

HEMISPHERX BIOPHARMA INC

Form 10-K

March 17, 2008

**FORM 10-K**  
**SECURITIES AND EXCHANGE COMMISSION**  
**x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE**  
**SECURITIES EXCHANGE ACT OF 1934**  
**For the fiscal year ended December 31, 2007**  
**OR**  
**o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE**  
**SECURITIES EXCHANGE ACT OF 1934**  
**For the transition period from \_\_\_\_\_ to \_\_\_\_\_**  
**Commission File No. 1-13441**

**HEMISPHERX BIOPHARMA, INC.**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

52-0845822  
(I.R.S. Employer Identification  
Number)

1617 JFK Boulevard Philadelphia, Pennsylvania  
(Address of principal executive offices)

19103  
(Zip Code)

Registrant's telephone number, including area code: (215) 988-0080

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

Common Stock, \$.001 par value

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

(Title of Each Class)

NONE

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

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 o No x

Indicate by check mark whether the registrant (1) has filed all reports to be filed by Section 13 or 15(d) of the Securities and 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 x No o

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

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 definition of "large accelerated filer," "accelerated filer" and "smaller reporting

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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 Common Stock held by non-affiliates at June 30, 2007, the last business day of the registrant’s most recently completed second fiscal quarter, was \$94,412,529.

The number of shares of the registrant’s Common Stock outstanding as of March 3, 2008 was 73,886,081.

**DOCUMENTS INCORPORATED BY REFERENCE:** None.

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### **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

Certain statements in this Annual Report on Form 10-K (the “Form 10-K”), including statements under “Item 1. Business,” “Item 1A. Risk Factors,” “Item 3. Legal Proceedings” and “Item 7. Management’s Discussion and Analysis of Financial Condition and Result of Operations,” constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995 (collectively, the “Reform Act”). Certain, but not necessarily all, of such forward-looking statements can be identified by the use of forward-looking terminology such as “believes,” “expects,” “may,” “will,” “should,” or “anticipates” or the negative thereof or other variations thereon or comparable terminology, or by discussions of strategy that involve risks and uncertainties. All statements other than statements of historical fact included in this Form 10-K regarding our financial position, business strategy and plans or objectives for future operations are forward-looking statements. Without limiting the broader description of forward-looking statements above, we specifically note that statements regarding potential drugs, their potential therapeutic effect, the possibility of obtaining regulatory approval, our ability to manufacture and sell any products, market acceptance or our ability to earn a profit from sales or licenses of any drugs or our ability to discover new drugs in the future are all forward-looking in nature.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Hemispherx Biopharma, Inc. and its subsidiaries (collectively, “Hemispherx”, “we or “us”) to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements and other factors referenced in this Form 10-K. We do not undertake and specifically decline any obligation to publicly release the results of any revisions which may be made to any forward-looking statement to reflect events or circumstances after the date of such statements or to reflect the occurrence of anticipated or unanticipated events.

## **PART I**

### **ITEM 1. Business.**

#### **GENERAL**

We are a biopharmaceutical company engaged in the clinical development, manufacture, marketing and distribution of new drug therapies based on natural immune system enhancing technologies for the treatment of viral and immune based chronic disorders. The Company was founded in the early 1970s doing contract research for the National Institutes of Health. Since that time, we have established a strong foundation of laboratory, pre-clinical, and clinical data with respect to the development of nucleic acids to enhance the natural antiviral defense system of the human body and to aid the development of therapeutic products for the treatment of certain chronic diseases. We have three domestic subsidiaries BioPro Corp., BioAegean Corp., and Core BioTech Corp., all of which are incorporated in Delaware and are dormant. Our foreign subsidiaries include Hemispherx Biopharma Europe N.V./S.A. established in Belgium in 1998 and Hemispherx Biopharma Europe S.A. incorporated in Luxembourg in 2002. Hemispherx Biopharma Europe N.V./S.A. has little or no activity. Hemispherx Biopharma Europe S. A. was dissolved as of December 2006.

Our current strategic focus is derived from four applications of our two core pharmaceutical technology platforms Ampligen® and Alferon N Injection®. The commercial focus for Ampligen includes application as a treatment for Chronic Fatigue Syndrome (CFS) and as a vaccine enhancer (adjuvant) for both therapeutic and preventative vaccine development. Alferon N Injection® is an FDA approved product with an indication for refractory or recurring genital warts. Alferon LDO (Low Dose Oral) is an application currently under early stage development targeting influenza and viral diseases both as an adjuvant as well as a single entity anti-viral.

Ampligen® is an experimental drug currently undergoing clinical development for the treatment of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (“ME/CFS” or “CFS”), and HIV. In August 2004, we completed a Phase III clinical trial (“AMP 516”) treating over 230 ME/CFS patients with Ampligen® and are presently in the registration process for a new drug application (“NDA”) with the Food and Drug Administration (“FDA”). Over its developmental history, Ampligen® has received various designations, including Orphan Drug Product Designation (FDA), Emergency (compassionate) Cost Recovery Sales Authorization (FDA) and “promising” clinical outcome recognition based on the evaluation of certain summary clinical reports (AHRQ, Agency Health Research Quality). An NDA for treatment of CFS was filed on October 10, 2007. On December 3, 2007 a refusal to file (RTF) letter was received because the application was deemed “not substantially complete”. A written response was developed and submitted to the FDA addressing 14 pre-clinical and clinical questions. Ampligen represents the first drug in class of RNA (nucleic acid) molecules to apply for NDA review.

The Status of our initiative for Ampligen as an adjuvant for preventative vaccine development includes pre-clinical studies in seasonal and pandemic influenza for intranasal administration being conducted by Japan’s National Institute for Infectious Diseases. A three year program targeting regulatory approval for pandemic flu and seasonal flu in Japan has been funded by the Japanese Ministry of Health. Parties to the research grant include Hemispherx, the NIID and BIKEN (non-profit operational arm of the Foundation for Microbial Disease of Osaka University). Our agreement with BIKEN is part of a three party agreement to develop an effective influenza vaccine for Japan and utilizes the resources of the National Institute of Infectious Disease of Japan. Our development strategy includes reproduction of preclinical studies outside Japan and completion of the three year program. We intend to conduct human studies in the US and seek approval for seasonal and pandemic indications in the US and Europe for intranasal administration. A phase II study for intramuscular administration for seasonal flu has been initiated in Australia through the St. Vincent’s Hospital Clinical Trials Centre.

With regard to Ampligen as a therapeutic vaccine adjuvant, we intend to initiate pre-clinical studies in HIV and various cancers and plan to ultimately negotiate a vaccine development licensing agreement.

Based on the results of published, peer reviewed pre-clinical studies and clinical trials, we believe that Ampligen® may have broad-spectrum anti-viral and anti-cancer properties. Over 750 patients have participated in Ampligen® clinical trials authorized by the FDA at over twenty clinical trial sites across the U.S., representing the administration of more than 90,000 doses of this drug.

Alferon N Injection® is the registered trademark for our injectable formulation of natural alpha interferon, which is approved by the FDA for the treatment of genital warts. Alferon N Injection® is also in clinical development for treating West Nile Virus. Other preclinical development with respect to Multiple Sclerosis and SARS has been suspended due to the resource requirements of other projects.

We are actively engaged in broad-based ongoing experimental studies assessing the efficacy of our products Ampligen®, Alferon N Injection®, and Alferon LDO® against influenza viruses as an adjuvant and/or single agent antiviral with the Defence R&D Canada, the National Institute of Infectious Diseases in Tokyo, the St. Vincent's Hospital Clinical Trial Centre in Australia and various research affiliates of the National Institutes of Health in the United States.

We own and operate a 43,000 sq. ft. FDA approved facility in New Brunswick, NJ primarily designed to produce Alferon N. In 2006, we completed the installation of a polymer production line to produce Ampligen® raw materials on a more reliable and consistent basis.

We outsource certain components of our research and development, manufacturing, marketing and distribution while maintaining control over the entire process through our quality assurance group and our clinical monitoring group.

Our principal executive offices are located at One Penn Center, 1617 JFK Boulevard, Philadelphia, Pennsylvania 19103, and our telephone number is 215-988-0080.

### **AVAILABLE INFORMATION**

We file our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 electronically with the Securities and Exchange Commission, or SEC. The public may read or copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is <http://www.sec.gov>.

You may obtain a free copy of our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports on the day of filing with the SEC on our website on the World Wide Web at <http://www.hemispherx.net> or by contacting the Investor Relations Department by calling (518) 398-6222 or sending an e-mail message to [dwill@willstar.net](mailto:dwill@willstar.net).

### **OUR PRODUCTS**

Our primary products consist of our experimental compound, Ampligen®, our FDA approved natural interferon product, Alferon N Injection® and Alferon LDO (low dose oral) our experimental liquid natural interferon for oral administration.

### **Ampligen®**

Nucleic acid compounds represent a potential new class of pharmaceutical products that are designed to act at the molecular level for treatment of human diseases. There are two forms of nucleic acids, DNA and RNA. DNA is a group of naturally occurring molecules found in chromosomes, the cell's genetic machinery. RNA is a group of naturally occurring informational molecules which orchestrate a cell's behavior which regulates the action of groups of cells, including the cells which compromise the body's immune system. RNA directs the production of proteins and regulates certain cell activities including the activation of an otherwise dormant cellular defense against viruses and tumors. Our drug technology utilizes specifically-configured RNA. Our double-stranded RNA drug product, trademarked Ampligen®, an experimental, unapproved drug, which is administered intravenously, is in human clinical development for various therapeutically oriented studies, including treatment for Chronic Fatigue Syndrome/Myalgic Encephalomyelitis ("CFS/ME"), HIV, renal cell carcinoma and malignant melanoma.

Clinical trials already conducted by us include treatments of ME/CFS, Hepatitis B, HIV, and cancer patients with renal cell carcinoma and malignant melanoma. Certain of these will require additional clinical trials to support regulatory approval.

The FDA has approved the use of Ampligen® in treating ME/CFS on an emergency basis (i.e. those with immediate life threatening illnesses). This is known as a treatment IND, or Treatment Investigational New Drug. Furthermore, the FDA has granted Hemispherx Orphan Drug Status in the United States. Orphan drugs get seven years of market exclusivity upon FDA approval.

### **Alferon N Injection®**

Interferons are a group of proteins produced and secreted by cells to combat diseases. Researchers have identified four major classes of human interferon: alpha, beta, gamma and omega. The Alferon N Injection® product contains a multi-species form of alpha interferon. The worldwide market for injectable alpha interferon-based products has experienced rapid growth and various alpha interferon injectable products are approved for many major medical uses worldwide. Alpha interferons are manufactured commercially in three ways: by genetic engineering, by cell culture, and from human white blood cells. All three of these types of alpha interferon are or were approved for commercial sale in the U.S. Our natural alpha interferon is produced from human white blood cells.

The potential advantages of natural alpha interferon over recombinant (synthetic) interferon produced and marketed by other pharmaceutical firms may be based upon their respective molecular compositions. Natural alpha interferon is composed of a family of proteins containing many molecular species of interferon. In contrast, recombinant alpha interferon each contain only a single species. Researchers have reported that the various species of interferons may have differing antiviral activity depending upon the type of virus. Natural alpha interferon presents a broad complement of species, which we believe may account for its higher activity in laboratory studies. Natural alpha interferon is also glycosylated (partially covered with sugar molecules). Such glycosylation is not present on the currently U.S. marketed recombinant alpha interferons. We believe that the absence of glycosylation may be, in part, responsible for the production of interferon-neutralizing antibodies seen in patients treated with recombinant alpha interferon. Although cell culture-derived interferon is also composed of multiple glycosylated alpha interferon species, the types and relative quantity of these species are different from our natural alpha interferon.

The FDA approved Alferon N Injection® in 1989 for the intralesional (within lesions) treatment of refractory (resistant to other treatment) or recurring external genital warts in patients 18 years of age or older. Certain types of human papillomaviruses ("HPV") cause genital warts, a sexually transmitted disease ("STD"). A published report estimates that approximately eight million new and recurrent causes of genital warts occur annually in the United States alone.





Alferon N Injection® [Interferon alfa-n3 (human leukocyte derived)] is a highly purified, natural-source, glycosylated, multi-species alpha interferon product. There are essentially no antibodies observed against natural interferon to date and the product has a relatively low side-effect profile. Alferon® is the only natural-source, multi-species alpha interferon currently sold in the U.S.

The recombinant DNA derived alpha interferon are now reported to have decreased effectiveness after one year, probably due to antibody formation and other severe toxicities. These detrimental effects have not been reported with the use of Alferon N Injection® which could allow this product to assume a much larger market share.

It is our belief that the use of Alferon® N in combination with Ampligen® has the potential to increase the positive therapeutic responses in chronic life threatening viral diseases. We have suspended certain preclinical trials for various viral disorders at this time due to funding considerations and increased resource requirements of other projects.

### **Alferon® Low Dose Oral (LDO)**

Alferon® LDO is an experimental low-dose, oral liquid formulation of Natural Alpha Interferon and like Alferon N Injection® should not cause antibody formation, which is a problem with recombinant interferon. It is an experimental immunotherapeutic believed to work by stimulating an immune cascade response in the cells of the mouth and throat, enabling it to bolster systemic immune response through the entire body by absorption through the oral mucosa. Oral interferon would be much more economically feasible for patients and logistically manageable in development programs in third-world countries primarily affected by HIV and other emerging viruses (SARS, Ebola, bird flu, etc.). Oral administration of Alferon® N, with its affordability, low toxicity, no production of antibodies, and broad range of potential bio activity, could be a breakthrough treatment for viral diseases.

We have initiated clinical trials as part of an accelerated evaluation of the experimental bio-therapeutic Alferon LDO® (Low Dose Oral Interferon Alfa-n3 (Human Leukocyte Derived)) as a potential new experimental therapy for Avian Flu and other lethal viral diseases, which have high acute death rates. Clinical trials in human volunteers (conducted in both the US at Drexel University, Philadelphia and in Hong Kong at the Princess Margaret Hospital) were designed to determine whether Alferon N, delivered in a new, experimental oral drug delivery format, can resuscitate the broad-spectrum antiviral and immunostimulatory genes. These human genes are shut down by acute lethal viral infections such as HIV, avian flu and smallpox. The results of this study are being evaluated.

### **Oragens**

We acquired a series of patents on Oragens, potentially a set of oral broad spectrum antivirals and immunological enhancers, through a licensing agreement with Temple University in Philadelphia, PA. We were granted an exclusive worldwide license from Temple for the Oragens products. These compounds have been evaluated in various academic laboratories for application to chronic viral and immunological disorders.

The 2', 5' oligoadenylate synthetase/RNase L system is an important and widely distributed pathway for the inhibition of viral replication and tumor growth. The 2', 5' oligoadenylate synthetase, upon activation by double-stranded RNA, synthesizes 2', 5' oligoadenylates (2-5A) from ATP. These bioactive 2-5As directly activate RNase L, which degrades viral and cellular RNAs resulting in the inhibition of protein synthesis.

The bioactive 2-5A molecules can be degraded by various hydrolytic enzymes, resulting in a short half life. Analogues of these bioactive 2-5As, termed Orogen RNA compounds, have been produced to increase stability and maintain or increase biological activity without demonstrable toxicity. Additional pre-clinical tests will be conducted prior to pursuing clinical trials (See "Research, Consulting, Licensing and Supply Agreements" section of Item I for more details on this license).

## **PATENTS**

We have over 90 patents worldwide with approximately 20 additional pending patent applications pending comprising our intellectual property. In 2006, we obtained the global patent rights for a compound that enhances DNA vaccination by the efficient intracellular delivery of immunogenic DNA (i.e.- DNA that can produce antigenic proteins that simulate an acute viral infection with a resultant umoral and cell-mediated immune response). See "Research, Consulting, Licensing and Supply Agreements" section within Item I for more information on the acquisition of these patents.

We continually review our patents rights to determine whether they have continuing value. Such review includes an analysis of the patent's ultimate revenue and profitability potential. In addition, management's review addresses whether each patent continues to fit into our strategic business plans for Ampligen, Alferon N and other intellectual property.

We have been issued certain patents on the use of Ampligen® alone and Ampligen® in combination with certain other drugs including AZT, ddI, ddC, interferon and/or IL-2, for the treatment of HIV.

Our experimental compounds, which have yet to be determined "safe and effective" by regulatory authorities, are accordingly only available legally in certain authorized trials and tests; in vitro (outside the body) tests are also not necessarily indicative of any evidence of clinical benefits or advantages. But the focus of Hemispherx is on Ampligen® as a treatment for CFS/ME and HIV.

The main U.S. ME/CFS treatment patent (#6130206) expires October 10, 2017. Our main patents covering HIV treatment (#4820696, #5063209, and #5091374) expired or will expire on April 11, 2006, November 5, 2008, and February 25, 2009, respectively; Hepatitis treatment coverage is conveyed by U.S. patent #5593973 which expires on January 14, 2014. The U.S. Ampligen® Trademark (#1,515,099) expires on December 6, 2008 and can be renewed thereafter for an additional 10 years. The FDA has granted us "orphan drug status" for our nucleic acid-derived therapeutics for ME/CFS, HIV, and renal cell carcinoma and malignant melanoma. Orphan drug status grants us protection against competition for a period of seven years following FDA approval, as well as certain federal tax incentives, and other regulatory benefits. Patent coverage for the HIV indication following the expiration of patents #4820696, #5063209 and #5091374 will be covered under the marketing protection provided by the orphan drug designation for using Ampligen® to treat HIV. Patent pending application #PCT/US 0239890 was abandoned during the current period.

The U.S. Alferon® Patents expire February 10, 2012 (5,503,828 and 5,676,942) and December 22, 2017 (5,989,441).

## **RESEARCH AND DEVELOPMENT ("R&D")**

Our focus is on developing drugs for use in treating viral and immune based chronic disorders and diseases such as ME/CFS, HIV, HPV, SARS and West Nile Virus. Our current R&D projects target treatment therapies for ME/CFS, HIV, HPV and other viral diseases, i.e.; Avian/Seasonal Influenza.

### **Myalgic Encephalomyelitis/Chronic Fatigue Syndrome ("ME/CFS")**

Chronic Fatigue Syndrome ("CFS"), also known as Chronic Immune Dysfunction Syndrome ("CFIDS") and, myalgic encephalomyelitis ("ME") is a serious and debilitating chronic illness and a major public health problem. Long misunderstood, under-recognized, and under-diagnosed, ME/CFS is now recognized by both the government and private sector as a major health problem, including the National Institutes of Health, U.S. Centers for Disease Control and Prevention ("CDC"), FDA and Social Security Administration, recognizes ME/CFS as one of the most common chronic illnesses of our time. The CDC listed ME/CFS as a priority disease, causing severe health and financial problems for the patients, their family, and the community. ME/CFS is endemic in the population, but occasionally seen in clusters suggesting an infectious basis. A variety of immunological, endocrine, autonomic nervous system, and metabolic abnormalities have been documented. A groundbreaking, community-based study of ME/CFS by Dr. Leonard Jason was published in the Archives of Internal Medicine in 1999 and showed a prevalence rate of 422 of every 100,000 Americans. As many as 1,000,000 people nationwide suffer from CFS, significantly more than previously estimated by the CDC. Furthermore, 90% of the patients with the illness are struggling without the benefit of medical diagnosis or treatment. While ME/CFS strikes people of all age, racial, ethnic, and socioeconomic groups, it is most prevalent amongst women. Research has shown that ME/CFS is about three times as common in women as men, a rate similar to that of many autoimmune diseases, such as multiple sclerosis and lupus. To put this into perspective, ME/CFS is over four times more common than HIV infection in women, and the rate of ME/CFS in women is considerably higher than a woman's lifetime risk of getting lung cancer as published by the CFIDS Association of America.

The most common symptom of ME/CFS is incapacitating fatigue, which does not subside with rest. Many severe ME/CFS patients become completely disabled or totally bedridden and are afflicted with severe pain and mental confusion even at rest. This debilitating tiredness is associated with flu-like symptoms such as chills, fever, headache, sore throat, painful lymph nodes, muscle aches, weakness and joint pain. Diagnosis of ME/CFS is a time-consuming and difficult process which is generally arrived at by excluding other illnesses with similar symptoms and comparing a patient's symptoms with the case definition. Overlapping symptoms can occur with several diseases, such as fibromyalgia, Gulf War Illnesses, and multiple chemical sensitivities. Many diseases have similar symptoms including Lupus and Lyme disease which so closely mimic ME/CFS that they need to be considered when making a diagnosis to rule them out.

The case definition for ME/CFS criteria calls for certain symptoms to be present along with fatigue that interferes with physical, mental, social, and educational activities. Both the fatigue and symptoms must have occurred for (at least) a six month period. People with ME/CFS may experience many more than the symptoms named in the case definition, so knowledgeable physicians will take this fact into consideration when making a diagnosis (after other possible reasons for symptoms have been ruled out).

The leading model of ME/CFS pathogenesis is thought to be rooted in abnormalities in the immune system and brain (central nervous system), both of which affects and alters the function of the other. Because some cases of chronic fatigue begin with a flu-like infection, several viruses have been studied as possible causes because all are relatively common in the general population, including Human Herpesvirus (“HHV”) 6 and 7, Retroviruses, Epstein-Barr Virus, Enteroviruses, as well as, Mycoplasmas, etc. Whilst, the etiology is likely to be caused by a collection of factors, including viral, hormonal, stress, and other triggers for the illness in genetically, environmentally or otherwise susceptible individuals and continues to be a subject of discussion.

Most ME/CFS patients are treated symptomatically with traditional treatments geared toward treating symptoms of the disease, such as improving quality of sleep, reducing pain and treatment of depression. Clinically, a number of different therapeutic approaches have been pursued, but with no significant clinical success.

### **Other Viral Diseases**

We are actively engaged in broad-based experimental studies assessing the efficacy of our products, Ampligen®, Alferon N Injection® and Alferon® LDO against influenza viruses as an adjuvant and/or single agent antiviral with the Defence R&D Canada, the National Institute of Infectious Disease in Tokyo, St. Vincent’s Hospital Clinical Trial Centre in Australia and various research affiliates of the National Institutes of Health in the United States.

In September 2007, Japan’s National Institute of Infectious Disease (“JNIID”) initiated research on the co-administration of JNIID’s HIV-1 vaccine with our experimental TLR3 agonist (a substance that binds to a specific receptor and triggers a host defense response in the cell) and immune enhancer, Ampligen®. This research is the result of earlier research suggesting a potential role for Ampligen® in boosting responses to certain vaccines designed to combat avian influenza (Bird Flu) as well as seasonal influenza viruses. The objective of this research is to determine if Ampligen® can overcome the historical problem which has handicapped AIDS vaccine development, namely marginal immune response which undermines the potential of long-lasting protection. Ampligen® will be combined with HIV recombinant protein and administered via an intranasal route.

In 2007, JNIID published, in two peer reviewed journals, the results of their studies to evaluate the ability of current seasonal influenza vaccine to confer cross-protection against highly pathogenic H5N1 influenza (Bird Flu) virus in mice. These studies indicate that, as a vaccine enhancer co-administered with their seasonal trivalent influenza vaccine, Ampligen® helps induce a protective effect against H5N1 influenza viruses. As such, Ampligen® as a toll-like receptor 3 agonist may aid in overcoming the problems protecting against mutated strains of the H5N1 virus and of limited supplies of H5N1 virus vaccines. Additional studies to support this conclusion are planned.

In April 2007, Japan’s Ministry of Health, Labor and Welfare (MHLW) issued authorization to its National Institute of Infectious Diseases approving their budget to advance studies indicating that an H5N1 influenza vaccine co-administered intranasally with Hemispherx’s experimental therapeutic, Ampligen®, protected against mutated strains of the virus and, further that, the seasonal trivalent influenza vaccine co-administered intranasally with Ampligen® maintained efficacy even when challenged with the H5N1 influenza virus.

In June 2007, we initiated a clinical trial in Australia using Ampligen® in combination with seasonal flu vaccine. This trial focuses on populations at risk for virulent cases of influenza, especially those over the age of 60 years who historically may have weakened immune systems. The Australian clinical trial was prompted by the results from the pre-clinical work conducted by the JNIIID (see above). Thirty-eight subjects are anticipated to be enrolled in this study, which will utilize a two dose Ampligen® regimen of 2 mg per dose. Data on the first eight subjects is currently under review and enrollment of thirty additional subjects will recommence in March 2008. This study is being monitored by Clinical Network Services Pty. Ltd. located in Brisbane, Australia. The clinical trials center of St. Vincent's Hospital, based in DarlingHurst, Australia, is conducting the trial. Prospective subjects will be screened to be included in the clinical trial.

The Center for Disease Control and Prevention reports that in 2007 the number of mosquito-borne West Nile Virus ("WNV") infections in the United States was "up sharply" over the same period in 2006. This increased infection rate has accelerated the enrollment of patients in our Phase IIb clinical trial using Alferon N™ to treat WNV patients. In lab studies, Alferon N™, a natural cocktail of eight alpha-interferons, shows synergistic effects (up to 100 fold over recombinant interferons) against pathogens such as WNV. The Phase IIb clinical trial is a double-blinded, randomized, multi-center program under the direction of Cornell University and Weill Cornell Medical College/New York Hospital.

Our direct Research and Development cost was \$10,444,000 in 2007; \$10,127,000 in 2006 and \$5,218,000 in 2005. Most of these expenditures relate to the development of our experimental drug, Ampligen®. The costs in 2006 and 2007 reflect the costs of producing Ampligen® raw materials (polymers) and Ampligen® doses for use in stability and validation testing. Also includes the costs of preparing the NDA for filing with the FDA.

## **MANUFACTURING**

We have a Supply Agreement with Hollister-Stier Laboratories LLC of Spokane, Washington ("Hollister-Stier"), for the manufacturing of Ampligen® for a five year term ending in 2010. Pursuant to the agreement we supply the key raw materials and Hollister-Stier formulates and bottles Ampligen®. Hollister-Stier has completed five (5) pilot manufacturing runs of Ampligen® for stability testing with one additional manufacturing run which was completed mid-March 2007. The first three pilot runs were completed in January 2006 utilizing polymer/raw material from Ribotech (our previous supplier of raw material). The six month accelerated stability data on these three lots support a two year expiration period with additional test results forthcoming. Having successfully completed these manufacturing runs, the scale up of Ampligen® manufacturing to commercial batch size and the validation of the manufacturing at Hollister-Stier was initiated. The remaining two lots were run in January and February 2007 with the aforementioned third lot completed in mid-March 2007 utilizing polymer/raw material from our NJ facility. Based on the available information from the completion of the first two commercial size manufacturing validation lots, we are using these three process validation lots in stability studies to monitor and confirm the product quality and stability.

Alferon N Injection®, the purified drug concentrate utilized in the formulation of Alferon N Injection®, was manufactured in our New Brunswick, New Jersey facility and was formulated and packaged at a production facility formerly owned and operated by Abbott Laboratories located in Kansas. Abbott Laboratories sold the facility to Hospira. Hospira ceased the labeling and packaging of Alferon N Injection® as they sought larger production runs for cost efficiency purposes. On February 8, 2006, we executed a Manufacturing and Safety Agreement with Hyaluron, Inc. (“Hyaluron”) of Burlington, Massachusetts, for the formulation, packaging and labeling of Alferon N Injection®. Pursuant to the Agreement, we will supply raw materials in sufficient quantity and provide any pertinent information to the project. Hyaluron is in the process of preparing their facility to produce Alferon N. At this time we are in the process of scheduling additional production runs in 2008.

## **MARKETING/DISTRIBUTION**

We continue our efforts to establish an internal marketing and sales infrastructure to facilitate and refine our commercialization initiatives.

Our marketing strategy for Ampligen® reflects the differing health care systems around the world, and the different marketing and distribution systems that are used to supply pharmaceutical products to those systems. In the U.S., we expect that, subject to receipt of regulatory approval, Ampligen® may be utilized in four medical arenas: physicians’ offices, clinics, hospitals and the home treatment setting. We are in the process of developing pre-launch and launch driven marketing plans focusing on those audience development, medical support and payor reimbursement initiatives which will facilitate product acceptance and utilization at the time of regulatory approval. Similarly, we are developing distribution scenarios for the Specialty Pharmacy/Infusion channel which will insure market access, offer 3PL (third party logistics) capabilities and provide the requisite risk management control mechanisms. It is our intent to utilize third party service providers to execute elements of both the marketing/sales and distribution plans. We currently plan to utilize a small group of Managed Market account managers to introduce the product to payor, employer and government account audiences. We believe that this approach will establish a market presence and facilitate the generation of revenue without incurring the substantial costs associated with a traditional sales force. Furthermore, management believes that the approach will enable us to retain many options for future marketing strategies.

For example, our commercialization strategy for Ampligen-CFS may include licensing/co-marketing agreements utilizing the resources and capacities of a strategic partner(s). We are currently seeking worldwide marketing partner(s), with the goal of having a relationship in place before approval is obtained. In parallel to partnering discussions, appropriate pre-marketing activities will be undertaken. We intend to control manufacturing of Ampligen on a worldwide basis.

In 1998, we entered into a strategic alliance with Accredo to develop certain marketing and distribution capacities for Ampligen® in the United States. Accredo, a division of MEDCO, is one of the nation's largest Specialty Pharmacy providers. Pursuant to the agreement, Accredo assumed certain responsibilities for distribution of Ampligen® for which they received a fee. Through this arrangement, we may mitigate the necessity of incurring certain up-front costs. Accredo has also worked with us in connection with the Amp 511 ME/CFS cost recovery treatment program, Amp 516 ME/CFS Phase III clinical trial and the Amp 719 (combining Ampligen® with other antiviral drugs in HIV-salvage therapy and Amp 720 HIV Phase IIb clinical trials now under way). There can be no assurances that this alliance will develop a significant commercial position in any of its targeted chronic disease markets. The agreement had an initial one year term from February 9, 1998 with successive additional one year terms unless either party notifies the other not less than 180 days prior to the anniversary date of its intent to terminate the agreement. Also, the agreement may be terminated for uncured defaults, or bankruptcy, or insolvency of either party and will automatically terminate upon our receiving an NDA for Ampligen® from the FDA, at which time, a new agreement will need to be negotiated with Accredo or another major drug distributor. This agreement offers the potential to provide some marketing and distribution capacity in the United States. There has been no communication or activity under this

agreement for the past few years.

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We executed our marketing strategy for Alferon N Injection® by relaunching the product via a collaborative marketing initiative between Hemispherx and Armada Healthcare, a Specialty Pharmacy network encompassing specialty pharmacists, pharmacies, distributors and targeted physician specialists. This effort was intended to direct our efforts in the most appropriate and productive market fully exposing our product in the indicated market. This initiative has had a positive impact on Alferon® revenues in 2007 by focusing on direct, non-personal selling efforts to targeted physician audiences. It is our intent to promote Alferon to those dermatologists, OB GYNs and Family practice/IMs who are involved in the treatment of patients with refractory or recurring external genital warts and who currently utilize both injectable interferons as well as topical therapeutic agents.

## **COMPETITION**

RNA based products and toll-like receptors (TLRs) have demonstrated great promise in pre-clinical and limited clinical applications resulting in active research and development by large pharmaceutical companies and emerging Biotech firms. As such, our potential competitors are among the largest pharmaceutical companies in the world, are well known to the public and the medical community, and have substantially greater financial resources, product development, and manufacturing and marketing capabilities than we have.

These companies and their competing products may be more effective and less costly than our products. In addition, conventional drug therapy, surgery and other more familiar treatments will offer competition to our products. Furthermore, our competitors have significantly greater experience than we do in pre-clinical testing and human clinical trials of pharmaceutical products and in obtaining FDA, EMEA Health Protection Branch ("HPB") and other regulatory approvals of products. Accordingly, our competitors may succeed in obtaining FDA, EMEA and HPB product approvals more rapidly than us. If any of our products receive regulatory approvals and we commence commercial sales of our products, we will also be competing with respect to manufacturing efficiency and marketing capabilities, areas in which we have no experience. Our competitors may possess or obtain patent protection or other intellectual property rights that prevent, limit or otherwise adversely affect our ability to develop or exploit our products.

The major pharmaceutical competitors with biotech capabilities/vaccine franchises include Pfizer, GSK, Wyeth, Merck, Novartis, Gilead Pharmaceutical, and Schering-Plough Corp. Biotech competitors include AVANT Immunotherapeutics, AVI Biopharma and GENTA. Alferon N Injection® currently competes with a product produced by Schering for treating genital warts. 3M Pharmaceutical also markets its immune response modifier product, Aldera, for the treatment of genital and perianal warts. We believe the approval and marketing of this product is the main reason that sales of Alferon N Injection® have not met our expectations since acquisition. In November 2006, the botanical drug, Veregen (marketed by Bradley Pharmaceuticals) was also approved for the topical treatment of genital and perianal warts.

## **GOVERNMENT REGULATION**

Regulation by governmental authorities in the U.S. and foreign countries is and will be a significant factor in the manufacture and marketing of Alferon N products and our ongoing research and product development activities. Ampligen® and the products developed from the ongoing research and product development activities will require regulatory clearances prior to commercialization. In particular, new human drug products for humans are subject to rigorous preclinical and clinical testing as a condition for clearance by the FDA and by similar authorities in foreign countries. The lengthy process of seeking these approvals, and the ongoing process of compliance with applicable statutes and regulations, has required, and will continue to require the expenditure of substantial resources. Any failure by us or our collaborators or licensees to obtain, or any delay in obtaining, regulatory approvals could materially adversely affect the marketing of any products developed by us and our ability to receive product or royalty revenue. We have received orphan drug designation for certain therapeutic indications, which might, under certain conditions, accelerate the process of drug commercialization. Alferon N Injection® is only approved for use in intra-lesional treatment of refractory or recurring external genital warts in patients 18 years of age or older. Use of Alferon N Injection® for other applications requires regulatory approval.

We are subject to various federal, state and local laws, regulations and recommendations relating to such matters as safe working conditions, laboratory and manufacturing practices, the experimental use of animals and the use of and disposal of hazardous or potentially hazardous substances, including radioactive compounds and infectious disease agents, used in connection with our research work. The laboratory and production facility in New Brunswick, New Jersey, which we acquired from ISI, is approved for the manufacture of Alferon N Injection® and we believe it is in substantial compliance with all material regulations. However, we cannot give assurances that facilities owned and operated by third parties that are utilized in the manufacture of our products, are in substantial compliance, or if presently in substantial compliance, will remain so.

## **RESEARCH, CONSULTING, LICENSING AND SUPPLY AGREEMENTS**

As previously discussed above, we acquired a series of patents on Oragens, potentially a set of oral broad spectrum antivirals and immunological enhancers, through a licensing agreement with Temple University in Philadelphia, PA. We were granted an exclusive worldwide license from Temple for the Oragens products. These compounds have been evaluated in various academic laboratories for application to chronic viral and immunological disorders. Pursuant to the terms of our agreement with Temple, we are obligated to pay royalties of 2% to 4% of sales depending on the amount of technical assistance required. We currently pay a royalty of \$30,000 per year to Temple. This agreement is to remain in effect until the date that the last licensed patent expires unless terminated sooner by mutual consent or default due to royalties not being paid. The last Oragen™ patent expires on June 1, 2018. We recorded the payment of the royalty as research and development cost for the period incurred.

In December 1999, we entered into an agreement with Biovail Corporation International (“Biovail”). Biovail is an international full service pharmaceutical company engaged in the formulation, clinical testing, registration and manufacture of drug products utilizing advanced drug delivery systems. Biovail is headquartered in Toronto, Canada. The agreement grants Biovail the exclusive distributorship of our product in the Canadian territories subject to certain terms and conditions. In return, Biovail agrees to conduct certain pre-marketing clinical studies and market development programs, including without limitation, expansion of the Emergency Drug Release Program in Canada with respect to our products. In addition, Biovail agrees to work with us in preparing and filing a New Drug Submission with Canadian Regulatory Authorities at the appropriate time. Biovail invested \$2,250,000 in Hemispherx equity at prices above the then current market price and agreed to make an additional investment of \$1,750,000 based on receiving approval to market Ampligen® in Canada from the appropriate regulatory authorities in Canada. The agreement requires Biovail to buy exclusively from us and penetrate certain market segments at specific rates in order to maintain market exclusivity. The agreement terminates on December 15, 2009, subject to successive two-year extensions by the parties and subject to earlier termination by the parties for uncured defaults under the agreement, bankruptcy or insolvency of either party, or withdrawal of our product from Canada for a period of more than ninety days for serious adverse health or safety reasons.

In March 2002, our European subsidiary Hemispherx S.A. entered into a Sales and Distribution agreement with Esteve. In December 2006 Hemispherx S.A. assigned all of its rights and obligations under the Sales and Distribution agreement to us. Pursuant to the terms of the Agreement, Esteve was granted the exclusive right to market Ampligen® in Spain, Portugal and Andorra for the treatment of ME/CFS. Due to non-performance of certain contractually required clinical trials, we notified Esteve of our intention to terminate the Sales and Distribution Agreement. As is its right under the Sales and Distribution Agreement, Esteve has applied for arbitration, seeking damages. We believe Esteve’s claim is without merit and intend to counterclaim seeking damages. Please see “Item 3. Legal Proceedings” below.

In October 2005, we signed a research agreement with the National Institute of Infectious Diseases, in Tokyo, Japan. The collaboration, by Hideki Hasegawa, M.D., Ph.D., Chief of the Laboratory of Infectious Disease Pathology, will assess our experimental therapeutic Ampligen® as a co-administered immunotherapeutic to the Institution's nasal flu vaccine.

In October 2005, we also engaged the Sage Group, Inc., a health care, technology oriented, strategy and transaction advisory firm, to assist us in obtaining a strategic alliance in Japan for the use of Ampligen® in treating Chronic Fatigue Syndrome or CFS. In the past year leaders in the Japanese medical community have established the Japanese Society of the Fatigue Science and the Osaka City University Hospital opened the Fatigue Clinical Center as the initial step in their Fatigue Research Project. In January 2007 we expanded our agreement with the Sage Group, Inc. to assist us in obtaining a strategic alliance in Japan for the use of Ampligen® in treating Avian Flu.

In December 2007 we concluded an agreement with BIKEN (the non-profit operational arm of the Foundation for Microbial Diseases of Osaka University) for the use of our experimental drug, Ampligen®, as an immune enhancer to influenza vaccines. Our agreement with BIKEN is part of a three party agreement to develop an effective influenza vaccine for Japan and utilizes vast resources of the National Institute of Infectious Diseases of Japan.

In November 2005, we entered into an agreement with Defence R&D Canada, Suffield (“DRDC Suffield”), an agency of the Canadian Department of National Defence, to evaluate the antiviral efficacy of our experimental therapeutic Ampligen® and Alferon® for protection against human respiratory influenza virus infection in well validated animal models. DRDC Suffield is conducting research and development of new drugs that could potentially become part of the arsenal of existing antiviral weapons to combat the bird flu. The initial study will focus on the testing of potential drugs against the respiratory influenza virus infection on a mouse-adapted strain of human influenza.

We entered into an agreement with Paul Griffin and The Asclepius Trust (“Asclepius”) whereby we acquired the right, title and interest in certain awarded patents and pending patent applications (“patents”). Consideration given by us for the acquisition of these patents amounted to \$150,000 paid with shares of our common stock to Paul Griffin valued at the closing price on the date of the agreement or July 3, 2006. The value of our common stock was \$2.43 on this date and equated to consideration of 61,728 shares. We registered these shares on behalf of Mr. Griffin for public resale. Asclepius will receive in consideration a 2% royalty of the gross sums received from all sales utilizing or relying upon the patents.

On July 26, 2006, we executed an agreement with Stem Cell Innovations, Inc. (formerly Interferon Sciences, Inc.) whereby we acquired the royalty interest previously granted Interferon Sciences with respect to our sale of products containing alpha interferon in exchange for 250,000 shares of common stock. We registered these shares on behalf of Stem Cell Innovations for public resale. The total consideration paid to Stem Cell under the agreement amounted to \$620,000 and was derived by multiplying the number of shares issued by the fair market value of our common stock on the date of the agreement or \$2.48 per share.

We have entered into agreements for consulting services, which are performed at medical research institutions and by medical and clinical research individuals. Our obligation to fund these agreements can be terminated after the initial funding period, which generally ranges from one to three years or on an as-needed monthly basis. During the years ending December 31, 2005, 2006 and 2007 we incurred approximately \$236,000, \$477,000 and \$842,000 respectively, of consulting service fees under these agreements. These costs are charged to research and development expense as incurred.

In December 2005, we executed a Supply Agreement with Hollister-Stier Laboratories LLC of Spokane, Washington (“Hollister-Stier”), for the contract manufacturing of Ampligen® for a five year term ending in 2010. Pursuant to the agreement we will supply the key raw materials and Hollister-Stier formulates and bottles the Ampligen®. Hollister-Stier has produced six lots of Ampligen through 2007, which are being used in stability studies.

As previously discussed in “Manufacturing” above, on February 8, 2006, we executed a Manufacturing and Safety Agreement with Hyaluron for the formulation, packaging and labeling of Alferon N Injection®. Pursuant to the Agreement, we will supply raw materials in sufficient quantity and provide any pertinent information to the project.

Sales to three large wholesalers (Cardinal Health, AmerisourceBergen and McKesson) represented approximately 70% and 68% of our total sales for the years ended December 31, 2006 and 2007, respectively.

## **HUMAN RESOURCES**

As of March 3, 2008, we had 49 personnel consisting of 36 full time employees, 13 regulatory/research medical personnel on a part-time basis. Part time personnel are paid on a per diem or monthly basis. 32 personnel are engaged in our research, development, clinical, and manufacturing effort. 17 of our personnel perform regulatory, general administration, data processing, including bio-statistics, financial and investor relations functions. We have no union employees and we believe our relationship with our employees is good.



While we have been successful in attracting skilled and experienced scientific personnel, there can be no assurance that we will be able to attract or retain the necessary qualified employees and/or consultants in the future.

### **SCIENTIFIC ADVISORY BOARD**

Our Scientific Advisory Board presently consists of two individuals who we believe have particular scientific and medical expertise in Virology, Cancer, Immunology, Biochemistry and related fields. These individuals advise us about current and long term scientific planning including research and development. This Board was originally made up of four medical scientists of which one resigned due to conflict of interest and one resigned for personal reasons. The Scientific Advisory Board conducts periodic meetings as needed by the clinical studies in progress by us. No Scientific Advisory Board meetings were held in 2007 primarily due to fewer active scientific projects. However, individual Scientific Advisory Board Members sometimes consult with, and meet informally with our employees. Members of the Scientific Advisory are employed by others and may have commitments to and/or consulting agreements with other entities, including our potential competitors.

### **ITEM 1A. Risk Factors.**

The following cautionary statements identify important factors that could cause our actual results to differ materially from those projected in the forward-looking statements made in this Form 10-K. Among the key factors that have a direct bearing on our results of operations are:

#### **Risks Associated With Our Business**

##### ***No assurance of successful product development***

Ampligen® and related products. The development of Ampligen® and our other related products is subject to a number of significant risks. Ampligen® may be found to be ineffective or to have adverse side effects, fail to receive necessary regulatory clearances, be difficult to manufacture on a commercial scale, be uneconomical to market or be precluded from commercialization by proprietary right of third parties. Our products are in various stages of clinical and pre-clinical development and, require further clinical studies and appropriate regulatory approval processes before any such products can be marketed. We do not know when, if ever, Ampligen® or our other products will be generally available for commercial sale for any indication. Generally, only a small percentage of potential therapeutic products are eventually approved by the FDA for commercial sale.

On December 3, 2007 a refusal to file (RTF) letter was received because the application was deemed “not substantially complete”. A written response was developed and submitted to the FDA addressing 14 pre-clinical and clinical questions. Ampligen represents the first drug in class of RNA (nucleic acid) molecules to apply for NDA review. We can provide no guidance as to the tentative date at which the filing of the NDA will be accepted or, if accepted, when or if the NDA will be approved. The timing of the FDA review process of the NDA is subject to the control of the FDA and could result in one of the following events; 1) approval to market Ampligen® for use in treating ME/CFS patients 2) require more research, development, and clinical work, 3) approval to market as well as conduct more testing, or 4) reject our NDA application. Given these variables, we are unable to project when material net cash inflows are expected to commence from the sale of Ampligen®.

Alferon N Injection®. Although Alferon N Injection® is approved for marketing in the United States for the intra-lesional treatment of refractory or recurring external genital warts in patients 18 years of age or older, to date it has not been approved for other indications. We face many of the risks discussed above, with regard to developing this product for use to treat other ailments.

***Our drug and related technologies are investigational and subject to regulatory approval. If we are unable to obtain regulatory approval, our operations will be significantly affected.***

All of our drugs and associated technologies, other than Alferon N Injection®, are investigational and must receive prior regulatory approval by appropriate regulatory authorities for general use and are currently legally available only through clinical trials with specified disorders. At present, Alferon N Injection® is only approved for the intra-lesional treatment of refractory or recurring external genital warts in patients 18 years of age or older. Use of Alferon N Injection® for other indications will require regulatory approval.

Our products, including Ampligen®, are subject to extensive regulation by numerous governmental authorities in the U.S. and other countries, including, but not limited to, the FDA in the U.S., the Health Protection Branch (“HPB”) of Canada, and the Agency for the Evaluation of Medicinal Products (“EMA”) in Europe. Obtaining regulatory approvals is a rigorous and lengthy process and requires the expenditure of substantial resources. In order to obtain final regulatory approval of a new drug, we must demonstrate to the satisfaction of the regulatory agency that the product is safe and effective for its intended uses and that we are capable of manufacturing the product to the applicable regulatory standards. We require regulatory approval in order to market Ampligen® or any other proposed product and receive product revenues or royalties. We cannot assure you that Ampligen® will ultimately be demonstrated to be safe or efficacious. In addition, while Ampligen® is authorized for use in clinical trials including a cost recovery program in the United States and Europe, we cannot assure you that additional clinical trial approvals will be authorized in the United States or in other countries, in a timely fashion or at all, or that we will complete these clinical trials. If Ampligen® or one of our other products does not receive regulatory approval in the U.S. or elsewhere, our operations most likely will be materially adversely affected.

***Although preliminary in vitro testing indicates that Ampligen® enhances the effectiveness of different drug combinations on avian influenza, preliminary testing in the laboratory is not necessarily predictive of successful results in clinical testing or human treatment.***

Ampligen® is undergoing pre-clinical testing for possible treatment of avian flu. Although preliminary in vitro testing indicates that Ampligen® enhances the effectiveness of different drug combinations on avian flu, preliminary testing in the laboratory is not necessarily predictive of successful results in clinical testing or human treatment. No assurance can be given that similar results will be observed in clinical trials. Use of Ampligen® in the treatment of avian flu requires prior regulatory approval. Only the FDA can determine whether a drug is safe, effective or promising for treating a specific application. As discussed in the prior risk factor, obtaining regulatory approvals is a rigorous and lengthy process.

In addition, Ampligen® is being tested on two strains of avian influenza virus. There are a number of strains and strains mutate. No assurance can be given that Ampligen® will be effective on any strains that might infect humans.

***We may continue to incur substantial losses and our future profitability is uncertain.***

We began operations in 1966 and last reported net profit from 1985 through 1987. Since 1987, we have incurred substantial operating losses, as we pursued our clinical trial effort to get our experimental drug, Ampligen®, approved. As of December 31, 2007, our accumulated deficit was approximately \$185,190,000. We have not yet generated significant revenues from our products and may incur substantial and increased losses in the future. We cannot assure that we will ever achieve significant revenues from product sales or become profitable. We require, and will continue to require, the commitment of substantial resources to develop our products. We cannot assure that our product development efforts will be successfully completed or that required regulatory approvals will be obtained or that any products will be manufactured and marketed successfully, or be profitable.

***We may require additional financing which may not be available.***

The development of our products will require the commitment of substantial resources to conduct the time-consuming research, preclinical development, and clinical trials that are necessary to bring pharmaceutical products to market. As of December 31, 2007, we had approximately \$15,415,000 in cash and cash equivalents and short-term investments. We anticipate, but cannot assure, that these funds will be sufficient to meet our operating cash requirements for the next 18 months.

On April 12, 2006, we entered into a common stock purchase agreement with Fusion Capital pursuant to which Fusion Capital has agreed, under certain conditions and with certain limitations, to purchase on each trading day \$100,000 of our common stock up to an aggregate of \$50,000,000 over a 25 month period (see Part I, Item 2. "Management's Discussion and Analysis of Financial Condition and Results of Operations; Liquidity and Capital Resources").

We only have the right to receive up to \$100,000 per trading day under the agreement with Fusion Capital unless our stock price exceeds \$1.90 by at least \$0.10, in which case the daily amount may be increased under certain conditions as the price of our common stock increases. Fusion Capital shall not have the right nor the obligation to purchase any shares of our common stock on any trading days that the market price of our common stock is less than \$1.00. We have registered an aggregate of 13,201,840 shares purchasable by Fusion Capital pursuant to the common stock purchase agreement (inclusive of up to 643,502 additional Commitment Shares) and, through March 3, 2008, we have sold to Fusion Capital an aggregate of 10,682,032 shares under the common stock purchase agreement for aggregate gross proceeds of approximately \$19,379,000. Assuming a purchase price of \$0.85 per share (the closing sale price of the common stock on March 3, 2008) and the purchase by Fusion Capital of the remaining 1,061,189 shares (not including the remaining 194,686 Commitment Shares), total gross proceeds to us from the remaining shares would only be \$9,020,106 (\$28,759,237 in the aggregate under the common stock purchase agreement).



In the event we elect to issue additional shares to Fusion Capital, we will be required to file a new registration statement and have it declared effective by the Securities and Exchange Commission. In addition, Fusion Capital cannot purchase more than 27,386,723 shares, inclusive of Commitment Shares under the common stock purchase agreement.

Accordingly, depending upon the future market price of our common stock, even if we register the balance of the shares issuable to Fusion Capital under the Purchase Agreement, we most likely will realize much less than the maximum \$50,000,000 proceeds from the sale of stock under the Purchase Agreement. In this regard, our current stock price is under \$1.00 and, accordingly, unless and until the market price increases to at least \$1.00, no additional shares will be sold to Fusion Capital under the agreement.

The extent to which we rely on Fusion Capital as a source of funding will depend on a number of factors including, the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources.

If obtaining sufficient financing from Fusion Capital were to prove unavailable or prohibitively dilutive and if we are unable to commercialize and sell Ampligen® and/or increase sales of Alferon N Injection® or our other products, we will need to secure another source of funding in order to satisfy our working capital needs. Even if we are able to access the full \$50,000,000 under the common stock purchase agreement with Fusion Capital, we may need to raise additional funds through additional equity or debt financing or from other sources in order to complete the necessary clinical trials and the regulatory approval processes including the commercializing of Ampligen® products. There can be no assurances that we will raise adequate funds which may have a material adverse effect on our ability to develop our products. Also, we have the ability to curtail discretionary spending, including some research and development activities, if required to conserve cash.

***We may not be profitable unless we can protect our patents and/or receive approval for additional pending patents.***

We need to preserve and acquire enforceable patents covering the use of Ampligen® for a particular disease in order to obtain exclusive rights for the commercial sale of Ampligen® for such disease. We obtained all rights to Alferon N Injection®, and we plan to preserve and acquire enforceable patents covering its use for existing and potentially new diseases. Our success depends, in large part, on our ability to preserve and obtain patent protection for our products and to obtain and preserve our trade secrets and expertise. Certain of our know-how and technology is not patentable, particularly the procedures for the manufacture of our experimental drug, Ampligen®, which is carried out according to standard operating procedure manuals. We have been issued certain patents including those on the use of Ampligen® and Ampligen® in combination with certain other drugs for the treatment of HIV. We also have been issued patents on the use of Ampligen® in combination with certain other drugs for the treatment of chronic Hepatitis B virus, chronic Hepatitis C virus, and a patent which affords protection on the use of Ampligen® in patients with Chronic Fatigue Syndrome. We have not yet been issued any patents in the United States for the use of Ampligen® as a sole treatment for any of the cancers, which we have sought to target. With regard to Alferon N Injection®, we have acquired from ISI its patents for natural alpha interferon produced from human peripheral blood leukocytes and its production process and we have filed a patent application for the use of Alferon® LDO in treating viral diseases including avian influenza. We cannot assure that our competitors will not seek and obtain patents regarding the use of similar products in combination with various other agents, for a particular target indication prior to our doing such. If we cannot protect our patents covering the use of our products for a particular disease, or obtain additional patents, we may not be able to successfully market our products.

***The patent position of biotechnology and pharmaceutical firms is highly uncertain and involves complex legal and factual questions.***

To date, no consistent policy has emerged regarding the breadth of protection afforded by pharmaceutical and biotechnology patents. There can be no assurance that new patent applications relating to our products or technology will result in patents being issued or that, if issued, such patents will afford meaningful protection against competitors with similar technology. It is generally anticipated that there may be significant litigation in the industry regarding patent and intellectual property rights. Such litigation could require substantial resources from us and we may not have the financial resources necessary to enforce the patent rights that we hold. No assurance can be made that our patents will provide competitive advantages for our products or will not be successfully challenged by competitors. No assurance can be given that patents do not exist or could not be filed which would have a materially adverse effect on our ability to develop or market our products or to obtain or maintain any competitive position that we may achieve with respect to our products. Our patents also may not prevent others from developing competitive products using related technology.

***There can be no assurance that we will be able to obtain necessary licenses if we cannot enforce patent rights we may hold. In addition, the failure of third parties from whom we currently license certain proprietary information or from whom we may be required to obtain such licenses in the future, to adequately enforce their rights to such proprietary information, could adversely affect the value of such licenses to us.***

If we cannot enforce the patent rights we currently hold we may be required to obtain licenses from others to develop, manufacture or market our products. There can be no assurance that we would be able to obtain any such licenses on commercially reasonable terms, if at all. We currently license certain proprietary information from third parties, some of which may have been developed with government grants under circumstances where the government maintained certain rights with respect to the proprietary information developed. No assurances can be given that such third parties will adequately enforce any rights they may have or that the rights, if any, retained by the government will not adversely affect the value of our license.

There is no guarantee that our trade secrets will not be disclosed or known by our competitors.

To protect our rights, we require certain employees and consultants to enter into confidentiality agreements with us. There can be no assurance that these agreements will not be breached, that we would have adequate and enforceable remedies for any breach, or that any trade secrets of ours will not otherwise become known or be independently developed by competitors.

***We have limited marketing and sales capability. If we are unable to obtain additional distributors and our current and future distributors do not market our products successfully, we may not generate significant revenues or become profitable.***

We have limited marketing and sales capability. We are dependent upon existing and, possibly future, marketing agreements and third party distribution agreements for our products in order to generate significant revenues and become profitable. As a result, any revenues received by us will be dependent in large part on the efforts of third parties, and there is no assurance that these efforts will be successful.

Our commercialization strategy for Ampligen-CFS may include licensing/co-marketing agreements utilizing the resources and capacities of a strategic partner(s). We are currently seeking worldwide marketing partner(s), with the goal of having a relationship in place before approval is obtained. In parallel to partnering discussions, appropriate pre-marketing activities will be undertaken. We intend to control manufacturing of Ampligen on a worldwide basis.

We cannot assure that our U.S. or foreign marketing strategy will be successful or that we will be able to establish future marketing or third party distribution agreements on terms acceptable to us, or that the cost of establishing these arrangements will not exceed any product revenues.

***There are no long-term agreements with suppliers of required materials. If we are unable to obtain the required raw materials, we may be required to scale back our operations or stop manufacturing Alferon N Injection® and/or Ampligen®.***

A number of essential materials are used in the production of Alferon N Injection®, including human white blood cells. We do not have long-term agreements for the supply of any of such materials. There can be no assurance we can enter into long-term supply agreements covering essential materials on commercially reasonable terms, if at all.

There are a limited number of manufacturers in the United States available to provide the polymers for use in manufacturing Ampligen®. At present, we do not have any agreements with third parties for the supply of any of these polymers. We have established relevant manufacturing operations within our New Brunswick, New Jersey facility for the production of Ampligen® polymers from raw materials in order to obtain polymers on a more consistent manufacturing basis.

If we are unable to obtain or manufacture the required polymers, we may be required to scale back our operations or stop manufacturing. The costs and availability of products and materials we need for the production of Ampligen® and the commercial production of Alferon N Injection® and other products which we may commercially produce are subject to fluctuation depending on a variety of factors beyond our control, including competitive factors, changes in technology, and FDA and other governmental regulations and there can be no assurance that we will be able to obtain such products and materials on terms acceptable to us or at all.

***There is no assurance that successful manufacture of a drug on a limited scale basis for investigational use will lead to a successful transition to commercial, large-scale production.***

Small changes in methods of manufacturing, including commercial scale-up, may affect the chemical structure of Ampligen® and other RNA drugs, as well as their safety and efficacy, and can, among other things, require new clinical studies and affect orphan drug status, particularly, market exclusivity rights, if any, under the Orphan Drug Act. The transition from limited production of pre-clinical and clinical research quantities to production of commercial quantities of our products will involve distinct management and technical challenges and will require additional management and technical personnel and capital to the extent such manufacturing is not handled by third parties. There can be no assurance that our manufacturing will be successful or that any given product will be determined to be safe and effective, capable of being manufactured economically in commercial quantities or successfully marketed.

***We have limited manufacturing experience and capacity.***

Ampligen® has been only produced in limited quantities for use in our clinical trials and we are dependent upon a third party supplier for substantially all of the production process. The failure to continue these arrangements or to achieve other such arrangements on satisfactory terms could have a material adverse affect on us. Also, to be successful, our products must be manufactured in commercial quantities in compliance with regulatory requirements and at acceptable costs. To the extent we are involved in the production process, our current facilities are not adequate for the production of our proposed products for large-scale commercialization, and we currently do not have adequate personnel to conduct commercial-scale manufacturing. We intend to utilize third-party facilities if and when the need arises or, if we are unable to do so, to build or acquire commercial-scale manufacturing facilities. We will need to comply with regulatory requirements for such facilities, including those of the FDA pertaining to current Good Manufacturing Practices (“cGMP”) regulations. There can be no assurance that such facilities can be used, built, or acquired on commercially acceptable terms, or that such facilities, if used, built, or acquired, will be adequate for our long-term needs.

***We may not be profitable unless we can produce Ampligen® or other products in commercial quantities at costs acceptable to us.***

We have never produced Ampligen® or any other products in large commercial quantities. We must manufacture our products in compliance with regulatory requirements in large commercial quantities and at acceptable costs in order for us to be profitable. We intend to utilize third-party manufacturers and/or facilities if and when the need arises or, if we are unable to do so, to build or acquire commercial-scale manufacturing facilities. If we cannot manufacture commercial quantities of Ampligen® or enter into third party agreements for its manufacture at costs acceptable to us, our operations will be significantly affected. Also, each production lot of Alferon N Injection® is subject to FDA review and approval prior to releasing the lots to be sold. This review and approval process could take considerable time, which would delay our having product in inventory to sell.

***Rapid technological change may render our products obsolete or non-competitive.***

The pharmaceutical and biotechnology industries are subject to rapid and substantial technological change. Technological competition from pharmaceutical and biotechnology companies, universities, governmental entities and others diversifying into the field is intense and is expected to increase. Most of these entities have significantly greater research and development capabilities than us, as well as substantial marketing, financial and managerial resources, and represent significant competition for us. There can be no assurance that developments by others will not render our products or technologies obsolete or noncompetitive or that we will be able to keep pace with technological developments.



***Our products may be subject to substantial competition.***

Ampligen®. Competitors may be developing technologies that are, or in the future may be, the basis for competitive products. Some of these potential products may have an entirely different approach or means of accomplishing similar therapeutic effects to products being developed by us. These competing products may be more effective and less costly than our products. In addition, conventional drug therapy, surgery and other more familiar treatments may offer competition to our products. Furthermore, many of our competitors have significantly greater experience than us in pre-clinical testing and human clinical trials of pharmaceutical products and in obtaining FDA, HPB and other regulatory approvals of products. Accordingly, our competitors may succeed in obtaining FDA, HPB or other regulatory product approvals more rapidly than us. There are no drugs approved for commercial sale with respect to treating ME/CFS in the United States. The dominant competitors with drugs to treat disease indications in which we plan to address include Gilead Pharmaceutical, Pfizer, Bristol-Myers, Abbott Labs, Glaxo Smith Kline, Merck and Schering-Plough Corp. These potential competitors are among the largest pharmaceutical companies in the world, are well known to the public and the medical community, and have substantially greater financial resources, product development, and manufacturing and marketing capabilities than we have. Although we believe our principal advantage is the unique mechanism of action of Ampligen® on the immune system, we cannot assure that we will be able to compete.

ALFERON N Injection®. Our competitors are among the largest pharmaceutical companies in the world, are well known to the public and the medical community, and have substantially greater financial resources, product development, and manufacturing and marketing capabilities than we have. Alferon N Injection® currently competes with Schering's injectable recombinant alpha interferon product (INTRON® A) for the treatment of genital warts. 3M Pharmaceuticals also offer competition from its immune-response modifier, Aldara®, a self-administered topical cream, for the treatment of external genital and perianal warts. In addition, Medigene recently received FDA approval for a self-administered ointment, Veregen™, which is indicated for the topical treatment of external genital and perianal warts. Alferon N Injection® also competes with surgical, chemical, and other methods of treating genital warts. We cannot assess the impact products developed by our competitors, or advances in other methods of the treatment of genital warts, will have on the commercial viability of Alferon N Injection®. If and when we obtain additional approvals of uses of this product, we expect to compete primarily on the basis of product performance. Our competitors have developed or may develop products (containing either alpha or beta interferon or other therapeutic compounds) or other treatment modalities for those uses. There can be no assurance that, if we are able to obtain regulatory approval of Alferon N Injection® for the treatment of new indications, we will be able to achieve any significant penetration into those markets. In addition, because certain competitive products are not dependent on a source of human blood cells, such products may be able to be produced in greater volume and at a lower cost than Alferon N Injection®. Currently, our wholesale price on a per unit basis of Alferon N Injection® is higher than that of the competitive recombinant alpha and beta interferon products.

General. Other companies may succeed in developing products earlier than we do, obtaining approvals for such products from the FDA more rapidly than we do, or developing products that are more effective than those we may develop. While we will attempt to expand our technological capabilities in order to remain competitive, there can be no assurance that research and development by others or other medical advances will not render our technology or products obsolete or non-competitive or result in treatments or cures superior to any therapy we develop.

***Possible side effects from the use of Ampligen® or Alferon N Injection® could adversely affect potential revenues and physician/patient acceptability of our product.***

Ampligen®. We believe that Ampligen® has been generally well tolerated with a low incidence of clinical toxicity, particularly given the severely debilitating or life threatening diseases that have been treated. A mild flushing reaction has been observed in approximately 15% of patients treated in our various studies. This reaction is occasionally accompanied by a rapid heart beat, a tightness of the chest, urticaria (swelling of the skin), anxiety, shortness of breath, subjective reports of "feeling hot", sweating and nausea. The reaction is usually infusion-rate related and can generally be controlled by reducing the rate of infusion. Other adverse side effects include liver enzyme level elevations, diarrhea, itching, asthma, low blood pressure, photophobia, rash, transient visual disturbances, slow or irregular heart rate, decreases in platelets and white blood cell counts, anemia, dizziness, confusion, elevation of kidney function tests, occasional temporary hair loss and various flu-like symptoms, including fever, chills, fatigue, muscular aches, joint pains, headaches, nausea and vomiting. These flu-like side effects typically subside within several months. One or more of the potential side effects might deter usage of Ampligen® in certain clinical situations and therefore, could adversely affect potential revenues and physician/patient acceptability of our product.

Alferon N Injection®. At present, Alferon N Injection® is only approved for the intra-lesional (within the lesion) treatment of refractory or recurring external genital warts in adults. In clinical trials conducted for the treatment of genital warts with Alferon N Injection®, patients did not experience serious side effects; however, there can be no assurance that unexpected or unacceptable side effects will not be found in the future for this use or other potential uses of Alferon N Injection® which could threaten or limit such product's usefulness.

***We may be subject to product liability claims from the use of Ampligen®, Alferon N Injection®, or other of our products which could negatively affect our future operations.***

We face an inherent business risk of exposure to product liability claims in the event that the use of Ampligen® or other of our products results in adverse effects. This liability might result from claims made directly by patients, hospitals, clinics or other consumers, or by pharmaceutical companies or others manufacturing these products on our behalf. Our future operations may be negatively affected from the litigation costs, settlement expenses and lost product sales inherent to these claims. While we will continue to attempt to take appropriate precautions, we cannot assure that we will avoid significant product liability exposure. Although we currently maintain product liability insurance coverage, there can be no assurance that this insurance will provide adequate coverage against Ampligen® and/or Alferon N Injection® product liability claims. A successful product liability claim against us in excess of Ampligen®'s \$1,000,000 in insurance coverage; \$3,000,000 in aggregate, or in excess of Alferon N Injection®'s \$5,000,000 in insurance coverage; \$5,000,000 in aggregate; or for which coverage is not provided could have a negative effect on our business and financial condition.

***The loss of services of key personnel including Dr. William A. Carter could hurt our chances for success.***

Our success is dependent on the continued efforts of Dr. William A. Carter because of his position as a pioneer in the field of nucleic acid drugs, his being the co-inventor of Ampligen®, and his knowledge of our overall activities, including patents and clinical trials. The loss of Dr. Carter's services could have a material adverse effect on our operations and chances for success. We have secured key man life insurance in the amount of \$2,000,000 on the life of Dr. Carter and we have an employment agreement with Dr. Carter that, as amended, runs until December 31, 2010. However, Dr. Carter has the right to terminate his employment upon not less than 30 days prior written notice. The loss of Dr. Carter or other personnel or the failure to recruit additional personnel as needed could have a materially adverse effect on our ability to achieve our objectives.

***Uncertainty of health care reimbursement for our products.***

Our ability to successfully commercialize our products will depend, in part, on the extent to which reimbursement for the cost of such products and related treatment will be available from government health administration authorities, private health coverage insurers and other organizations. Significant uncertainty exists as to the reimbursement status of newly approved health care products, and from time to time legislation is proposed, which, if adopted, could further restrict the prices charged by and/or amounts reimbursable to manufacturers of pharmaceutical products. We cannot predict what, if any, legislation will ultimately be adopted or the impact of such legislation on us. There can be no assurance that third party insurance companies will allow us to charge and receive payments for products sufficient to realize an appropriate return on our investment in product development.

***There are risks of liabilities associated with handling and disposing of hazardous materials.***

Our business involves the controlled use of hazardous materials, carcinogenic chemicals, flammable solvents and various radioactive compounds. Although we believe that our safety procedures for handling and disposing of such materials comply in all material respects with the standards prescribed by applicable regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of such an accident or the failure to comply with applicable regulations, we could be held liable for any damages that result, and any such liability could be significant. We do not maintain insurance coverage against such liabilities.

**Risks Associated With an Investment in Our Common Stock**

***The market price of our stock may be adversely affected by market volatility.***

The market price of our common stock has been and is likely to be volatile. In addition to general economic, political and market conditions, the price and trading volume of our stock could fluctuate widely in response to many factors, including:

· announcements of the results of clinical trials by us or our competitors;



- adverse reactions to products;
- governmental approvals, delays in expected governmental approvals or withdrawals of any prior governmental approvals or public or regulatory agency concerns regarding the safety or effectiveness of our products;
- changes in U.S. or foreign regulatory policy during the period of product development;
- developments in patent or other proprietary rights, including any third party challenges of our intellectual property rights;
- announcements of technological innovations by us or our competitors;
- announcements of new products or new contracts by us or our competitors;
- actual or anticipated variations in our operating results due to the level of development expenses and other factors;
- changes in financial estimates by securities analysts and whether our earnings meet or exceed the estimates;
- conditions and trends in the pharmaceutical and other industries; new accounting standards; and
- the occurrence of any of the risks described in these "Risk Factors."

Our common stock is listed for quotation on the American Stock Exchange. For the 12-month period ended December 31, 2007, the price of our common stock has ranged from \$0.76 to \$2.33 per share. We expect the price of our common stock to remain volatile. The average daily trading volume of our common stock varies significantly. Our relatively low average volume and low average number of transactions per day may affect the ability of our stockholders to sell their shares in the public market at prevailing prices and a more active market may never develop.

In the past, following periods of volatility in the market price of the securities of companies in our industry, securities class action litigation has often been instituted against companies in our industry. If we face securities litigation in the future, even if without merit or unsuccessful, it would result in substantial costs and a diversion of management attention and resources, which would negatively impact our business.

***Our stock price may be adversely affected if a significant amount of shares are sold in the public market.***

We have registered 13,201,840 for sale by Fusion Capital and 143,658 shares by others, and have stockholder authorization to register an additional 15,000,000 shares for sale by Fusion Capital under the common stock purchase agreement that expires April 30, 2008. As of December 31, 2007, approximately 175,435 shares of our common stock, constituted "restricted securities" as defined in Rule 144 under the Securities Act. Also, we have registered 6,859,534 shares issuable upon exercise of 135% of certain Warrants and upon exercise of certain other warrants. Registration of the shares permits the sale of the shares in the open market or in privately negotiated transactions without compliance with the requirements of Rule 144. To the extent the exercise price of the warrants is less than the market price of the common stock, the holders of the warrants are likely to exercise them and sell the underlying shares of common stock and to the extent that the conversion price and exercise price of these securities are adjusted pursuant to anti-dilution protection, the securities could be exercisable or convertible for even more shares of common stock. We also may issue shares to be used to meet our capital requirements or use shares to compensate employees, consultants and/or directors. We are unable to estimate the amount, timing or nature of future sales of outstanding common stock. Sales of substantial amounts of our common stock in the public market could cause the market price for our common stock to decrease. Furthermore, a decline in the price of our common stock would likely impede our ability to raise capital through the issuance of additional shares of common stock or other equity securities.

***The sale of our common stock to Fusion Capital may cause dilution and the sale of the shares of common stock acquired by Fusion Capital and other shares registered for selling stockholders could cause the price of our common stock to decline.***

The sale by Fusion Capital and other selling stockholders of our common stock will increase the number of our publicly traded shares, which could depress the market price of our common stock. Moreover, the mere prospect of sales by Fusion Capital and other selling stockholders could depress the market price for our common stock. The issuance of shares to Fusion Capital under the common stock purchase agreement will dilute the equity interest of existing stockholders and could have an adverse effect on the market price of our common stock.

The purchase price for the common stock to be sold to Fusion Capital pursuant to the common stock purchase agreement will fluctuate based on the price of our common stock. All shares sold to Fusion Capital are to be freely tradable. Fusion Capital may sell none, some or all of the shares of common stock purchased from us at any time. We expect that the shares offered by Fusion Capital will be sold over a period of in excess of two years. Depending upon market liquidity at the time, a sale of shares by Fusion at any given time could cause the trading price of our common stock to decline. The sale of a substantial number of shares of our common stock to Fusion Capital pursuant to the purchase agreement, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

***Provisions of our Certificate of Incorporation and Delaware law could defer a change of our management which could discourage or delay offers to acquire us.***

Provisions of our Certificate of Incorporation and Delaware law may make it more difficult for someone to acquire control of us or for our stockholders to remove existing management, and might discourage a third party from offering to acquire us, even if a change in control or in management would be beneficial to our stockholders. For example, our Certificate of Incorporation allows us to issue shares of preferred stock without any vote or further action by our stockholders. Our Board of Directors has the authority to fix and determine the relative rights and preferences of preferred stock. Our Board of Directors also has the authority to issue preferred stock without further stockholder approval. As a result, our Board of Directors could authorize the issuance of a series of preferred stock that would grant to holders the preferred right to our assets upon liquidation, the right to receive dividend payments before dividends are distributed to the holders of common stock and the right to the redemption of the shares, together with a premium, prior to the redemption of our common stock. In this regard, in November 2002, we adopted a stockholder rights plan and, under the Plan, our Board of Directors declared a dividend distribution of one Right for each outstanding share of Common Stock to stockholders of record at the close of business on November 29, 2002. Each Right initially entitles holders to buy one unit of preferred stock for \$30.00. The Rights generally are not transferable apart from the common stock and will not be exercisable unless and until a person or group acquires or commences a tender or exchange offer to acquire, beneficial ownership of 15% or more of our common stock. However, for Dr. Carter, our chief executive officer, who already beneficially owns 7.9% of our common stock, the Plan's threshold will be 20%, instead of 15%. The Rights will expire on November 19, 2012, and may be redeemed prior thereto at \$.01 per Right under certain circumstances.

***Special Note Regarding Forward Looking Statements***

Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us, you should not place undue reliance on any such forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Our research in clinical efforts may continue for the next several years and we may continue to incur losses due to clinical costs incurred in the development of Ampligen® for commercial application. Possible losses may fluctuate from quarter to quarter as a result of differences in the timing of significant expenses incurred and receipt of licensing fees and/or cost recovery treatment revenues in Europe, Canada and in the United States.

**ITEM 1B. Unresolved Staff Comments.**

None.

**ITEM 2. Properties.**

We currently lease our headquarters located in Philadelphia, Pennsylvania consisting of a suite of offices of approximately 15,000 square feet. We also currently own, occupy and use our New Brunswick, New Jersey laboratory and production facility that we acquired from ISI. These facilities consist of two buildings located on 2.8 acres. One building is a two story facility consisting of a total of 31,300 square feet. This facility contains offices, laboratories, production space and shipping and receiving areas. It is also contains space designated for research and development, our pharmacy, packaging, quality assurance and quality control laboratories. Building Two has 11,670 square feet consisting of offices, laboratories and warehouse space. The property has parking space for approximately 100 vehicles.

**ITEM 3. Legal Proceedings.**

On September 30, 1998, we filed a multi-count complaint against Manuel P. Asensio, Asensio & Company, Inc. ("Asensio"). The action included claims of defamation, disparagement, tortious interference with existing and prospective business relations and conspiracy, arising out of Asensio's false and defamatory statements. The complaint further alleged that Asensio defamed and disparaged us in furtherance of a manipulative, deceptive and unlawful short-selling scheme in August and September, 1998. In 1999, Asensio filed an answer and counterclaim alleging that in response to Asensio's strong sell recommendation and other press releases, we made defamatory statements about Asensio. We denied the material allegations of the counterclaim. In July 2000, following dismissal in federal court for lack of subject matter jurisdiction, we transferred the action to the Pennsylvania State Court. In March 2001, the defendants responded to the complaints as amended and a trial commenced on January 30, 2002. A jury verdict disallowed the claims against the defendants for defamation and disparagement and the court granted us a directed verdict on the counterclaim. On July 2, 2002 the Court entered an order granting us a new trial against Asensio for defamation and disparagement. Thereafter, Asensio appealed the granting of a new trial to the Superior Court of Pennsylvania. The Superior Court of Pennsylvania has denied Asensio's appeal. Asensio petitioned the Supreme Court of Pennsylvania for allowance of an appeal, which was denied. We now anticipate the scheduling of a new trial against Asensio for defamation and disparagement in the Philadelphia Common Pleas Court.

In June 2002, a former ME/CFS clinical trial patient in Belgium filed a claim in Belgium against Hemispherx Biopharma Europe, NV/SA, our Belgian subsidiary, and one of its clinical trial investigators alleging that she was harmed in the Belgium ME/CFS clinical trial as a result of negligence and breach of warranties. We believe the claim is without merit and we are defending the claim against us through our product liability insurance carrier.

In December 2004, we filed a multicount complaint in federal court (Southern District of Florida) against a conspiratorial group seeking to illegally manipulate our stock for purposes of bringing about a hostile takeover of Hemispherx. The lawsuit alleges that the conspiratorial group commenced with a plan to seize control of our cash and proprietary assets by an illegal campaign to drive down our stock price and publish disparaging reports on our management and current fiduciaries. The lawsuit seeks monetary damages from each member of the conspiratorial group as well as injunctions preventing further recurrences of their misconduct. The conspiratorial group includes Bioclones, a privately held South African Biopharmaceutical company that collaborated with us, and Johannesburg Consolidated Investments, a South African corporation, Cyril Donninger, R. B. Kebble, H. C. Buitendag, Bart Goemaere, and John Doe(s). Bioclones, Johannesburg Consolidated Investments, Cyril Donninger, R. B. Kebble and H.C. Buitendag filed a motion to dismiss the complaint, which was granted by the court. The decision granting the dismissal is on appeal to the 11<sup>th</sup> federal circuit court of appeals.

In October 2006, litigation was initiated against us in the Court of Common Pleas, Philadelphia County, Pennsylvania between us and Hospira Worldwide, Inc. with regard to a dispute with respect to fees for services charged by Hospira Worldwide, Inc. to us. The dispute was promptly settled and the litigation dismissed.

In January 2007, arbitration proceedings were initiated by Bioclones (Proprietary), Ltd., (“Bioclones”) and are pending in South Africa to determine damages arising out of the termination of a marketing agreement we had with Bioclones. We had deemed the marketing agreement void due to numerous and long standing failures of performance by Bioclones and will present claims for damages against Bioclones in the arbitration. Bioclones has now confirmed that the marketing agreement has been terminated.

In January 2007, we filed an application in South Africa for the dissolution of Ribotech (PTY) Ltd. (“Ribotech”) on the grounds that the purpose for the existence of Ribotech, the marketing agreement between us and Bioclones, had been terminated. The application for termination is now pending.

Due to non-performance by Laboratorios del Dr. Esteve (“Esteve”) of certain contractually required clinical trials, we notified Esteve of our intention to terminate the Sales and Distribution Agreement entered into as of March 20, 2002, and in December 2007, as is its right under the Sales and Distribution Agreement, Esteve applied for arbitration, seeking damages. We believe the Esteve claim is without merit and have filed a counterclaim.

In March 2007, Cedric Philipp (“Philipp”) initiated an arbitration proceeding in Philadelphia, Pennsylvania with the American Arbitration Association alleging that, under a 1994 agreement between us and Philipp (“1994 Agreement”), we owed him commissions on product, or services he alleges we had purchased from Hollister-Stier. The Company is defending this claim on, among other claims, the ground that the 1994 Agreement has been terminated. In April 2007, the company filed a declaratory judgment action in the Court of Common Pleas of Philadelphia asking the court to declare that the 1994 agreement between us and Cedric Philipp has been terminated. We have withdrawn the declaratory judgment action.

#### **ITEM 4. Submission of Matters to a Vote of Security Holders.**

No matters were submitted to a vote of the security holders during the last quarter of the year ended December 31, 2007.

## **PART II**

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

In 2007, we issued 6,943,682 shares of common stock consisting of 1) 116,745 shares for interest payments related to the October 2003, January 2004 and July 2004 Convertible Debentures; 2) 175,435 shares in payment of services rendered and 3) 6,651,502 shares issued pursuant to the 2006 Purchase Agreement with Fusion Capital.

The foregoing issuances of securities were private transactions and exempt from registration under section 4(2) of the Securities Act and/or regulation D rule 506 promulgated under the Securities Act. These securities have been or will be registered with the SEC.

Since October 1997 our common stock has been listed and traded on the American Stock Exchange (“AMEX”) under the symbol HEB. The following table sets forth the high and low list prices for our Common Stock for the last two fiscal years as reported by the AMEX. Such prices reflect inter-dealer prices, without retail markup, markdowns or commissions and may not necessarily represent actual transactions.

| <b>COMMON STOCK</b>                       | <b>High</b> | <b>Low</b> |
|-------------------------------------------|-------------|------------|
| <u>Time Period:</u>                       |             |            |
| January 1, 2006 through March 31, 2006    | \$ 4.23     | \$ 2.15    |
| April 1, 2006 through June 30, 2006       | 3.57        | 2.21       |
| July 1, 2006 through September 30, 2006   | 2.63        | 1.80       |
| October 1, 2006 through December 31, 2006 | 2.47        | 1.87       |
| January 1, 2007 through March 31, 2007    | 2.49        | 1.60       |
| April 1, 2007 through June 30, 2007       | 1.82        | 1.24       |
| July 1, 2007 through September 30, 2007   | 1.79        | 1.06       |
| October 1, 2007 through December 31, 2007 | 2.08        | 0.53       |

As of March 3, 2008, there were approximately 256 holders of record of our Common Stock. This number was determined from records maintained by our transfer agent and does not include beneficial owners of our securities whose securities are held in the names of various dealers and/or clearing agencies.

On March 3, 2008, the last sale price for our common stock on the AMEX was \$0.85 per share.



We have not paid any cash dividends on our Common Stock in recent years. It is management's intention not to declare or pay dividends on our Common Stock, but to retain earnings, if any, for the operation and expansion of our business.

The following table gives information about our Common Stock that may be issued upon the exercise of options, warrants and rights under all of our equity compensation plans as of December 31, 2007.

| Plan Category                                               | Number of Securities to be issued upon exercise of outstanding options, warrants and rights | Weighted-average Exercise price of Outstanding options, warrants and rights | Number of Securities Remaining available for future issuance under equity compensation plans(excluding securities reflected in column (a)) |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|                                                             | (a)                                                                                         | (b)                                                                         | (c)                                                                                                                                        |
| Equity compensation plans approved by security holders:     | 6,902,204                                                                                   | \$ 2.61                                                                     | 1,443,524                                                                                                                                  |
| Equity compensation plans not approved by security holders: | 7,262,771                                                                                   | \$ 1.99                                                                     | -                                                                                                                                          |
| Total                                                       | 14,164,975                                                                                  | \$ 2.99                                                                     | 1,443,524                                                                                                                                  |

## Performance Graph

### Total Return To Shareholders (Includes reinvestment of dividends)

#### ANNUAL RETURN PERCENTAGE Years Ending

| Company Name / Index       | Dec 03 | Dec 04 | Dec 05 | Dec 06 | Dec 07 |
|----------------------------|--------|--------|--------|--------|--------|
| Hemispherx Biopharma, Inc. | 6.10   | -15.93 | 14.21  | 1.38   | -65.45 |
| S&P SmallCap 600 Index     | 38.79  | 22.65  | 7.68   | 15.12  | -0.30  |
| Peer Group                 | 46.06  | -63.90 | -10.29 | -21.89 | -54.59 |

#### INDEXED RETURNS Years Ending

| Company Name / Index       | Base Period<br>Dec 02 | Dec 03 | Dec 04 | Dec 05 | Dec 06 | Dec 07 |
|----------------------------|-----------------------|--------|--------|--------|--------|--------|
| Hemispherx Biopharma, Inc. | 100                   | 106.10 | 89.20  | 101.88 | 103.29 | 35.68  |
| S&P SmallCap 600 Index     | 100                   | 138.79 | 170.22 | 183.30 | 211.01 | 210.38 |
| Peer Group                 | 100                   | 146.06 | 52.72  | 47.29  | 36.94  | 16.78  |

**Peer Group Companies**

**AVANT**

**IMMUNOTHERAPEUTICS**

**INC**

**AVI BIOPHARMA INC**

**GENTA INC**

**SCICLONE**

**PHARMACEUTICALS INC**

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**ITEM 6. Selected Financial Data (in thousands except for share and per share data).**

The selected consolidated financial data set forth below should be read in conjunction with our consolidated financial statements, and the related notes thereto, and “Management’s Discussion and Analysis of Financial Condition and Results of Operations”, included in this Annual Report. The statement of operations and balance sheet data presented below for, and as of the end of, each of the years in the five year period ended December 31, 2007 are derived from our audited consolidated financial statements. Historical results are not necessarily indicative of the results to be expected in the future.

| Year Ended December 31                                        | 2003 <sup>(2)</sup> | 2004       | 2005       | 2006       | 2007       |
|---------------------------------------------------------------|---------------------|------------|------------|------------|------------|
| <b>Statement of Operations Data:</b>                          |                     |            |            |            |            |
| Revenues and License fee Income                               | \$ 657              | \$ 1,229   | \$ 1,083   | \$ 933     | \$ 1,059   |
| Total Costs and Expenses <sup>(1)</sup>                       | 7,909               | 12,118     | 10,998     | 19,627     | 20,348     |
| Interest Expense and Financing Costs <sup>(2)</sup>           | 6,723               | 5,674      | 3,121      | 1,259      | 396        |
| Net loss                                                      | (13,895)            | (16,887)   | (12,446)   | (19,399)   | (18,139)   |
| Deemed Dividend                                               | (1,320)             | (4,031)    | -          | -          | -          |
| Net loss applicable to common stockholders                    | (15,215)            | (20,918)   | (12,446)   | (19,399)   | (18,139)   |
| Basic and diluted net loss per share                          | (0.43)              | (0.46)     | (0.24)     | (0.31)     | (0.25)     |
| Shares used in computing basic and diluted net loss per share | 35,234,526          | 45,177,862 | 51,475,192 | 61,815,358 | 71,839,782 |

**Balance Sheet Data:**

|                                      |          |           |           |           |           |
|--------------------------------------|----------|-----------|-----------|-----------|-----------|
| Working Capital                      | \$ 7,000 | \$ 13,934 | \$ 16,353 | \$ 16,559 | \$ 14,412 |
| Total Assets                         | 13,638   | 25,293    | 24,654    | 31,431    | 23,142    |
| Debt, net of discount <sup>(3)</sup> | 3,123    | 4,312     | 4,171     | 3,871     | -         |
| Stockholders' Equity                 | 8,417    | 19,443    | 18,627    | 24,751    | 20,955    |

**Cash Flow Data:**

|                                   |            |            |            |             |             |
|-----------------------------------|------------|------------|------------|-------------|-------------|
| Cash used in operating activities | \$ (7,022) | \$ (7,240) | \$ (7,231) | \$ (13,747) | \$ (15,112) |
| Capital expenditures              | (19)       | (150)      | (1,002)    | (1,351)     | (212)       |

(1) General and Administrative expenses include stock compensation expense of \$237, \$2,000, \$391, \$2,483 and \$2,291 for the years ended December 31, 2003, 2004, 2005, 2006, and 2007, respectively.

(2) For information concerning our financing see Note 7 to our consolidated financial statements for the year ended December 31, 2007 contained herein.

(3) In accounting for the March 12, 2003, July 10, 2003, October 29, 2003, January 26, 2004 and July 13, 2004 issuances of 6% Senior Convertible Debentures in the principal amounts of \$5,426, \$5,426, \$4,142, \$4,000, and \$2,000, respectively, and related embedded conversion features and warrant issuances, we recorded debt discounts which, in effect, reduced the carrying value of the debt.

## **ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.**

The following discussion and analysis is related to our financial condition and results of operations for the three years ended December 31, 2007. This information should be read in conjunction with Item 6 - "Selected Financial Data" and our consolidated financial statements and related notes thereto beginning on F-1 of this Form 10-K.

### **Statement of Forward-Looking Information**

Certain statements in the section are "forward-looking statements." You should read the information before Item 1B above, "Special Note" Regarding Forward-Looking Statements" for more information about our presentation of information.

### **Background**

We are a biopharmaceutical company engaged in the manufacture and clinical development of new drug entities for treatment of seriously debilitating disorders. Our flagship products include Alferon N Injection® and the experimental therapeutics Ampligen® and Oragens®. Alferon N Injection® is approved for a category of STD infection, and Ampligen® and Oragens® represent experimental RNA nucleic acids being developed for globally important viral diseases and disorders of the immune system. Hemispherx's platform technology includes large and small agent components for potential treatment of various severely debilitating and life threatening diseases. We have in excess of 90 patents comprising our core intellectual property estate, a fully commercialized product (Alferon N Injection®) and GMP certified manufacturing facilities for our novel pharma products.

We have reported net income only from 1985 through 1987. Since 1987, we have incurred, as expected, substantial operating losses due to our conducting research and development programs.

## **RESULTS OF OPERATIONS**

### **Year ended December 31, 2006 versus December 31, 2007**

#### **Net loss**

Our net loss of approximately \$18,139,000 for the year ended December 31, 2007 was 6.5% lower when compared to the same period in 2006. This \$1,260,000 reduction in loss was primarily due to:

- 1) Higher Interest and Other Income of approximately \$646,000 mainly due to higher interest earned upon the maturity of our marketable securities as compared to the same period a year ago;
- 2) Lower interest expense and financing costs of \$863,000 in 2007 relating to the amortization of debt discounts on our convertible debentures and the incurring of liquidated damages in 2006 payable to our debenture holders resulting from us failing to timely file our 2005 Annual Report on Form 10-K; and
- 3) An increase of \$346,000 in other income due to a reversal of accrued liquidated damages in 2006 with respect to our debentures holders as a result of our failure to timely file our 2005 Annual Report on Form 10-K. These damages related to certain debenture covenants settled without charge in the maturation and pay down of the debenture holder's outstanding loan balances in 2007.

Net loss per share was \$(0.25) for the current period versus \$(0.31) for the same period in 2006.

### **Revenues**

Revenues for the year ended December 31, 2007 were \$1,059,000 as compared to revenues of \$933,000 for the same period in 2006. Ampligen® sold under the cost recovery clinical program was down \$49,000 or 27% and Alferon N Injection® sales were up \$175,000 or 23% as compared to the prior period. Ampligen® sold under the cost recovery clinical program is a product of physicians and ME/CFS patients applying to us to enroll in the program. This program has been in effect for several years and is offered as a treatment option to patients severely affected by CFS. As the name “cost recovery” implies, we have no gain or profit on these sales. The benefits to us include 1) physicians and patients becoming familiar with Ampligen® and 2) collection of clinical data relating to the patients’ treatment and results.

We altered our marketing strategy for Alferon N Injection® by relaunching the product via a collaborative marketing initiative between Hemispherx and a national Specialty Pharmacy network encompassing specialty pharmacists, pharmacies and targeted physician specialists. This effort was intended to focus our efforts in the most appropriate and productive market segment for the product. While Alferon N dollar sales are up from 2006, unit sales are down which reflects the effect of the price increase put into place in February 2007.

### **Production costs/cost of goods sold**

Production/cost of goods sold was approximately \$930,000 during the current period representing a decrease of approximately \$345,000 or 27% as compared to the same period in 2006. This decrease was primarily due to lower production costs of \$199,000 relating to excess production capacity during the prior period as more effort was directed toward Ampligen® research and development and the NDA; and a decrease in costs of goods sold of \$146,000. Costs of goods sold for the year ended December 31, 2006 and 2007 was \$527,000 and \$381,000, respectively.

The primary reason for the decrease can be attributed to a decrease in unit sales in the current year versus the prior year. We outsourced certain components of our overall research and development, manufacturing, marketing and distribution while maintaining control over the entire process through our quality assurance group and our clinical monitoring group.

### **Research and Development costs**

Overall research and development costs for the year ended December 31, 2007 were \$10,444,000 as compared to \$10,127,000 for the same period a year ago representing an increase of \$317,000 or 3%. These costs are primarily related to the collection and processing of clinical data, including the costs of establishing our in-house polymer production facility and the costs of preparing and completing our NDA for the use of Ampligen® in treating CFS. The year to year increase can be basically attributed to an increase in the use of consultants related to the preparation of our Ampligen® NDA.

Our primary focus in 2007 was on the preparation of the NDA for using Ampligen® to treat patients affected with CFS. In addition, we documented our polymer production process in anticipation of an FDA inspection. Three lots of liquid Ampligen® were produced for use in testing and stability studies. We finalized the filing of our Ampligen® NDA on October 7, 2007.

On December 3, 2007 a refusal to file (RTF) letter was received because the application was deemed “not substantially complete”. A written response was developed and submitted to the FDA on January 8, 2008 addressing fourteen pre-clinical and clinical questions. At our scheduled Guidance Meeting with the FDA on February 8, 2008, the number of items necessary to accomplish a complete filing for review purposes was reduced from the original fourteen to five. Nine of the original fourteen incomplete items are no longer considered as filing related issues. The five remaining open items are being addressed by our clinical staff with the expectation of filing five additional Amendments to the original NDA that was filed on October 7, 2007.

Much of our R&D cost is related to production of raw materials at our new production line installed at our New Brunswick facility. This facility produces Poly I and Poly C<sub>12</sub>U for use by Hollister-Stier (our contract manufacturer) in the manufacture of Ampligen®. The first pilot production runs are being used for stability testing. Later commercial sized runs are being used for process validation and clinical use.

In addition, we are engaged in broad based, ongoing, experimental studies assessing the efficacy of Ampligen®, Alferon N Injection®, and Alferon LDO against influenza viruses as an adjuvant single agent antiviral with Defence R&D Canada, Japan’s National Institute of Infectious disease, Biken (the non-profit operational arm of the Foundation for Microbial Diseases of Osaka University) and St. Vincent’s Hospital in Darlinghurst, Australia.

The Biken arrangement was concluded in December 2007 and basically consists of Biken purchasing Ampligen® from us for use in conducting further animal studies of intranasal prototype vaccines containing antigens from influenza sub-types H1N1, H3N2 and B progressing to human studies with all programs supported by the Japanese Health Ministry. Under the terms of the non-exclusive licensing arrangement, we will receive royalties as well as income for all Ampligen® used in the ongoing experimental work and any subsequent marketing of Ampligen® as an immuno-enhancer for flu vaccines delivered intranasally in Japan. To date, only 2 or 3 pharma companies worldwide have achieved regulatory authorizations to sell intranasally (IN) administered influenza vaccines versus many companies receiving approval for intramuscular vaccine delivery routes. Safety has been paramount in developing effective treatments. However, animal studies to date indicate Ampligen®, an experimental drug, may be safely administered intranasally. Clinical studies (in other disorders) have built a database of more than 90,000 injections of Ampligen® when given parenterally (intravenous, or “IV”).

In September 2007, Japan’s National Institute of Infectious Disease (“JNIID”) initiated research on the co-administration of JNIID’s HIV-1 vaccine with our experimental TLR3 agonist a substance that binds to a specific receptor and triggers a host defense response in the cell) and immune enhancer, Ampligen®. This research is the result of earlier research suggesting a potential role for Ampligen® in boosting responses to certain vaccines designed to combat avian influenza (Bird Flu) as well as seasonal influenza viruses. The objective of this research is to determine if Ampligen® can overcome the historical problem which has handicapped AIDS vaccine development, namely marginal immune response which undermines the potential of long-lasting protection. Ampligen® will be combined with HIV recombinant protein and administered via an intranasal route.

In October 2007, JNIIID published, in two peer reviewed journals, the results of their studies to evaluate the ability of current seasonal influenza vaccine to confer cross-protection against highly pathogenic H5N1 influenza (Bird Flu) virus in mice. These studies indicate that, as a vaccine enhancer co-administered with their seasonal trivalent influenza vaccine, Ampligen® helps induce a protective effect against H5N1 influenza viruses. As such, Ampligen® as a toll-like receptor 3 agonist may aid in overcoming the problems protecting against mutated strains of the H5N1 virus and of limited supplies of H5N1 virus vaccines. Additional studies to support this conclusion are planned.

In June 2007, we initiated a clinical trial in Australia using Ampligen® in combination with seasonal flu vaccine. This trial, expected to continue for several months, is being conducted in Australia's winter season and focuses on populations at risk for virulent cases of influenza, especially those over the age of 60 years who historically may have weakened immune systems. The Australian clinical trial was prompted by the results from the pre-clinical work conducted by the JNIIID (see above). Thirty patients are anticipated to be enrolled in this study, which will utilize a two dose Ampligen® regimen of 2 mg per dose. This study is being monitored by Clinical Network Services Pty. Ltd. located in Brisbane, Australia. The clinical trials center of St. Vincent's Hospital based in DarlingHurst, Australia is conducting the trial. Prospective patients are being screened to be included in the clinical trial.

The Center for Disease Control and Prevention reports that the number of mosquito-borne West Nile Virus ("WNV") infections in the United States is "up sharply" over the same period in 2006. This increased infection rate has accelerated the enrollment of patients in our Phase IIb clinical trial using Alferon N™ to treat WNV patients. In lab studies, Alferon N™, a natural cocktail of eight alpha-interferons, shows synergistic effects (up to 100 fold over recombinant interferons) against pathogens such as WNV. The Phase IIb clinical trial is a double-blinded, randomized, multi-center program under the direction of Cornell University and Weill Cornell Medical College/New York Hospital.

### **General and Administrative Expenses**

General and Administrative (“G&A”) expenses for the year ended December 31, 2006 and 2007 were approximately \$8,225,000 and \$8,974,000, respectively, reflecting an increase of \$749,000 or 9%. This increase related primarily to an increase in legal and professional fees of \$325,000 primarily due to on-going litigation involving Bioclones, increase in travel related expenses of \$87,000 and increases in salaries and wages of \$398,000 mainly resulting from the hire of our chief operating officer during the 4<sup>th</sup> quarter 2006. These increases in general and administrative costs were offset by lower accounting fees of \$545,000 in 2007. The decrease in accounting fees was primarily due to charges incurred by us in 2006 related to the restatements to our financial statements in 2005. Lastly, we incurred impairment losses in 2007 amounting to \$526,000 as compared to no such charges in the prior year. The primary reason for these charges stemmed from the \$228,000 write-down of a water purification system that was determined to be unnecessary at our New Jersey facility due to a change in manufacturing plans. In addition, we wrote down the value of our intangible asset associated with the repurchase of a 6% Royalty on Alferon N Injection sales by \$298,000. We determined that we did not have sufficient inventory on hand to realize the full economic benefit of this asset; therefore, it was written down to its net realizable value.

Our operating funds should be sufficient to meet our operating cash requirements for the next 18 months as we have taken steps to curtail discretionary spending to conserve cash and reduce our monthly burn rate.

### **Reversal of Previously Accrued Interest Expense**

Reversal of previously accrued interest expense was \$346,000 for the year ended December 31, 2007. This item, classified as other income, resulted from the reversal of accrued liquidated damages in 2006 related to a certain covenant in our debenture agreements. These charges were incurred as a result of our failure to timely file our 2005 Annual Report on Form 10-K and our report on Form 10-Q for the quarterly period ended March 31, 2006 with the SEC pursuant to the 1934 Act. These liquidated damages were not included as part of the maturation and pay down of the debenture holder’s outstanding loan balances.

### **Interest and Other Income**

Interest and other income for the year ended December 31, 2006 and 2007 increased approximately \$646,000 as compared to the same period a year earlier. The increase in interest and other income during the current period was mainly due to higher interest earned upon the maturity of our marketable securities as compared to the same period a year ago.

### **Interest Expense and Financing Costs**

Interest expense and non-cash financing costs were approximately \$396,000 for the year ended December 31, 2007 versus \$1,259,000 for the same period a year ago. The main reason for the decrease in interest expense and financing costs of \$863,000 or 69% can be attributed to decreased amortization charges on debt discounts and the incurring of liquidated damages in 2006 payable to our debenture holders resulting from our failure to timely file our 2005 Annual Report on Form 10-K as we were in violation of provisions within our debenture agreements. These debentures matured in June 2007 and all outstanding loan balances were paid off.

**Years Ended December 31, 2005 vs. 2006**

**Net loss**

Our net loss of \$19,399,000 for the year ended December 31, 2006 was up \$6,953,000 or 56% compared to the same period in 2005. This increase in loss was primarily due to: 1) higher General and Administrative (“G&A”) expense of \$2,836,000 related primarily to the adoption of FAS 123R amounting to higher stock compensation expense of \$2,092,000 and higher accounting fees of \$747,000 mainly related to the restatement of our financial statements, 2) higher research and development costs of \$4,909,000 due to an increase in direct costs associated with developing Ampligen® and Alferon N Injection® for new and existing indications and costs associated with stability studies for Ampligen® and Alferon N Injection® related to manufacturing at our new contract manufacturer’s sites, Hollister-Stier and Hyaluron, and 3) higher production costs of approximately \$884,000 primarily due to excess manufacturing capacity. Offsetting these increased expenditures, was a net decrease in our interest expense and financing costs of approximately \$1,862,000 as the amortization of the discounts on our convertible Debentures has been decreasing as they near maturity. Net losses per share were \$.31 for current period versus \$.24 for the same period 2005.

**Revenues**

Revenues for the years ended December 31, 2006 were \$933,000 as compared to revenues of \$1,083,000 for the same period in 2005. Ampligen® sold under the cost recovery clinical program was up \$10,000 or 6% and Alferon N Injection® sales were down \$160,000 or 18%. The decline in Alferon N Injection® sales can be attributed to increased competition from rival products. Ampligen® sold under the cost recovery clinical program is a product of physicians and ME/CFS patients applying to us to enroll in the program. This program has been in effect for several years and is offered as a treatment option to patients severely affected by CFS. As the name “cost recovery” implies, we have no gain or profit on these sales. The benefits to us include 1) physicians and patients becoming familiar with Ampligen® and 2) collection of clinical data relating to the patients’ treatment and results. We are altering our marketing strategy for Alferon N Injection®. We plan to establish an internal marketing and sales department to facilitate and refine our commercialization initiatives.

**Production costs/cost of goods sold**

Our costs for production/cost of goods sold increased \$884,000 for the year ended December 31, 2006 compared to the same period in 2005. This increase was primarily due to higher production costs representing excess production capacity during the current period amounting to \$748,000. Cost of goods sold for the year ended December 31, 2005 and 2006 were \$391,000 and \$527,000, respectively.

We executed a Manufacturing and Safety Agreement with Hyaluron, Inc. (“Hyaluron”) of Burlington, Massachusetts, for the formulation, packaging and labeling of Alferon N Injection®. During 2006, Hyaluron conducted three production runs for stability testing of Alferon N Injection®’s new vial material. The stability test results at the six month check point met the required specifications. The stability and validation testing of the new vials was successfully completed by year end 2006.

We purchased the royalty interest related to the sales of our natural alpha interferon products from Stem Cell Innovations, Inc. (previously known as Interferon Sciences, Inc.) for \$620,000. In March 2004, we acquired the FDA approved manufacturing facility in New Brunswick, N.J. and the worldwide license for the production, manufacture, use, marketing and sale of Alferon N Injection®. The royalty interest on the interferon products was a residual of this transaction.





We outsource certain components of our overall research and development, manufacturing, marketing and distribution while maintaining control over the entire process through our quality assurance group and our clinical monitoring group.

### **Research and Development costs**

Overall research and development costs for the year ended December 31, 2006 were \$10,127,000 as compared to \$5,218,000 for the same period a year ago representing an increase of \$4,909,000 or 94%. The higher costs reflect an increase in the direct costs associated with our effort to develop our lead product, Ampligen®, as a therapy in treating acute and chronic diseases, cancers and on-going clinical trials involving patients with HIV and pre-clinical and clinical testing for possible treatment for avian and seasonal influenza viruses. Also, incremental costs were incurred for development of alternative delivery routes for Alferon N more suitable for various biodefense treatment indications.

Much of this increase in R&D cost is related to the production of raw materials at our new production line recently installed at our New Brunswick facility. The New Brunswick facility successfully produced three lots of Poly I and three lots of Poly C<sub>12</sub>U, which have been shipped to Hollister-Stier (our contract manufacturer) for use in producing Ampligen® doses.

For current status on Research & Development activities see Part I, Item 1. Business and Management's Discussion and Analysis for the period December 31, 2007 vs. December 31, 2006.

### **General and Administrative Expenses**

General and Administrative ("G&A") expenses for the years ended December 31, 2005 and 2006 were approximately \$5,389,000 and \$8,225,000, respectively, representing an increase of a \$2,836,000 or 53%. The increase in G&A expenses relates primarily to the adoption of FAS 123R which has increased stock compensation expense approximately \$2,092,000 during 2006 versus a year ago. In addition, we have incurred higher accounting fees related to the restatement of our financial statements which has increased these fees by approximately \$747,000 from the same period a year earlier.

### **Interest and Other Income and Expense**

Interest and other income for the years ended December 31, 2005 and 2006 totaled \$590,000 and \$554,000, respectively. The decrease in interest and other income during 2006 can primarily be attributed to the timing of the maturities of our marketable securities during the 2006 period versus the same period a year earlier. All funds in excess of our immediate need are invested in short-term high quality securities.

### **Interest Expense and Financing Costs**

Interest expense and non-cash financing costs were approximately \$1,259,000 for the year ended December 31, 2006 versus \$3,121,000 for the same period a year ago. The main reason for the decrease in interest expense and financing costs of \$1,862,000 can be attributed to decreased amortization charges on debt discounts during 2006 versus the same period a year earlier as our convertible debentures have come closer to maturity (Please see Note 7 in the consolidated financial statements contained herein for more details on these transactions).

### **Liquidity and Capital Resources**

Cash used in operating activities for the year ended December 31, 2007 was \$15,112,000 reflecting mainly expenditures for the preparation and filing of the Ampligen® NDA. Cash provided by investing activities for the year ending December 31, 2007, amounted to \$13,955,000, primarily from the maturity of short-term investments. Cash provided by financing activities for the year ended December 31, 2007 amounted to \$8,892,000, basically from the sale of common stock for proceeds totaling \$11,620,000 partially offset by our net payment to our debenture holders of \$2,638,000 upon the maturity of our debt instruments. As of February 29, 2008 we had approximately \$13,400,000 in cash and cash equivalents and short-term investments, or a decrease of approximately 13% from December 31, 2007. These funds should be sufficient to meet our operating cash requirements for the next 18 months as we have taken steps to curtail discretionary spending to conserve cash and reduce our monthly burn rate.

In June 2007, we retired all remaining debt related to our convertible debentures issued in October 2003, January 2004 and July 2004. Of the outstanding debt of approximately \$4,102,000, only \$2,638,000 was required to be paid in new funds to retire the debentures, with the balance being covered by other cash and securities already held as collateral for the debentures.

Over the long term, we may need to raise additional funds through additional equity or debt financing or from other sources in order to complete the necessary clinical trials and the regulatory approval processes including the commercializing of Ampligen® products. There can be no assurances that we will raise adequate funds from these or other sources, which may have a material adverse effect on our ability to develop our products. Any additional funding may result in significant dilution and could involve the issuance of securities with rights, which are senior to those of existing stockholders. We may also need additional funding earlier than anticipated, and our cash requirements, in general, may vary materially from those now planned, for reasons including, but not limited to, changes in our research and development programs, clinical trials, competitive and technological advances, the regulatory process, and higher than anticipated expenses and lower than anticipated revenues from certain of our clinical trials for which cost recovery from participants has been approved.

### **Equity Financing**

On April 12, 2006, we entered into a common stock purchase agreement (the “2006 Purchase Agreement”) with Fusion Capital Fund II, LLC (“Fusion Capital”), pursuant to which Fusion Capital has agreed, under certain conditions, to purchase on each trading day \$100,000 of our common stock up to an aggregate of \$50.0 million over a period of approximately 25 months. Pursuant to the terms of the Registration Rights Agreement, dated as of April 12, 2006, we registered 12,386,723 shares issuable to or issued to Fusion Capital under the Purchase Agreement. Through February 29, 2008, we have sold to Fusion Capital an aggregate of 10,682,032 shares under the common stock purchase agreement for aggregate gross proceeds of approximately \$19,739,000 and issued 448,816 Commitment Shares. Pursuant to the 2006, Fusion Capital cannot purchase shares if our stock price is under \$1.00. Our current stock price is below \$1.00. Accordingly, unless and until the market price increases to at least \$1.00, no additional shares will be sold to Fusion Capital under the agreement.

Under the rules of the American Stock Exchange, in the event that we elect to sell more than 12,386,723 shares to Fusion Capital, we were required to seek stockholder approval. This approval was obtained on September 20, 2006. We also will be required to file a new registration statement and have it declared effective by the SEC in the event we elect to sell to Fusion Capital more than the 12,386,723 shares previously registered.

We are using the proceeds from this financing for general corporate purposes.

There can be no assurances that we will raise adequate funds from these or other sources, which may have a material adverse effect on our ability to develop our products. Also, we have the ability to curtail further discretionary spending, including some research and development activities, if required to conserve additional cash.

| Contractual Cash Obligations | Total  | (dollars in thousands)<br>Obligations Expiring by Period |        |       |  |
|------------------------------|--------|----------------------------------------------------------|--------|-------|--|
|                              |        | 2008                                                     | 2009   | 2010  |  |
| Operating Leases             | \$ 487 | \$ 205                                                   | \$ 211 | \$ 71 |  |
| Total                        | \$ 487 | \$ 205                                                   | \$ 211 | \$ 71 |  |

### New Accounting Pronouncements

We adopted the provisions of FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes" ("FIN 48") effective January 1, 2007. The purpose of FIN 48 is to clarify and set forth consistent rules for accounting for uncertain tax positions in accordance with Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes". The cumulative effect of applying the provisions of this interpretation are required to be reported separately as an adjustment to the opening balance of retained earnings in the year of adoption. The adoption of this standard did not have an impact on our financial condition or the results of our operations.

On February 15, 2007, the FASB issued FASB Statement No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities - Including an Amendment of FASB Statement No. 115". This standard permits an entity to choose to measure many financial instruments and certain other items at fair value. Most of the provisions in Statement 159 are elective; however, the amendment to FASB Statement No. 115, "Accounting for Certain Investments in Debt and Equity Securities", applies to all entities with available-for-sale and trading securities. Some requirements apply differently to entities that do not report net income. The FASB's stated objective in issuing this standard is as follows: "to improve financial reporting by providing entities with the opportunity to mitigate volatility in reported earnings caused by measuring related assets and liabilities differently without having to apply complex hedge accounting provisions".

The fair value option established by Statement 159 permits all entities to choose to measure eligible items at fair value at specified election dates. A business entity will report unrealized gains and losses on items for which the fair value option has been elected in earnings (or another performance indicator if the business entity does not report earnings) at each subsequent reporting date. The fair value option: (a) may be applied instrument by instrument, with a few exceptions, such as investments otherwise accounted for by the equity method; (b) is irrevocable (unless a new election date occurs); and (c) is applied only to entire instruments and not to portions of instruments.

Statement 159 is effective as of the beginning of an entity's first fiscal year that begins after November 15, 2007. The impact of this statement has not been determined.

On December 4, 2007, the FASB issued FASB Statement No. 160, "*Noncontrolling Interests in Consolidated Financial Statements - An Amendment of ARB No. 51.*" Statement 160 establishes new accounting and reporting standards for the noncontrolling interest in a subsidiary and for the deconsolidation of a subsidiary. Specifically, this statement requires the recognition of a noncontrolling interest (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. Statement 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. Statement 160 also includes expanded disclosure requirements regarding the interests of the parent and its noncontrolling interest.

Statement 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 impact of this statement has not been determined.

#### **Disclosure About Off-Balance Sheet Arrangements**

None

#### **Critical Accounting Policies**

Financial Reporting Release No. 60 requires all companies to include a discussion of critical accounting policies or methods used in the preparation of financial statements. Our significant accounting policies are described in the Notes to the Consolidated Financial Statements. The significant accounting policies that we believe are most critical to aid in fully understanding our reported financial results are the following:

##### Revenue

Revenue from the sale of Ampligen® under cost recovery clinical treatment protocols approved by the FDA is recognized when the treatment is provided to the patient.

Revenues from the sale of product are recognized when the product is shipped, as title is transferred to the customer. We have no other obligation associated with our products once shipment has occurred.

### Short-term Investments

Investments with original maturities of more than three months and less than 12 months and marketable equity securities are considered available for sale. The investments classified as available for sale include debt securities and equity securities carried at estimated fair value. The unrealized gains and losses are recorded as a component of stockholders' equity.

### Inventories

We use the lower of first-in, first-out ("FIFO") cost or market method of accounting for inventory.

### Patents and Trademarks

Patents and trademarks are stated at cost (primarily legal fees) and are amortized using the straight-line method over the estimated useful life of 17 years. We review our patents and trademark rights periodically to determine whether they have continuing value. Such review includes an analysis of the patent and trademark's ultimate revenue and profitability potential. In addition, management's review addresses whether each patent continues to fit into our strategic business plans.

### Stock Based Compensation

Under FAS 123R, share-based compensation cost is measured at the grant date, based on the estimated fair value of the award, and is recognized as expense over the requisite service period. We adopted the provisions of FAS 123R, effective January 1, 2006, using a modified prospective application. Under this method, compensation cost is recognized for all share-based payments granted, modified or settled after the date of adoption, as well as for any unvested awards that were granted prior to the date of adoption. Prior periods are not revised for comparative purposes. Because we previously adopted only the pro forma disclosure provisions of FAS 123, we recognize compensation cost relating to the unvested portion of awards granted prior to the date of adoption, using the same estimate of the grant-date fair value and the same attribution method used to determine the pro forma disclosures under FAS 123, except that forfeiture rates are estimated for all options, as required by FAS 123R. The cumulative effect of applying the forfeiture rates is not material.

The fair value of each option award is estimated on the date of grant using a Black-Scholes option valuation model. Expected volatility is based on the historical volatility of the price of our common stock. The risk-free interest rate is based on U.S. Treasury issues with a term equal to the expected life of the option. We use historical data to estimate expected dividend yield, expected life and forfeiture rates.

### Concentration of Credit Risk

Our policy is to limit the amount of credit exposure to any one financial institution and place investments with financial institutions evaluated as being credit worthy, or in short-term money markets, which are exposed to minimal interest rate and credit risks. At and since December 31, 2007, we have had bank deposits and overnight repurchase agreements that exceed federally insured limits.

Concentration of credit risk, with respect to receivables, is limited through our credit evaluation process. We do not require collateral on our receivables. Our receivables consist principally of amounts due from wholesale drug companies as of December 31, 2007.

Sales to three large wholesalers represented approximately 70% and 68% of our total sales for the years ended December 31, 2006 and 2007, respectively.

#### **Item 7A. Quantitative And Qualitative Disclosures About Market Risk**

We had approximately \$15,415,000 in cash and cash equivalents and short-term investments at December 31, 2007. To the extent that our cash and cash equivalents exceed our near term funding needs, we invest the excess cash in three to twelve month interest bearing financial instruments. We employ established conservative policies and procedures to manage any risks with respect to investment exposure.

We have not entered into, and do not expect to enter into, financial instruments for trading or hedging purposes.

#### **ITEM 8. Financial Statements and Supplementary Data.**

The consolidated balance sheets as of December 31, 2006 and 2007, and our consolidated statements of operations, changes in stockholders' equity and comprehensive loss and cash flows for each of the years in the three year period ended December 31, 2007, together with the reports of BDO Seidman, LLP and McGladrey & Pullen, LLP, independent registered public accountants, are included at the end of this report. Reference is made to the "Index to Financial Statements and Financial Statement Schedule" on page F-1.

#### **ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosures.**

As previously reported in our current Report on Form 8-K filed on November 9, 2006, on November 7, 2006, the Audit Committee of our Board of Directors approved the appointment of McGladrey & Pullen, LLP ("McGladrey") as our independent registered public accounting firm, effective immediately. McGladrey replaces BDO Seidman, LLP ("BDO") as our independent registered public accounting firm.

As noted in our Current Report on Form 8-K/A filed with the Commission on September 22, 2006, BDO informed us that it would resign from the client-auditor relationship with us no later than the date of our filing of our Form 10-Q report for the period ending September 30, 2006. BDO's decision to resign was not recommended or approved by our Audit Committee. On November 7, 2006, we filed our Form 10-Q report for the period ended September 30, 2006 and BDO resigned from the client-auditor relationship with us.

BDO's report on our financial statements for the fiscal year ended December 31, 2005 did not contain any adverse opinion or any disclaimer of opinion and was not qualified or modified as to uncertainty, audit scope or accounting principles.

During the fiscal year ended December 31, 2005, and the subsequent interim period preceding the date of BDO's resignation, there were no disagreements between us and BDO on any matter of accounting principles or practice, financial statement disclosure or auditing scope of procedure which, if not resolved to the satisfaction of BDO, would have caused BDO to make a reference to the subject matter thereof in connection with its reports and, during the same period, there were no reportable events as defined in item 304(a)(1)(v) of the Commission Regulation S-K, except as previously reported in Item 9A of our 2005 Form 10-K/A.

## **ITEM 9A. Controls and Procedures.**

### Effectiveness of Control Procedures

As of December 31, 2007, the end of the period covered by this report, we carried out an evaluation under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Act of 1934, as amended, as of December 31, 2007. Our disclosure controls and procedures are intended to ensure that the information we are required to disclose in the reports that we file or submit under the Securities Exchange Act of 1934 is (i) recorded, processed, summarized and reported within the time periods specified in the Securities Exchange Commission's rules and forms and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as the principal executive and financial officers, respectively, to allow final decisions regarding required disclosures. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that the controls and procedures were effective as of December 31, 2007 to ensure that material information was accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Our management has concluded that the financial statements included in this Form 10-K present fairly, in all material respects our financial position, results of operations and cash flows for the periods presented in conformity with accounting principles generally accepted in the United States of America.

### Changes in Internal Control over Financial Reporting

We made no changes in our internal control over financial reporting during the last fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act).

### Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined in Rules 13a-15(f) or 15d-15(f), under the Exchange Act. Internal control over financial reporting is a process designed by, or under the supervision of, our principal executive and principal financial officers and affected by our Board of Directors, management and other personnel, and 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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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 its 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 risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2007. In making this assessment, management used the criteria set forth in the framework established by the Committee of Sponsoring Organizations of the Treadway Commission *Internal Control—Integrated Framework*, (COSO). Based on this assessment, management has not identified any material weaknesses as of December 31, 2007. A material weakness is a control deficiency, or combination of control deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected.

Management has concluded that we did maintain effective internal control over financial reporting as of December 31, 2007, based on the criteria set forth in “*Internal Control—Integrated Framework*” issued by the COSO.

Our internal control over financial reporting as of December 31, 2007 has been audited by McGladrey and Pullen, an independent registered public accounting firm, as stated in their report which appears herein.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders  
Hemispherx Biopharma, Inc.  
Philadelphia, Pennsylvania

We have audited Hemispherx Biopharma, Inc.'s internal control over financial reporting as of December 31, 2007, based on criteria established in "*Internal Control—Integrated Framework*" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO)". Hemispherx Biopharma, 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. 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, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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, Hemispherx Biopharma, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2007 based on criteria established in “*Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO)*”.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the December 31, 2007 consolidated financial statements of Hemispherx Biopharma, Inc. and our report dated March 17, 2008 expressed an unqualified opinion.

Blue Bell, Pennsylvania  
March 17, 2008

/s/ McGladrey& Pullen, LLP

**ITEM 9B. Other Information.**

None.

**PART III**

**Item 10. Directors and Executive Officers and Corporate Governance.**

The following sets forth biographical information about each of our directors and executive officers as of the date of this report:

| <b>Name</b>               | <b>Age</b> | <b>Position</b>                             |
|---------------------------|------------|---------------------------------------------|
| William A. Carter, M.D.   | 70         | Chairman, Chief Executive Officer           |
| Anthony A. Bonelli        | 56         | President, Chief Operating Officer          |
| Robert E. Peterson        | 70         | Chief Financial Officer                     |
| David R. Strayer, M.D.    | 62         | Medical Director, Regulatory Affairs        |
| Carol A. Smith, Ph.D.     | 56         | VP of Manufacturing                         |
| Richard C. Piani          | 79         | Director                                    |
| Katalin Ferencz-Biro      | 61         | Senior Vice President of Regulatory Affairs |
| William M. Mitchell, M.D. | 72         | Director                                    |
| Ransom W. Etheridge       | 68         | Director, Secretary and General Counsel     |
| Iraj Eqhbal Kiani, Ph.D.  | 60         | Director                                    |
| Wayne Springate           | 37         | Vice President of Operations                |
| Russel Lander             | 57         | Vice President of Quality Assurance         |

Each director has been elected to serve until the next annual meeting of stockholders, or until his earlier resignation, removal from office, death or incapacity. Each executive officer serves at the discretion of the Board of Directors, subject to rights, if any, under contracts of employment.

**WILLIAM A. CARTER, M.D.**, the coinventor of Ampligen®, joined us in 1978, and has served as: (a) our Chief Scientific Officer since May 1989; (b) the Chairman of our Board of Directors since January 1992; (c) our Chief Executive Officer since July 1993; (d) our President since April, 1995; and (e) a director since 1987. From 1987 to 1988, Dr. Carter served as our Chairman. Dr. Carter was a leading innovator in the development of human interferon for a variety of treatment indications including various viral diseases and cancer. Dr. Carter received the first FDA approval to initiate clinical trials on a beta interferon product manufactured in the U.S. under his supervision. From 1985 to October 1988, Dr. Carter served as our Chief Executive Officer and Chief Scientist. He received his M.D. degree from Duke University and underwent his postdoctoral training at the National Institutes of Health and Johns Hopkins University. Dr. Carter also served as Professor of Neoplastic Diseases at Hahnemann Medical University, a position he held from 1980 to 1998. Dr. Carter served as Director of Clinical Research for Hahnemann Medical University's Institute for Cancer and Blood Diseases, and as a professor at Johns Hopkins School of Medicine and the State University of New York at Buffalo. Dr. Carter is a Board certified physician and author of more than 200 scientific articles, including the editing of various textbooks on anti-viral and immune therapy.

**ANTHONY A. BONELLI** was appointed as President and Chief Operating Officer in November 2006. Mr. Bonelli is a graduate of Harvard University with a degree in Biological Sciences as well as an MBA from Rutgers University Graduate School of Business and JD from the University of San Francisco. Mr. Bonelli has over twenty-five years of diversified healthcare industry experience. Most recently, he served as President and CEO of Optigenex, an applied DNA sciences company, since October 2005, having joined that company in September 2004 as President and Chief Operating Officer. As principal of Anthony Bonelli Associates between 1999 and 2004, some of the firms he has advised include Parke-Davis, Schering-Plough Company, Aventis, Pharmacia and Pfizer. From 1998 to 1999, he was President and COO of Vitaquest International, a custom developer and manufacturer of vitamins and nutritional supplements.

**ROBERT E. PETERSON** has served as our Chief Financial Officer since April, 1993 and served as an Independent Financial Advisor to us from 1989 to April, 1993. Also, Mr. Peterson has served as Vice President of the Omni Group, Inc., a business consulting group based in Tulsa, Oklahoma since 1985. From 1971 to 1984, Mr. Peterson worked for PepsiCo, Inc. and served in various financial management positions including Vice President and Chief Financial Officer of PepsiCo Foods International and PepsiCo Transportation, Inc. Mr. Peterson is a graduate of Eastern New Mexico University.

**DAVID R. STRAYER, M.D.** who served as Professor of Medicine at the Medical College of Pennsylvania and Hahnemann University, has acted as our Medical Director since 1986. He is Board Certified in Medical Oncology and Internal Medicine with research interests in the fields of cancer and immune system disorders. Dr. Strayer has served as principal investigator in studies funded by the Leukemia Society of America, the American Cancer Society, and the National Institutes of Health. Dr. Strayer attended the School of Medicine at the University of California at Los Angeles where he received his M.D. in 1972.

**CAROL A. SMITH, Ph.D.** is VP of Manufacturing and has served as our Director of Manufacturing and Process Development from 1995 to 2003, as Director of Operations from 1993 to 1995 and as the Manager of Quality Control from 1991 to 1993, with responsibility for the manufacture, quality control, process development, technology transfer to contract manufacturers and the chemistry of Ampligen®. Dr. Smith was Scientist/Quality Assurance Officer for Virotech International, Inc. from 1989 to 1991 and Director of the Reverse Transcriptase and Interferon Laboratories and a Clinical Monitor for Life Sciences, Inc. from 1983 to 1989. She received her Ph.D. in Medical Sciences with a concentration on Virology from the University of South Florida, College of Medicine in 1980 and was an NIH post-doctoral fellow in the Department of Microbiology and Virology at the Pennsylvania State University College of Medicine from 1980 to 1983.

**RICHARD C. PIANI** has been a director since 1995. Mr. Piani has been employed as a principal delegate for Industry to the City of Science and Industry, Paris, France, a billion dollar scientific and educational complex. Mr. Piani provided consulting to us in 1993, with respect to general business strategies for our European operations and markets. Mr. Piani served as Chairman of Industrielle du Batiment-Morin, a building materials corporation, from 1986 to 1993. Previously Mr. Piani was a Professor of International Strategy at Paris Dauphine University from 1984 to 1993. From 1979 to 1985, Mr. Piani served as Group Director in Charge of International and Commercial Affairs for Rhone-Poulenc and from 1973 to 1979 he was Chairman and Chief Executive Officer of Societe "La Cellophane", the French company which invented cellophane and several other worldwide products. Mr. Piani has a Law degree from Faculte de Droit, Paris Sorbonne and a Business Administration degree from Ecole des Hautes Etudes Commerciales, Paris.

**WILLIAM M. MITCHELL, M.D., Ph.D.** has been a director since July 1998. Dr. Mitchell is a Professor of Pathology at Vanderbilt University School of Medicine. Dr. Mitchell earned a M.D. from Vanderbilt and a Ph.D. from Johns Hopkins University, where he served as an Intern in Internal Medicine, followed by a Fellowship at its School of Medicine. Dr. Mitchell has published over 200 papers, reviews and abstracts dealing with viruses, anti-viral drugs and immune responses to HIV infection. Dr. Mitchell has worked for and with many professional societies, including the International Society for Interferon Research, and committees, among them the National Institutes of Health, AIDS and Related Research Review Group. Dr. Mitchell previously served as one of our directors from 1987 to 1989.

**RANSOM W. ETHERIDGE** has been a director since October 1997, and presently serves as our secretary and general counsel. Mr. Etheridge first became associated with us in 1980 when he provided consulting services to us and participated in negotiations with respect to our initial private placement through Oppenheimer & Co., Inc. Mr. Etheridge has been practicing law since 1967, specializing in transactional law. Mr. Etheridge is a member of the Virginia State Bar, a Judicial Remedies Award Scholar, and has served as President of the Tidewater Arthritis Foundation. He is a graduate of Duke University, and received his Law degree from the University of Richmond School of Law.

**IRAJ EQHBAL KIANI, M.B.A., Ph.D.**, was appointed to the Board of Directors on May 1, 2002. Dr. Kiani is a citizen of England and resides in Newport, California. Dr. Kiani served in various local government positions including the Governor of Yasoi, Capital of Boyerahmand, Iran. In 1980, Dr. Kiani moved to England, where he established and managed several trading companies over a period of some 20 years. Dr. Kiani is a planning and logistic specialist who is now applying his knowledge and experience to build a worldwide immunology network, which will use our proprietary technology. Dr. Kiani received his Ph.D. degree from the University of Warwick in England.

**WAYNE S. SPRINGATE** is Vice President of Operations; Mr. Springate joined Hemispherx in 2002 as Vice President of Business Development. Mr. Springate came on board when Hemispherx acquired Alferon N Injection and its New Brunswick manufacturing facilities. He led the consolidation of our Rockville facility to our New Brunswick location as well as coordinated the relocation of manufacturing polymers from South Africa to our production facility in New Brunswick. He is responsible for preparing our Manufacturing plant for a Pre Approval Inspection by the FDA in connection with the filing of our Ampligen NDA. Previously, Mr. Springate acted as President for World Fashion Concepts. He oversaw operations at several locations in the United States and overseas. Mr. Springate assisted the CEO in details of operations on a daily basis and was involved in all aspects of manufacturing, warehouse management, distribution and logistics.

**KATALIN FERENCZ-BIRO, Ph.D.** has served as the Company's Senior Vice President of Regulatory Affairs and Quality Assurance Departments since January 2007. She served as the Director of Regulatory Affairs and Quality Assurance from 2006 to 2007. Previously from 1987 to 2003, she served Interferon Sciences Inc, in various positions including Senior Director of Regulatory Affairs, Quality Control and Quality Assurance Departments, and FDA official for our FDA approved product, Alferon N Injection. Dr. Ferencz-Biro received her Ph.D. in Chemistry/Biochemistry in 1972 from the University of Eötvös Lóránd, Budapest, Hungary, and her M.S., in Chemistry and Biology in 1971 from University of Eötvös Lóránd, Budapest, Hungary. She was a postdoctoral fellow from 1981-1984 in Rutgers University, Center for Alcohol Studies, Piscataway, New Jersey. She is an author and coauthor of several scientific publications, patents and presentations on the field of biochemistry. Currently she is a member of Regulatory Affairs Professionals Society.

**RUSSEL J. LANDER, Ph.D.** is Vice President Quality Assurance. Dr. Lander joined Hemispherx in 2005, assuming responsibility for CMC writing for the NDA filing of Ampligen®. He has subsequently served at the New Brunswick site as Director of Quality Control and has provided guidance to the efforts to improve and validate the manufacturing process for the synthesis of Ampligen® polynucleotide raw materials, Poly I and Poly C<sub>12</sub>U. Dr. Lander was formerly employed at Merck and Co., Inc. in the process development groups for drug development (1977-1991) and vaccines (1991-2005). Dr. Lander received his Ph.D. in Chemical/Biochemical Engineering from the University of Pennsylvania. He has authored numerous scientific publications and invention disclosures.

On November 20, 2007, Steven Spence, Director, submitted his resignation from the Board of Directors. Mr. Spence was a member of the following Board Committees: The Audit Committee, the Corporate Governance and Nomination Committee, and the Executive Committee. Mr. Spence was the financial expert on the Audit Committee.

### **Compliance with Section 16(a) of the Exchange Act**

Section 16(a) of the Exchange Act requires our officers and directors, and persons who own more than ten percent of a registered class of equity securities, to file reports with the Securities and Exchange Commission reflecting their initial position of ownership on Form 3 and changes in ownership on Form 4 or Form 5. Based solely on a review of the copies of such Forms received by us, we found that, during the fiscal year ended December 31, 2007, certain of our officers and directors had not complied with all applicable Section 16(a) filing requirements on a timely basis with regard to transactions occurring in 2007. Specifically, Dr. Carter filed three forms 4 late concerning five transactions; Mr. Peterson filed one form 5 late concerning two late transactions; Mr. Etheridge filed three forms 4 late concerning five transactions; Mr. Bonelli filed one form 4 late concerning one transaction; Mr. Kiani filed two forms 4 late concerning four transactions; Mr. Piani filed three forms 4 late concerning five transactions; Dr. Mitchell filed three forms 4 late concerning five transactions; Dr. Strayer filed two forms 4 late concerning two transactions; and Mr. Spence filed one form 4 late concerning one transaction.

### **Audit Committee and Audit Committee Expert**

The Audit Committee of our Board of Directors consists of Richard Piani, Committee Chairman, William Mitchell, M.D. and Iraj Egbal Kiani. Mr. Piani, Dr. Mitchell, and Mr. Kiani are all determined by the Board of Directors to be independent directors as required under Section 121B(2)(a) of the AMEX Company Guide. We do not have a financial expert as defined in the SEC rules on the committee in the true sense of the description. However, Mr. Piani has 40 years experience in business and has served in senior level and leadership positions for international businesses. His working experience includes reviewing and analyzing financial statements and dealing with financial institutions. We believe Mr. Piani, Dr. Mitchell, and Mr. Kiani to be independent of management and free of any relationship that would interfere with their exercise of independent judgment as members of this committee. The principal functions of the Audit Committee are to (i) assist the Board in fulfilling its oversight responsibility relating to the annual independent audit of our consolidated financial statements and internal control over financial reporting, the engagement of the independent registered public accounting firm and the evaluation of the independent registered public accounting firm's qualifications, independence and performance, (ii) prepare the reports or statements as may be required by AMEX or the securities laws, (iii) assist the Board in fulfilling its oversight responsibility relating to the integrity of our financial statements and financial reporting process and our system of internal accounting and financial controls, (iv) discuss the financial statements and reports with management, including any significant adjustments, management judgments and estimates, new accounting policies and disagreements with management, and (v) review disclosures by our independent registered public accounting firm concerning relationships with us and the performance of our independent accountants.

### **Code of Ethics**

Our Board of Directors adopted a code of ethics and business conduct for officers, directors and employees that went into effect on May 19, 2003. This code has been presented, reviewed and signed by each officer, director and employee. You may obtain a copy of this code by visiting our web site at [www.hemispherx.net](http://www.hemispherx.net) (Corporate Info) or by written request to our office at 1617 JFK Boulevard, Suite 660, Philadelphia, PA 19103.



## **Item 11. Executive Compensation.**

### **Compensation Discussion and Analysis**

#### **Objectives and Philosophy of Executive Compensation**

The primary objectives of the compensation committee of our board of directors with respect to executive compensation are to attract and retain the most talented and dedicated executives possible, to tie annual and long-term cash and stock incentives to achievement of measurable performance objectives, and to align executives' incentives with stockholder value creation. To achieve these objectives, the compensation committee expects to implement and maintain compensation plans that tie a substantial portion of executives' overall compensation to key strategic financial and operational goals such as the establishment and maintenance of key strategic relationships, the development of our products, the identification and advancement of additional product and the performance of our common stock price. The compensation committee evaluates individual executive performance with the goal of setting compensation at levels the committee believes are comparable with executives in other companies of similar size and stage of development operating in the biotechnology industry while taking into account our relative performance and our own strategic goals.

Our compensation plans are developed by utilizing publicly available compensation data and subscription compensation survey data for national and regional companies in the biopharmaceutical industry. We believe that the practices of this group of companies provide us with appropriate compensation benchmarks, because these companies have similar organizational structures and tend to compete with us for executives and other employees. For benchmarking executive compensation, we typically review the compensation data we have collected from the complete group of companies, as well as a subset of the data from those companies that have a similar number of employees as our company. We have also engaged independent outside consultants to help us analyze this data and to compare our compensation programs with the practices of the companies represented in the compensation data we review.

#### **Elements of Executive Compensation**

Executive compensation consists of the following elements:

##### **Base Salary**

Base salaries for our executives are established based on the scope of their responsibilities, taking into account competitive market compensation paid by other companies for similar positions. Generally, we believe that executive base salaries should be targeted near the median of the range of salaries for executives in similar positions with similar responsibilities at comparable companies, in line with our compensation philosophy. Base salaries are reviewed annually, and adjusted from time to time to realign salaries with market levels after taking into account individual responsibilities, performance and experience. This review normally occurs in the fourth quarter of each year.

On November 6, 2006, the Board of Directors, at the recommendation of the compensation committee and based upon an independent valuation of Executive Compensation by the compensation committee determined that: (1) Dr. Carter's annual compensation under his Employment and Engagement Agreements be increased by \$90,000 and \$60,000, respectively; and (2) Robert E. Peterson's annual compensation under his Engagement Agreement be increased by \$50,000. These annual compensation adjustments were retroactive to January 1, 2006.

##### **Annual Bonus**

Our compensation program includes eligibility for an annual performance-based cash bonus in the case of all executives and certain senior, non-executive employees. The amount of the cash bonus depends on the level of achievement of the stated corporate, department, and individual performance goals, with a target bonus generally set as a percentage of base salary. As provided in their employment agreements, our Chief Executive Officer and Chief Financial Officer are eligible for an annual performance-based bonus up to 25% of their salaries, the amount of which, if any, is determined by the board of directors in its sole discretion based on the recommendation of the compensation committee.

The compensation committee utilizes annual incentive bonuses to compensate officers for achieving financial and operational goals and for achieving individual annual performance objectives. These objectives will vary depending on the individual executive, but will relate generally to strategic factors such as establishment and maintenance of key strategic relationships, development of our product, identification and research and development of additional products, and to financial factors such as raising capital and improving our results of operations.

In December 2007, the Compensation Committee recommended and the Board of Directors awarded bonuses to certain executives of 25% of base salaries for performance in relation to accomplishing certain 2007 corporate goals. Bonuses were awarded to William a. Carter, M.D., CEO and Chairman of the Board; Anthony Bonelli, President and COO; Robert E. Peterson, CFO; David Strayer, M.D., Chief Medical Officer and Wayne Springate, VP of Operations. The Compensation Committee and Board of Directors reviewed corporate goals established in February 2007 and determined that significant progress had been made with respect to 1) preparing and filing the Ampligen NDA; 2) contacting and establishing strategic partners; 3) developing and implementing a global marketing strategy; 4) finalizing an agreement with a vaccine manufacturer and 5) developing Alferon LDO potential.

#### Long-Term Incentive Program

We believe that long-term performance is achieved through an ownership culture that encourages such performance by our executive officers through the use of stock and stock-based awards. Our stock plans have been established to provide our employees, including our executive officers, with incentives to help align those employees' interests with the interests of stockholders. The compensation committee believes that the use of stock and stock-based awards offers the best approach to achieving our compensation goals. We have historically elected to use stock options as the primary long-term equity incentive vehicle. We have adopted stock ownership guidelines and our stock compensation plans have provided the principal method, other than through direct investment for our executive officers to acquire equity in our company. We believe that the annual aggregate value of these awards should be set near competitive median levels for comparable companies. However, in the early stage of our business, we provided a greater portion of total compensation to our executives through our stock compensation plans than through cash-based compensation.

#### Stock Options

Our stock plans authorize us to grant options to purchase shares of common stock to our employees, directors and consultants. Our compensation committee oversees the administration of our stock option plan. The compensation committee reviews and recommends approval by our Board of Directors of stock option awards to executive officers based upon a review of competitive compensation data, its assessment of individual performance, a review of each executive's existing long-term incentives, and retention considerations. Periodic stock option grants are made at the discretion of the Board of Directors upon recommendation of the compensation committee to eligible employees and, in appropriate circumstances, the compensation committee considers the recommendations of members of management. In 2007, the Compensation Committee and the Board authorized the renewal of expiring options for certain named executives in the amounts indicated in the section entitled "Stock Option Grants to Executive Officers." Grants were made to certain of our employees based on past performance, particularly, those who worked hard and diligently on the preparation of our NDA. Stock options granted by us have an exercise price equal to the fair market value of our common stock on the day of grant and typically vest over a period of years based upon continued employment, and generally expire ten years after the date of grant. Incentive stock options also include certain other terms necessary to assure compliance with the Internal Revenue Code of 1986, as amended, or Internal Revenue Code.

We expect to continue to use stock options as a long-term incentive vehicle because; (1) Stock options align the interests of executives with those of the shareholders, support a pay-for-performance culture, foster employee stock ownership, and focus the management team on increasing value for the shareholders, (2) Stock options are performance based. All the value received by the recipient of a stock option is based on the growth of the stock price, (3) Stock options help to provide a balance to the overall executive compensation program as base salary and our discretionary annual bonus program focus on short-term compensation, while the vesting of stock options increases shareholder value over the longer term, and (4) The vesting period of stock options encourages executive retention and the preservation of shareholder value.

In determining the number of stock options to be granted to executives, we take into account the individual's position, scope of responsibility, ability to affect profits and shareholder value and the individual's historic and recent performance and the value of stock options in relation to other elements of the individual executive's total compensation.

As of December 31, 2007, 1,433,524 shares were available for future grants under the 2004 Plan. Options granted include 1,351,680 in 2005, 1,345,742 in 2006 and 3,232,870 in 2007 including 2,970,000 issued for expiring options. Unless sooner terminated, the Equity Incentive Plan will continue in effect for a period of 10 years from its effective date.

On June 30, 2007 the stockholders adopted the 2007 Equity Incentive Plan which authorizes the issuance of up to 8,000,000 stock options to acquire common stock pursuant to the terms of the plan. No options have been issued under this plan.

#### Restricted Stock and Restricted Stock Units

Our 2004 Equity Compensation Plan authorizes us to grant restricted stock and restricted stock units. To date, we have not granted any restricted stock or restricted stock units under our 2004 equity compensation plan. We anticipate that in order to implement the long-term incentive goals of the compensation committee we may grant restricted stock units in the future.

#### **Other Compensation**

Our Chief Executive Officer, Chief Operating Officer, Chief Financial Officer and General Counsel have employment, and/or engagement contracts that will remain in effect until they are terminated, expire, or are renegotiated. Each contract is different with respect to specific benefits or other compensation. We maintain a broad-based benefits program that is provided to all employees including vacation, sick leave and health insurance. Details of these agreements are as follows:

Dr. Carter's employment as our Chief Executive Officer and Chief Scientific Officer expires December 31, 2010 unless sooner terminated for cause or disability. The agreement automatically renews for successive one year periods after the initial termination date unless the Company or Dr. Carter give written notice otherwise at least ninety days prior to the termination date or any renewal period. Dr. Carter has the right to terminate the agreement on 30 days' prior written notice. The base salary is subject to adjustments and the average increase or decrease in the Consumer Price Index for the prior year. In addition, Dr. Carter could receive an annual performance bonus of up to 25% of his base salary, at the sole discretion of the Compensation Committee of the board of directors, based on his performance or our operating results. Dr. Carter will not participate in any discussions concerning the determination of his annual bonus. Dr. Carter is also entitled to an incentive bonus of 0.5% of the gross proceeds received by us from any joint venture or corporate partnering arrangement. Dr. Carter's agreement also provides that he be paid a base salary and benefits through the last day of the then term of the agreement if he is terminated without "cause", as that term is defined in agreement. In addition, should Dr. Carter terminate the agreement or the agreement be terminated due to his death or disability, the agreement provides that Dr. Carter be paid a base salary and benefits through the last day of the month in which the termination occurred and for an additional twelve month period.

Our engagement of Dr. Carter as a consultant related to patent development, as one of our directors and as chairman of the Executive Committee of our board of directors expires December 31, 2010 unless sooner terminated for cause or disability. The agreement automatically renews for successive one year periods after the initial termination date or any renewal period. Dr. Carter has the right to terminate the agreement on 30 days' prior written notice. The base fee is subject to annual adjustments equal to the percentage increase or decrease of annual dollar value of directors' fees provided to our directors during the prior year. The annual fee is further subject to adjustment based on the average increase or decrease in the Consumer Price Index for the prior year. In addition, Dr. Carter could receive an annual performance bonus of up to 25% of his base fee, at the sole direction of the Compensation Committee of the board of directors, based on his performance. Dr. Carter will not participate in any discussions concerning the determination of this annual bonus. Dr. Carter's agreement also provides that he be paid his base fee through the last day of the then term of the agreement if he is terminated without "cause", as that term is defined in the agreement. In addition, should Dr. Carter terminate the agreement or the agreement be terminated due to his death or disability, the agreement provides that Dr. Carter be paid fees due him through the last day of the month in which the termination occurred and for an additional twelve month period.

Our agreement with Ransom W. Etheridge provides for Mr. Etheridge's engagement as our General Counsel until December 31, 2009 unless sooner terminated for cause or disability. The agreement automatically renews for successive one year periods after the initial termination date unless we or Mr. Etheridge give written notice otherwise at least ninety days prior to the termination date or any renewal period. Mr. Etheridge has the right to terminate the agreement on 30 days' prior written notice. The initial annual fee for services is \$96,000 and is annually subject to adjustment based on the average increase or decrease in the Consumer Price Index for the prior year. Mr. Etheridge's agreement also provides that he be paid all fees through the last day of then current term of the agreement if he is terminated without "cause" as that term is defined in the agreement. In addition, should Mr. Etheridge terminate the agreement or the agreement be terminated due to his death or disability, the agreement provides that Mr. Etheridge be paid the fees due him through the last day of the month in which the termination occurred and for an additional twelve month period. Mr. Etheridge will devote approximately 85% of his business time to our business.

Our engagement agreement, with Robert E. Peterson provides for Mr. Peterson's engagement as our Chief Financial Officer until December 31, 2010 unless sooner terminated for cause or disability. Mr. Peterson has the right to terminate the agreement on 30 days' prior written notice. The annual fee for services is subject to increases based on the average increase in the cost of inflation index for the prior year. Mr. Peterson shall receive an annual bonus in each year that our Chief Executive Officer is granted a bonus. The bonus shall equal a percentage of Mr. Peterson's base annual compensation comparable to the percentage bonus received by the Chief Executive Officer. In addition, Mr. Peterson shall receive bonus compensation upon Federal Drug Administration approval of commercial application of Ampligen®. Mr. Peterson's agreement also provides that he be paid all fees through the last day of then current term of the agreement if he is terminated without "cause" as that term is defined in the agreement. In addition, should Mr. Peterson terminate the agreement or the agreement be terminated due to his death or disability, the agreement provides that Mr. Peterson be paid the fees due him through the last day of the month in which the termination occurred and for an additional twelve month period. Mr. Peterson will devote approximately 85% of his business time to our business.

We engaged Anthony A. Bonelli to serve as our full time President and Chief Operating Officer on November 27, 2006. Pursuant to this agreement, the President and Chief Operating Officer is employed for an initial term of two years. The employment automatically renews thereafter for successive one year periods unless either party gives written notice not to renew within 90 days of the termination date.

Mr. Bonelli receives an annual salary at the rate of \$350,000 per year through December 31, 2007 and, thereafter, at the annual rate of \$400,000. His salary is subject to cost of living increases. He is entitled to annual bonuses in the discretion of our Chairman and Board of Directors. A \$50,000 cash bonus and 100,000 options were given upon the execution of the employment agreement and the minimum cash bonus for the year ended December 31, 2007 was \$75,000. He was entitled and received an additional 50,000 options upon his successful completion of three months of employment and an aggregate of up to an additional 950,000 options upon the happening of specific business milestones. We have the right, at our discretion, to modify the time periods within which the milestones must be met. Each option vests upon award, expires in ten years and has an exercise price equal to 110% of the closing price of our common stock on the American Stock Exchange on the date of the award. Upon the happening of certain events, such as our merger with and in to another entity or our sale or transfer of assets or earning power aggregating 50% or more of our assets or earning capacity, provided he is still employed by us, any of the foregoing options not granted to him will be granted. He is also entitled to receive fringe benefits generally available to our executive officers and we have agreed, during his employment period, to pay premiums on a term life insurance policy in the face amount of \$1,500,000 with a beneficiary of his choosing.

The employment agreement terminates upon his death or disability and is terminable by us for "cause" as defined in the agreement, or without cause. He has the right to terminate the agreement upon not less than 60 day's prior notice. In the event that the agreement terminates due to his death or disability, or by him, he will be entitled to fees due and payable through the last day of the month in which the termination occurs. If it is terminated by us for cause, he will be entitled to fees due and payable to him through the date of termination. If we terminate the agreement without cause, he is entitled to fees depending upon the amount of time he has been employed by us ranging from 12 months' of fees if he is terminated within the first 12 months of employment to three months' of fees if he is terminated in the 21st month of employment. He is subject to confidentiality and non-compete covenants.

The Board of Directors, deeming it essential to the best interests of our shareholders to foster the continuous engagement of key management personnel and recognizing that, as is the case with many publicly held corporations, a change of control might occur and that such possibility, and the uncertainty and questions which it might raise among management, might result in the departure or distraction of management personnel to the detriment of us and our shareholders, determined to reinforce and encourage the continued attention and dedication of members of our management to their engagement without distraction in the face of potentially disturbing circumstances arising from the possibility of a change in control of the Company and entered into identical agreements regarding change in control with William A. Carter, our Chief Executive Officer and Chief Scientific Officer, Robert E. Peterson, our Chief Financial Officer and Ransom W. Etheridge, our General Counsel. Each of the agreements regarding change in control became effective March 11, 2005 and continue through December 31, 2007 and shall extend automatically to the third anniversary thereof unless we give notice to the other party prior to the date of such extension that the agreement term will not be extended. Notwithstanding the foregoing, if a change in control occurs during the term of the agreements, the term of the agreements will continue through the second anniversary of the date on which the change in control occurred. Each of the agreements entitles William A. Carter, Robert E. Peterson and Ransom W. Etheridge, respectively, to change of control benefits, as defined in the agreements and summarized below, upon their respective termination of employment/engagement with us during a potential change in control, as defined in the agreements or after a change in control, as defined in the agreements, when their respective terminations are caused (1) by us for any reason other than permanent disability or cause, as defined in the agreement (2) by William A. Carter, Robert E. Peterson and/or Ransom W. Etheridge, respectively, for good reason as defined in the agreement or, (3) by William A. Carter, Robert E. Peterson and/or Ransom W. Etheridge, respectively for any reason during the 30 day period commencing on the first date which is six months after the date of the change in control.

The benefits for each of the foregoing executives would be as follows:

- o A lump sum cash payment of three times his base salary and annual bonus amounts; and
- o Outplacement benefits.

Each agreement also provides that the executive is entitled to a “gross-up” payment to make him whole for any federal excise tax imposed on change of control or severance payments received by him.

Dr. Carter’s agreement also provides for the following benefits:

- o Continued insurance coverage through the third anniversary of his termination; and
- o Retirement benefits computed as if he had continued to work for the above period.

## **401(K) Plan**

In December 1995, we established a defined contribution plan, effective January 1, 1995, entitled the Hemispherx Biopharma employees 401(K) Plan and Trust Agreement. All of our full time employees are eligible to participate in the 401(K) plan following one year of employment. Subject to certain limitations imposed by federal tax laws, participants are eligible to contribute up to 15% of their salary (including bonuses and/or commissions) per annum. Participants' contributions to the 401(K) plan may be matched by Hemispherx at a rate determined annually by the board of directors. Each participant immediately vests in his or her deferred salary contributions, while our contributions will vest over one year. See Note 11 to the consolidated financial statements contained herein.

## **Severance**

Upon termination of employment, most executive officers are entitled to receive severance payments under their employment and/or engagement agreements. In determining whether to approve and setting the terms of such severance arrangements, the compensation committee recognizes that executives, especially highly ranked executives, often face challenges securing new employment following termination. The employment agreement with our CEO, which expires on December 31, 2010, provides that we pay him an annual salary through the terms of the agreement if terminated without cause. The engagement agreement with our CFO, which expires on December 31, 2010, provides that we pay him one year's salary. The employment agreement of our COO, which expires in November 2008, provides that he is entitled to severance pay up to 12 months depending on the time employed, if terminated without cause.

We believe that our Executive Officers' severance packages are generally in line with severance packages offered to chief executive officers of the companies of similar size to us represented in the compensation data we reviewed.

## **Compensation of Directors**

Non-employee Board member compensation consists of an annual retainer of \$150,000 to be paid two thirds in cash and one third in our common stock. On September 9, 2003, the Directors approved a 10 year plan which authorizes up to 1,000,000 shares for use in supporting this compensation plan. The number of shares paid shall have a value of \$12,500 with the value of the shares being determined by the closing price of our common stock on the American Stock Exchange on the last day of the calendar quarter. All directors have been granted options to purchase common stock under our Stock Option Plans and/or Warrants to purchase common stock. We believe such compensation and payments are necessary in order for us to attract and retain qualified outside directors.

## **Conclusion**

Our compensation policies are designed to retain and motivate our senior executive officers and to ultimately reward them for outstanding individual and corporate performance.



**Summary Compensation Table - 2006**

| Name and<br>Principal<br>Position | Salary     | Bonus      | Stock<br>Award | Option<br>Award | Non-Equity<br>Incentive<br>Plan Compensation | Change<br>in<br>Pension<br>Value and<br>Non-qualified<br>Deferred<br>Compensation |         | All Other<br>Compensation | Total        |
|-----------------------------------|------------|------------|----------------|-----------------|----------------------------------------------|-----------------------------------------------------------------------------------|---------|---------------------------|--------------|
|                                   |            |            |                |                 |                                              | Plan                                                                              | Forming |                           |              |
| W. A. Carter, CEO                 | \$ 655,686 | \$ 166,624 | -              | \$ 1,236,367    | -                                            | -                                                                                 | -       | \$ 118,087(2)             | \$ 2,186,764 |
| A. Bonelli,<br>COO                | 35,000(4)  | 50,000     | -              | 122,601         | -                                            | -                                                                                 | -       | 3,000(2)                  | 210,601      |
| R. E. Peterson, CFO               | 259,164    | 64,791     | -              | 373,043         | -                                            | -                                                                                 | -       | -                         | 696,998      |
| D. Strayer, Medical<br>Director   | 225,144    | -          | -              | 19,200          | -                                            | -                                                                                 | -       | -                         | 244,344      |
| M. J. Liao, Director - QC         | 158,381    | -          | -              | 9,600           | -                                            | -                                                                                 | -       | 18,246(3)                 | 186,406      |
| C. Smith,<br>VP of MFG            | 143,136    | -          | -              | 9,600           | -                                            | -                                                                                 | -       | 17,227(3)                 | 169,963      |
| R. Hansen,<br>VP of Manufact.     | 140,311    | -          | -              | 9,600           | -                                            | -                                                                                 | -       | 17,006(3)                 | 166,917      |
| R. D. Hulse                       | 105,000    | -          | -              | -               | -                                            | -                                                                                 | -       | -                         | 105,000      |

Notes:

(1) Based on Black Scholes Pricing Model of valuing options. Total Fair Value of Option Awards granted to officers in 2006 was \$1,780,011.

(2) Consists of Healthcare premiums, life insurance premiums, 401-K matching funds, qualifying insurance premium, company car and parking cost.

(3) Consists of healthcare premiums and 401-K matching funds.

(4) Mr. Bonelli joined the Company on November 27, 2006. His annual salary is \$350,000.

**Summary Compensation Table - 2007**

| Name and<br>Principal<br>Position      | Salary     | Bonus      | Stock<br>Award | Option<br>Award (Compensation) | Non-Equity<br>Incentive Plan Compensation | Change<br>in<br>Pension<br>Value and<br>Non-qualified<br>Deferred<br>Compensation |          | All Other<br>Compensation | Total        |
|----------------------------------------|------------|------------|----------------|--------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------|----------|---------------------------|--------------|
|                                        |            |            |                |                                |                                           | Non-qualified                                                                     | Deferred |                           |              |
| W. A. Carter, CEO                      | \$ 637,496 | \$ 166,156 | -              | \$ 1,688,079                   | -                                         | -                                                                                 | -        | \$ 123,063(2)             | \$ 2,664,794 |
| A. Bonelli,<br>COO                     | 350,000(4) | 87,500     | -              | 59,684                         | -                                         | -                                                                                 | -        | 33,375(3)                 | 530,504      |
| R. E. Peterson, CFO                    | 259,164    | 64,791     | -              | 153,055                        | -                                         | -                                                                                 | -        | -                         | 477,010      |
| D. Strayer, Medical<br>Director        | 240,348    | 50,347     | -              | 79,810                         | -                                         | -                                                                                 | -        | -                         | 370,505      |
| C. Smith,<br>VP of MFG.                | 147,695    | -          | -              | 34,235                         | -                                         | -                                                                                 | -        | 30,088(4)                 | 212,018      |
| K. Ferencz-Biro, VP of<br>Reg. Affairs | 145,000    | -          | -              | 11,744                         | -                                         | -                                                                                 | -        | 13,999(5)                 | 170,743      |
| W. Springate, VP of<br>Operations      | 150,000    | 37,500     | -              | 36,253                         | -                                         | -                                                                                 | -        | 13,429(5)                 | 237,182      |
| R. Lander,<br>VP of Qual. Assurance    | 178,000    | -          | -              | 11,744                         | -                                         | -                                                                                 | -        | 9,649(6)                  | 199,393      |

## Notes:

(1) Based on Black Scholes pricing model of valuing options. Total fair of options granted to Officers in 2007 was \$2,241,028.

(2) Consists of a) Life Insurance premiums totaling \$63,627; b) 401-K matching funds of \$18,833; c) Healthcare premiums of \$28,586; and d) Company car expenses of \$12,017.

(3) Healthcare premiums of \$9,649, car allowance expense of \$9,276, and life insurance premiums totaling \$14,400.

(4) Consists of Healthcare premiums of \$21,266, and 401-K matching funds of \$8,862.

(5) Healthcare premiums and 401-K matching funds

(6) Healthcare premiums

**2007 Stock Option Grants to Executive Officers**

The following table provides additional information about option awards granted to our Named Executive Officers during the year ended December 31, 2007. The compensation plan under which the grants in the following tables were made are described in the Compensation Discussion and Analysis section headed “Long-Term Equity Incentive Awards”.

| Name                                | Grant Date | No. of Options | Exercise Price per Share | Expiration Date | Closing Price on Grant | Grant Date Fair Value of Option (2) |
|-------------------------------------|------------|----------------|--------------------------|-----------------|------------------------|-------------------------------------|
| W.A. Carter, CEO                    | 9/10/07    | 1,000,000(1)   | \$ 2.00                  | 9/9/17          | 1.24                   | 674,063                             |
|                                     | 10/1/07    | 1,400,000(1)   | 3.50                     | 9/30/17         | 1.60                   | 1,014,016                           |
| A. Bonelli, COO                     | 2/22/07    | 50,000         | 2.07                     | 2/27/17         | 1.88                   | 59,684                              |
| R.E. Peterson, CFO                  | 1/23/07    | 13,750(1)      | 2.37                     | 1/23/17         | 2.10                   | 18,242                              |
|                                     | 9/10/07    | 200,000(1)     | 2.00                     | 9/9/17          | 1.24                   | 134,813                             |
| D. Strayer, Medical Director        | 1/23/07    | 20,000(1)      | 2.37                     | 1/23/17         | 2.10                   | 26,534                              |
|                                     | 9/10/07    | 50,000(1)      | 2.00                     | 9/9/17          | 1.24                   | 33,703                              |
|                                     | 12/6/07    | 25,000         | 1.30                     | 12/6/17         | 1.30                   | 19,573                              |
| C. Smith, VP of MFG.                | 1/23/07    | 6,791(1)       | 2.37                     | 1/23/17         | 2.10                   | 9,010                               |
|                                     | 9/10/07    | 20,000(1)      | 2.00                     | 9/9/17          | 1.24                   | 13,481                              |
|                                     | 12/6/07    | 15,000         | 1.30                     | 12/6/17         | 1.30                   | 11,744                              |
| W. Springate, VP of Operations      | 5/1/07     | 20,000         | 1.78                     | 4/30/17         | 1.63                   | 20,595                              |
|                                     | 12/6/07    | 20,000         | 1.30                     | 12/6/17         | 1.30                   | 15,658                              |
| K. Ferencz-Biro, VP of Reg. Affairs | 12/6/07    | 15,000         | 1.30                     | 12/6/17         | 1.30                   | 11,744                              |
| R. Lander, VP of Qual. Assurance    | 12/6/07    | 15,000         | 1.30                     | 12/6/17         | 1.30                   | 11,744                              |

1) Renewal of previously issued options that expired unexercised.

2) These amounts shown represent the approximate amount we recognize for financial statement reporting purposes in fiscal year 2007 for the fair value of equity awards granted to the named executive officers. As a result, these amounts do not reflect the amount of compensation actually received by the named executive officer during the fiscal year. For a description of the assumptions used in calculating the fair value of equity awards under SFAS No. 123(R), see Note 2(m) of our financial statements.

## Outstanding Equity Awards at Year End - 2007

| Name             | Option/Warrants Awards                                  |                                                       |                       |                        |                                            | Stock Awards                                                                                                  |                                            |                                            |                                            |                                            |
|------------------|---------------------------------------------------------|-------------------------------------------------------|-----------------------|------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|
|                  | Equity Incentive Plan Awards                            |                                                       |                       |                        |                                            | Equity Incentive Awards: Plan Market or Awards: Payout of Value Unearned or Shares, Units or Rights That Have |                                            |                                            |                                            |                                            |
|                  | Number of Securities Underlying Unexercised Options (#) | Number of Securities Underlying Exercised Options (#) | Option Exercise Price | Option Expiration Date | Number of Shares or Units That Have Vested | Number of Shares or Units That Have Vested                                                                    | Number of Shares or Units That Have Vested | Number of Shares or Units That Have Vested | Number of Shares or Units That Have Vested | Number of Shares or Units That Have Vested |
| W.A. Carter, CEO | 1,450,000                                               | 0                                                     | \$ 2.20               | 9/8/08                 | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 1,000,000                                               | 0                                                     | 2.00                  | 9/9/17                 | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 190,000                                                 | 0                                                     | 4.00                  | 1/1/08                 | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 73,728                                                  | 0                                                     | 2.71                  | 12/31/10               | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 10,000                                                  | 0                                                     | 4.03                  | 1/3/11                 | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 167,000                                                 | 0                                                     | 2.60                  | 9/7/14                 | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 153,000                                                 | 0                                                     | 2.60                  | 12/7/14                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 100,000                                                 | 0                                                     | 1.75                  | 4/26/15                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 465,000                                                 | 0                                                     | 1.86                  | 6/30/15                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 70,000                                                  | 0                                                     | 2.87                  | 12/9/15                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 300,000                                                 | 0                                                     | 2.38                  | 1/1/16                 | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 10,000                                                  | 0                                                     | 2.61                  | 12/9/15                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 376,650                                                 | 0                                                     | 3.78                  | 2/22/16                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 1,400,000                                               | 0                                                     | 3.50                  | 9/30/17                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
| A. Bonelli, COO  | 100,000                                                 | 0                                                     | 2.11                  | 11/26/16               | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 50,000                                                  | 0                                                     | 2.07                  | 2/27/17                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
| R. Peterson, CFO | 200,000                                                 | 0                                                     | 2.00                  | 9/9/17                 | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 50,000                                                  | 0                                                     | 3.44                  | 6/22/14                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 13,824                                                  | 0                                                     | 2.60                  | 9/7/14                 | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 55,000                                                  | 0                                                     | 1.75                  | 4/26/15                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |
|                  | 10,000                                                  | 0                                                     | 2.61                  | 12/8/15                | -                                          | -                                                                                                             | -                                          | -                                          | -                                          | -                                          |

|                                        |         |        |   |      |          |   |   |   |   |
|----------------------------------------|---------|--------|---|------|----------|---|---|---|---|
|                                        | 50,000  | 0      | 0 | 3.85 | 2/28/16  | - | - | - | - |
|                                        | 100,000 | 0      | 0 | 3.48 | 4/14/16  | - | - | - | - |
|                                        | 30,000  | 0      | 0 | 3.55 | 4/30/16  | - | - | - | - |
|                                        | 13,750  | 0      | 0 | 2.37 | 1/22/17  | - | - | - | - |
|                                        | 10,000  | 0      | 0 | 4.03 | 1/3/11   | - | - | - | - |
| D. Strayer, Medical Director           | 50,000  | 0      | 0 | 2.00 | 9/9/17   | - | - | - | - |
|                                        | 50,000  | 0      | 0 | 4.00 | 2/28/08  | - | - | - | - |
|                                        | 10,000  | 0      | 0 | 4.03 | 1/3/11   | - | - | - | - |
|                                        | 20,000  | 0      | 0 | 3.50 | 2/23/07  | - | - | - | - |
|                                        | 10,000  | 0      | 0 | 1.90 | 12/14/14 | - | - | - | - |
|                                        | 10,000  | 0      | 0 | 2.61 | 12/8/15  | - | - | - | - |
|                                        | 10,000  | 5,000  | 0 | 2.20 | 11/20/16 | - | - | - | - |
|                                        | 25,000  | 0      | 0 | 1.30 | 12/6/17  | - | - | - | - |
| C. Smith,<br>VP of MFG                 | 20,000  | 0      | 0 | 2.00 | 9/9/17   | - | - | - | - |
|                                        | 5,000   | 0      | 0 | 4.00 | 6/7/08   | - | - | - | - |
|                                        | 10,000  | 0      | 0 | 4.03 | 1/3/11   | - | - | - | - |
|                                        | 10,000  | 0      | 0 | 2.61 | 12/8/15  | - | - | - | - |
|                                        | 6,791   | 0      | 0 | 2.37 | 1/23/17  | - | - | - | - |
|                                        | 10,000  | 0      | 0 | 1.90 | 12/7/14  | - | - | - | - |
|                                        | 5,000   | 2,500  | 0 | 2.20 | 11/20/16 | - | - | - | - |
| W. Springate, VP of Operations         | 1,812   | 0      | 0 | 1.90 | 12/7/14  | - | - | - | - |
|                                        | 2,088   | 0      | 0 | 2.61 | 12/8/05  | - | - | - | - |
|                                        | 5,000   | 0      | 0 | 2.20 | 11/20/16 | - | - | - | - |
|                                        | 20,200  | 0      | 0 | 1.78 | 4/30/17  | - | - | - | - |
|                                        | 6,067   | 13,333 | 0 | 1.30 | 12/6/17  | - | - | - | - |
| R. Lander,<br>VP of Quality Assurance  | 5,000   | 10,000 | 0 | 1.30 | 12/6/17  | - | - | - | - |
| K. Ferencz-Biro,<br>VP of Reg. Affairs | 5,000   | 10,000 | 0 | 1.30 | 12/6/17  | - | - | - | - |

**Options Exercised / Stock Vested - 2007**

| Name                                   | Option Awards                                      |                                       | Stock Awards                                      |                                         |
|----------------------------------------|----------------------------------------------------|---------------------------------------|---------------------------------------------------|-----------------------------------------|
|                                        | Number of<br>Shares<br>Acquired on<br>Exercise (#) | Value<br>Realized on<br>Exercise (\$) | Number of<br>Shares<br>Acquired on<br>Vesting (#) | Value of<br>Realized on<br>Vesting (\$) |
| (a)                                    | (b)                                                | (c)                                   | (d)                                               | (e)                                     |
| W.A. Carter,<br>CEO                    | none                                               |                                       |                                                   |                                         |
| A. Bonelli,<br>COO                     | none                                               |                                       |                                                   |                                         |
| R. Peterson, CFO                       | none                                               |                                       |                                                   |                                         |
| D. Strayer,<br>Medical Director        | none                                               |                                       |                                                   |                                         |
| C. Smith,<br>VP MFG.                   | none                                               |                                       |                                                   |                                         |
| W. Springate,<br>VP of Operations      | none                                               |                                       |                                                   |                                         |
| R. Lander,<br>VP of Qual. Assurance    | none                                               |                                       |                                                   |                                         |
| K. Ferencz-Biro,<br>VP of Reg. Affairs | none                                               |                                       |                                                   |                                         |

**Compensation Committee Interlocks and Insider Participation**

Our Compensation Committee of the Board of Directors, consisting of Richard Piani, the Committee Chairman, William Mitchell, M.D. and Dr. Iraj E. Kiani, are all independent directors. There are no interlocking relationships.

**COMPENSATION COMMITTEE REPORT**

Our Committee has reviewed and discussed the Compensation Discussion and Analysis contained in this Annual Report with management. Based on our Committee's review of and the discussions with management with respect to the Compensation Discussion and Analysis, our Committee recommended to the board of directors that the Compensation Discussion and Analysis be included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2007 for filing with the SEC.

COMPENSATION  
COMMITTEE  
Richard Piani,  
Committee  
Chairman  
William Mitchell,  
M.D.  
Dr. Iraj E. Kiani

The foregoing Compensation Committee report shall not be deemed incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, and shall not otherwise be deemed filed under these acts, except to the extent we incorporate by reference into such filings.



**Director Compensation - 2007**

| Name                                       | Fees<br>Earned<br>or Paid<br>in Cash<br>(\$) | Stock<br>Awards<br>(\$) | Option<br>Awards<br>(\$)<br>(2) | Change in<br>Pension Value<br>Non-Equity and<br>Incentive Plan<br>Compensation (\$) |   |            | All Other<br>Compensation (\$) | Total<br>(\$) |
|--------------------------------------------|----------------------------------------------|-------------------------|---------------------------------|-------------------------------------------------------------------------------------|---|------------|--------------------------------|---------------|
|                                            |                                              |                         |                                 | Nonqualified<br>Deferred<br>Compensation<br>Earnings                                |   |            |                                |               |
| R. Etheridge,<br>Director, General Counsel | 100,000                                      | 50,000                  | 67,406                          | 0                                                                                   | 0 | 117,179(1) |                                | 334,585       |
| W. Mitchell,<br>Director                   | 100,000                                      | 50,000                  | 67,406                          | 0                                                                                   | 0 | 0          |                                | 217,406       |
| R. Piani,<br>Director                      | 100,000                                      | 50,000                  | 67,406                          | 0                                                                                   | 0 | 0          |                                | 217,406       |
| I. Kiani,<br>Director                      | 100,000                                      | 50,000                  | 0                               | 0                                                                                   | 0 | 0          |                                | 150,000       |

(1) General Counsel fees as per Engagement Agreement.

(2) The total Fair Value of Stock Options granted in 2007 to Directors was \$202,218. The options were the renewal of previously issued options that expired unexercised.

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

The following table sets forth as of March 3, 2008, the number and percentage of outstanding shares of common stock beneficially owned by:

- Each person, individually or as a group, known to us to be deemed the beneficial owners of five percent or more of our issued and outstanding common stock;
- each of our directors and the Named Executives; and
- all of our officers and directors as a group.

As of March 3, 2008, there were no other persons, individually or as a group, known to us to be deemed the beneficial owners of five percent or more of our issued and outstanding common stock.

| Name and Address of<br>Beneficial Owner                                      | Shares Beneficially<br>Owned | % Of Shares<br>Beneficially Owned |
|------------------------------------------------------------------------------|------------------------------|-----------------------------------|
| William A. Carter, M.D.                                                      | 6,241,868(1)                 | 7.9%                              |
| Ransom W. Etheridge<br>2610 Potters Rd.<br>Virginia Beach, VA 23452          | 704,171(2)                   | *                                 |
| Robert E. Peterson                                                           | 540,574(3)                   | *                                 |
| Richard C. Piani<br>97 Rue Jeans-Jaures<br>Levaillois-Perret<br>France 92300 | 532,223(4)                   | *                                 |
| Anthony Bonelli<br>783 Jersey Avenue<br>New Brunswick, NJ 08901              | 152,500(5)                   | *                                 |
| William M. Mitchell, M.D.                                                    | 459,495(6)                   | *                                 |



Vanderbilt University  
 Department of Pathology  
 Medical Center North  
 21<sup>st</sup> and Garland  
 Nashville, TN 37232

|                                                                 |            |       |
|-----------------------------------------------------------------|------------|-------|
| David R. Strayer, M.D.                                          | 200,746(7) | *     |
| Carol A. Smith, Ph.D.                                           | 69,291(8)  | *     |
| Iraj-Eqhbali Kiani, Ph.D.                                       |            |       |
| Orange County Immune Institute                                  |            |       |
| 18800 Delaware Street                                           |            |       |
| Huntingdon Beach, CA 92648                                      | 166,751(9) | *     |
| W. Springate                                                    | 48,900(10) | *     |
| R. Lander, Ph.D.                                                | 15,000(11) | *     |
| K. Ferencz-Biro, Ph.D.                                          | 15,000(11) | *     |
| All directors and executive officers as a group<br>(11 persons) | 9,146,519  | 11.2% |
| * Less than 1%                                                  |            |       |

(1) Includes shares issuable upon the exercise of (i) replacement options issued in 2006 to purchase 376,650 shares of common stock exercisable at \$3.78 per share expiring on February 22, 2016; (ii) stock options issued in 2001 to purchase 10,000 shares of common stock at \$4.03 per share expiring January 3, 2011; (iii) options issued in 2007 to purchase 1,000,000 shares of common stock exercisable at \$2.00 per share expiring on September 9, 2017, these options replaced previously issued options that expired unexercised on August 13, 2007; (iv) warrants issued in 2003 to purchase 1,450,000 shares of common stock exercisable at \$2.20 per share expiring on September 8, 2008; (v) stock options issued in 2004 to purchase 320,000 shares of common stock at \$2.60 per share expiring on September 7, 2014; (vi) Stock Options issued in 2005 to purchase 100,000 shares of common stock at \$1.75 per share expiring on April 26, 2015; (vii) Stock options issued in 2005 to purchase 465,000 shares of common stock at \$1.86 per share expiring June 30, 2015; and (viii) stock options issued in 2005 to purchase 70,000 shares of Common Stock at \$2.87 per share expiring December 9, 2015; (ix) stock options issued in 2005 to purchase 10,000 shares of Common Stock at \$2.61 per share expiring December 8, 2015; (x) 300,000 options issued in 2006 to purchase common stock at \$2.38 per share and expiring on January 1, 2016; and (xi) 476,490 shares of Common Stock. Also includes 1,663,728 warrants and options originally issued to William A. Carter and subsequently transferred to Carter Investments of which Dr. Carter is the beneficial owner. These securities consist of (a) warrants issued in 2008 to purchase 190,000 shares of common stock at \$4.00 per share expiring on February 17, 2018, these options replace previously issued warrants that expired unexercised on February 18, 2007, (b) stock options granted in 1991 and extended in 1998 to purchase 73,728 shares of common stock exercisable at \$2.71 per share expiring on August 8, 2008 and (c) options issued in 2007 to purchase 1,400,000 shares of common stock at \$3.50 per share expiring on September 30, 2017. These options replaced previously issued options that expired unexercised on September 30, 2007.

- (2) Includes shares issuable upon exercise of (i) 20,000 options issued in to purchase common stock at \$4.00 per share expiring on February 17, 2018, these options replace previously issued warrants that expired unexercised on February 18, 2007; (ii) 100,000 warrants issued in 2002 exercisable \$2.00 per share expiring on August 17, 2017, these options replaced previously issued options that expired unexercised on August 13, 2007; (iii) stock options issued in 2005 to purchase 100,000 shares of common stock exercisable at \$1.75 per share expiring on April 26, 2015; and (iv) stock options issued in 2004 to purchase 50,000 shares of common stock exercisable at \$2.60 per share expiring on September 7, 2014; and (vi) 184,171 shares of common stock of which 40,900 are subject to security interest. Also includes 200,000 stock options originally granted to Ransom Etheridge in 2003 and 50,000 stock options originally granted to Ransom Etheridge in 2006, all of which were subsequently transferred to relatives and family trusts. 200,000 of these stock options are exercisable at \$2.75 per share and expire on December 4, 2013. 37,500 of these options were transferred to Julianne Inglima; 37,500 of these options were transferred to Thomas Inglima; 37,500 of these options were transferred to R. Etheridge-BMI Trust; 37,500 options were transferred to R. Etheridge-TCI Trust and 50,000 of these options were transferred to the Etheridge Family Trust. 50,000 of these stock options are exercisable at \$3.86 per share and expire on February 24, 2016. 12,500 of these shares were transferred to Julianne Inglima; 12,500 of these options were transferred to Thomas Inglima; 12,500 of these options were transferred to R. Etheridge - BMI Trust; and 12,500 of these options were transferred to R. Etheridge-TCI Trust. Julianne and Thomas are Mr. Etheridge's daughter and son-in-law.
- (3) Includes shares issuable upon exercise of (i) replacement options issued in 2007 to purchase 13,750 shares of common stock at \$2.37 per share and expiring on January 22, 2017; (ii) options issued in 2001 to purchase 10,000 shares of common stock at \$4.03 per share and expiring on January 3, 2011; (iii) options issued in 2005 to purchase 10,000 shares of Common Stock at \$2.61 per share expiring December 8, 2015; and (iv) 8,000 shares of Common Stock. Also includes 498,824 warrants/options originally issued to Robert E. Peterson and subsequently transferred to the Robert E. Peterson Trust of which Robert E. Peterson is owner and Trustee and to Mr. Peterson's spouse, Leslie Peterson. The trust securities include options issued in 2007 to purchase 200,000 shares at \$2.00 per share expiring September 17, 2017, these options replaced previously issued options that expired unexercised on August 13, 2007; options issued in 2006 to purchase 50,000 shares of common stock exercisable at \$3.85 per share expiring on February 28, 2016; replacement options issued in 2006 to purchase 100,000 shares of common stock at \$3.48 per share expiring on April 14, 2016; replacement options issued in 2006 to purchase 30,000 shares of common stock exercisable at \$3.55 per share expiring on April 30, 2016 and 63,824 stock options issued in 2004 consisting of 50,000 options to acquire common stock at \$3.44 per share expiring on June 22, 2014 and 13,824 options to acquire common stock at \$2.60 per share expiring on September 7, 2014. 55,000 options to purchase common stock at \$1.75 per share expiring on April 16, 2015 were transferred to Mrs. Peterson of which Mr. Peterson is still considered the beneficial owner.
- (4) Includes shares issuable upon exercise of (i) 20,000 warrants issued in 1998 to purchase common stock at \$4.00 per share expiring on February 17, 2018, these options replace previously issued warrants that expired unexercised on February 18, 2007; (ii) 100,000 warrants issued in 2007 exercisable at \$2.00 per share expiring on September 17, 2017, these options replaced previously issued options that expired unexercised on August 13, 2007; (iii) options granted in 2004 to purchase 54,608 shares of common stock exercisable at \$2.60 per share expiring on September 17, 2014; (iv) options granted in 2005 to purchase 100,000 shares of common stock exercisable at \$1.75 per share expiring on April 26, 2015; (v) stock options issued in 2006 to purchase 50,000 shares of common stock exercisable at \$3.86 per share expiring February 24, 2006; (vi) 161,715 shares of common stock owned by Mr. Piani; (vii) 40,900 shares of common stock owned jointly by Mr. and Mrs. Piani; and (viii) and 5,000 shares of common stock owned by Mrs. Piani.

- (5) Consists of (i) 100,000 options exercisable at \$2.11 per share expiring November 27, 2016 (ii) 50,000 options exercisable at \$2.08 per share expiring February 26, 2017 and (iii) 2,500 shares of common stock.
- (6) Includes shares issuable upon exercise of (i) options issued in to purchase 12,000 shares of common stock at \$6.00 per share; (ii) 100,000 warrants issued in 2002 exercisable at \$2.00 per share expiring on August 13, 2007; (iii) 50,000 stock options issued in 2004 exercisable at \$2.60 per share expiring on September 7, 2014; (iv) 100,000 stock options issued in 2005 exercisable at \$1.75 per share expiring on April 26, 2015; (v) stock options issued in 2006 to purchase 50,000 shares of common stock exercisable at \$3.86 per share expiring February 24, 2006; and (vi) 147,495 shares of common stock.
- (7) (i) stock options issued in 2007 to purchase 20,000 shares of common stock at \$2.37 per share expiring on February 22, 2017; (ii) warrants issued in 1998 to purchase 50,000 shares of common stock exercisable at \$4.00 per share expiring on February 17, 2018. These options replace previously issued warrants that expired unexercised on February 18, 2007; (iii) stock options granted in 2001 to purchase 10,000 shares of common stock exercisable at \$4.03 per share expiring on January 3, 2011; (iv) warrants issued in 2007 to purchase 50,000 shares of common stock exercisable at \$2.00 per share expiring on September 17, 2017, these options replaced previously issued options that expired unexercised on August 13, 2007; (v) stock options issued in 2004 to purchase 10,000 shares of common stock exercisable at \$1.90 per share expiring on December 7, 2014; (vi) stock options issued in 2005 to purchase 10,000 shares of Common Stock at \$2.61 per share expiring December 8, 2015; (vii) stock options to purchase 15,000 shares of common stock at \$2.20 per share expiring November 20, 2016; (viii) stock options issued in 2007 to purchase 25,000 shares of common stock at \$1.30 per share expiring December 6, 2017 and (ix) 10,746 shares of common stock.
- (8) Consists of shares issuable upon exercise of (i) 5,000 warrants issued in 1998 to purchase common stock at \$4.00 per share expiring June 7, 2008; (ii) 20,000 options issued in 2007 exercisable at \$2.00 per share expiring in September 17, 2017, these options replaced previously issued options that expired unexercised on August 13, 2007; (iii) 6,791 stock options issued in 1997 exercisable at \$2.37 expiring January 22, 2017; (iv) 10,000 stock options issued in 2001 exercisable at \$4.03 per share expiring January 3, 2011; (v) 10,000 stock options issued in 2004 exercisable at \$1.90 expiring on December 7, 2014; (vi) 10,000 stock options issued in 2005 to purchase Common Stock at \$2.61 per share expiring December 8, 2015 and (vii) 7,500 stock options issued in 1996 to purchase common stock at \$2.20 per share expiring November 20, 2016.

- (9) Consists of shares issuable upon exercise of (i) 12,000 options issued in 2005 exercisable at \$1.63 per share expiring on June 2, 2015; (ii) 15,000 options issued in 2005 exercisable at \$1.75 per share expiring on April 26, 2015; (iii) stock options issued in 2006 to purchase 50,000 shares of common stock exercisable at \$3.86 per share expiring February 24, 2006; and (iv) 89,751 shares of common stock.
- (10) Consists of (i) stock options to acquire 1,812 shares of common stock at \$1.90 per share expiring December 7, 2014; (ii) stock options to acquire 2,088 shares of common stock at \$2.61 per share expiring December 8, 2015; (iii) 5,000 stock options at \$2.20 per share expiring November 20, 2016; (iv) stock options to acquire 20,000 shares of common stock at \$1.78 per share expiring April 30, 2017 and (v) stock options to acquire 20,000 shares at \$1.30 per share expiring December 6, 2017.
- (11) Consists of stock options to purchase 15,000 shares of common stock at \$1.30 per share expiring on December 6, 2017.

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

We have employment agreements with certain of our executive officers and have granted such officers and directors options and warrants to purchase our common stock, as discussed under the headings, “Item 11. Executive Compensation,” and “Item 12. Security Ownership of Certain Beneficial Owners and Management,” above.

Ransom W. Etheridge, our Secretary, General Counsel and one of our directors, is an attorney in private practice, who renders corporate legal services to us from time to time, for which he has received fees totaling approximately \$91,000 and \$117,000 in 2006 and 2007, respectively. In addition, Mr. Etheridge serves on the Board of Directors for which he received Director’s Fees of cash and stock valued at \$150,000 in 2006 and 2007. We loaned \$60,000 to Ransom W. Etheridge in November, 2001 for the purpose of exercising 15,000 class A redeemable warrants. This loan bore interest at 6% per annum. This loan was granted prior to the enactment of the Sarbanes Oxley Act of 2002 prohibiting such transactions. In lieu of granting Mr. Etheridge a bonus for outstanding legal work performed on behalf of the Company, the Board of Directors forgave the loan and accrued interest on February 24, 2006.

We used the property acquired in late 2004 by Retreat House, LLC an entity in which the children of William A. Carter have a beneficial interest. We paid Retreat House, LLC \$102,000 and \$153,000 in 2006 and 2007, respectively, for the use of the property at various times.

Antoni Esteve, one of our former directors, was a Member of the Executive Committee and Director of Scientific and Commercial Operations of Laboratorios Del Dr. Esteve S.A. In March 2002, our European subsidiary Hemispherx S.A. entered into a Sales and Distribution Agreement with Laboratorios Del Dr. Esteve S.A. In addition, in March 2003, we issued 347,445 shares of our common stock to Provesan SA, an affiliate of Laboratorios Del Dr. Esteve S.A., in exchange for 1,000,000 Euros of convertible preferred equity certificates of Hemispherx S.A., owned by Laboratorios Del Dr. Esteve S.A.

We have engaged the Sage Group, Inc., a health care, technology oriented, strategy and transaction advisory firm, to assist us in obtaining a strategic alliance in Japan for the use of Ampligen® in treating Chronic Fatigue Syndrome (CFS) and Avian Flu. R. Douglas Hulse, our former President and Chief Operating Officer, is a member and an executive director of The Sage Group, Inc.

Kati Kovari, M.D. was paid \$13,000 in 2006 and 2007 for her part-time services to the Company as Assistant Medical Director. Dr. Kovari is the spouse of W. A. Carter, our CEO.

#### ITEM 14. Principal Accountant Fees and Services.

All audit and professional services are approved in advance by the Audit Committee to assure such services do not impair the auditor's independence from us. BDO Seidman, LLP ("BDO") resigned as our auditor on November 7, 2006 and, on November 9, 2006, we engaged McGladrey & Pullen, LLP ("McGladrey") as our certified public accountants. The total fees by McGladrey for 2006 and 2007 were \$205,000 and \$280,000, respectively. The following table shows the aggregate fees for professional services rendered during the year ended December 31, 2007.

| Description of Fees | Amount (\$) |            |
|---------------------|-------------|------------|
|                     | 2006        | 2007       |
| Audit Fees          | \$ 205,000  | \$ 220,000 |
| Audit-Related Fees  | -           | 60,000     |
| Tax Fees            | -           | -          |
| All Other Fees      | -           | -          |
| Total               | \$ 205,000  | \$ 280,000 |

##### *Audit Fees*

Represents fees for professional services provided for the audit of our annual financial statements, audit of the effectiveness of internal control over financial reporting, services that are performed to comply with generally accepted auditing standards, and review of our financial statements included in our quarterly reports and services in connection with statutory and regulatory filings.

##### *Audit-Related Fees*

Represents the fees for assurance and related services that were reasonably related to the performance of the audit or review of our financial statements.

The Audit Committee has determined that McGladrey's rendering of these audit-related services was compatible with maintaining auditor's independence. The Board of Directors considered McGladrey to be well qualified to serve as our independent public accountants. The committee also pre-approved the charges for services performed in 2006 and 2007.

The Audit Committee pre-approves all auditing services and the terms thereof (which may include providing comfort letters in connection with securities underwriting) and non-audit services (other than non-audit services prohibited under Section 10A(g) of the Exchange Act or the applicable rules of the SEC or the Public Company Accounting Oversight Board) to be provided to us by the independent auditor; provided, however, the pre-approval requirement is waived with respect to the provisions of non-audit services for us if the "de minimus" provisions of Section 10A(i)(1)(B) of the Exchange Act are satisfied. This authority to pre-approve non-audit services may be delegated to one or more members of the Audit Committee, who shall present all decisions to pre-approve an activity to the full Audit Committee at its first meeting following such decision.

## PART IV

### ITEM 15. Exhibits and Financial Statement Schedules

(a) Financial Statements and Schedules – See index to financial statements on page F-1 of this Annual Report.

All other schedules called for under regulation S-X are not submitted because they are not applicable or not required, or because the required information is included in the financial statements or notes thereto.

(b) Exhibits – See exhibit index below.

Except as disclosed in the footnotes, the following exhibits were filed with the Securities and Exchange Commission as exhibits to our Form S-1 Registration Statement (No. 33-93314) or amendments thereto and are hereby incorporated by reference:

| Exhibit<br>No. | Description                                                                                                                                                                                                                                                                                                                                                        |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1            | First Asset Purchase Agreement dated March 11, 2003, by and between the Company and ISI.(1)                                                                                                                                                                                                                                                                        |
| 2.2            | Second Asset Purchase Agreement dated March 11, 2003, by and between the Company and ISI.(1)                                                                                                                                                                                                                                                                       |
| 3.1            | Amended and Restated Certificate of Incorporation of the Company, as amended, along with Certificates of Designations.                                                                                                                                                                                                                                             |
| 3.1.1          | Series E Preferred Stock.                                                                                                                                                                                                                                                                                                                                          |
| 3.2            | By-laws of Registrant, as amended.                                                                                                                                                                                                                                                                                                                                 |
| 4.1            | Specimen certificate representing our Common Stock.                                                                                                                                                                                                                                                                                                                |
| 4.2            | Rights Agreement, dated as of November 19, 2002, between the Company and Continental Stock Transfer & Trust Company. The Right Agreement includes the Form of Certificate of Designation, Preferences and Rights of the Series A Junior Participating Preferred Stock, the Form of Rights Certificate and the Summary of the Right to Purchase Preferred Stock.(2) |
| 4.3            | Form of 6% Convertible Debenture of the Company issued in March 2003.(1)                                                                                                                                                                                                                                                                                           |
| 4.4            | Form of Warrant for Common Stock of the Company issued in March 2003.(1)                                                                                                                                                                                                                                                                                           |
| 4.5            | Form of Warrant for Common Stock of the Company issued in June 2003.(3)                                                                                                                                                                                                                                                                                            |
| 4.6            | Form of 6% Convertible Debenture of the Company issued in July 2003.(4)                                                                                                                                                                                                                                                                                            |
| 4.7            | Form of Warrant for Common Stock of the Company issued in July 2003.(4)                                                                                                                                                                                                                                                                                            |
| 4.8            | Form of 6% Convertible Debenture of the Company issued in October 2003.(5)                                                                                                                                                                                                                                                                                         |
| 4.9            | Form of Warrant for Common Stock of the Company issued in October 2003.(5)                                                                                                                                                                                                                                                                                         |
| 4.10           | Form of 6% Convertible Debenture of the Company issued in January 2004.(6)                                                                                                                                                                                                                                                                                         |
| 4.11           | Form of Warrant for Common Stock of the Company issued in January 2004.(6)                                                                                                                                                                                                                                                                                         |
| 4.12           | Form of Warrant for Common Stock of the Company. (9)                                                                                                                                                                                                                                                                                                               |
| 4.13           | Amendment Agreement, effective October 6, 2005, by and among the Company and debenture holders.(11)                                                                                                                                                                                                                                                                |
| 4.14           | Form of Series A amended 7% Convertible Debenture of the Company (amending Debenture due October 31, 2005).(11)                                                                                                                                                                                                                                                    |
| 4.15           | Form of Series B amended 7% Convertible Debenture of the Company (amending Debenture issued on January 26, 2004 and due January 31, 2006). (11)                                                                                                                                                                                                                    |

- 4.16 Form of Series C amended 7% Convertible Debenture of the Company (amending Debenture issued on July 13, 2004 and due January 31, 2006).(11)
- 4.17 Form of Warrant issued effective October 6, 2005 for Common Stock of the Company.(11)
- 10.1 1990 Stock Option Plan.
- 10.2 1992 Stock Option Plan.
- 10.3 1993 Employee Stock Purchase Plan.
- 10.4 Form of Confidentiality, Invention and Non-Compete Agreement.
- 10.5 Form of Clinical Research Agreement.
- 10.6 Form of Collaboration Agreement.
- 10.7 Amended and Restated Employment Agreement by and between the Company and Dr. William A. Carter, dated as of July 1, 1993. (7)
- 10.8 Employment Agreement by and between the Registrant and Robert E. Peterson, dated April 1, 2001.
- 10.9 License Agreement by and between the Company and The Johns Hopkins University, dated December 31, 1980.
- 10.10 Technology Transfer, Patent License and Supply Agreement by and between the Company, Pharmacia LKB Biotechnology Inc., Pharmacia P-L Biochemicals Inc. and E.I. du Pont de Nemours and Company, dated November 24, 1987.
- 10.11 Pharmaceutical Use Agreement, by and between the Company and Temple University, dated August 3, 1988.
- 10.12 Assignment and Research Support Agreement by and between the Company, Hahnemann University and Dr. David Strayer, Dr. Isadore Brodsky and Dr. David Gillespie, dated June 30, 1989.
- 10.13 Lease Agreement between the Company and Red Gate Limited Partnership, dated November 1, 1989, relating to the Company's Rockville, Maryland facility.
- 10.14 Agreement between the Company and Bioclones (Proprietary) Limited.
- 10.15 Amendment, dated August 3, 1995, to Agreement between the Company and Bioclones (Proprietary) Limited (contained in Exhibit 10.14).
- 10.16 Licensing Agreement with Core BioTech Corp.
- 10.17 Licensing Agreement with BioPro Corp.
- 10.18 Licensing Agreement with BioAegean Corp.
- 10.19 Agreement with Esteve.
- 10.20 Agreement with Accredo (formerly Gentiva) Health Services.
- 10.21 Agreement with Biovail Corporation International.
- 10.22 Forbearance Agreement dated March 11, 2003, by and between ISI, the American National Red Cross and the Company.(1)
- 10.23 Forbearance Agreement dated March 11, 2003, by and between ISI, GP Strategies Corporation and the Company.(1)
- 10.24 Securities Purchase Agreement, dated March 12, 2003, by and among the Company and the Buyers named therein.(1)
- 10.25 Registration Rights Agreement, dated March 12, 2003, by and among the Company and the Buyers named therein.(1)
- 10.26 Securities Purchase Agreement, dated July 10, 2003, by and among the Company and the Buyers named therein.(4)
- 10.27 Registration Rights Agreement, dated July 10, 2003, by and among the Company and the Buyers named therein.(4)
- 10.28 Securities Purchase Agreement, dated October 29, 2003, by and among the Company and the Buyers named therein.(5)
- 10.29 Registration Rights Agreement, dated October 29, 2003, by and among the Company and the Buyers named therein.(5)
- 10.30 Securities Purchase Agreement, dated January 26, 2004, by and among the Company and the Buyers named therein.(6)



- 10.31 Registration Rights Agreement, dated January 26, 2004, by and among the Company and the Buyers named therein.(6)
- 10.32 Memorandum of Understanding with Fujisawa. (8)

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- 10.33 Securities Purchase Agreement, dated July 30, 2004, by and among the Company and the Purchasers named therein.(9)
- 10.34 Registration Rights Agreement, dated July 30, 2004, by and among the Company and the Purchasers named therein. (9)
- 10.35 Agreement for services of R. Douglas Hulse, (12)
- 10.36 Amended and Restated Employment Agreement of Dr. William A. Carter. (10)
- 10.37 Engagement Agreement with Dr. William A. Carter. (10)
- 10.38 Amended and restated employment agreement of Dr. William A. Carter (12)
- 10.39 Amended and restated engagement agreement with Dr. William A. Carter (12)
- 10.40 Amended and restated engagement agreement with Robert E. Peterson (12)
- 10.41 Engagement Agreement with Ransom W. Etheridge (12)
- 10.42 Change in control agreement with Dr. William A. Carter (12)
- 10.43 Change in control agreement with Dr. William A. Carter (12)
- 10.44 Change in control agreement with Robert E. Peterson (12)
- 10.45 Change in control agreement with Ransom Etheridge (12)
- 10.46 Supply Agreement with Hollister-Stier Laboratories LLC
- 10.47 Manufacturing and Safety Agreement with Hyaluron, Inc.
- 10.48 Common Stock Purchase Agreement, dated July 8, 2005, by and among the Company and Fusion Capital.(13)
- 10.49 Registration Rights Agreement, dated July 8, 2005, by and among the Company and Fusion Capital.(13)
- 10.48 Common Stock Purchase Agreement, dated April 12, 2006, by and among the Company and Fusion Capital.(14)
- 10.49 Registration Rights Agreement, dated April 12, 2006, by and among the Company and Fusion Capital.(14)
- 10.50 Supply Agreement with Hollister-Stier Laboratories LLC. (15)
- 10.51 Manufacturing and Safety Agreement with Hyaluron, Inc. (15)
- 10.52 April 19, 2006 Amendment to Common Stock Purchase Agreement by and among the Company and Fusion Capital.(15)
- 10.53 July 21, 2006 Letter Amendment to Common Stock Purchase Agreement by and among the Company and Fusion Capital.(15)
- 10.54 Royalty Purchase Agreement with Stem Cell Innovations, Inc. (15)
- 10.55 Biken Activating Agreement. (16)
- 10.56 Biken Material Evaluation Agreement. (16)
- 21 Subsidiaries of the Registrant.
- 23.1 McGladrey & Pullen, LLP consent.(17)
- 23.2 BDO Seidman, LLP consent.(17)
- 31.1 Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 from the Company's Chief Executive Officer.(17)
- 31.2 Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 from the Company's Chief Financial Officer.(17)
- 32.1 Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 from the Company's Chief Executive Officer.(17)
- 32.2 Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 from the Company's Chief Financial Officer.(17)

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(1) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 1-13441) dated March 12, 2003 and is hereby incorporated by reference.

(2)

Filed with the Securities and Exchange Commission on November 20, 2002 as an exhibit to the Company's Registration Statement on Form 8-A (No. 027072) and is hereby incorporated by reference.

(3) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 1-13441) dated June 27, 2003 and is hereby incorporated by reference.

- (4) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 1-13441) dated July 14, 2003 and is hereby incorporated by reference.
- (5) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 1-13441) dated October 30, 2003 and is hereby incorporated by reference.
- (6) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 1-13441) dated January 27, 2004 and is hereby incorporated by reference.
- (7) Filed with the Securities and Exchange Commission as an exhibit to the Company's quarterly report on Form 10-Q (No. 1-13441) for the period ended September 30, 2001 and is hereby incorporated by reference.
- (8) Filed with the Securities and Exchange Commission as an exhibit to the Company's Form S-1 Registration Statement (No. 333-113796) and is hereby incorporated by reference.
- (9) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 1-13441) dated August 6, 2004 and is hereby incorporated by reference.
- (10) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 1-13441) dated September 15, 2004 and is hereby incorporated by reference.
- (11) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K/A-1 (No. 1-13441) filed on October 28, 2005 and is hereby incorporated by reference.
- (12) Filed with the Securities and Exchange Commission as an exhibit to the Company's annual report on Form 10-K (No. 1-13441) for the year ended December 31, 2004 and is hereby incorporated by reference.
- (13) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 1-13441) dated September 15, 2005 and is hereby incorporated by reference.
- (14) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 1-13441) dated April 12, 2006 and is hereby incorporated by reference.
- (15) Filed with the Securities and Exchange Commission on July 31, 2006 as an exhibit to the Company's Form S-1 Registration Statement (No. 333-136187) and is hereby incorporated by reference.
- (16) Filed with the Securities and Exchange Commission as an exhibit to the Company's Current Report on Form 8-K (No. 1-13441) dated December 13, 2007 and is hereby incorporated by reference.
- (17) Filed herewith.

## 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.

HEMISPHERx  
BIOPHARMA, INC.

By: /s/ William A.  
Carter  
William A.  
Carter, M.D.  
Chief Executive  
Officer

March 17, 2008

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange of 1934, as amended, this report has been signed below by the following persons on behalf of this Registrant and in the capacities and on the dates indicated.

|                                                       |                                                                   |                |
|-------------------------------------------------------|-------------------------------------------------------------------|----------------|
| /s/ William A. Carter<br>William A. Carter, M.D.      | Chairman of the Board, Chief<br>Executive Officer and<br>Director | March 17, 2008 |
| /s/ Richard Piani<br>Richard Piani                    | Director                                                          | March 17, 2008 |
| /s/ Robert E. Peterson<br>Robert E. Peterson          | Chief Financial Officer                                           | March 17, 2008 |
| /s/ Ransom Etheridge<br>Ransom Etheridge              | Secretary And Director                                            | March 17, 2008 |
| /s/ William Mitchell<br>William Mitchell, M.D., Ph.D. | Director                                                          | March 17, 2008 |
| /s/ Iraj E. Kiani<br>Iraj E. Kiani, Ph.D.             | Director                                                          | March 17, 2008 |

**HEMISPHERx BIOPHARMA, INC AND SUBSIDIARIES**  
**Index to Consolidated Financial Statements**

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders  
Hemispherx Biopharma, Inc.  
Philadelphia, PA

We have audited the consolidated balance sheets of Hemispherx Biopharma, Inc. and Subsidiaries as of December 31, 2006 and 2007 and the related consolidated statements of operations, stockholders' equity and comprehensive loss and cash flows for each of the two years in the period ended December 31, 2007. Our audits also included the financial statement schedule of Hemispherx Biopharma, Inc. listed in Item 15(a) for each of the two years in the period ended December 31, 2007. These financial statements and financial statement schedule 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of Hemispherx Biopharma, Inc. and Subsidiaries as of December 31, 2006 and 2007, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2007, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the related financial statement schedule for each of the two years in the period ended December 31, 2007, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Hemispherx Biopharma, Inc. and Subsidiaries' internal control over financial reporting as of December 31, 2007, based on criteria established in "*Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO)*" and our report dated March 17, 2008, expressed an unqualified opinion on the effectiveness of Hemispherx Biopharma, Inc.'s internal control over financial reporting.

/s/ McGladrey & Pullen, LLP

Blue Bell, Pennsylvania  
March 17, 2008

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders  
Hemispherx Biopharma, Inc.

We have audited the accompanying consolidated statement of operations, changes in stockholders' equity and comprehensive loss and cash flows of Hemispherx Biopharma, Inc. and subsidiaries for the year ended December 31, 2005. We have also audited the financial statement schedule listed under Item 15(a) for the year ended December 31, 2005. These consolidated financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit.

We conducted our audit in accordance with auditing 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 and financial statement schedule 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 audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the results of operations and cash flows of Hemispherx Biopharma, Inc. and subsidiaries for the year ended December 31, 2005 in conformity with accounting principles generally accepted in the United States. Also, in our opinion, the financial statement schedule presents fairly, in all material respects, the information set forth therein for the year ended December 31, 2005.

/s/ BDO Seidman, LLP  
BDO Seidman, LLP

Philadelphia, Pennsylvania  
June 1, 2006

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**HEMISPHERx BIOPHARMA, INC. AND SUBSIDIARIES**  
**Consolidated Balance Sheets**  
**December 31, 2006 and 2007**

(in thousands, except for share and per share amounts)

|                                                                                                                                          | 2006      | 2007      |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|
| <b>ASSETS</b>                                                                                                                            |           |           |
| Current assets:                                                                                                                          |           |           |
| Cash and cash equivalents (Notes 2 & 17)                                                                                                 | \$ 3,646  | \$ 11,471 |
| Short term investments (Notes 2 & 4)                                                                                                     | 18,375    | 3,944     |
| Inventories (Note 3)                                                                                                                     | 957       | 511       |
| Accounts and other receivables (Note 2)                                                                                                  | 93        | 77        |
| Prepaid expenses and other current assets                                                                                                | 168       | 146       |
| Assets held for sale (Note 2)                                                                                                            | -         | 450       |
| Total current assets                                                                                                                     | 23,239    | 16,599    |
| Property and equipment, net (Note 2)                                                                                                     | 4,720     | 4,821     |
| Patent and trademark rights, net (Notes 2 & 5)                                                                                           | 857       | 958       |
| Investment                                                                                                                               | 35        | 35        |
| Royalty interest, net (Note 5)                                                                                                           | 601       | 243       |
| Construction in progress (Note 2)                                                                                                        | 624       | 469       |
| Deferred financing costs, net                                                                                                            | 38        | -         |
| Advance receivable (Note 7)                                                                                                              | 1,300     | -         |
| Other assets                                                                                                                             | 17        | 17        |
| Total assets                                                                                                                             | \$ 31,431 | \$ 23,142 |
| <b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>                                                                                              |           |           |
| Current liabilities:                                                                                                                     |           |           |
| Accounts payable                                                                                                                         | \$ 1,548  | \$ 1,118  |
| Accrued expenses (Notes 2 & 6)                                                                                                           | 1,261     | 1,069     |
| Current portion of long-term debt (Notes 2 & 7)                                                                                          | 3,871     | -         |
| Total current liabilities                                                                                                                | 6,680     | 2,187     |
| Commitments and contingencies<br>(Notes 10, 12, 13, 15)                                                                                  |           |           |
| Stockholders' equity (Note 8):                                                                                                           |           |           |
| Preferred stock, par value \$0.01 per share, authorized 5,000,000; issued and outstanding; none                                          | -         | -         |
| Common stock, par value \$0.001 per share, authorized 200,000,000 shares; issued and outstanding 66,816,764 and 73,760,446, respectively | 67        | 74        |
| Additional paid-in capital                                                                                                               | 191,689   | 206,078   |
| Accumulated other comprehensive income (loss)                                                                                            | 46        | (7)       |
| Accumulated deficit                                                                                                                      | (167,051) | (185,190) |
| Total stockholders' equity                                                                                                               | 24,751    | 20,955    |
| Total liabilities and stockholders' equity                                                                                               | \$ 31,431 | \$ 23,142 |

See accompanying notes to consolidated financial statements.

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**HEMISPHERX BIOPHARMA, INC. AND SUBSIDIARIES****Consolidated Statements of Operations**

(in thousands, except share and per share data)

|                                                 | Years ended December 31, |                    |                    |
|-------------------------------------------------|--------------------------|--------------------|--------------------|
|                                                 | 2005                     | 2006               | 2007               |
| <b>Revenues:</b>                                |                          |                    |                    |
| Sales of product, net                           | \$ 910                   | \$ 750             | \$ 925             |
| Clinical treatment programs                     | 173                      | 183                | 134                |
| <b>Total Revenues</b>                           | <b>1,083</b>             | <b>933</b>         | <b>1,059</b>       |
| <b>Costs and Expenses:</b>                      |                          |                    |                    |
| Production/cost of goods sold                   | 391                      | 1,275              | 930                |
| Research and development                        | 5,218                    | 10,127             | 10,444             |
| General and administrative                      | 5,389                    | 8,225              | 8,974              |
| <b>Total Costs and Expenses:</b>                | <b>10,998</b>            | <b>19,627</b>      | <b>20,348</b>      |
| Operating loss                                  | (9,915)                  | (18,694)           | (19,289)           |
| Reversal of previously accrued interest expense | -                        | -                  | 346                |
| Interest and other income                       | 590                      | 554                | 1,200              |
| Interest expense                                | (388)                    | (646)              | (116)              |
| Financing costs (Note 7)                        | (2,733)                  | (613)              | (280)              |
| <b>Net loss</b>                                 | <b>\$ (12,446)</b>       | <b>\$ (19,399)</b> | <b>\$ (18,139)</b> |
| <b>Basic and diluted loss per share</b>         | <b>\$ (.24)</b>          | <b>\$ (.31)</b>    | <b>\$ (.25)</b>    |
| <b>Weighted average shares outstanding</b>      |                          |                    |                    |
| Basic and Diluted                               | 51,475,192               | 61,815,358         | 71,839,782         |

See accompanying notes to consolidated financial statements.

**HEMISPHERx BIOPHARMA, INC. AND SUBSIDIARIES**  
**Consolidated Statements of Changes in Stockholders' Equity and Comprehensive Loss**  
(in thousands except share data)

|                                                 | Common<br>Stock<br>Shares | Common<br>Stock .001<br>Par Value | Additional<br>paid-in<br>capital | Accumulated<br>other<br>Comprehensive<br>Income<br>(loss) | Accumulated<br>deficit | Total<br>stockholders<br>equity |
|-------------------------------------------------|---------------------------|-----------------------------------|----------------------------------|-----------------------------------------------------------|------------------------|---------------------------------|
| Balance December 31, 2004                       | 49,631,766                | \$ 50                             | \$ 154,609                       | \$ (10)                                                   | \$ (135,206)           | \$ 19,443                       |
| Shares issued for:                              |                           |                                   |                                  |                                                           |                        |                                 |
| Payment of accounts payable                     | 338,995                   | -                                 | 413                              | -                                                         | -                      | 413                             |
| Conversion of debt                              | 1,358,887                 | 1                                 | 2,219                            | -                                                         | -                      | 2,220                           |
| Warrants exercised                              | 5,000                     | -                                 | 9                                | -                                                         | -                      | 9                               |
| Interest on convertible debt                    | 255,741                   | -                                 | 409                              | -                                                         | -                      | 409                             |
| Private placement, net of issuance costs        | 4,673,766                 | 5                                 | 8,015                            | -                                                         | -                      | 8,020                           |
| Options and warrants issued for services        | -                         | -                                 | 391                              | -                                                         | -                      | 391                             |
| Conversion price adjustment                     | -                         | -                                 | 140                              | -                                                         | -                      | 140                             |
| Discount resulting from debt refinance          | -                         | -                                 | 189                              | -                                                         | -                      | 189                             |
| Net comprehensive loss                          | -                         | -                                 | -                                | (161)                                                     | (12,446)               | (12,607)                        |
| Balance December 31, 2005                       | 56,264,155                | 56                                | 166,394                          | (171)                                                     | (147,652)              | 18,627                          |
| Shares issued for:                              |                           |                                   |                                  |                                                           |                        |                                 |
| Payment of accounts payable                     | 111,085                   | -                                 | 272                              | -                                                         | -                      | 272                             |
| Conversion of debt                              | 400,642                   | 1                                 | 832                              | -                                                         | -                      | 833                             |
| Warrants exercised                              | 255,416                   | 1                                 | 671                              | -                                                         | -                      | 672                             |
| Interest on convertible debt                    | 80,724                    | -                                 | 177                              | -                                                         | -                      | 177                             |
| Private placement, net of issuance costs        | 9,393,014                 | 9                                 | 20,090                           | -                                                         | -                      | 20,099                          |
| Purchase patents                                | 61,728                    | -                                 | 150                              | -                                                         | -                      | 150                             |
| Purchase royalty interest                       | 250,000                   | -                                 | 620                              | -                                                         | -                      | 620                             |
| Stock-based compensation                        | -                         | -                                 | 2,483                            | -                                                         | -                      | 2,483                           |
| Net comprehensive loss                          | -                         | -                                 | -                                | 217                                                       | (19,399)               | (19,182)                        |
| Balance December 31, 2006                       | 66,816,764                | 67                                | 191,689                          | 46                                                        | (167,051)              | 24,751                          |
| Shares issued for:                              |                           |                                   |                                  |                                                           |                        |                                 |
| Interest on convertible debt                    | 116,745                   | -                                 | 193                              |                                                           |                        | 193                             |
| Private placement, net of issuance costs        | 6,651,502                 | 7                                 | 11,613                           |                                                           |                        | 11,620                          |
| Stock issued for settlement of accounts payable | 175,435                   | -                                 | 292                              |                                                           |                        | 292                             |
| Stock based compensation                        |                           |                                   | 2,291                            |                                                           |                        | 2,291                           |
| Net comprehensive loss                          | -                         | -                                 | -                                | (53)                                                      | (18,139)               | (18,192)                        |
| Balance December 31, 2007                       | 73,760,446 \$             | 74 \$                             | 206,078 \$                       | (7) \$                                                    | (185,190) \$           | 20,955                          |

See accompanying notes to consolidated financial statements



**HEMISPHERx BIOPHARMA, INC. AND SUBSIDIARIES**  
**Consolidated Statements of Cash Flows**  
(in thousands)

|                                                                             | Years ended December 31, |             |             |
|-----------------------------------------------------------------------------|--------------------------|-------------|-------------|
|                                                                             | 2005                     | 2006        | 2007        |
| Cash flows from operating activities:                                       |                          |             |             |
| Net loss                                                                    | \$ (12,446)              | \$ (19,399) | \$ (18,139) |
| Adjustments to reconcile net loss to net cash used in operating activities: |                          |             |             |
| Depreciation of property and equipment                                      | 114                      | 192         | 266         |
| Amortization of patent, trademark rights, and royalty interest              | 281                      | 180         | 170         |
| Amortization of deferred financing costs                                    | 2,733                    | 608         | 281         |
| Stock option and warrant compensation and service expense                   | 391                      | 2,483       | 2,291       |
| Impairment losses                                                           | -                        | -           | 526         |
| Inventory reserve                                                           | (125)                    | 141         | 109         |
| Interest on convertible debt                                                | 409                      | 177         | 181         |
| Changes in assets and liabilities:                                          |                          |             |             |
| Inventory                                                                   | 505                      | 669         | 337         |
| Accounts and other receivables                                              | 43                       | 3           | (148)       |
| Asset held for sale                                                         | -                        | -           | (678)       |
| Prepaid expenses and other current assets                                   | 124                      | (26)        | 22          |
| Accounts payable                                                            | 687                      | 829         | (138)       |
| Accrued expenses                                                            | 53                       | 396         | (192)       |
| Net cash used in operating activities                                       | (7,231)                  | (13,747)    | (15,112)    |
| Cash flows from investing activities:                                       |                          |             |             |
| Purchases of property and Equipment and construction in progress, net       | (1,002)                  | (1,351)     | (212)       |
| Additions to patent and trademark rights                                    | (168)                    | (73)        | (211)       |
| Maturities of short term investments                                        | 7,934                    | 12,548      | 21,132      |
| Purchase of short term investments                                          | (12,548)                 | (18,329)    | (6,754)     |
| Net cash (used in) provided by investing activities                         | \$ (5,784)               | \$ (7,205)  | \$ 13,955   |

**HEMISPHERX BIOPHARMA, INC. AND SUBSIDIARIES**  
**Consolidated Statements of Cash Flows (Continued)**  
(in thousands)

|                                                                                   | Years ended December 31, |                 |                  |
|-----------------------------------------------------------------------------------|--------------------------|-----------------|------------------|
|                                                                                   | 2005                     | 2006            | 2007             |
| <b>Cash flows from financing activities:</b>                                      |                          |                 |                  |
| Proceeds from issuance of common stock, net                                       | \$ 8,020                 | \$ 20,099       | \$ 11,620        |
| Payment of long-term debt                                                         | -                        | -               | (4,102)          |
| Collection of advance receivable                                                  | -                        | -               | 1,464            |
| Proceeds from exercise of stock warrants                                          | 9                        | 672             | -                |
| <b>Net cash provided by financing activities</b>                                  | <b>8,029</b>             | <b>20,771</b>   | <b>8,892</b>     |
| <b>Net (decrease) increase in cash and cash equivalents</b>                       | <b>(4,986)</b>           | <b>(181)</b>    | <b>7,825</b>     |
| <b>Cash and cash equivalents at beginning of year</b>                             | <b>8,813</b>             | <b>3,827</b>    | <b>3,646</b>     |
| <b>Cash and cash equivalents at end of year</b>                                   | <b>\$ 3,827</b>          | <b>\$ 3,646</b> | <b>\$ 11,471</b> |
| <b>Supplemental disclosures of cash flow information:</b>                         |                          |                 |                  |
| Issuance of common stock for accounts payable and accrued expenses                | \$ 413                   | \$ 272          | \$ 292           |
| Issuance of common stock for debt conversion, interest payments and debt payments | \$ 2,628                 | \$ 1,010        | \$ 181           |
| Common stock issued for purchase of patents and royalty interest                  | \$ -                     | \$ 770          | \$ -             |
| Unrealized gains/(losses) on investments                                          | \$ (161)                 | \$ 217          | \$ (53)          |

See accompanying notes to consolidated financial statements.

**HEMISPHERX BIOPHARMA, INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Business**

The Company is a biopharmaceutical company engaged in the clinical development, manufacture, marketing and distribution of new drug therapies based on natural immune system enhancing technologies for the treatment of viral and immune based chronic disorders. The Company was founded in the early 1970s doing contract research for the National Institutes of Health. Since that time, the Company has established a strong foundation of laboratory, pre-clinical, and clinical data with respect to the development of nucleic acids to enhance the natural antiviral defense system of the human body and to aid the development of therapeutic products for the treatment of certain chronic diseases.

The consolidated financial statements include the financial statements of Hemispherx Biopharma, Inc. and its wholly-owned subsidiaries. The Company has three domestic subsidiaries BioPro Corp., BioAegean Corp. and Core BioTech Corp., all of which are incorporated in Delaware and are dormant. The Company's foreign subsidiaries include Hemispherx Biopharma Europe N.V./S.A. established in Belgium in 1998 and Hemispherx Biopharma Europe S. A. incorporated in Luxemburg in 2002, which have limited or no activity. All significant intercompany balances and transactions have been eliminated in consolidation.

On October 10, 2007, the Company filed a New Drug Application ("NDA") with the US Food and Drug Administration ("FDA") for using Ampligen to treat Chronic Fatigue Syndrome. The Company received notice on December 5, 2007 from the FDA that its submission was determined to be insufficiently complete to permit substantive review. On January 8, 2008, the Company formally submitted to the FDA its response to all 14 questions posed by the FDA. The Company met with the FDA on February 8, 2008 to discuss the NDA and the Company is awaiting further communication from the FDA at this time.

**(2) Summary of Significant Accounting Policies**

**(a) Cash and Cash Equivalents**

Cash equivalents consist of money market certificates with original maturities of less than three months, with both a cost and fair value of \$3,646,000 and \$11,471,000 at December 31, 2006 and 2007, respectively.

**(b) Short-term Investments**

Investments with original maturities of more than three months and less than 12 months and marketable equity securities are considered available for sale. The investments classified as available for sale include debt securities and equity securities carried at estimated fair value of \$18,375,000 and \$3,944,000 at December 31, 2006 and 2007 respectively. The unrealized gains and losses are recorded as a component of stockholders' equity.



## (c) Property and Equipment

|                                                | (in thousands) |          |
|------------------------------------------------|----------------|----------|
|                                                | December 31,   |          |
|                                                | 2006           | 2007     |
| Land, buildings and improvements               | \$ 4,094       | \$ 4,094 |
| Furniture, fixtures, and equipment             | 1,731          | 2,097    |
| Leasehold improvements                         | 85             | 85       |
| Total property and equipment                   | 5,910          | 6,276    |
| Less accumulated depreciation and amortization | 1,190          | 1,455    |
| Property and equipment, net                    | \$ 4,720       | \$ 4,821 |

Property and equipment consists of land, building, building improvements, furniture, fixtures, office equipment, and leasehold improvements and is recorded at cost. Depreciation and amortization is computed using the straight-line method over the estimated useful lives of the respective assets, ranging from five to thirty-nine years. Depreciation and amortization expense was \$114,000, \$192,000 and \$266,000 for 2005, 2006 and 2007, respectively.

Construction in progress consists of funds used for the construction and installation of property and equipment within the Company's New Jersey facility. As of December 31, 2006 and 2007, construction in progress was \$624,000 and \$469,000 respectively. In 2007, the Company reclassified \$450,000 to Asset Held for Resale as a change in manufacturing plans made the previously acquired system unnecessary. The Company also recorded an impairment charge of \$228,000 in 2007 to bring the cost of the system down to its net realizable value.

## (d) Patent and Trademark Rights

Patents and trademarks are stated at cost (primarily legal fees) and are amortized using the straight line method over the established useful life of 17 years. The Company reviews its patents and trademark rights periodically to determine whether they have continuing value. Such review includes an analysis of the patent and trademark's ultimate revenue and profitability potential. Management's review addresses whether each patent continues to fit into the Company's strategic business plans.

## (e) Revenue

Revenue from the sale of Ampligen® under cost recovery clinical treatment protocols approved by the FDA is recognized when the treatment is provided to the patient.

Revenues from the sale of Alferon N Injection® are recognized when the product is shipped, as title is transferred to the customer. The Company has no other obligation associated with its products once shipment has occurred.

## (f) Net Loss Per Share

Basic and diluted net loss per share is computed using the weighted average number of shares of common stock outstanding during the period. Equivalent common shares, consisting of stock options and warrants including the Company's convertible debentures, amounted to 25,635,142, 26,016,660 and 16,686,281 shares, are excluded from the calculation of diluted net loss per share for the years ended December 31, 2005, 2006 and 2007, respectively, since their effect is antidilutive.

(g) Accounting for Income taxes

Deferred income tax assets and liabilities are determined based on differences between the financial statement reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws in effect when the differences are expected to reverse. The measurement of deferred income tax assets is reduced, if necessary, by a valuation allowance for any tax benefits, which are not expected to be realized. The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in the period that such tax rate changes are enacted.

(h) Comprehensive loss

Comprehensive loss consists of net loss and net unrealized gains (losses) on securities and is presented in the consolidated statements of changes in stockholders' equity and comprehensive loss.

(i) Use of Estimates

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

(j) Foreign currency translations

Assets and liabilities of the Company's foreign operations are generally translated into U.S. dollars at current exchange rates as of the balance sheet date. Revenues and expenses are translated at average exchange rates during each period. Transaction gains and losses that arise from exchange rate fluctuations are included in the results of operations as incurred. The resulting translation adjustments are immaterial for all years presented and are included in interest and other income on the consolidated statement of operations.

(k) Recent Accounting Standard and Pronouncements:

The Company adopted the provisions of FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes" ("FIN 48") effective January 1, 2007. The purpose of FIN 48 is to clarify and set forth consistent rules for accounting for uncertain tax positions in accordance with Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes". The cumulative effect of applying the provisions of this interpretation are required to be reported separately as an adjustment to the opening balance of retained earnings in the year of adoption. The adoption of this standard did not have an impact on the financial condition or the results of our operations.

On February 15, 2007, the FASB issued FASB Statement No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities - Including an Amendment of FASB Statement No. 115". This standard permits an entity to choose to measure many financial instruments and certain other items at fair value. Most of the provisions in Statement 159 are elective; however, the amendment to FASB Statement No. 115, "Accounting for Certain Investments in Debt and Equity Securities", applies to all entities with available-for-sale and trading securities. Some requirements apply differently to entities that do not report net income. The FASB's stated objective in issuing this standard is as follows: "to improve financial reporting by providing entities with the opportunity to mitigate volatility in reported earnings caused by measuring related assets and liabilities differently without having to apply complex hedge accounting provisions".

The fair value option established by Statement 159 permits all entities to choose to measure eligible items at fair value at specified election dates. A business entity will report unrealized gains and losses on items for which the fair value option has been elected in earnings (or another performance indicator if the business entity does not report earnings) at each subsequent reporting date. The fair value option: (a) may be applied instrument by instrument, with a few exceptions, such as investments otherwise accounted for by the equity method; (b) is irrevocable (unless a new election date occurs); and (c) is applied only to entire instruments and not to portions of instruments.

Statement 159 is effective as of the beginning of an entity's first fiscal year that begins after November 15, 2007. The impact of this statement has not been determined.

On December 4, 2007, the FASB issued FASB Statement No. 160, *“Noncontrolling Interests in Consolidated Financial Statements - An Amendment of ARB No. 51.”* Statement 160 establishes new accounting and reporting standards for the noncontrolling interest in a subsidiary and for the deconsolidation of a subsidiary. Specifically, this statement requires the recognition of a noncontrolling interest (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. Statement 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. Statement 160 also includes expanded disclosure requirements regarding the interests of the parent and its noncontrolling interest.

Statement 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 impact of this statement has not been determined.

#### (l) Research and Development Costs

Research and development related to both future and present products are charged to operations as incurred.

#### (m) Equity Based Compensation

Prior to the adoption of Statement of Financial Accounting Standards No. 123R, “Share Based Payment”, (“FAS 123R”) the Company applied the intrinsic value-based method of accounting prescribed by Accounting Principles Board (“APB”) Opinion No. 25, *“Accounting for Stock Issued to Employees”*, and related interpretations including FASB Interpretation No. 44, *“Accounting for Certain Transactions Involving Stock Compensation, an interpretation of APB Opinion No. 25”*, issued in March 2000 (“FIN 44”), to account for its fixed plan stock options. Under this method, compensation expense was recorded on the date of grant only if the current market price of the underlying stock exceeded the exercise price. Statement of Financial Accounting Standards No. 123, *“Accounting for Stock-Based Compensation”* (“FAS 123”), established accounting and disclosure requirements using a fair value-based method of accounting for stock-based employee compensation plans. In December 2002, the FASB issued Statement of Financial Accounting Standards No. 148, *“Accounting for Stock-Based Compensation Transition and Disclosure, an amendment of FASB Statement No. 123”*. This Statement amended FAS 123, to provide alternative methods of transition for a voluntary change to the fair value method of accounting for stock-based employee compensation.

The Equity Incentive Plan effective May 1, 2004, authorizes the grant of non-qualified and incentive stock options, stock appreciation rights, restricted stock and other stock awards. A maximum of 8,000,000 shares of common stock is reserved for potential issuance pursuant to awards under the Equity Incentive Plan. Unless sooner terminated, the Equity Incentive Plan will continue in effect for a period of 10 years from its effective date.

The Equity Incentive Plan is administered by the Board of Directors. The Equity Incentive Plan provides for awards to be made to such officers, other key employees, non-employee directors, consultants and advisors of the Company and its subsidiaries as the Board may select.

Stock options awarded under the Equity Incentive Plan may be exercisable at such times (not later than 10 years after the date of grant) and at such exercise prices (not less than fair market value at the date of grant) as the Board may determine. The Board may provide for options to become immediately exercisable upon a "change in control," which is defined in the Equity Incentive Plan to occur upon any of the following events: (a) the acquisition by any person or group, as beneficial owner, of 20% or more of the outstanding shares or the voting power of the outstanding securities of the Company; (b) either a majority of the directors of the Company at the annual stockholders meeting has been nominated other than by or at the direction of the incumbent directors of the Board, or the incumbent directors cease to constitute a majority of the Company's Board; (c) the Company's stockholders approve a merger or other business combination pursuant to which the outstanding common stock of the Company no longer represents more than 50% of the combined entity after the transaction; (d) the Company's shareholders approve a plan of complete liquidation or an agreement for the sale or disposition of all or substantially all of the Company's assets; or (e) any other event or circumstance determined by the Company's Board to affect control of the Company and designated by resolution of the Board as a change of control.

Effective January 1, 2006, the Company adopted FAS 123R. Under FAS 123R, share-based compensation cost is measured at the grant date, based on the estimated fair value of the award, and is recognized as expense over the requisite service period. The Company adopted the provisions of FAS 123R using a modified prospective application. Under this method, compensation cost is recognized for all share-based payments granted, modified or settled after the date of adoption, as well as for any unvested awards that were granted prior to the date of adoption. Prior periods are not revised for comparative purposes. Because the Company previously adopted only the pro forma disclosure provisions of FAS 123, it will recognize compensation cost relating to the unvested portion of awards granted prior to the date of adoption, using the same estimate of the grant-date fair value and the same attribution method used to determine the pro forma disclosures under FAS 123, except that forfeiture rates will be estimated for all options, as required by FAS 123R. The cumulative effect of applying the forfeiture rates is not material.

The fair value of each option award is estimated on the date of grant using a Black-Scholes option valuation model. Expected volatility is based on the historical volatility of the price of the Company's stock. The risk-free interest rate is based on U.S. Treasury issues with a term equal to the expected life of the option. The Company uses historical data to estimate expected dividend yield, expected life and forfeiture rates. The fair values of the options granted, were estimated based on the following weighted average assumptions:

|                                                                                                          | 2005         | December 31,<br>2006 | 2007           |
|----------------------------------------------------------------------------------------------------------|--------------|----------------------|----------------|
| Risk-free interest rate                                                                                  | 4.81%        | 4.3 - 5.0%           | 3.39 - 4.77%   |
| Expected dividend yield                                                                                  | -            | -                    | -              |
| Expected lives                                                                                           | 2.5-5 yrs    | 2.5 - 5 yrs          | 5 yrs          |
| Expected volatility                                                                                      | 78.12%       | 72.62 - 79.31%       | 70.01 - 77.52% |
| Weighted average fair value of options and warrants issued in the years 2005, 2006 and 2007 respectively |              |                      |                |
|                                                                                                          | \$ 1,371,000 | \$ 2,503,000         | \$ 2,216,091   |

Had compensation cost for the Company's option plan been determined using the fair value method at the grant dates, the effect on the Company's net loss and loss per share for the year ended December 31, 2005 would have been as follows:

|                                                                                                                      |             |
|----------------------------------------------------------------------------------------------------------------------|-------------|
| For the years ended December 31,                                                                                     | 2005        |
| Net loss applicable to common stockholders, as reported                                                              | \$ (12,446) |
| Add: Stock based compensation included in net loss as reported, net of related tax effects                           | 391         |
| Deduct: Stock based compensation determined under fair value based method for all awards, net of related tax effects | (1,371)     |
| Pro forma - net loss                                                                                                 | \$ (13,426) |
| Basic and diluted loss per share - as reported                                                                       | \$ (.24)    |
| Basic and diluted loss per share - pro forma                                                                         | \$ (.26)    |

For stock warrants or options granted to non-employees, the Company measures fair value of the equity instruments utilizing the Black-Scholes method if that value is more reliably measurable than the fair value of the consideration or service received. The Company amortizes such cost over the related period of service.

The exercise price of all stock warrants granted was equal to or greater than the fair market value of the underlying common stock as defined by APB 25 on the date of the grant.

Stock option activity during the years ended December 31, 2006 and 2007 is as follows:

Stock option activity for employees:

|                               | Number of<br>Options | Weighted<br>Average<br>Exercise<br>Price | Weighted<br>Average<br>Remaining<br>Contracted<br>Term (Years) | Aggregate<br>Intrinsic<br>Value |
|-------------------------------|----------------------|------------------------------------------|----------------------------------------------------------------|---------------------------------|
| Outstanding January 1, 2006   | 1,133,948            | \$ 2.19                                  | 7.07                                                           |                                 |
| Options granted               | 870,742              | 2.94                                     | 9.22                                                           |                                 |
| Options forfeited             | (2,721)              | (1.47)                                   | -                                                              |                                 |
| Outstanding December 31, 2006 | 2,001,969            | 2.51                                     | 8.01                                                           | -                               |
| Options granted               | 2,624,120            | 2.77                                     | 9.05                                                           |                                 |
| Options forfeited             | -                    | -                                        | -                                                              |                                 |
| Outstanding December 31, 2007 | 4,626,089            | \$ 2.66                                  | 8.25                                                           | -                               |
| Exercisable December 31, 2007 | 4,459,326            | \$ 2.70                                  | 8.29                                                           | -                               |

The weighted-average grant-date fair value of employee options granted during the year 2007 was \$0.72.

Unvested stock option activity for employees:

|                               | Number of<br>Options | Weighted<br>Average<br>Exercise<br>Price | Average<br>Remaining<br>Contracted<br>Term(Years) | Aggregate<br>Intrinsic<br>Value |
|-------------------------------|----------------------|------------------------------------------|---------------------------------------------------|---------------------------------|
| Outstanding January 1, 2006   | 54,314               | \$ 2.28                                  | 7.50                                              |                                 |
| Options granted               | 62,393               | 2.20                                     | 10.00                                             |                                 |
| Options forfeited             | (2,721)              | (1.47)                                   | -                                                 |                                 |
| Outstanding December 31, 2006 | 113,986              | 2.26                                     | 9.05                                              | -                               |
| Options granted               | 130,000              | 1.34                                     | 10.00                                             |                                 |
| Options vested                | (77,223)             | (6.86)                                   | 8.29                                              |                                 |
| Outstanding December 31, 2007 | 166,673              | \$ 1.59                                  | 7.18                                              | -                               |

Stock option activity for non-employees during the year:

|                               | Number of<br>Options | Weighted<br>Average<br>Exercise<br>Price | Weighted<br>Average<br>Remaining<br>Contracted<br>Term (Years) | Aggregate<br>Intrinsic<br>Value |
|-------------------------------|----------------------|------------------------------------------|----------------------------------------------------------------|---------------------------------|
| Outstanding January 1, 2006   | 851,732              | \$ 2.09                                  | 7.67                                                           | -                               |
| Options granted               | 475,000              | 3.60                                     | 9.09                                                           |                                 |
| Options forfeited             | -                    | -                                        | -                                                              |                                 |
| Outstanding December 31, 2006 | 1,326,732            | \$ 2.63                                  | 8.18                                                           | -                               |
| Options granted               | 608,750              | 1.99                                     | 9.94                                                           |                                 |
| Options forfeited             | -                    | -                                        | -                                                              |                                 |
| Outstanding December 31, 2007 | 1,935,482            | 2.43                                     | 8.05                                                           | -                               |
| Exercisable December 31, 2007 | 1,895,482            | \$ 2.45                                  | 8.23                                                           | -                               |

The weighted-average grant-date fair value of non-employee options granted during the year 2007 was \$0.71.

Unvested stock option activity for non-employees:

|                               | Number of<br>Options | Weighted<br>Average<br>Exercise<br>Price | Weighted<br>Average<br>Remaining<br>Contracted<br>Term (Years) | Aggregate<br>Intrinsic<br>Value |
|-------------------------------|----------------------|------------------------------------------|----------------------------------------------------------------|---------------------------------|
| Outstanding January 1, 2006   | 7,100                | \$ 2.61                                  | 9.00                                                           |                                 |
| Options granted               | 30,000               | 2.20                                     | 10.00                                                          |                                 |
| Options forfeited             | -                    | -                                        | -                                                              |                                 |
| Outstanding December 31, 2006 | 37,100               | \$ 2.28                                  | 9.81                                                           | -                               |
| Options granted               | 25,000               | \$ 1.30                                  | 10.00                                                          |                                 |
| Options vested                | (22,100)             | (2.30)                                   | 8.23                                                           |                                 |
| Outstanding December 31, 2007 | 40,000               | \$ 1.50                                  | 9.30                                                           | -                               |

The impact on the Company's results of operations of recording stock-based compensation for the year ended December 31, 2007 was to increase general and administrative expenses by approximately \$2,291,000 and reduce earnings per share by \$.03 per basic and diluted share.

As of December 31, 2007, there was \$164,000 of unrecognized stock-based compensation cost related to options granted under the Equity Incentive Plan.

## (n) Accounts Receivable

Concentration of credit risk, with respect to accounts receivable, is limited due to the Company's credit evaluation process. The Company does not require collateral on its receivables. The Company's receivables primarily consist of amounts due from wholesale drug companies as of December 31, 2006 and 2007 and all amounts are deemed collectible. The Company has agreements requiring its wholesaler drug companies to assess credit worthiness of the customers. The Company assesses collectability monthly by review of the accounts receivable aging report.

## (3) Inventories

The Company uses the lower of first-in, first-out ("FIFO") cost or market method of accounting for inventory.

Inventories consist of the following:

|                                                                                             | (in thousands)<br>December 31, |        |
|---------------------------------------------------------------------------------------------|--------------------------------|--------|
|                                                                                             | 2006                           | 2007   |
| Raw materials and work in process                                                           | \$ 443                         | \$ 505 |
| Finished goods, net of reserves of \$241,000 and \$350,000 at<br>December 31, 2006 and 2007 | 514                            | 6      |
|                                                                                             | \$ 957                         | \$ 511 |

## (4) Short-term investments:

| December 31, 2007 |              |              |                           |                  |
|-------------------|--------------|--------------|---------------------------|------------------|
| Name of security  | Cost         | Market value | Unrealized<br>gain (loss) | Maturity<br>date |
|                   |              |              |                           | March            |
| Marshall & Isley  | \$ 1,979,000 | \$ 1,976,000 | \$ (3,000)                | 2008             |
| Intesa Funding    | 1,972,000    | 1,968,000    | (4,000)                   | April 2008       |
|                   | \$ 3,951,000 | \$ 3,944,000 | \$ (7,000)                |                  |

No investment securities were pledged to secure public funds at December 31, 2007.

The table below indicates the length of time individual securities have been in a continuous unrealized loss position at December 31, 2007.

| Name of security                            | Number of<br>Securities | Less than 12 months |                    | 12 months or longer |                    | Total        |                    |
|---------------------------------------------|-------------------------|---------------------|--------------------|---------------------|--------------------|--------------|--------------------|
|                                             |                         | Fair value          | Unrealized<br>loss | Fair value          | Unrealized<br>loss | Fair value   | Unrealized<br>loss |
| Marshall & Isley                            | 1                       | \$ 1,976,000        | \$ (3,000)         | \$ -                | \$ -               | \$ 1,976,000 | \$ (3,000)         |
| Intesa Funding                              | 1                       | 1,968,000           | (4,000)            | -                   | -                  | 1,968,000    | (4,000)            |
| Total temporary<br>impairment<br>securities | 2                       | \$ 3,944,000        | \$ (7,000)         | \$ -                | \$ -               | \$ 3,944,000 | \$ (7,000)         |

In management's opinion, the unrealized losses reflect changes in interest rates subsequent to the acquisition of specific securities. There are two securities in the less than 12 months category and none in the more than a twelve month category. The Company has the ability to hold these securities until maturity or market price recovery;



therefore, management believes that the unrealized losses represent temporary impairment of the securities.

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| December 31, 2006        |               |               |                       |                 |  |
|--------------------------|---------------|---------------|-----------------------|-----------------|--|
| Name of security         | Cost          | Market value  | Unrealized gain(loss) | Maturity date   |  |
| AIG Discount Commercial  | \$ 972,000    | \$ 983,000    | \$ 11,000             | April, 2007     |  |
| Natexis Banques Popolare | 969,000       | 979,000       | 10,000                | May, 2007       |  |
| American General Finance | 965,000       | 974,000       | 9,000                 | June, 2007      |  |
| Daimler Chrysler         | 965,000       | 974,000       | 9,000                 | June, 2007      |  |
| LaSalle Bank             | 965,000       | 974,000       | 9,000                 | June, 2007      |  |
| General Electric         | 1,240,000     | 1,242,000     | 2,000                 | July, 2007      |  |
| HSBC Finance             | 1,000,000     | 1,000,000     | -                     | August, 2007    |  |
| American General Finance | 976,000       | 987,000       | 11,000                | September, 2007 |  |
| General Electric         | 965,000       | 974,000       | 9,000                 | September, 2007 |  |
| General Electric         | 1,202,000     | 1,200,000     | (2,000)               | September, 2007 |  |
| FHLMC                    | 960,000       | 960,000       | -                     | October, 2007   |  |
| FHLMC                    | 1,051,000     | 1,051,000     | -                     | November, 2007  |  |
| FNMA                     | 3,000,000     | 2,991,000     | (9,000)               | November, 2007  |  |
| FHLMC                    | 3,099,000     | 3,086,000     | (13,000)              | December, 2007  |  |
|                          | \$ 18,329,000 | \$ 18,375,000 | \$ 46,000             |                 |  |

No investment securities were pledged to secure public funds at December 31, 2006. The table below indicates the length of time individual securities have been in a continuous unrealized loss position at December 31, 2006.

| Name of security                      | Number of Securities | Less than 12 months |                 | 12 months or longer |                 | Total         |                 |
|---------------------------------------|----------------------|---------------------|-----------------|---------------------|-----------------|---------------|-----------------|
|                                       |                      | Fair value          | Unrealized loss | Fair value          | Unrealized loss | Fair value    | Unrealized loss |
| AIG Discount Commercial               | 1                    | \$ 983,000          | \$ -            | \$ -                | \$ -            | \$ 983,000    | \$ -            |
| Natexis Banques Popolare              | 1                    | 979,000             | -               | -                   | -               | 979,000       | -               |
| American General Finance              | 1                    | 974,000             | -               | -                   | -               | 974,000       | -               |
| Daimler Chrysler                      | 1                    | 974,000             | -               | -                   | -               | 974,000       | -               |
| LaSalle Bank                          | 1                    | 974,000             | -               | -                   | -               | 974,000       | -               |
| General Electric                      | 1                    | 1,242,000           | -               | -                   | -               | 1,242,000     | -               |
| HSBC Finance                          | 1                    | 1,000,000           | -               | -                   | -               | 1,000,000     | -               |
| American General Finance              | 1                    | 987,000             | -               | -                   | -               | 987,000       | -               |
| General Electric                      | 1                    | 974,000             | -               | -                   | -               | 974,000       | -               |
| General Electric                      | 1                    | 1,200,000           | (2,000)         | -                   | -               | 1,200,000     | (2,000)         |
| FHLMC                                 | 1                    | 960,000             | -               | -                   | -               | 960,000       | -               |
| FHLMC                                 | 1                    | 1,051,000           | -               | -                   | -               | 1,051,000     | -               |
| FNMA                                  | 1                    | 2,991,000           | (9,000)         | -                   | -               | 2,991,000     | (9,000)         |
| FHLMC                                 | 1                    | 3,086,000           | (13,000)        | -                   | -               | 3,086,000     | (13,000)        |
| Total temporary impairment securities | 14                   | \$ 18,375,000       | \$ (24,000)     | \$ -                | \$ -            | \$ 18,375,000 | \$ (24,000)     |



In management's opinion, the unrealized losses reflect changes in interest rates subsequent to the acquisition of specific securities. There were 14 securities in the less than 12 months category. The Company has the ability to hold these securities until maturity or market price recovery.

Management believes that the unrealized losses represent temporary impairment of the securities.

## **(5) Patents, Trademark Rights and Other Intangibles**

Intangibles are stated at cost are amortized over the established useful life of 17 years for patents or over the period which the asset is expected to directly or indirectly contribute to the Company's cash flow.

On July 3, 2006, and July 20, 2006, the Company entered into an agreement with Paul Griffin and The Asclepius Trust ("Asclepius") whereby the Company acquired the right, title and interest in certain awarded patents and pending patent applications ("patents"). Consideration given by the Company for the acquisition of these patents amounted to \$150,000 paid with shares of the Company's common stock to Paul Griffin valued at the closing price on the date of the agreement or July 3, 2006. The value of the Company's common stock was \$2.43 on this date and equated to consideration of 61,728 shares of the Company's common stock. The Company registered these shares on behalf of Mr. Griffin for public resale. Asclepius will receive in consideration a 2% royalty of the gross sums received from all sales utilizing or relying upon the patents. The Company recorded the acquisition of these patents as an intangible asset to be amortized over the remaining life of the patent under guidance set forth in *SFAS No. 2 Accounting for Research and Development Costs* ("FAS 2") which refers to *SFAS No. 142 - Goodwill and Other Intangible Assets* ("FAS 142"). The net book value of these patents, net of accumulated amortization, as of December 31, 2006 and 2007, was \$144,000 and \$133,000, respectively.

On July 26, 2006, the Company executed an agreement with Stem Cell Innovations, Inc. (formerly Interferon Sciences, Inc.) whereby it acquired the royalty interest previously granted Interferon Sciences with respect to the Company's sale of products containing alpha interferon in exchange for 250,000 shares of common stock. The Company registered these shares on behalf of Stem Cell Innovations for public resale. The Company recorded this transaction on its balance sheet as an intangible asset under guidance provided by *FAS 142*. The total consideration paid to Stem Cell under the agreement amounted to \$620,000 and was derived by multiplying the number of shares issued by the fair market value of the Company's common stock on the date of the agreement or \$2.48 per share. The intangible asset is amortized over the period which the asset is expected to contribute directly or indirectly to the Company's cash flow. In 2007, the Company recorded an impairment charge of \$298,000 as the Company determined that sufficient inventory is not on hand to realize the full economic benefit; therefore, the asset was written down to its estimated net realizable value. The balance of this intangible asset, as of December 31, 2006 and 2007, was \$601,000 and \$243,000, respectively. The estimated aggregate amortization for the next five years is \$243,000 and will be fully amortized in approximately three years.

During the years ended December 31, 2005, 2006 and 2007, the Company decided not to pursue certain patents in various countries for strategic reasons and recorded abandonment charges of \$194,000, \$67,000 and \$7,000 respectively, which are included in research and development. Amortization expense was \$87,000, \$94,000 and \$103,000 in 2005, 2006 and 2007, respectively. The total cost of the patents was \$2,423,000 and \$2,627,000 as of December 31, 2006 and 2007, respectively. The accumulated amortization as of December 31, 2006 and 2007 is \$1,566,000 and \$1,669,000, respectively.

As of December 31, 2007, the weighted average remaining life of the patents and trademarks was 9 years. Amortization of patents and trademarks for each of the next five years is as follows: 2008 - \$103,000, 2009 - \$103,000, 2010 - \$103,000, 2011 - \$103,000 and 2012 - \$103,000.

## (6) Accrued Expenses

Accrued expenses at December 31, 2006 and 2007 consists of the following:

|                   | (in thousands) |          |
|-------------------|----------------|----------|
|                   | December 31,   |          |
|                   | 2006           | 2007     |
| Compensation      | \$ 246         | \$ 360   |
| Interest          | 419            | -        |
| Professional fees | 180            | 187      |
| Other expenses    | 152            | 230      |
| Other liability   | 264            | 292      |
|                   | \$ 1,261       | \$ 1,069 |

The Company executed a Memorandum of Understanding (MOU) in January 2004 with Astellas Pharma (“Astellas”), formally Fujisawa Deutschland GmbH, a major pharmaceutical corporation, granting them an exclusive option for a limited number of months to enter a Sales and Distribution Agreement with exclusive rights to market Ampligen® for ME/CFS in Germany, Austria and Switzerland. The Company received an initial fee of 400,000 Euros (approximately \$497,000 US) in 2004. On November 9, 2004, Astellas exercised their right to terminate the MOU. The Company did not agree on the process to be utilized in certain European Territories for obtaining commercial approval for the sale of Ampligen® in the treatment of patients suffering from Chronic Fatigue Syndrome (CFS). Instead of a centralized procedure, and in order to obtain an earlier commercial approval of Ampligen® in Europe, the Company has determined to follow a decentralized filing procedure which was not anticipated in the MOU. The Company believed that it was in the best interest of the Company’s stockholders to potentially accelerate entry into selected European markets whereas the original MOU specified a centralized registration procedure. Pursuant to the agreement of the parties the Company refunded 200,000 Euros (\$248,000 USD) to Astellas during the fourth quarter 2004. The Company recorded the remaining 200,000 Euros (\$264,000 USD and \$292,000 USD) as an accrued liability as of December 31, 2006 and 2007, respectively.

## (7) Debenture Financing

Long term debt consists of the following:

|                      | (in thousands) |      |
|----------------------|----------------|------|
|                      | December 31,   |      |
|                      | 2006           | 2007 |
| October 2003         | \$ 2,071       | \$ - |
| January 2004         | 1,031          | -    |
| July 2004            | 1,000          | -    |
| Total                | 4,102          | -    |
| Less Discounts       | (231)          | -    |
| Total                | 3,871          | -    |
| Less current portion | 3,871          | -    |
| Long term debt       | \$ -           | \$ - |



In June 2007, the Company retired all remaining debt related to its convertible debentures issued in October 2003, January 2004 and July 2004. Of the outstanding debt of approximately \$4,102,000, only \$2,638,000 was required to be paid in new funds to retire the debentures, with the balance being covered by the Company's advance receivable held as collateral by one of the debenture holders.

#### **October 2003 Debentures**

The discount on the October 2003 Debentures was fully amortized; therefore, the Company did not record any financing costs for the years ended December 31, 2006 and 2007, respectively. Interest expense for the years ended December 31, 2006 and 2007, with regard to the October 2003 Debentures was approximately \$145,000 and \$72,000, respectively.

#### **January 2004 Debentures**

Financing costs for the years ended December 31, 2006 and 2007, was approximately \$49,000 and \$0, respectively. Interest expense for the year ended December 31, 2006 and 2007, with regard to the January 2004 Debentures was approximately \$77,000 and \$9,000, respectively.

#### **July 2004 Debentures**

The Company recorded financing costs for the years ended December 31, 2006 and 2007, with regard to the July 2004 Debentures of \$484,000 and \$231,000 respectively. Interest expense for the year ended December 31, 2006 and 2007, with regard to the July 2004 Debentures was approximately \$78,000 and \$35,000, respectively.

### **(8) Stockholders' Equity**

#### **(a) Preferred Stock**

The Company is authorized to issue 5,000,000 shares of \$.01 par value preferred stock with such designations, rights and preferences as may be determined by the board of directors. There were no preferred shares issued and outstanding at December 31, 2006 and 2007.

#### **(b) Common Stock**

The Company's stockholders approved an amendment to the Company's corporate charter at the Annual Shareholder meeting held in Philadelphia, PA on September 20, 2006. This amendment increased the Company's authorized shares from 100,000,000 to 200,000,000.

As of December 31, 2006 and 2007, 66,816,764 and 73,760,446 shares, were outstanding, respectively.

#### **(c) Equity Financings**

On July 8, 2005, the Company entered into a common stock purchase agreement with Fusion Capital Fund II, LLC ("Fusion Capital"), pursuant to which Fusion Capital has agreed, under certain conditions, to purchase on each trading day \$40,000 of the Company's common stock up to an aggregate of \$20.0 million over approximately a 25 month period, subject to earlier termination at the Company's discretion. In the Company's discretion, it may elect to sell less common stock to Fusion Capital than the daily amount and may increase the daily amount as the market price of the Company's stock increases. The purchase price of the shares of common stock will be equal to a price based upon the future market price of the common stock without any fixed discount to the market price. Fusion Capital does not have the right or the obligation to purchase shares of the Company's common stock in the event that the price of the

common stock is less than \$1.00.

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Pursuant to the Company's agreement with Fusion Capital, the Company has registered for public sale to Fusion Capital up to 10,795,597 shares of common stock. However, in the event that the Company decides to issue more than 10,113,278, i.e. greater than 19.99% of the outstanding shares of common stock as of the date of the agreement, the Company would first seek stockholder approval in order to be in compliance with American Stock Exchange rules. As of April 3, 2006, Fusion Capital purchased 8,791,838 (4,678,382 in 2006) shares amounting to approximately \$20,000,000 in gross proceeds to the Company, which completed the terms of the July 8, 2005, Fusion Capital agreement. Pursuant to the agreement, the Company also issued 785,597 (235,287 in 2006) commitment fee shares and 10,000 shares as reimbursement for expenses.

In connection with entering into the above agreement with Fusion Capital, the Company, in July 2005, issued to Fusion Capital 402,798 shares of its common stock. 392,798 of these shares represented 50% of the commitment fee due Fusion Capital with the remaining 10,000 shares issued as reimbursement for expenses. An additional 392,799 shares, representing the remaining balance of the commitment, were issued in conjunction with daily purchases of common stock by Fusion Capital. These additional commitment shares were issued in an amount equal to the product of (x) 392,799 and (y) the Purchase Amount Fraction. The "Purchase Amount Fraction" means a fraction, the numerator of which is the purchase price at which the shares were being purchased by Fusion Capital and the denominator of which is \$20,000,000.

On April 12, 2006, the Company entered into a Common Stock Purchase Agreement ("Purchase Agreement") with Fusion Capital. Pursuant to the terms of the Purchase Agreement, Fusion Capital has agreed to purchase from the Company up to \$50,000,000 of common stock over a period of approximately twenty-five (25) months. Pursuant to the terms of the Registration Rights Agreement, dated as of April 12, 2006, the Company registered 12,386,723 shares issuable to or issued to Fusion Capital under the Purchase Agreement. Once the Registration Statement was declared effective, each trading day during the term of the Purchase Agreement the Company has the right to sell to Fusion Capital up to \$100,000 of the Company's common stock on such date or the arithmetic average of the three lowest closing trade prices of the common stock during the immediately preceding 12 trading day period. At the Company's option under certain conditions, Fusion Capital can be required to purchase greater amounts of common stock during a given period. In connection with entering into the Purchase Agreement, the Company issued to Fusion Capital as commitment shares 321,751 shares of common stock and the Company is obligated to issue an additional 321,751 commitment shares. These additional commitment shares will be issued in an amount equal to the product of (x) 321,751 and (y) the Purchase Amount Fraction. The "Purchase Amount Fraction" means a fraction, the numerator of which is the purchase price at which the shares are being purchased by Fusion Capital and the denominator of which is \$50,000,000.

The purchase price will be adjusted for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction. Fusion Capital may not purchase shares of the Company's common stock under the common stock purchase agreement if it, together with its affiliates, would beneficially own more than 9.9% of the common stock outstanding at the time of the purchase by Fusion Capital. Fusion Capital has the right at any time to sell any shares purchased under the 2006 Purchase Agreement which would allow it to avoid the 9.9% limitation. Due to AMEX guidelines, without prior stockholder approval, we do not have the right or the obligation under the Agreement to sell shares to Fusion Capital in excess of 12,386,723 shares (i.e. 19.99% of the 61,964,598 outstanding shares of our common stock on April 12, 2006, the date of the 2006 Purchase Agreement) inclusive of commitment shares issued to Fusion Capital under the Agreement. In addition, Fusion Capital cannot purchase more than 27,386,723 shares, inclusive of the commitment shares under the Agreement. On September 20, 2006 stockholders voted to allow the sale of up to 27,386,723 shares pursuant to the terms of the Fusion agreement.

As of December 31, 2007, Fusion Capital has purchased from the Company 10,682,032 shares for aggregate gross proceeds of approximately \$19,739,000. In addition, the Company issued to Fusion Capital 127,065 shares towards the remaining commitment fee.

#### (d) Common Stock Options and Warrants

##### (i) Stock Options

The 1990 Stock Option Plan provides for the grant of options to purchase up to 460,798 shares of the Company's Common Stock to employees, directors, and officers of the Company and to consultants, advisors, and other persons whose contributions are important to the success of the Company. The recipients of options granted under the 1990 Stock Option Plan, the number of shares to be converted by each option, and the exercise price, vesting terms, if any, duration and other terms of each option shall be determined by the Company's board of directors or, if delegated by the board, its Compensation Committee. No option is exercisable more than 10 years and one month from the date as of which an option agreement is executed. These shares become vested through various periods not to exceed four years from the date of grant. The option price represents the fair market value of each underlying share of Common Stock at the date of grant, based upon the public trading price. This plan is no longer in effect and no further options will be issued from this plan.

Information regarding the options approved by the Board of Directors under the 1990 Stock Option Plan is summarized below:

|                               | 2005      |              |                                 | 2006      |              |                                 | 2007      |              |                                 |
|-------------------------------|-----------|--------------|---------------------------------|-----------|--------------|---------------------------------|-----------|--------------|---------------------------------|
|                               | Shares    | Option Price | Weighted Average Exercise Price | Shares    | Option Price | Weighted Average Exercise Price | Shares    | Option Price | Weighted Average Exercise Price |
| Outstanding beginning at year | 633,080   | \$ 1.90-3.44 | \$ 2.56                         | 1,985,680 | \$ 1.63-2.87 | \$ 2.15                         | 3,328,701 | \$ 1.63-3.86 | \$ 2.56                         |
| Granted                       | 1,352,600 | \$ 1.63-2.87 | \$ 1.95                         | 1,345,742 | \$ 2.11-3.86 | \$ 3.17                         | 3,232,870 | \$ 1.30-3.86 | \$ 2.62                         |
| Canceled                      | -         | -            | -                               | (2,721)   | \$ 1.90-2.61 | \$ 1.47                         | (5,095)   | 1.90-2.61    | \$ 2.40                         |
| Exercised                     | -         | -            | -                               | -         | -            | -                               | -         | -            | -                               |
| Outstanding end of year       | 1,985,680 | \$ 1.63-2.87 | \$ 2.15                         | 3,328,701 | \$ 1.63-3.86 | \$ 2.56                         | 6,556,476 | \$ 1.30-3.86 | \$ 2.59                         |
| Exercisable                   | 1,373,250 | \$ 1.63-2.87 | \$ 2.46                         | 3,177,615 | \$ 1.63-3.86 | \$ 2.57                         | 6,354,808 | \$ 1.75-3.86 | \$ 2.63                         |
|                               | 8-9 years | -            | -                               | 8-9 years | -            | -                               | 8-9 years | -            | -                               |

Weighted  
average  
remaining  
contractual life  
(years)

Available for  
future grants

6,014,320

-

-

4,671,299

-

-

1,443,524

-

-

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In December 1992, the Board of Directors approved the 1992 Stock Option Plan (the 1992 Stock Option Plan) which provides for the grant of options to purchase up to 92,160 shares of the Company's Common Stock to employees, directors, and officers of the Company and to consultants, advisors, and other persons whose contributions are important to the success of the Company. The recipients of the options granted under the 1992 Stock Option Plan, the number of shares to be covered by each option, and the exercise price, vesting terms, if any, duration and other terms of each option shall be determined by the Company's board of directors. No option is exercisable more than 10 years and one month from the date as of which an option agreement is executed. To date, no options have been granted under the 1992 Stock Option Plan.

The Company's 1993 Employee Stock Purchase Plan (the 1993 Purchase Plan) was approved by the board of directors in July 1993. The outline of the 1993 Purchase Plan provides for the issuance, subject to adjustment for capital changes, of an aggregate of 138,240 shares of Common Stock to employees.

The 1993 Purchase Plan is administered by the Compensation Committee of the board of directors. Under the 1993 Purchase Plan, Company employees are eligible to participate in semi-annual plan offerings in which payroll deductions may be used to purchase shares of Common Stock. The purchase price for such shares is equal to the lower of 85% of the fair market value of such shares on the date of grant or 85% of the fair market value of such shares on the date such right is exercised. There have been no offerings under the 1993 Purchase Plan to date and no shares of Common Stock have been issued thereunder.

The Equity Incentive Plan effective May 1, 2004, authorizes the grant of non-qualified and incentive stock options, stock appreciation rights, restricted stock and other stock awards. A maximum of 8,000,000 shares of common stock is reserved for potential issuance pursuant to awards under the Equity Incentive Plan. Unless sooner terminated, the Equity Incentive Plan will continue in effect for a period of 10 years from its effective date.

The Equity Incentive Plan is administered by the Board of Directors. The Equity Incentive Plan provides for awards to be made to such officers, other key employees, non-employee directors, consultants and advisors of the Company and its subsidiaries as the Board may select.

Stock options awarded under the Equity Incentive Plan may be exercisable at such times (not later than 10 years after the date of grant) and at such exercise prices (not less than fair market value at the date of grant) as the Board may determine. The Board may provide for options to become immediately exercisable upon a "change in control," which is defined in the Equity Incentive Plan to occur upon any of the following events: (a) the acquisition by any person or group, as beneficial owner, of 20% or more of the outstanding shares or the voting power of the outstanding securities of the Company; (b) either a majority of the directors of the Company at the annual stockholders meeting has been nominated other than by or at the direction of the incumbent directors of the Board, or the incumbent directors cease to constitute a majority of the Company's Board; (c) the Company's stockholders approve a merger or other business combination pursuant to which the outstanding common stock of the Company no longer represents more than 50% of the combined entity after the transaction; (d) the Company's shareholders approve a plan of complete liquidation or an agreement for the sale or disposition of all or substantially all of the Company's assets; or (e) any other event or circumstance determined by the Company's Board to affect control of the Company and designated by resolution of the Board as a change of control.

Information regarding the options approved by the Board of Directors under the Equity Incentive Plan is summarized below:

|                                                     | 2005      |              |                                 | 2006      |              |                                 | 2007      |              |                                 |
|-----------------------------------------------------|-----------|--------------|---------------------------------|-----------|--------------|---------------------------------|-----------|--------------|---------------------------------|
|                                                     | Shares    | Option Price | Weighted Average Exercise Price | Shares    | Option Price | Weighted Average Exercise Price | Shares    | Option Price | Weighted Average Exercise Price |
| Outstanding beginning at year                       | 633,080   | \$ 1.90-3.44 | \$ 2.56                         | 1,985,680 | \$ 1.63-2.87 | \$ 2.15                         | 3,328,701 | \$ 1.63-3.86 | \$ 2.56                         |
| Granted                                             | 1,352,600 | \$ 1.63-2.87 | \$ 1.95                         | 1,345,742 | \$ 2.11-3.86 | \$ 3.17                         | 3,232,870 | \$ 1.30-3.86 | \$ 2.62                         |
| Canceled                                            | -         | -            | -                               | (2,721)   | \$ 1.90-2.61 | \$ 1.47                         | (5,095)   | \$ 1.90-2.61 | \$ 2.40                         |
| Exercised                                           | -         | -            | -                               | -         | -            | -                               | -         | -            | -                               |
| Outstanding end of year                             | 1,985,680 | \$ 1.63-2.87 | \$ 2.15                         | 3,328,701 | \$ 1.63-3.86 | \$ 2.56                         | 6,556,476 | \$ 1.30-3.86 | \$ 2.59                         |
| Exercisable                                         | 1,373,250 | \$ 1.63-2.87 | \$ 2.46                         | 3,177,615 | \$ 1.63-3.86 | \$ 2.57                         | 6,354,808 | \$ 1.75-3.86 | \$ 2.63                         |
| Weighted average remaining contractual life (years) | 8-9 years | -            | -                               | 8-9 years | -            | -                               | 8-9 years | -            | -                               |
| Available for future grants                         | 6,014,320 | -            | -                               | 4,671,299 | -            | -                               | 1,443,524 | -            | -                               |

(ii) Stock Warrants

Information regarding warrants outstanding and exercisable into shares of common stock is summarized below:

|                                                     | 2005        |               |                                 | 2006        |               |                                 | 2007        |              |                                 |
|-----------------------------------------------------|-------------|---------------|---------------------------------|-------------|---------------|---------------------------------|-------------|--------------|---------------------------------|
|                                                     | Shares      | Option Price  | Weighted Average Exercise Price | Shares      | Option Price  | Weighted Average Exercise Price | Shares      | Option Price | Weighted Average Exercise Price |
| Outstanding beginning of year                       | 13,167,037  | \$ 1.75-16.00 | \$ 3.46                         | 11,529,837  | \$ 1.55-16.00 | \$ 3.32                         | 10,262,771  | \$ 1.55-6.00 | \$ 2.89                         |
| Granted                                             | 565,000     | \$ 1.50-3.00  | \$ 2.08                         | 20,000      | \$ 1.87-3.60  | \$ 2.55                         | 20,000      | \$ 1.32-2.20 | \$ 1.71                         |
| Canceled                                            | (2,197,200) | \$ 1.75-12.00 | \$ 3.70                         | (1,031,650) | \$ 3.50-16.00 | \$ 8.35                         | (3,020,000) | \$ 2.00-4.00 | \$ 2.64                         |
| Exercised                                           | (5,000)     | \$ 1.75-12.00 | \$ 1.75                         | (255,416)   | \$ 1.50-2.86  | \$ 2.63                         | -           | -            | -                               |
| Outstanding end of year                             | 11,529,837  | \$ 1.55-16.00 | \$ 3.32                         | 10,262,771  | \$ 1.55-6.00  | \$ 2.89                         | 7,262,771   | \$ 1.32-6.00 | \$ 2.96                         |
| Exercisable                                         | 11,529,837  | \$ 1.55-16.00 | \$ 3.32                         | 10,262,771  | \$ 1.55-6.00  | \$ 2.89                         | 7,262,771   | \$ 1.32-6.00 | \$ 2.96                         |
| Weighted average remaining contractual life (years) | 4.43 years  | -             | -                               | 1.97 years  | -             | -                               | 1.99 years  | -            | -                               |

Years

|             |           |   |   |           |   |   |           |   |
|-------------|-----------|---|---|-----------|---|---|-----------|---|
| exercisable | 2006-2015 | - | - | 2007-2016 | - | - | 2008-2017 | - |
|-------------|-----------|---|---|-----------|---|---|-----------|---|

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On June 20, 2007, our Stockholders approved the 2007 Equity Incentive Plan at our Annual Shareholder Meeting. This plan, effective June 1, 2007 authorizes the grant of non-qualified and incentive stock options, stock appreciation rights, restricted stock and other awards. A maximum of 8,000,000 shares of common stock is reserved for potential issuance pursuant to awards under this plan. Unless sooner terminated, this plan will continue in effect for a period of 10 years from its effective date. As of December 31, 2007 no awards have been granted under this plan.

Certain of the stock warrants outstanding are subject to adjustments for stock splits and dividends.

As of December 31, 2007, the Company has outstanding stock warrants totaling 7,262,771, which consisted of the following:

In 2005, 2006 and 2007 the Company had warrants outstanding, issued to employees, directors and consultants, of 4,268,650, 3,667,000 and 2,067,000 respectively. These warrants were not issued pursuant to an equity plan and are exercisable at rates of \$1.30 to \$3.86 per share of common stock. The exercise price was equal to the fair market value of the stock on the date of grant. There was a balance of 4,645,650 at December 31, 2004. During 2005, 265,000 warrants were issued to consultants and 642,000 expired leaving a balance of 4,268,650 at December 31, 2005. During 2006, 20,000 warrants were issued to consultants, 15,000 warrants were exercised and 606,650 warrants expired leaving a balance of 3,667,000 warrants at December 31, 2006. During 2007, 20,000 warrants were issued to consultants and 3,020,000 warrants expired leaving a balance of 2,067,000 warrants.

During 2005, 300,000 warrants were issued leaving a balance of 5,436,187 at December 31, 2005. During 2006, 240,416 warrants were exercised leaving a balance of 5,195,771 at December 31, 2006 and December 31, 2007.

Proceeds received from the exercise of stock warrants were \$9,000 and \$672,000 for 2005 and 2006, respectively. No warrants were exercised during 2007.

#### (e) Rights Offering

On November 19, 2002, the Board of Directors of Hemispherx Biopharma, Inc. (the "Company") declared a dividend distribution of one Right for each outstanding share of Common Stock to stockholders of record at the close of business on November 29, 2002 (the "Record Date"). Each Right entitles the registered holder to purchase from the Company a unit consisting of one one-hundredth of a share (a "Unit") of Series A Junior Participating Preferred Stock, par value \$.01 per share (the "Series A Preferred Stock") at a Purchase Price of \$30.00 per Unit, subject to adjustment. The description and terms of the Rights are set forth in a Rights Agreement (the "Rights Agreement") between the Company and Continental Stock Transfer & Trust Company, as Rights Agent.

Initially, the Rights are attached to all Common Stock certificates representing shares then outstanding, and no separate Rights Certificates will be distributed. Subject to certain exceptions specified in the Rights Agreement, the Rights will separate from the Common Stock and a Distribution Date will occur upon the earlier of (i) 10 days following a public announcement that a person or group of affiliated or associated persons (an "Acquiring Person") has acquired beneficial ownership of 15% or more (or 20% or more for William A. Carter, M.D.) of the outstanding shares of Common Stock (the "Stock Acquisition Date"), other than as a result of repurchases of stock by the Company or certain inadvertent actions by institutional or certain other stockholders or (ii) 10 business days (or such later date as the Board shall determine) following the commencement of a tender offer or exchange offer that would result in a person or group becoming an Acquiring Person. Until the Distribution Date, (i) the Rights will be evidenced by the Common Stock certificates and will be transferred with and only with such Common Stock certificates, (ii) new Common Stock certificates issued after the Record Date will contain a notation incorporating the Rights Agreement by reference and (iii) the surrender for transfer of any certificates for Common Stock outstanding will also constitute the transfer of the Rights associated with the Common Stock represented by such certificate. Pursuant to the Rights Agreement, the Company reserves the right to require prior to the occurrence of a triggering event that, upon any exercise of Rights, a number of Rights be exercised so that only whole shares of Preferred Stock will be issued.

#### **(9) Segment and Related Information**

The Company operates in one segment, which performs research and development activities related to Ampligen® and other drugs under development, and sales and marketing of Alferon®. The Company's revenues for the three year period ended December 31, 2007, were earned in the United States.

The Company employs an insignificant amount of net property and equipment in its foreign operations.

#### **(10) Research, Consulting and Supply Agreements**

In 1994, the Company entered into a licensing agreement with Bioclones (Proprietary) Limited ("Bioclones") for manufacturing and international market development in Africa, Australia, New Zealand, Tasmania, the United Kingdom, Ireland and certain countries in South Africa, of Ampligen® and Oragen®. On December 27, 2004 the Company initiated a lawsuit in Federal Court identifying a conspiratorial group seeking to illegally manipulate the Company's stock for purposes of bringing about a hostile takeover of Hemispherx. This conspiratorial group includes Bioclones. This licensing agreement was terminated.



In 1998, the Company entered into a strategic alliance with Accredo to develop certain marketing and distribution capacities for Ampligen® in the United States. Accredo is one of the nation's largest home health care companies with over 400 offices and sixty thousand caregivers nationwide. Pursuant to the agreement, Accredo assumed certain responsibilities for distribution of Ampligen® for which they received a fee. Through this arrangement, the Company may mitigate the necessity of incurring certain up-front costs. Accredo has also worked with the Company in connection with the Amp 511 ME/CFS cost recovery treatment program, Amp 516 ME/CFS Phase III clinical trial and the Amp 719 (combining Ampligen® with other antiviral drugs in HIV-salvage therapy and Amp 720 HIV Phase IIb clinical trials now under way). There can be no assurances that this alliance will develop a significant commercial position in any of its targeted chronic disease markets. The agreement had an initial one year term from February 9, 1998 with successive additional one year terms unless either party notifies the other not less than 180 days prior to the anniversary date of its intent to terminate the agreement. Also, the agreement may be terminated for uncured defaults, or bankruptcy, or insolvency of either party and will automatically terminate upon the Company's receiving an NDA for Ampligen® from the FDA, at which time, a new agreement will need to be negotiated with Accredo or another major drug distributor. There were no initial fees. There has been no communication or activity under this agreement for the past few years.

In December, 1999, the Company entered into an agreement with Biovail Corporation International ("Biovail"). Biovail is an international full service pharmaceutical company engaged in the formulation, clinical testing, registration and manufacture of drug products utilizing advanced drug delivery systems. Biovail is headquartered in Toronto, Canada. The agreement grants Biovail the exclusive distributorship of the Company's product in the Canadian territories subject to certain terms and conditions. In return, Biovail agrees to conduct certain pre-marketing clinical studies and market development programs, including without limitation, expansion of the Emergency Drug Release Program in Canada with respect to the Company's products. Biovail agrees to work with the Company in preparing and filing of a New Drug Submission with Canadian Regulatory Authorities. Biovail invested \$2.25 million in Hemispherx equity at prices above the then current market price and agreed to make further payments based on reaching certain regulatory milestones. The Agreement requires Biovail to penetrate certain market segments at specific rates in order to maintain market exclusivity. The agreement terminates on December 15, 2009, subject to successive two-year extensions by the parties and subject to earlier termination by the parties for uncured defaults under the agreement, bankruptcy or insolvency of either party, or withdrawal of the Company's product from Canada for a period of more than ninety days for serious adverse health or safety reasons.

In March 2002, the Company's European subsidiary Hemispherx S.A. entered into a Sales and Distribution agreement with Esteve. In December 2006 Hemispherx S.A. assigned all of its rights and obligations under the Sales and Distribution agreement to the Company. Pursuant to the terms of the Agreement, Esteve was granted the exclusive right to market Ampligen® in Spain, Portugal and Andorra for the treatment of ME/CFS. Due to non-performance of certain contractually required clinical trials, the Company notified Esteve of its intention to terminate the Sales and Distribution Agreement in 2007. As is its right under the Sales and Distribution Agreement, Esteve has applied for arbitration, seeking damages. The Company believes Esteve's claim is without merit and intends to counterclaim seeking damages.

In October 2005, the Company signed a research agreement with the National Institute of Infectious Diseases, in Tokyo, Japan. The collaboration, by Hideki Hasegawa, M.D., Ph.D., Chief of the Laboratory of Infectious Disease Pathology, will assess the Company's experimental therapeutic Ampligen® as a co-administered immunotherapeutic to the Institution's nasal flu vaccine.

In October 2005, the Company also engaged the Sage Group, Inc., a health care, technology oriented, strategy and transaction advisory firm, to assist the Company in obtaining a strategic alliance in Japan for the use of Ampligen® in treating Chronic Fatigue Syndrome or CFS. In January 2007, the Company extended its agreement with The Sage Group, Inc. through the end of the year to assist the Company in obtaining strategic alliance in Japan for the use of Ampligen® in treating Avian Flu. The Company incurred approximately \$4,000, \$24,000 and \$25,000 in fees for the years ended December 31, 2005, 2006 and 2007, respectively, pursuant to this agreement.

In November 2005, the Company entered into an agreement with Defence R&D Canada, Suffield (“DRDC Suffield”), an agency of the Canadian Department of National Defence, to evaluate the antiviral efficacy of our experimental therapeutic Ampligen® and Alferon® for protection against human respiratory influenza virus infection in well validated animal models. DRDC Suffield is conducting research and development of new drugs that could potentially become part of the arsenal of existing antiviral weapons to combat the bird flu. The initial study will focus on the testing of potential drugs against the respiratory influenza virus infection on a mouse-adapted strain of human influenza.

On December 9, 2005, the Company executed a Supply Agreement with Hollister-Stier Laboratories LLC of Spokane, Washington (“Hollister-Stier”), for the manufacturing of Ampligen® for a five year term ending in 2010. Pursuant to the agreement the Company supplies the key raw materials and Hollister-Stier formulates and bottles the Ampligen®. The Company incurred approximately \$433,000, \$1,450,000 and \$475,000 in fees for the years ended December 31, 2005, 2006 and 2007, respectively, pursuant to this agreement.

In December 2007, the Company concluded an agreement with BIKEN (the non-profit operational arm of the Foundation for Microbial Diseases of Osaka University) for the use of the Company’s experimental drug, Ampligen®, as an immune enhancer to influenza vaccines. The Company’s agreement with Biken is part of a three party agreement to develop an effective influenza vaccine for Japan and utilizes vast resources of the National Institute of Infectious Diseases of Japan.

The Company has entered into agreements for consulting services, which are performed at medical research institutions and by medical and clinical research individuals. The Company's obligation to fund these agreements can be terminated after the initial funding period, which generally ranges from one to three years or on an as-needed monthly basis. During the years ending December 31, 2005, 2006 and 2007 the Company incurred approximately \$236,000, \$477,000 and \$842,000 respectively, of consulting service fees under these agreements. These costs are charged to research and development expense as incurred.

#### **(11) 401(K) Plan**

The Company has a defined contribution plan, entitled the Hemispherx Biopharma Employees 401(K) Plan and Trust Agreement (the 401(K) Plan). Full time employees of the Company are eligible to participate in the 401(K) Plan following one year of employment. Subject to certain limitations imposed by federal tax laws, participants are eligible to contribute up to 15% of their salary (including bonuses and/or commissions) per annum. Participants' contributions to the 401(K) Plan may be matched by the Company at a rate determined annually by the Board of Directors.

Each participant immediately vests in his or her deferred salary contributions, while Company contributions will vest over one year. In 2005, 2006 and 2007 the Company provided matching contributions to each employee for up to 6% of annual pay aggregating \$89,000, \$105,000 and \$130,000 respectively.

## **(12) Royalties, License, and Employment Agreements**

The Company acquired a series of patents on Oragens, potentially a set of oral broad spectrum antivirals and immunological enhancers, through a licensing agreement with Temple University in Philadelphia, PA. The Company was granted an exclusive worldwide license from Temple for the Oragens products. These compounds have been evaluated in various academic laboratories for application to chronic viral and immunological disorders. The 2', 5' oligoadenylate synthetase/RNase L system is an important and widely distributed pathway for the inhibition of viral replication and tumor growth. Pursuant to the terms of the Company's agreement with Temple, the Company is obligated to pay royalties of 2% to 4% of sales depending on the amount of technical assistance required. The Company currently pays a royalty of \$30,000 per year to Temple. This agreement is to remain in effect until the date that the last licensed patent expires unless terminated sooner by mutual consent or default due to royalties not being paid. The last Oragen™ patent expires on June 1, 2018. The Company records the payment of the royalty as research and development cost for the period incurred.

In October 1994, the Company entered into a licensing agreement with Bioclones (Propriety) Limited (SAB/Bioclones) with respect to co-development of various RNA drugs, including Ampligen®, for a period ending three years from the expiration of the last licensed patents. The licensing agreement provided SAB/Bioclones with an exclusive manufacturing and marketing license for certain southern hemisphere countries (including certain countries in South America, Africa and Australia as well as the United Kingdom and Ireland (the licensed territory)). This marketing arrangement with Bioclones was deemed void by the Company due to the numerous and long standing failures of performance by Bioclones. This agreement was subsequently terminated.

The Company had contractual agreements with two officers in 2005 and three officers in 2006 and 2007. The aggregate annual base compensation under these contractual agreements for 2005, 2006 and 2007 (as adjusted, see below) was \$701,000, \$938,000 and \$1,276,000 respectively. In addition, certain of these officers are entitled to receive performance bonuses of up to 25% of the annual base salary (in addition to the bonuses described below). In 2005, 2006 and 2007, bonuses of \$175,000, \$253,000 and \$319,000 respectively were granted and a signing bonus of \$50,000 was paid to the third officer in 2006. The Chief Executive Officer's employment agreement (see below) provides for bonuses based on gross proceeds received by the Company from any joint venture or corporate partnering agreement. In 2005, the Chief Executive Officer of the Company was granted options to purchase 645,000 shares of common stock at \$1.75 to \$2.87 per share and the Chief Financial Officer of the Company was granted options to purchase 110,000 shares of common stock at \$1.75 to \$2.61 per share. In 2006, the Chief Executive Officer was granted 677,000 options to purchase common stock at \$2.38 to \$3.78 per share, the Chief Financial Officer was granted 180,000 options to purchase common stock at \$3.48 to \$3.85 per share and the Chief Operating Officer was granted 100,000 options at \$3.55 per share. In 2007, the Chief Executive Officer was granted 2,400,000 options to purchase common stock at \$1.24-\$1.60 per share, the Chief Financial Officer was granted 213,050 options to purchase common stock at \$1.30-\$2.00 per share and the Chief Operating Officer was granted 50,000 options to purchase common stock at \$1.88 per share. The Company recorded stock compensation expense of \$1,732,000 and \$1,883,000, respectively, during the years ended December 31, 2006 and 2007 with regard to these issuances.

Dr. Carter's employment as the Company's Chief Executive Officer and Chief Scientific Officer expires December 31, 2010 unless sooner terminated for cause or disability. The agreement automatically renews for successive one year periods after the initial termination date unless the Company or Dr. Carter give written notice otherwise at least ninety days prior to the termination date or any renewal period. Dr. Carter has the right to terminate the agreement on 30 days' prior written notice. The base salary is subject to adjustments and the average increase or decrease in the Consumer Price Index for the prior year. In addition, Dr. Carter could receive an annual performance bonus of up to 25% of his base salary, at the sole discretion of the Compensation Committee of the board of directors, based on his performance or the Company's operating results. Dr. Carter will not participate in any discussions concerning the determination of his annual bonus. Dr. Carter is also entitled to an incentive bonus of 0.5% of the gross proceeds received from any joint venture or corporate partnering arrangement. Dr. Carter's agreement also provides that he be paid a base salary and benefits through the last day of the then term of the agreement if he is terminated without "cause", as that term is defined in agreement. In addition, should Dr. Carter terminate the agreement or the agreement be terminated due to his death or disability, the agreement provides that Dr. Carter be paid a base salary and benefits through the last day of the month in which the termination occurred and for an additional twelve month period.

The Company's engagement of Dr. Carter as a consultant related to patent development, as one of the Company's directors and as chairman of the Executive Committee of the Company's board expires December 31, 2010 unless sooner terminated for cause or disability. The agreement automatically renews for successive one year periods after the initial termination date or any renewal period. Dr. Carter has the right to terminate the agreement on 30 days' prior written notice. The base fee is subject to annual adjustments equal to the percentage increase or decrease of annual dollar value of directors' fees provided to the Company's directors during the prior year. The annual fee is further subject to adjustment based on the average increase or decrease in the Consumer Price Index for the prior year. In addition, Dr. Carter could receive an annual performance bonus of up to 25% of his base fee, at the sole direction of the Compensation Committee of the board of directors, based on his performance. Dr. Carter will not participate in any discussions concerning the determination of this annual bonus. Dr. Carter's agreement also provides that he be paid his base fee through the last day of the then term of the agreement if he is terminated without "cause", as that term is defined in the agreement. In addition, should Dr. Carter terminate the agreement or the agreement be terminated due to his death or disability, the agreement provides that Dr. Carter be paid fees due him through the last day of the month in which the termination occurred and for an additional twelve month period.

The Company's agreement with Ransom W. Etheridge provides for Mr. Etheridge's engagement as the Company's General Counsel until December 31, 2009 unless sooner terminated for cause or disability. The agreement automatically renews for successive one year periods after the initial termination date unless the Company or Mr. Etheridge give written notice otherwise at least ninety days prior to the termination date or any renewal period. Mr. Etheridge has the right to terminate the agreement on 30 days' prior written notice. The initial annual fee for services is \$96,000 and is annually subject to adjustment based on the average increase or decrease in the Consumer Price Index for the prior year. Mr. Etheridge's agreement also provides that he be paid all fees through the last day of then current term of the agreement if he is terminated without "cause" as that term is defined in the agreement. In addition, should Mr. Etheridge terminate the agreement or the agreement be terminated due to his death or disability, the agreement provides that Mr. Etheridge be paid the fees due him through the last day of the month in which the termination occurred and for an additional twelve month period. Mr. Etheridge will devote approximately 85% of his business time to the Company's business.

The Company's engagement agreement with Robert E. Peterson provides for Mr. Peterson's engagement as the Company's Chief Financial Officer until December 31, 2010 unless sooner terminated for cause or disability. Mr. Peterson has the right to terminate the agreement on 30 days' prior written notice. The annual fee for services is subject to increases based on the average increase in the cost of inflation index for the prior year. Mr. Peterson shall receive an annual bonus in each year that the Company's Chief Executive Officer is granted a bonus. The bonus shall equal a percentage of Mr. Peterson's base annual compensation comparable to the percentage bonus received by the Chief Executive Officer. In addition, Mr. Peterson shall receive bonus compensation upon Federal Drug Administration approval of commercial application of Ampligen®. Mr. Peterson's agreement also provides that he be paid all fees through the last day of then current term of the agreement if he is terminated without "cause" as that term is defined in the agreement. In addition, should Mr. Peterson terminate the agreement or the agreement be terminated due to his death or disability, the agreement provides that Mr. Peterson be paid the fees due him through the last day of the month in which the termination occurred and for an additional twelve month period. Mr. Peterson will devote approximately 85% of his business time to the Company's business.

On November 27, 2006, the Company engaged the services of a full time President and Chief Operating Officer. Pursuant to this agreement, the President and Chief Operating Officer is employed for an initial term of two years. The employment automatically renews thereafter for successive one year periods unless either party gives written notice not to renew within 90 days of the termination date.

The President and Chief Operating Officer receives an annual salary at the rate of \$350,000 per year through December 31, 2007 and, thereafter, at the annual rate of \$400,000. His salary is subject to cost of living increases. He is entitled to annual bonuses in the discretion of our Chairman and Board of Directors. A \$50,000 cash bonus and 100,000 options given upon the execution of the employment agreement and the minimum cash bonus for the year ended December 31, 2007 was \$75,000. He was also entitled to and received an additional 50,000 options upon his successful completion of three months of employment and an aggregate of up to an additional 950,000 options upon the happening of specific business milestones. The Company has the right, at its discretion, to modify the time periods within which the milestones must be met. Each option vests upon award, expires in ten years and has an exercise price equal to 110% of the closing price of its common stock on the American Stock Exchange on the date of the award. Upon the happening of certain events, such as its merger with and in to another entity or the Company's sale or transfer of assets or earning power aggregating 50% or more of its assets or earning capacity, provided he is still employed by the Company, any of the foregoing options not granted to him will be granted. He is also entitled to receive fringe benefits generally available to the Company's executive officers and the Company has agreed, during his employment period, to pay premiums on a term life insurance policy in the face amount of \$1,500,000 with a beneficiary of his choosing.

The employment agreement terminates upon his death or disability and is terminable by the Company for "cause" as defined in the agreement, or without cause. He has the right to terminate the agreement upon not less than 60 day's prior notice. In the event that the agreement terminates due to his death or disability, or by him, he will be entitled to fees due and payable through the last day of the month in which the termination occurs. If it is terminated by the Company for cause, he will be entitled to fees due and payable to him through the date of termination. If the Company terminates the agreement without cause, he is entitled to fees depending upon the amount of time he has been employed by the Company ranging from 12 months' of fees if he is terminated within the first 12 months of employment to three months' of fees if he is terminated in the 21st month of employment. He is subject to confidentiality and non-compete covenants.

The Board of Directors, deeming it essential to the best interests of the Company's shareholders to foster the continuous engagement of key management personnel and recognizing that, as is the case with many publicly held corporations, a change of control might occur and that such possibility, and the uncertainty and questions which it might raise among management, might result in the departure or distraction of management personnel to the detriment of the Company and the Company's shareholders, determined to reinforce and encourage the continued attention and dedication of members of the Company's management to their engagement without distraction in the face of potentially disturbing circumstances arising from the possibility of a change in control of the Company and entered into identical agreements regarding change in control with William A. Carter, the Company's Chief Executive Officer and Chief Scientific Officer, Robert E. Peterson, the Company's Chief Financial Officer and Ransom W. Etheridge, the Company's General Counsel. Each of the agreements regarding change in control became effective March 11, 2005 and continue through December 31, 2007 and shall extend automatically to the third anniversary thereof unless the Company gave notice to the other party prior to the date of such extension that the agreement term will not be extended. Notwithstanding the foregoing, if a change in control occurs during the term of the agreements, the term of the agreements will continue through the second anniversary of the date on which the change in control occurred. Each of the agreements entitles William A. Carter, Robert E. Peterson and Ransom W. Etheridge, respectively, to change of control benefits, as defined in the agreements and summarized below, upon their respective termination of employment/engagement with the Company during a potential change in control, as defined in the agreements or after a change in control, as defined in the agreements, when their respective terminations are caused (1) by the Company for any reason other than permanent disability or cause, as defined in the agreement (2) by William A. Carter, Robert E. Peterson and/or Ransom W. Etheridge, respectively, for good reason as defined in the agreement or, (3) by William A. Carter, Robert E. Peterson and/or Ransom W. Etheridge, respectively for any reason during the 30 day period commencing on the first date which is six months after the date of the change in control.

The benefits for each of the foregoing executives would be as follows:

- o A lump sum cash payment of three times his base salary and annual bonus amounts; and
- o Outplacement benefits.

Each agreement also provides that the executive is entitled to a "gross-up" payment to make him whole for any federal excise tax imposed on change of control or severance payments received by him.

Dr. Carter's agreement also provides for the following benefits:

- o Continued insurance coverage through the third anniversary of his termination; and
- o Retirement benefits computed as if he had continued to work for the above period.

In order to facilitate the Company's need to obtain financing and prior to the Company's shareholders approving an amendment to the Company's corporate charter to merge the number of authorized shares, Dr. Carter, the Company's Chief Executive Officer, agreed to waive his right to exercise certain warrants and options unless and until the Company's shareholder approved an increase in the Company's authorized shares of Common Stock.

The Company has engaged the Sage Group, Inc., a health care, technology oriented, strategy and transaction advisory firm, to assist the Company in obtaining a strategic alliance in Japan for the use of Ampligen® in treating Chronic Fatigue Syndrome or CFS. R. Douglas Hulse, the Company's former President and Chief Operating Officer, is a member and an executive director of The Sage Group, Inc.

### **(13) Leases**

The Company has a non-cancelable operating lease for the space in which its principal office is located.

Future minimum lease payments under the noncancellable operating lease are as follows:

| Year Ending December 31,            | (in thousands) |
|-------------------------------------|----------------|
| 2008                                | \$ 205         |
| 2009                                | 211            |
| 2010                                | 71             |
| <b>Total minimum lease payments</b> | <b>\$ 487</b>  |

Rent expense charged to operations for the years ended December 31, 2005, 2006 and 2007 amounted to approximately \$284,000, \$229,000 and \$231,000 respectively. The term of the lease for the Rockville, Maryland facility expired June 2005. The Company transferred this operational site to the Company's New Jersey facility. The term of the lease for the Philadelphia, Pennsylvania offices is through April, 2010.

### **(14) Income Taxes**

As of December 31, 2007, the Company has approximately \$83,000,000 of federal net operating loss carryforwards (expiring in the years 2008 through 2027) available to offset future federal taxable income. The Company also has approximately \$25,000,000 of Pennsylvania state net operating loss carryforwards (expiring in the years 2008 through 2027) and approximately \$35,000,000 of New Jersey state net operating loss carry forwards (expiring in the years 2010 through 2014) available to offset future state taxable income. The utilization of certain state net operating loss carryforwards may be subject to annual limitations.

Under the Tax Reform Act of 1986, the utilization of a corporation's net operating loss carryforward is limited following a greater than 50% change in ownership. Due to the Company's prior and current equity transactions, the Company's net operating loss carryforwards may be subject to an annual limitation generally determined by multiplying the value of the Company on the date of the ownership change by the federal long-term tax exempt rate. Any unused annual limitation may be carried forward to future years for the balance of the net operating loss carryforward period.

Deferred income taxes reflect the net tax effects of temporary differences between carrying amounts of assets and liabilities for financial reporting purposes and the carrying amounts used for income tax purposes. In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which temporary differences representing net future deductible amounts become deductible. Due to the uncertainty of the Company's ability to realize the benefit of the deferred tax asset, the deferred tax assets are fully offset by a valuation allowance at December 31, 2006 and 2007.

The components of the net deferred tax asset of December 31, 2006 and 2007 consists of the following:

|                                | (000's omitted) |           |
|--------------------------------|-----------------|-----------|
| Deferred tax assets:           | 2006            | 2007      |
| Net operating losses           | \$ 27,485       | \$ 28,097 |
| Stock Based Compensation       | 993             | 765       |
| Accrued Expenses and Other     | (82)            | (119)     |
| Research and development costs | 3,443           | 3,551     |
| Total                          | 31,839          | 32,294    |
| Less: Valuation Allowance      | (31,839)        | (32,294)  |
| Balance                        | \$ -0-          | \$ -0-    |

### (15) Contingencies

On September 30, 1998, the Company filed a multi-count complaint against Manuel P. Asensio, Asensio & Company, Inc. ("Asensio"). The action included claims of defamation, disparagement, tortious interference with existing and prospective business relations and conspiracy, arising out of Asensio's false and defamatory statements. The complaint further alleged that Asensio defamed and disparaged the Company in furtherance of a manipulative, deceptive and unlawful short-selling scheme in August and September, 1998. In 1999, Asensio filed an answer and counterclaim alleging that in response to Asensio's strong sell recommendation and other press releases, the Company made defamatory statements about Asensio. The Company denied the material allegations of the counterclaim. In July 2000, following dismissal in federal court for lack of subject matter jurisdiction, the Company transferred the action to the Pennsylvania State Court. In March 2001, the defendants responded to the complaints as amended and a trial commenced on January 30, 2002. A jury verdict disallowed the claims against the defendants for defamation and disparagement and the court granted the Company a directed verdict on the counterclaim. On July 2, 2002 the Court entered an order granting the Company a new trial against Asensio for defamation and disparagement. Thereafter, Asensio appealed the granting of a new trial to the Superior Court of Pennsylvania. The Superior Court of Pennsylvania has denied Asensio's appeal. Asensio petitioned the Supreme Court of Pennsylvania for allowance of an appeal, which was denied. The Company now anticipates the scheduling of a new trial against Asensio for defamation and disparagement in the Philadelphia Common Pleas Court.



In December 2004, the Company filed a multicount complaint in federal court (Southern District of Florida) against a conspiratorial group seeking to illegally manipulate the Company's stock for purposes of bringing about a hostile takeover of Hemispherx. The lawsuit alleges that the conspiratorial group commenced with a plan to seize control of its cash and proprietary assets by an illegal campaign to drive down the Company's stock price and publish disparaging reports on its management and current fiduciaries. The lawsuit seeks monetary damages from each member of the conspiratorial group as well as injunctions preventing further recurrences of their misconduct. The conspiratorial group includes Bioclones, a privately held South African Biopharmaceutical company that collaborated with the Company, and Johannesburg Consolidated Investments, a South African corporation, Cyril Donninger, R. B. Kebble, H. C. Buitendag, Bart Goemaere, and John Doe(s). Bioclones, Johannesburg Consolidated Investments, Cyril Donninger, R. B. Kebble and H.C. Buitendag filed a motion to dismiss the complaint, which was granted by the court. The Company is in the process of appealing this decision to the 11<sup>th</sup> federal circuit court of appeals.

In October 2006, litigation was initiated against the Company in the Court of Common Pleas, Philadelphia County, Pennsylvania between the Company and Hospira Worldwide, Inc. with regard to a dispute with respect to fees for services charged by Hospira Worldwide, Inc. to the Company. The dispute was promptly settled and the litigation dismissed.

In January 2007, arbitration proceedings were initiated by Bioclones (Proprietary), Ltd., ("Bioclones") and are pending in South Africa to determine damages arising out of the termination of a marketing agreement the Company had with Bioclones. The Company had deemed the marketing agreement void due to numerous and long standing failures of performance by Bioclones and will present claims for damages against Bioclones in the arbitration. Bioclones has confirmed that the marketing agreement has been terminated.

In January 2007, the Company filed an application in South Africa for the dissolution of Ribotech (PTY) Ltd. ("Ribotech") on the grounds that the purpose for the existence of Ribotech, the marketing agreement between the Company and Bioclones, had been terminated. The application for termination is now pending.

Due to non-performance by Laboratorios del Dr. Esteve ("Esteve") of certain contractually required clinical trials, the Company notified Esteve of its intention to terminate the Sales and Distribution Agreement entered into as of March 20, 2002, and in December 2007, as is its right under the Sales and Distribution Agreement, Esteve applied for arbitration, seeking damages. The Company believes the Esteve claim is without merit and have filed a counterclaim.

In March 2007, Cedric Philipp ("Philipp") initiated an arbitration proceeding in Philadelphia, Pennsylvania with the American Arbitration Association alleging that, under a 1994 agreement between the Company and Philipp ("1994 Agreement"), the Company owed him commissions on product, or services he alleges the Company has purchased from Hollister-Stier. The Company is defending this claim on, among other claims, the ground that the 1994 Agreement has been terminated. In April 2007, the Company filed a declaratory judgment action in the Court of Common Pleas of Philadelphia asking the court to declare that the 1994 agreement between the Company and Cedric Philipp has been terminated. This declaratory judgment action is now pending.

The Company has not recorded any loss contingencies as a result of the above matters for the years ended December 31, 2006 and 2007.

## **(16) Certain Relationships and Related Transactions**

The Company has employment agreements with certain of its executive officers and has granted such officers and directors options and warrants to purchase its common stock, as discussed in Note 12.

Ransom W. Etheridge, the Company's Secretary, General Counsel and one of its directors, is an attorney in private practice, who renders corporate legal services to the Company from time to time, for which he has received fees totaling \$88,000, \$91,000 and \$117,000 in 2005, 2006 and 2007, respectively. In addition, Mr. Etheridge serves on the Board of Directors for which he received Director's Fees of cash and stock valued at \$100,000, \$137,000 and \$150,000 in 2005, 2006 and 2007, respectively. The Company loaned \$60,000 to Ransom W. Etheridge in November 2001 for the purpose of exercising 15,000 Class A redeemable warrants. This loan bears interest at 6% per annum. This loan was granted prior to the enactment of the Sarbanes Oxley Act of 2002 prohibiting such transactions. In lieu of granting Mr. Etheridge a bonus for outstanding legal work performance on behalf of the Company, the Board of Directors forgave the loan and accrued interest on February 24, 2006.

The Company used at various times the property owned by Retreat House, LLC, an entity in which the children of William A. Carter have a beneficial interest. The Company paid Retreat House, LLC \$54,000, \$102,000 and \$153,000 for the use of the property at various times in 2005, 2006 and 2007, respectively.

On February 14, 2005 the Company entered into an agreement with The Sage Group of Branchburg, New Jersey for R. Douglas Hulse, an Executive Director of The Sage Group, to serve as President and Chief Operating Officer ("COO") of the Company (See Note 12). Mr. Hulse resigned during the fourth quarter of 2006 as President and COO.

Kati Kovari was paid \$13,000 in 2006 and 2007 for her services to the Company. Dr. Kovari is the spouse of William A. Carter, CEO.

## **(17) Concentrations of credit risk**

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash, cash equivalents, investments and accounts receivable. The Company places its cash with high-quality financial institutions. At times, such amount may be in excess of Federal Deposit Insurance Corporation insurance limits of \$100,000.

Sales to three large wholesalers represented approximately 70% and 68% of the Company's total sales for the years ended December 31, 2006 and 2007, respectively.

**(18) Quarterly Results of Operation (unaudited)**

The following is a summary of the unaudited quarterly results of operations:

| <b>2006</b>                                 |                   |                  |                       |                      |             |
|---------------------------------------------|-------------------|------------------|-----------------------|----------------------|-------------|
| <b>(in thousands except per share data)</b> |                   |                  |                       |                      |             |
|                                             | March 31,<br>2006 | June 30,<br>2006 | September 30,<br>2006 | December 31,<br>2006 | Total       |
| Revenues                                    | \$ 236            | \$ 247           | \$ 232                | \$ 218               | \$ 933      |
| Costs and expenses                          | 5,822             | 5,072            | 4,096                 | 4,637                | 19,627      |
| Net loss                                    | \$ (5,920)        | \$ (5,081)       | \$ (3,807)            | \$ (4,591)           | \$ (19,399) |
| Basic and diluted loss per share            | \$ (.10)          | \$ (.08)         | \$ (.06)              | \$ (.07)             | \$ (.31)    |

| <b>2007</b>                                 |                   |                  |                       |                      |             |
|---------------------------------------------|-------------------|------------------|-----------------------|----------------------|-------------|
| <b>(in thousands except per share data)</b> |                   |                  |                       |                      |             |
|                                             | March 31,<br>2007 | June 30,<br>2007 | September 30,<br>2007 | December 31,<br>2007 | Total       |
| Revenues                                    | \$ 255            | \$ 234           | \$ 285                | \$ 285               | \$ 1,059    |
| Costs and expenses                          | 5,195             | 4,392            | 6,464                 | 3,771                | 19,822      |
| Net loss                                    | \$ (5,100)        | \$ (3,925)       | \$ (5,718)            | \$ (3,396)           | \$ (18,139) |
| Basic and diluted loss per share            | \$ (.07)          | \$ (.05)         | \$ (.08)              | \$ (.05)             | \$ (.25)    |

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**Hemispherx Biopharma, Inc.**  
**Schedule II -Valuation and Qualifying Accounts**  
(dollars in thousands)

| <b>Column A</b>                                    | <b>Column B</b>                       | <b>Column C</b>          | <b>Column D</b>   | <b>Column E</b>                 |
|----------------------------------------------------|---------------------------------------|--------------------------|-------------------|---------------------------------|
| <b>Description</b>                                 | <b>Balance at beginning of period</b> | <b>Charge to expense</b> | <b>Write-offs</b> | <b>Balance at end of period</b> |
| Year Ended December 31, 2007 Reserve for inventory | \$ 241                                | 109                      | -                 | \$ 350                          |
| Year Ended December 31, 2006 Reserve for inventory | \$ 100                                | 241                      | (100)             | 241                             |
| Year Ended December 31, 2005 Reserve for inventory | \$ 225                                | -                        | (125)             | \$ 100                          |

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