

HEMISPHERX BIOPHARMA INC

Form POS AM

April 24, 2008

As filed with the Securities and Exchange Commission on April 24, 2008

Registration No. 333-136187

---

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

---

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

---

HEMISPHERX BIOPHARMA, INC.  
(Exact name of registrant as specified in its charter)

Delaware	2836	52-0845822
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

---

1617 JFK Boulevard  
Philadelphia, Pennsylvania 19103  
(215) 988-0080  
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

---

William A. Carter, M.D., Chief Executive Officer  
Hemispherx Biopharma, Inc.  
1617 JFK Boulevard  
Philadelphia, Pennsylvania 19103  
(215) 988-0080  
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies of all communications to:  
Richard Feiner, Esq.  
Silverman Sclar Shin & Byrne PLLC  
381 Park Avenue South, Suite 1601  
New York, New York, 10016

Edgar Filing: HEMISPHERX BIOPHARMA INC - Form POS AM

(212) 779-8600

Fax (212) 779-8858

---

Approximate date of proposed sale to the public: From time to time or at one time after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 ("Securities Act"), check the following box.  x

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

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

If this form is a post-effective amendment filed pursuant to 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  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 company" in Rule 12b-2 of the Exchange Act. (Check one): Large accelerated filer  o Accelerated filer  x  
Non-accelerated filer  o Smaller Reporting Company  o.

Pursuant to Rule 429 under the Securities Act of 1933, as amended, the prospectus included in this Registration Statement also relates to the remaining unsold shares which were previously registered by the Registrant under Registration Statement Nos. 333-117178, 333-108645, 333-111135, 333-113796 and 333-130008.

The Registrant hereby amends this registration statement on the date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on a date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be amended. Neither we nor the selling stockholders may sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where an offer or sale is not permitted.

**Subject to Completion**  
**Preliminary Prospectus Dated April 24, 2008**

*HEMISPHERX BIOPHARMA, INC.*

8,564,225 Shares of Common Stock

---

**The Offering:**

This prospectus relates to the sale of up to 8,564,225 shares of our common stock that may be offered and sold from time to time by selling stockholders and the persons to whom such selling stockholders may transfer their shares, consisting of: (1) 1,255,877 shares of our common stock issuable to Fusion Capital Fund II, LLC ("Fusion Capital") under a common stock purchase agreement; (2) 5,594,104 shares of common stock issuable upon exercise of outstanding warrants; (3) 135% of 3,615,514 shares of common stock issuable upon the exercise of outstanding warrants related to our former 2003 and 2004 7% Senior Convertible Debentures ("Debenture Warrants"); and (4) 448,814 shares of outstanding common stock issued to Fusion Capital. We will not receive any of the proceeds from the sale of these shares by the selling stockholders, but we will receive proceeds from sales of shares to Fusion Capital and the cash exercise of warrants, if any.

Our common stock is listed on the American Stock Exchange under the symbol HEB. The reported last sale price on the American Stock Exchange on April 18, 2008 was \$0.68.

The selling stockholders may sell their shares from time to time on the American Stock Exchange or otherwise, in one or more transactions at fixed prices, at prevailing market prices at the time of sale or at prices negotiated with purchasers. The selling stockholders will be responsible for any commissions or discounts due to brokers or dealers. We will pay substantially all expenses of registration of the shares covered by this prospectus.

---

*Please see the risk factors beginning on page 6 to read about certain factors you should consider before buying shares of common stock.*

---

Fusion Capital is an "underwriter" within the meaning of the Securities Act of 1933. Other selling stockholders may be deemed to be an "underwriter" within the meaning of the Securities Act of 1933.

---

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

The date of this prospectus is April \_\_, 2008

---

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the Securities and Exchange Commission a registration statement (which includes this prospectus) on Form S-1 (File No. 333-136187) under the Securities Act of 1933, as amended, with respect to the common stock the selling stockholders are offering by this prospectus. This prospectus does not contain all of the information included in the registration statement and the exhibits and schedules to the registration statement. For further information about us and our securities, you should refer to the registration statement and the exhibits filed with the registration statement. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of that contract or document filed as an exhibit to the Registration Statement.

We are subject to the information requirements of the Securities Exchange Act of 1934 and file annual, quarterly and current reports, proxy statements and other information with the SEC. You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at [www.sec.gov](http://www.sec.gov) or through our website at [www.hemispherx.net](http://www.hemispherx.net). Information contained on our website is not considered to be a part of, nor incorporated by reference in, this prospectus. You may also read and copy any document we file with the SEC at its Public Reference Room at 100 F Street, NE, Washington, D.C. 20549.

You may also obtain copies of the documents at prescribed rates by writing to the Public Reference Room of the SEC at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

## INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to "incorporate by reference" the information that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus, and you should review that information in order to understand the nature of any investment by you in our common stock. Information contained in this prospectus automatically updates and supersedes previously filed information. We are incorporating by reference the following documents:

- (a) Our annual report on Form 10-K for our fiscal year ended December 31, 2007, SEC File No. 1-13441.
- (b) Our current report on Form 8-K, SEC File No. 1-13441 filed with the SEC on March 10, 2008.
- (c) Our proxy statement on schedule 14A for our 2007 annual meeting, SEC File No. 1-13441.

- (d) A description of our common stock contained in our registration statement on Form S-1, SEC File No. 333-117178, and any amendment or report filed for the purpose of updating this description filed subsequent to the date of this prospectus and prior to the termination of this offering.
- (e) All of our filings pursuant to Sections 13(a) or 15(d) under the Securities Exchange Act of 1934, as amended, since the date of the filing of our Annual Report on Form 10-K for the fiscal year ended December 31, 2007 through the date of this prospectus.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the reports or documents that we have incorporated by reference in this prospectus, at no cost. To obtain any such documents please write or telephone us at the following address: Hemispherx Biopharma, Inc., 1617 JFK Boulevard, Philadelphia, Pennsylvania 19103, telephone number 215-988-0080. In addition, these documents may be accessed at our website at [www.hemispherx.net](http://www.hemispherx.net) via a link to the SEC's website. Information contained on our website is not considered to be a part of, nor incorporated by reference in, this prospectus.

You should rely only on the information incorporated by reference or provided in this prospectus or any supplement. We have not authorized anyone else to provide you with different information. We and the selling stockholders will not make offers to sell these shares in any state where the offer is not permitted. You should not assume that the information in this prospectus or any supplement is accurate as of any date other than the date on the front of those documents.

### **PROSPECTUS SUMMARY**

The following is a brief summary of certain information contained elsewhere in this prospectus or incorporated in this prospectus by reference. This summary is not intended to be a complete description of the matters covered in this prospectus and is qualified in its entirety by reference to the more detailed information contained or incorporated by reference in this prospectus. You are urged to read this prospectus in its entirety, including all materials incorporated in this prospectus by reference.

The registration statement that contains this prospectus, including the exhibits to the registration statement, contains additional information about us and the securities being offered under this prospectus. You should read the registration statement and the accompanying exhibits for further information. The registration statement and exhibits can be read and are available to the public over the Internet at the SEC's website at <http://www.sec.gov> as described under the heading "Where You Can Find More Information."

### ***About Hemispherx***

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. We were 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.

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. We completed Phase III clinical trials using Ampligen® to treat ME/CFS patients and are presently in the registration process for a new drug application (“NDA”) with the Food and Drug Administration (“FDA”). 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. We are currently in the process of submitting amendments to the NDA filing that we believe address certain of these questions. Ampligen represents the first drug in class of RNA (nucleic acid) molecules to apply for NDA review.

We own and operate a 43,000 sq. ft. FDA approved facility in New Brunswick, New Jersey 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.

Our principal executive offices are located at One Penn Center, 1617 JFK Boulevard, Philadelphia, Pennsylvania 19103, and our telephone number is 215-988-0080. We maintain a website at “<http://www.hemispherx.net>.” Information contained on our website is not considered to be a part of, nor incorporated by reference in, this prospectus.

### ***Fusion Capital Transactions***

On April 12, 2006, we 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 from us on each trading day \$100,000 of our common stock up to an aggregate of \$50,000,000 through August 1, 2008, subject to earlier termination at our discretion. At our option, we may elect to sell less of our common stock to Fusion Capital than the daily amount and we may increase the daily amount as the market price of our stock increases. The purchase price of the shares of common stock is 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 our common stock in the event that the price of our common stock is less than \$1.00. As of the date hereof, Fusion is not permitted to purchase shares under the common stock purchase agreement because the price of our common stock is less than \$1.00.



Through April 18, 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. In addition, we have issued 448,814 Commitment Shares. Fusion Capital is offering for sale herein up to 1,704,691 shares of our common stock consisting of 448,814 shares currently owned by Fusion Capital (Commitment Shares) and 1,255,877 shares (inclusive of an additional 194,688 Commitment Shares) issuable under the common stock purchase agreement. We will realize much less than the maximum \$50,000,000 proceeds from the sale of stock under the Purchase Agreement (please see “*Selling Stockholders; The Fusion Transaction; Commitment Shares Issued to Fusion Capital*” for a description of the Commitment Shares).

The number of shares ultimately offered for sale by Fusion Capital is dependent upon the number of shares purchased by Fusion Capital under the common stock purchase agreement. For more detailed information, please see “*The Fusion Transaction*” in “*Selling Stockholders*” below.

***Securities Offered***

Common stock to be offered  
by the selling stockholders 8,564,225 Shares consisting of:

- 1,255,877 shares of our common stock issuable to Fusion Capital pursuant to a common stock purchase agreement (inclusive of 194,688 Commitment Shares);
- 5,594,104 shares of common stock issuable upon exercise of other outstanding warrants;
- 135% of 3,615,514 shares of common stock issuable upon the exercise of outstanding warrants related to our former 2003 and 2004 7% Senior Convertible Debentures; and
- 448,814 outstanding shares of common stock owned by Fusion Capital.

Common stock outstanding  
prior to this offering 73,975,265 Shares

Use of Proceeds We will not receive any of the proceeds from the sale of the shares of common stock because they are being offered by the selling stockholders and we are not offering any shares for sale under this prospectus, but we may receive proceeds from the exercise of warrants held by certain of the selling stockholders. In addition, if the price of our common stock reaches \$1.00 per share, we may receive gross proceeds from the sale of up to 1,255,877 shares of our common stock to Fusion Capital under the common stock purchase agreement. We will apply such proceeds, if any, for general corporate operating purposes. See "Use of Proceeds."

American Stock Exchange symbol HEB

## **RISK FACTORS**

### **Special Note Regarding Forward-Looking Statements**

Certain statements in this prospectus constitute “forwarding-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities and Exchange 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 prospectus 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, including but not limited to, the risk factors discussed below, which may cause the actual results, performance or achievements of Hemispherx and its subsidiaries 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 prospectus. 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.

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 prospectus. 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. Please see the next risk factor.

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 adversely 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.

We filed an NDA with the FDA for treatment of CFS on October 10, 2007. On December 3, 2007 we received a refusal to file (“RTF”) letter from the FDA because the application was deemed “not substantially complete”. We submitted a written response 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 are currently in the process of submitting amendments to the NDA filing that we believe address certain of these questions. 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.

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.

In April 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 until August 1, 2008 (see “The Fusion Transaction” in Selling Stockholders” below).

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 does 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 April 18, 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. Assuming a purchase price of \$1.00 per share, the lowest price at which Fusion is obligated to purchase shares from us (the closing sale price of the common stock on April 18, 2008 was \$0.68) and the purchase by Fusion Capital of the remaining 1,061,189 shares (not including the remaining 194,688 Commitment Shares), total gross proceeds to us from the remaining shares would only be approximately \$1,061,000 (\$20,800,000 in the aggregate under the common stock purchase agreement).

Unless and until the market price for our common stock increases to at least \$1.00, no additional shares will be sold to Fusion Capital under the agreement. We will realize much less than the maximum \$50,000,000 proceeds from the sale of stock under the Purchase Agreement.

Assuming no material additional financing from Fusion Capital 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 other sources of funding through additional equity or debt financing or from other sources in order to satisfy our working capital needs and 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.

***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. Our inability to establish viable marketing and sales capabilities would most likely have a materially adverse effect on us.

***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 \$0.53 to \$2.49 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.***

Fusion Capital is offering for sale herein up to 1,704,691 shares of our common stock consisting of shares currently owned by Fusion Capital and shares issuable under the common stock purchase agreement. Also, we have registered 3,615,514 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 and other selling stockholders will be sold over a period of six to twelve months. Depending upon market liquidity at the time, a sale of shares by Fusion or other selling stockholders at any given time could cause the trading price of our common stock to decline. Given the current market price of our common stock which is below the \$1.00 threshold for Fusion to purchase shares, we do not anticipate sales by Fusion to materially affect the market price. Nevertheless, should the market price rise, 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.

*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 revenue.*

## **BUSINESS**

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2007, incorporated by reference into this Prospectus, contains information about us, including audited financial statements for our fiscal year ended December 31, 2007. Please refer to this report for additional information.

## **SELLING STOCKHOLDERS**

The following table provides information regarding the selling stockholders and the number of shares of common stock they are offering.

Unless otherwise indicated in the footnotes below, we believe that the persons and entities named in the table have sole voting and investment power with respect to all shares beneficially owned. The information regarding shares beneficially owned after the offering assumes the sale of all shares offered by each of the selling stockholders. The percentage ownership data is based on 73,975,265 shares of our common stock issued and outstanding as of April 18, 2008.

None of the selling stockholders has had any position, office or other material relationship with us or any of our affiliates within the past three years, other than as a stockholder, unless otherwise disclosed in the footnotes.



<b>Selling Stockholder</b>	<b>Common Stock Owned Prior To Offering</b>	<b>No. of Shares Being Offered</b>	<b>Common Stock Owned After The Offering</b>
Fusion Capital Fund II, LLC (1) (2)	448,814	1,704,691	-
Portside Growth & Opportunity Fund (3)	2,721,649	2,721,649	-
Leonardo L.P. (4)	2,447,757	2,447,757	-
Christopher Chipman (5)	30,000	30,000	-
Mid South Capital, LLC (6)	25,000	25,000	-
Windward Capital Advisors, LLC (7)	212,292	212,292	-
HefCap Holdings, LLC (8)	212,292	212,292	-
Baxter Capital Advisors, Inc. (9)	30,000	30,000	-
William Mason (10)	131,066	41,666	89,400
W. Barry McDonald (10)	131,067	41,667	89,400
Wayne Pambianchi (10)	131,067	41,667	89,400
Gordon Ramseier (10)	131,666	41,666	89,400
Daniel Tripodi (10)	131,667	41,667	89,400
Michael Burrows (11)	690,000	150,000	540,000
UBS O'Connor LLC (12)	30,000	30,000	-
Kingsbridge Capital Ltd. (13)	28,846	28,846	-
Fenmore Holdings (14)	36,058	36,058	-
Smithfield Fiduciary, LLC (15)	72,115	72,115	-
Spectra Investments, LLC (16)	36,058	36,058	-
Gemini Master Fund, Ltd. (17)	7,211	7,211	-
Provident Premier Master Fund, Ltd. (18)	36,058	36,058	-
Asset Managers International (19)	188,461	188,461	-
JMG Capital Partners, LP (20)	37,116	37,116	-
JMG Triton Off shore Fund, Ltd. (21)	72,116	72,116	-
Winton Capital Holdings, Ltd. (22)	60,000	60,000	-
Iroquois Capital, LP (23)	57,692	57,692	-
Jefferies & Company, Inc. (24)	150,480	150,480	-
Sage Healthcare Advisors (25)	10,000	10,000	-

(1) Steven G. Martin and Joshua B. Scheinfeld, the principals of Fusion Capital, are deemed to be beneficial owners of all of the shares of common stock owned by Fusion Capital. Messrs. Martin and Scheinfeld have shared voting and investment power over the Fusion Capital shares being offered under this prospectus.

(2) Includes 448,814 shares currently owned by Fusion Capital (Commitment Shares) and 1,255,877 shares issuable under the common stock purchase agreement..

- (3) Includes 135% of (i) 107,104 shares of common stock issuable upon exercise of certain Debenture Warrants; (ii) 650,000 shares of common stock issuable upon exercise of Warrants that expire in May 2009, (iii) 650,000 shares of common stock issuable upon exercise of Warrants that expire in June 2009 and (iv) 395,257 shares of common stock issuable upon exercise of Warrants that expire in July 2009. Also includes 288,462 shares issuable upon exercise of warrants issued in the August 5, 2004 Private Placement. Ramius Capital Group, LLC ("Ramius Capital") is the investment adviser of Portside Growth & Opportunity Fund ("Portside") and consequently has voting control and investment discretion over securities held by Portside. Ramius Capital disclaims beneficial ownership of the shares held by Portside. Peter A. Cohen, Morgan B. Stark, Thomas W. Strauss and Jeffrey M. Solomon are the sole managing members of C4S& Co., LLC, the sole managing member of Ramius Capital. As a result, Messrs. Cohen, Stark, Strauss and Solomon may be considered beneficial owners of any shares deemed to be beneficially owned by Ramius Capital. Messrs. Cohen, Stark, Strauss and Solomon disclaim beneficial ownership of these shares.
- (4) Includes 135% of (i) 117,896 shares of common stock issuable upon exercise of the Debenture Warrants; (ii) 1,300,000 shares of common stock issuable upon exercise of Warrants that expire in May 2009, and (iii) 395,257 shares of common stock issuable upon exercise of Warrants that expire in July 2009. Angelo, Gordon & Co., L.P. ("Angelo, Gordon") is the sole director of the general partner of Leonardo, L.P. ("Leonardo") and consequently has voting control and investment discretion over securities held by Leonardo. Angelo, Gordon disclaims beneficial ownership of the shares held by Leonardo. Mr. John M. Angelo, the Chief Executive Officer of Angelo, Gordon, and Mr. Michael L. Gordon, the Chief Operating Officer of Angelo, Gordon, are the sole general partners of AG Partners, L.P., the sole general partner of Angelo, Gordon. As a result, Messrs. Angelo and Gordon may be considered beneficial owners of any shares deemed to be beneficially owned by Angelo, Gordon. Messrs. Angelo and Gordon disclaim beneficial ownership of these shares.
- (5) Includes (i) 5,000 shares issuable upon exercise of warrants exercisable at \$3.91 per share expiring on February 28, 2009, (ii) 5,000 shares issuable upon exercise of warrants exercisable at \$4.25 per share expiring on January 31, 2009, (iii) 5,000 shares issuable upon the exercise of warrants at \$3.51 per share expiring March 31, 2009, (iv) 5,000 shares issuable upon the exercise of warrants at \$2.17 expiring January 3, 2011, (v) 5,000 shares issuable upon the exercise of warrants at \$3.60 expiring April 1, 2011 and (vi) 5,000 shares issuable upon the exercise of warrants at \$2.54 expiring July 1, 2011, Mr. Chipman provides us with financial and accounting consulting services.
- (6) Includes up to 25,000 shares of common stock issuable upon exercise of warrants owned by Mid South Capital which are exercisable at a price of \$3.00 per share. Mark Hill and Jack Magerson are the principals of Mid South Capital and are therefore considered the beneficial owner of these securities.

- (7) H. David Coherd is the sole member of Windward Capital Advisors, LLC. Accordingly, the shares beneficially owned by Windward Capital are deemed to be beneficially owned by this selling stockholder. Shares owned and offered include up to 212,292 shares of common stock issuable upon exercise of warrants of which (i) 33,750 are exercisable at a price of \$2.57 per share, (ii) 91,667 are exercisable at a price of \$2.50 per share, (iii) 16,875 are exercisable at a price of \$2.57 per share, and (iv) 15,000 are exercisable at a price of \$3.04 per share, (v) 25,000 are exercisable at a price of \$4.07 per share, and (vi) 30,000 are exercisable at \$3.04 per share.
- (8) Robert Rosenstein is the sole member of Hefcap Holdings, LLC. Accordingly, the shares beneficially owned by Hefcap Holdings are deemed to be beneficially owned by this selling stockholder. In addition, shares owned and offered include up to 212,292 shares of common stock issuable upon exercise of warrants of which (i) 33,750 are exercisable at a price of \$2.57 per share, (ii) 91,667 are exercisable at a price of \$2.50 per share, (iii) 16,875 are exercisable at a price of \$2.57 per share, (iv) 45,000 are exercisable at a price of \$3.04 per share, and (v) 25,000 are exercisable at a price of \$4.07 per share.
- (9) Peter Baxter is the president of Baxter Capital Advisors, Inc. Shares owned and offered include up to 30,000 shares of common stock issuable upon exercise of warrants of which (i) 11,250 are exercisable at a price of \$2.57 per share, (ii) 8,750 are exercisable at a price of \$2.42 per share, and (iii) 10,000 are exercisable at a price of \$3.04 per share.
- (10) Includes share issuable upon the exercise of outstanding options exercisable at \$1.55 per share expiring February 14, 2015. The principals of The Sage Group are Wayne Pambianchi, Daniel Tripodi, W. Barry McDonald, Gordon Ramseier, William Mason and R. Douglas Hulse. The foregoing securities were issued to The Sage Group and its principals for services provided to us.
- (11) Consists of shares issuable upon exercise of 150,000 options issued in 2005 to purchase common stock at \$2.00 per share expiring September 23, 2015. Mr. Burrows is a former member of the Board of Directors and serves as an advisor to the Company from time to time.
- (12) Shares offered and owned include 30,000 shares issuable upon exercise of warrants issued in the Private Placement. The shares are beneficially owned by O'Connor PIPES Corporate Strategies Master Ltd. UBS O'Connor LLC is the investment manager for O'Connor PIPES Corporate Strategies Master Ltd. UBS O'Connor LLC is a wholly owned subsidiary of UBS AG, which is traded on the NYSE.
- (13) Shares offered and owned includes 28,846 shares issuable upon exercise of warrants issued in the Private Placement. The selling stockholder has identified Adam Gurney, as a natural person with voting and investment control over shares of our common stock beneficially owned by the selling stockholder.

- (14) Shares offered and owned includes 36,058 shares issuable upon exercise of warrants issued in the Private Placement. The selling stockholder has identified Mark Nordlicht, as a natural person with voting and investment control over shares of our common stock beneficially owned by the selling stockholder. Mr. Nordlicht disclaims beneficial ownership of the securities held by Fenmore.
- (15) Shares offered and owned includes 72,115 shares issuable upon exercise of warrants issued in the Private Placement. Highbridge Capital Management, LLC is the trading manager of Smithfield Fiduciary LLC and consequently has voting control and investment discretion over securities held by Smithfield. Glenn Dubin and Henry Swieca control Highbridge. Each of Highbridge, Glenn Dubin and Henry Swieca disclaims beneficial ownership of the securities held by Smithfield.
- (16) Shares offered and owned includes 36,058 shares issuable upon exercise of warrants issued in the Private Placement. The selling stockholder has identified Greg Porges, as a natural person with voting and investment control over shares of our common stock beneficially owned by the selling stockholder. Mr. Porges disclaims beneficial ownership of the securities held by Spectra.
- (17) Shares offered and owned includes 7,211 shares issuable upon exercise of warrants issued in the Private Placement. Shares listed as owned and offered excludes shares beneficially owned by Provident Premier Master Fund, Ltd. The Investment Manager of Gemini Master Fund, Ltd. is Gemini Investment Strategies, LLC. The Managing Members of Gemini Investment Strategies, LLC are Messrs. Steven W. Winters and Mr. Richard S. Yakomin. As such, Messrs. Winters and Yakomin may be deemed beneficial owners of the shares. Messrs. Winters and Yakomin, however, disclaim beneficial ownership of such shares.
- (18) Shares offered and owned includes 36,058 shares issuable upon exercise of warrants issued in the Private Placement. Shares listed as owned and offered excludes shares beneficially owned by Gemini Master Fund, Ltd. The Investment Advisor to Provident Premier Master Fund, Ltd. is Gemini Investment Strategies, LLC. The Managing Members of Gemini Investment Strategies, LLC are Messrs. Steven W. Winters and Mr. Richard S. Yakomin. As such, Messrs. Winters and Yakomin may be deemed beneficial owners of the shares. Messrs. Winters and Yakomin, however, disclaim beneficial ownership of such shares.
- (19) Shares offered and owned includes 188,461 shares issuable upon exercise of warrants issued in the Private Placement. The selling stockholder has identified Adam Benowitz, as a natural person with voting and investment control over shares of our common stock beneficially owned by the selling stockholder. Mr. Benowitz disclaims beneficial ownership of the securities held by Asset Managers International.

- (20) Shares offered and owned includes 37,116 shares issuable upon exercise of warrants issued in the Private Placement. Shares listed as owned and offered excludes shares beneficially owned by JMG Triton Offshore Fund, Ltd. JMG Capital Partners, L.P. (“JMG Partners”) is a California limited partnership. Its general partner is JMG Capital Management, LLC (the “Manager”), a Delaware limited liability company and an investment adviser registered with the Securities and Exchange Commission. The Manager has voting and dispositive power over JMG Partners’ investments, including the Registrable Securities. The equity interests of the Manager are owned by JMG Capital Management, Inc., (“JMG Capital”) a Delaware corporation, and Asset Alliance Holding Corp., a Delaware corporation. Jonathan M. Glaser is the Executive Officer and Director of JMG Capital and has sole investment discretion over JMG Partners’ portfolio holdings.
- (21) Shares offered and owned includes 72,116 shares issuable upon exercise of warrants issued in the Private Placement. Shares listed as owned and offered excludes shares beneficially owned by JMG Capital Partners, L.P. JMG Triton Offshore Fund, Ltd. (The “Fund”) is an international business company under the laws of the British Virgin Islands. The Fund’s investment manager is Pacific Assets Management LLC, a Delaware limited liability company (the “Manager”). The Manager is an investment adviser registered with the Securities and Exchange Commission and has voting and dispositive power over the Fund’s investments, including the Registrable Securities. The equity interests of the Manager are owned by Pacific Capital Management, Inc., a Delaware company (“the Pacific”) and Asset Alliance Holding Corp., a Delaware company. The equity interests of Pacific are owned by Messrs. Roger Richter, Jonathan M. Glaser and Daniel A. David and Messrs. Glaser and Richter have sole investment discretion over the fund’s portfolio holdings.
- (22) Shares offered and owned includes 60,000 shares issuable upon exercise of warrants issued in the Private Placement. The selling stockholder has identified Marc Belzberg, as a natural person with voting and investment control over shares of our common stock beneficially owned by the selling stockholder.
- (23) Shares offered and owned include 57,692 shares issuable upon exercise of warrants issued in the Private Placement. The selling stockholder has identified Joshua Silverman, as a natural person with voting and investment control over shares of our common stock beneficially owned by the selling stockholder. Mr. Silverman disclaims beneficial ownership of the shares held by Iroquois Capital, LP.

(24) Includes 150,480 shares issuable upon exercise of immediately exercisable warrants. Jefferies acted as the sole placement agent in the financing and is a registered broker-dealer. Based upon representations made to us by Jefferies, the warrant to purchase common stock were acquired in the ordinary course of its business for its own account for investment purposes only and not with a view to, or for, distributing the warrant or the shares of common stock issuable upon exercise thereof. Jefferies does not have any agreements, plans or understandings, directly or indirectly, with any person or entity to distribute the warrant to purchase common stock or the shares of common stock issuable upon exercise of the warrant.

(25) Reflects 10,000 warrants to purchase common stock at \$2.46 per share expiring December 8, 2010.

### **The Fusion Transaction**

#### **General**

On April 12, 2006 we entered into a common stock purchase agreement with Fusion Capital Fund II, LLC, 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 \$50,000,000 through August 1, 2008, subject to earlier termination at our discretion. The purchase price of the shares of common stock is equal to a price based upon the future market price of the common stock. Fusion Capital does not have the right or the obligation to purchase shares of our common stock in the event that the price of our common stock is less than \$1.00. As of the date hereof, Fusion is not permitted to purchase shares under the common stock purchase agreement because the price of our common stock is less than \$1.00.

Through April 18, 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. Fusion Capital is offering for sale herein up to 1,704,691 shares of our common stock consisting of 448,814 shares currently owned by Fusion Capital (Commitment Shares) and 1,255,877 shares (inclusive of an additional 194,688 Commitment Shares) issuable under the common stock purchase 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. However, we do not plan on filing a registration statement to permit the sale of any additional shares of Common Stock to Fusion Capital under the common stock purchase agreement.

The number of shares ultimately offered for sale by Fusion Capital is dependent upon the number of shares purchased by Fusion Capital under the common stock purchase agreement.

### **Purchase of Shares Under The Common Stock Purchase Agreement**

Under the common stock purchase agreement, on each trading day Fusion Capital is obligated to purchase a specified dollar amount of our common stock. Subject to our right to suspend such purchases at any time, and our right to terminate the agreement with Fusion Capital at any time, each as described below, Fusion Capital is purchasing on each trading day during the term of the agreement \$100,000 of our common stock. This daily purchase amount may be decreased by us at any time. We also have the right to increase the daily purchase amount at any time, provided however, we may not increase the daily purchase amount above \$100,000 unless our stock price exceeds \$1.90 per share by at least \$0.10 per share for five consecutive trading days.

The purchase price per share is equal to the lesser of:

- the lowest sale price of our common stock on the purchase date; or
- the average of the three lowest closing sale prices of our common stock during the twelve consecutive trading days prior to the date of a purchase by Fusion Capital.

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 our common stock under the common stock purchase agreement if Fusion Capital, together with its affiliates, would beneficially own more than 9.9% of our 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 common stock purchase agreement which would allow it to avoid the 9.9% limitation. Therefore, we do not believe that Fusion Capital will ever reach the 9.9% limitation.

### **Minimum Purchase Price**

Under the common stock purchase agreement, we have set a minimum purchase price (“floor price”) of \$1.00. Fusion Capital shall not have the right nor the obligation to purchase any shares of our common stock in the event that the purchase price would be less than the floor price. As of the date hereof, Fusion is not permitted to purchase shares under the common stock purchase agreement because the price of our common stock is less than \$1.00.

### **Our Right To Suspend Purchases**

We have the unconditional right to suspend purchases at any time for any reason effective upon one trading day's notice. Any suspension would remain in effect until our revocation of the suspension.

## Our Right To Increase and Decrease the Amount to be Purchased

Under the common stock purchase agreement, Fusion Capital has agreed to purchase on each trading day during a period of approximately 25 months, \$100,000 of our common stock up to an aggregate of \$50,000,000. We have the unconditional right to decrease the daily amount to be purchased by Fusion Capital at any time for any reason effective upon one trading day's notice.

In our discretion, we may elect to sell more of our common stock to Fusion Capital than the minimum daily amount. First, in respect of the daily purchase amount, we have the right to increase the daily purchase amount as the market price of our common stock increases. Specifically, for every \$0.10 increase in Threshold Price (as defined below) above \$1.90, we have the right to increase the daily purchase amount by up to an additional \$10,000. For example, if the Threshold Price is \$2.20 we would have the right to increase the daily purchase amount by up to \$30,000 to an aggregate of \$130,000. The "Threshold Price" is the lowest sale price of our common stock during the five trading days immediately preceding our notice to Fusion Capital to increase the daily purchase amount. If at any time during any trading day the sale price of our common stock is below the Threshold Price, the applicable increase in the daily purchase amount will be void.

In addition to the daily purchase amount, we may elect to require Fusion Capital to purchase on any single trading day our shares in an amount up to \$250,000, provided that our share price is above \$1.50 during the five trading days prior thereto. The price at which such shares would be purchased will be the lower of the lowest Sale Price of our common stock on the trading day that Fusion Capital receives such purchase notice from us, or the lowest Purchase Price (as defined above) during the previous ten trading days prior to the date that such purchase notice was received by Fusion Capital. We may increase this amount as follows:

Share Price    Increased Amount

\$3.00	\$	500,000
\$5.00	\$	1,000,000
\$8.00	\$	2,000,000

## Events of Default

Generally, Fusion Capital may terminate the common stock purchase agreement without any liability or payment to us upon the occurrence of any of the following events of default:

- the effectiveness of the registration statement of which this prospectus is a part lapses for any reason (including, without limitation, the issuance of a stop order) or is unavailable to Fusion Capital for sale of our common stock offered hereby and such lapse or unavailability continues for a period of ten consecutive trading days or for more than an aggregate of 30 trading days in any 365-day period;



- suspension by our principal market of our common stock from trading for a period of three consecutive trading days;
- the de-listing of our common stock from the American Stock Exchange, our principal market, provided our common stock is not immediately thereafter trading on the Nasdaq National Market, the Nasdaq SmallCap Market or the New York Stock Exchange or the OTC Bulletin Board;
- the transfer agent's failure for five trading days to issue to Fusion Capital shares of our common stock which Fusion Capital is entitled to under the common stock purchase agreement;
- any material breach of the representations or warranties or covenants contained in the common stock purchase agreement or any related agreements which has or which could have a material adverse affect on us subject to a cure period of ten trading days;
  - any participation or threatened participation in insolvency or bankruptcy proceedings by or against us; or
  - a material adverse change in our business, properties, operations, financial condition or results of operations.

### **Our Termination Rights**

We have the unconditional right at any time for any reason to give notice to Fusion Capital terminating the common stock purchase agreement. Such notice shall be effective one trading day after Fusion Capital receives such notice.

### **Effect of Performance of the Common Stock Purchase Agreement on Our Stockholders**

All shares registered on behalf of Fusion Capital in this offering will be freely tradable. It is anticipated that shares registered on behalf of Fusion Capital in this offering will be sold over a period of up to six to twelve months from the date of this prospectus. The sale of a significant amount of shares registered in this offering at any given time could cause the trading price of our common stock to decline and to be highly volatile. Fusion Capital may ultimately purchase all 1,061,189 shares of common stock still available for purchase under the common stock purchase agreement, and it may sell some, none or all of the shares of common stock it acquires under the agreement. Therefore, the purchases under the common stock purchase agreement may result in substantial dilution to the interests of other holders of our common stock. However, we have the right at any time for any reason to: (1) reduce the daily purchase amount, (2) suspend purchases of the common stock by Fusion Capital and (3) terminate the common stock purchase agreement.

### **No Short-Selling or Hedging by Fusion Capital**

Fusion Capital has agreed that neither it nor any of its affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the common stock purchase agreement.

### **Commitment Shares Issued to Fusion Capital**

Under the terms of the common stock purchase agreement Fusion Capital has received 448,814 shares of our common stock as a partial commitment fee and is entitled to receive up to an additional 194,688 commitment shares (collectively, the "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.

### **No Variable Priced Financings**

Until the termination of the common stock purchase agreement, we have agreed not to issue, or enter into any agreement with respect to the issuance of, any variable priced equity or variable priced equity-like securities unless we have obtained Fusion Capital's prior written consent.

## **PLAN OF DISTRIBUTION**

### **Selling Stockholders other than Fusion Capital**

The following Plan of distribution relates to all selling stockholders other than Fusion Capital.

The common stock offered by this prospectus is being offered by the selling stockholders. The selling stockholders may sell their shares of common stock from time to time in various ways and at various prices. The shares may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. These sales may be affected in transactions that may involve crosses or block transactions. Some of the methods by which the selling stockholders may sell the shares include:

- on any national securities exchange or quotation service on which the shares may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;

- through the writing of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- privately negotiated transactions;
- block trades in which the broker or dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker or dealer as principal and resale by that broker or dealer for the selling stockholder's account under this prospectus;
- sales under Rule 144 rather than by using this prospectus;
- through the settlement of short sales;
- a combination of any of these methods of sale; or
- any other legally permitted method.

In connection with sales of the shares or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares in the course of hedging in positions they assume. The selling stockholders may also sell shares short and deliver shares to close out short positions, provided that the selling stockholders may not close out short positions entered into prior to the effective date of the registration statement of which this prospectus is a part with any shares included in this prospectus. The selling stockholders may also pledge their shares as collateral for a margin loan under their customer agreements with their brokers. If there is a default by the selling stockholders, the brokers may offer and sell the pledged shares from time to time under this prospectus or an amendment to this prospectus under Rule 424(b)(3) or other applicable provisions of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

Brokers or dealers may receive commissions or discounts from the selling stockholders (or, if the broker-dealer acts as agent for the purchaser of the shares, from that purchaser) in amounts to be negotiated. These commissions may exceed those customary in the types of transactions involved.

We cannot estimate at the present time the amount of commissions or discounts, if any, that will be paid by the selling stockholders in connection with sales of the shares.

The selling stockholders and any broker-dealers or agents that participate with the selling stockholders in sales of the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In that event, any commissions received by the broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling stockholders have advised us that they have not entered into any agreements, understandings or arrangements with any underwriters or broker-dealers regarding the sale of the shares. There is no underwriter or coordinating broker acting in connection with the proposed sale of shares by the selling stockholders. In addition, each of the selling stockholders who is a registered broker-dealer or is affiliated with a registered broker-dealer has advised us that:

it purchased the shares in the ordinary course of business; and  
at the time of the purchase of the shares to be resold, it had no agreements or understandings, directly or indirectly, with any person to distribute the shares.

Under the securities laws of certain states, the shares may be sold in those states only through registered or licensed broker-dealers. In addition, the shares may not be sold unless they have been registered or qualified for sale in the relevant state or unless they qualify for an exemption from registration or qualification.

We do not know whether any selling stockholder will sell any or all of the shares registered by the registration statement of which this prospectus forms a part.

We have agreed to pay all fees and expenses incident to the registration of the shares, including certain fees and disbursements of counsel to certain of the selling stockholders. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Certain of the selling stockholders have also agreed to indemnify us, our directors, officers, agents and representatives against certain liabilities, including certain liabilities under the Securities Act.

The selling stockholders and other persons participating in the distribution of the shares offered under this prospectus are subject to the applicable requirements of Regulation M promulgated under the Exchange Act in connection with sales of the shares. With certain exceptions, Regulation M precludes the selling stockholders, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the shares offered hereby this Prospectus.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus is a part effective until all the shares registered under the registration statement have been resold.

This offering will terminate on the date that all shares offered by this Prospectus have been sold by the selling stockholders.

**Fusion Capital**

The following Plan of distribution relates to Fusion Capital.

The common stock offered by Fusion Capital may be sold or distributed from time to time by Fusion Capital only for cash directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the common stock may be affected in one or more of the following methods:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers or underwriters who may act solely as agents;
- "at the market" into an existing market for the common stock;
- in other ways not involving market makers or established trading markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions;
- any combination of the foregoing methods of sale; and
- any other method permitted pursuant to applicable law.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the registration or qualification requirement is available and complied with.

Brokers, dealers, underwriters, or agents participating in the distribution of the shares as agents may receive compensation in the form of commissions, discounts, or concessions from the selling stockholder and/or purchasers of the common stock for whom the broker-dealers may act as agent. The compensation paid to a particular broker-dealer may be less than or in excess of customary commissions.

Fusion Capital is an "underwriter" within the meaning of the Securities Act of 1933. Any broker-dealers or agents that are involved in selling the shares for the selling stockholders may be deemed to be "underwriters" within the meaning of the Securities Act of 1933 in connection with such sales.

Neither we nor the selling stockholder can presently estimate the amount of compensation that any agent will receive. We know of no existing arrangements between the selling stockholder, any other stockholder, broker, dealer, underwriter, or agent relating to the sale or distribution of the shares offered by this Prospectus. At the time a particular offer of shares is made, a prospectus supplement, if required, will be distributed that will set forth the names of any agents, underwriters, or dealers and any compensation from the selling stockholder, and any other required information.

We will pay all of the expenses incident to the registration, offering, and sale of the shares to the public other than commissions or discounts of underwriters, broker-dealers, or agents. We have also agreed to indemnify Fusion Capital and related persons against specified liabilities, including liabilities under the Securities Act of 1933.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and controlling persons, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore, unenforceable.

Fusion Capital and its affiliates have agreed not to engage in any direct or indirect short selling or hedging of our common stock during the term of the common stock purchase agreement.

We have advised Fusion Capital that while it is engaged in a distribution of the shares included in this Prospectus it is required to comply with Regulation M promulgated under the Securities Exchange Act of 1934, as amended. With certain exceptions, Regulation M precludes the selling stockholders, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the shares offered hereby this Prospectus.

This offering will terminate on the date that all shares offered by this Prospectus have been sold by the selling stockholders.

#### **USE OF PROCEEDS**

We will not receive any proceeds from the sale of the shares of common stock offered by the selling stockholders. We will receive proceeds from the exercising of the Warrants, if any. In addition, if the price of our common stock reaches \$1.00 per share, we may receive gross proceeds from the sale of up to 1,255,877 shares of our common stock to Fusion Capital under the common stock purchase agreement. We will apply such proceeds, if any, for general corporate operating purposes.

## **SEC POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES**

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

## **LEGAL MATTERS**

The validity of the common stock offered in this prospectus has been passed upon for us by Silverman Sclar Shin & Byrne PLLC, 381 Park Avenue South, Suite 1601, New York, New York 10016.

## **EXPERTS**

The financial statements, the related financial statement schedule, and management's report on the effectiveness of internal control over financial reporting incorporated by reference in this Prospectus and Registration Statement have been audited by McGladrey & Pullen, LLP, an independent registered public accounting firm, as stated in their reports incorporated herein by reference, and are incorporated in reliance upon such reports and upon the authority of such firm as experts in accounting and auditing.

The financial statements and schedules as of December 31, 2005 and for the year then ended incorporated by reference in this Prospectus and in the Registration Statement have been so incorporated in reliance on the report of BDO Seidman, LLP, an independent registered public accounting firm, incorporated herein by reference and in the Registration Statement, given on the authority of said firm as experts in auditing and accounting.

No dealer, salesman or any other person is authorized to give any information or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representations. This prospectus is an offer to sell these securities and it is not a solicitation of an offer to buy these securities in any state where the offer or sale is not permitted. The information contained in this Prospectus is current only as of this date.

TABLE OF CONTENTS

	Page
Where you can find More information	2
Information Incorporated	
By Reference	2
Prospectus Summary	3
Risk Factors	6
Business	20
Selling Stockholders	20
Plan of Distribution	30
Use of Proceeds	34
SEC Position On Indemnification For Securities Act Liabilities	35
Legal Matters	35
Experts	35

---

8,564,225 SHARES OF  
COMMON STOCK

**HEMISPHERX BIOPHARMA, INC.**

---

PROSPECTUS

---

April \_\_, 2008

---



**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.**

The following table sets forth the costs and expenses payable by the registrant in connection with resales of the securities being registered, including the preparation and filing of this registration statement. All amounts are estimates subject to future contingencies except the SEC registration statement filing fee.

SEC Filing Fees	\$	0
American Stock Exchange Listing Fee*	\$	0
Printing and Engraving Expenses*	\$	2,500
Accounting Fees and Expenses*	\$	30,000
Legal Fees and Expenses*	\$	15,000
Transfer Agent and Registrar Fees*	\$	1,000
Miscellaneous*	\$	1,000
Total Expenses*	\$	49,500

---

\* Estimated.

**ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS.**

The Registrant's Amended and Restated Certificate of Incorporation provides that the Registrant shall indemnify to the extent permitted by Delaware law any person whom it may indemnify thereunder, including directors, officers, employees and agents of the Registrant. Such indemnification (other than an order by a court) shall be made by the Registrant only upon a determination that indemnification is proper in the circumstances because the individual met the applicable standard of conduct. Advances for such indemnification may be made pending such determination. In addition, the Registrant's Amended and Restated Certificate of Incorporation eliminates, to the extent permitted by Delaware law, personal liability of directors to the Registrant and its stockholders for monetary damages for breach of fiduciary duty as directors.

The Registrant's authority to indemnify its directors and officers is governed by the provisions of Section 145 of the Delaware General Corporation Law, as follows:

- (a) A corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than action by or in the right of the corporation) by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that the person's conduct was unlawful.

II-1

---

- (b) A corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.
- (c) To the extent that a present or former director or officer of a corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in subsections (a) and (b) of this section, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.
- (d) Any indemnification under subsections (a) and (b) of this section (unless ordered by a court) shall be made by the corporation only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee or agent is proper in the circumstances because he has met the applicable standard of conduct set forth in subsections (a) and (b) of this section. Such determination shall be made, with respect to a person who is a director or officer at the time of such determination (1) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, or (2) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, or (3) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion, or (4) by the stockholders.
- (e) Expenses (including attorneys' fees) incurred by an officer or director in defending a civil or criminal action, suit or proceeding may be paid by the corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the corporation as authorized in this section. Such expenses incurred by former directors and officers and other employees and agents may be so paid upon such terms and conditions, if any, as the corporation deems appropriate.

- (f) The indemnification and advancement of expenses provided by, or granted pursuant to, the other subsections of this section shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any by, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office.
- (g) A corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify such person against such liability under this section.
- (h) For purposes of this section, references to the "corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had the power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under this section with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued.
- (i) For purposes of this section, references to "other enterprises" shall include employee benefit plans, references to "fines" shall include any excise taxes assessed on a person with respect to any employee benefit plan, and references to "serving at the request of the corporation" shall include any service as a director, officer, employee, or agent with respect to any employee benefit plan, its participants or beneficiaries, and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of any employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this section.
- (j) The indemnification and advancement of expenses provided by, or granted pursuant to, this section shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.
- (k) The Court of Chancery is hereby vested with exclusive jurisdiction to hear and determine all actions for advancement of expenses or indemnification brought under this section, or under any bylaw, agreement, vote of stockholders or disinterested directors, or otherwise. The Court of Chancery may summarily determine a corporation's obligation to advance expenses (including attorneys' fees).

**ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES.**

Since January 1, 2005, we have issued and sold the following securities:

In the period of January 2005 through March 2008, we issued 766,014 shares for payment of fees due to service providers. The issuance of these securities was deemed to be exempt from registration under the Securities Act in reliance on Section 4(2) of the Securities Act as a transaction by an issuer not involving a public offering.

On June 23, 2004, the shareholders approved the Company's 2004 Equity Incentive Plan. This plan authorizes the Board of Directors to grant non-qualified and incentive stock options, stock appreciation rights, restricted stock and other stock awards to officers, key employees, consultants and advisors of the Company. A maximum of 8,000,000 shares of stock is reserved for use under this plan. Unless sooner terminated, this equity plan will continue in effect for 10 years. As of April 18, 2008 the Board of Directors had authorized the grant of 7,121,571 options to the Officers, Directors and Employees of the Company.

On July 8, 2005, the Company issued 392,798 shares to Fusion as 50% of the commitment fee pursuant to a common stock purchase agreement with Fusion Capital, LLC ("Fusion").

On December 8, 2005, the Company issued five year warrants to Sage Healthcare LLC to purchase 10,000 shares exercisable at \$2.46 per share.

On April 3, 2006, the Company issued five year options to a consultant to purchase 5,000 shares exercisable at \$3.60 per share.

On April 12, 2006, the Company issued 321,751 shares as a commitment fee pursuant to a second common stock purchase agreement.

On July 3, 2006, the Company issued 61,728 shares of common stock to Paul Griffin in exchange for the rights to certain patents and patents pending.

On July 26, 2006, the Company issued 250,000 shares to Stem Cell Innovations, Inc. in exchange for the return of the rights to a 6% royalty on sales of Interferon Products.

The above mentioned issuances of securities were deemed to be exempt from registration under the Securities Act in reliance on Section 4(2) of the Securities Act as a transaction by an issuer not involving a public offering.

**ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.**

(a) Exhibits.

Exhibit 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.(2)
- 3.2 Certificates of Amendment to the Certificate of Incorporation.(3)
- 3.2 By-laws of Registrant, as amended.(2)
- 4.1 Specimen certificate representing our Common Stock.(2)
- 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.(4)
- 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.(5)
- 4.6 Form of 6% Convertible Debenture of the Company issued in July 2003.(6)
- 4.7 Form of Warrant for Common Stock of the Company issued in July 2003.(6)
- 4.8 Form of 6% Convertible Debenture of the Company issued in October 2003.(7)
- 4.9 Form of Warrant for Common Stock of the Company issued in October 2003.(7)
- 4.10 Form of 6% Convertible Debenture of the Company issued in January 2004.(8)
- 4.11 Form of Class A Warrant for Common Stock of the Company issued in January 2004.(8)
- 4.12 Form of Class B Warrant for Common Stock of the Company issued in January 2004.(8)
- 4.13 Form of Additional Investment Rights to acquire debentures issued in January 2004.(8)
- 4.14 Form of Warrant for Common Stock of the Company issued in May 2004. (9)
- 4.15 Form of Warrant for Common Stock of the Company issued in July 2004.(10)
- 4.16 Form of Warrant for Common Stock of the Company issued in August 2004.(11)
- 4.17 Amendment Agreement, effective October 6, 2005, by and among the Company and debenture holders.(12)
- 4.18 Form of Series A amended 7% Convertible Debenture of the Company (amending Debenture due October 31, 2005).(12)
- 4.19 Form of Series B amended 7% Convertible Debenture of the Company (amending Debenture issued on January 26, 2004 and due January 31, 2006).(12)
- 4.20 Form of Series C amended 7% Convertible Debenture of the Company (amending Debenture issued on July 13, 2004 and due January 31, 2006).(12)
- 4.21 Form of Warrant issued effective October 6, 2005 for Common Stock of the Company.(12)

II-5

---

- 5.1 Opinion of Silverman Sclar Shin & Byrne PLLC, legal counsel.\*
- 10.1 1990 Stock Option Plan. (2)
- 10.2 1992 Stock Option Plan. (2)
- 10.3 1993 Employee Stock Purchase Plan. (2)
- 10.4 Form of Confidentiality, Invention and Non-Compete Agreement. (2)
- 10.5 Form of Clinical Research Agreement. (2)
- 10.6 Form of Collaboration Agreement. (2)
- 10.7 License Agreement by and between the Company and The Johns Hopkins University, dated December 31, 1980. (2)
- 10.8 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. (2)
- 10.9 Pharmaceutical Use Agreement, by and between the Company and Temple University, dated August 3, 1988. (2)
- 10.10 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. (2)
- 10.11 Agreement between the Company and Bioclones (Proprietary) Limited. (2)
- 10.12 Amendment, dated August 3, 1995, to Agreement between the Company and Bioclones (Proprietary) Limited (contained in Exhibit 10.14).
- 10.13 Licensing Agreement with Core BioTech Corp. (2)
- 10.14 Licensing Agreement with BioPro Corp. (2)
- 10.15 Licensing Agreement with BioAegean Corp. (2)
- 10.16 Agreement with Esteve. (18)
- 10.17 Agreement with Accredo (formerly Gentiva) Health Services. (2)
- 10.18 Agreement with Biovail Corporation International. (2)
- 10.19 Forbearance Agreement dated March 11, 2003, by and between ISI, the American National Red Cross and the Company.(1)
- 10.20 Forbearance Agreement dated March 11, 2003, by and between ISI, GP Strategies Corporation and the Company.(1)
- 10.21 Securities Purchase Agreement, dated March 12, 2003, by and among the Company and the Buyers named therein.(1)
- 10.22 Registration Rights Agreement, dated March 12, 2003, by and among the Company and the Buyers named therein.(1)
- 10.23 Securities Purchase Agreement, dated July 10, 2003, by and among the Company and the Buyers named therein.(6)
- 10.24 Registration Rights Agreement, dated July 10, 2003, by and among the Company and the Buyers named therein.(6)
- 10.25 Securities Purchase Agreement, dated October 29, 2003, by and among the Company and the Buyers named therein.(7)
- 10.26 Registration Rights Agreement, dated October 29, 2003, by and among the Company and the Buyers named therein.(7)
- 10.27 Securities Purchase Agreement, dated January 26, 2004, by and among the Company and the Buyers named therein.(8)

- 10.28 Registration Rights Agreement, dated January 26, 2004, by and among the Company and the Buyers named therein.(8)
- 10.29 Memorandum of Understanding with Fujisawa. \*
- 10.30 Securities Purchase Agreement, dated July 30, 2004, by and among the Company and the Purchasers named therein.(11)
- 10.31 Registration Rights Agreement, dated July 30, 2004, by and among the Company and the Purchasers named therein. (11)
- 10.32 Agreement for services of R. Douglas Hulse, (13)
- 10.33 Amended and Restated Employment Agreement of Dr. William A. Carter. (14)Engagement Agreement with Dr. William A. Carter. (14)
- 10.34 Amended and restated employment agreement of Dr. William A. Carter (13)
- 10.35 Amended and restated engagement agreement with Dr. William A. Carter (13)
- 10.36 Amended and restated engagement agreement with Robert E. Peterson (13)
- 10.37 Engagement Agreement with Ransom W. Etheridge (13)
- 10.38 Change in control agreement with Dr. William A. Carter (13)
- 10.39 Change in control agreement with Dr. William A. Carter (13)
- 10.40 Change in control agreement with Robert E. Peterson (13)
- 10.41 Change in control agreement with Ransom Etheridge (13)
- 10.42 Supply Agreement with Hollister-Stier Laboratories LLC\*
- 10.44 Manufacturing and Safety Agreement with Hyaluron, Inc.\*
- 10.45 Common Stock Purchase Agreement, dated April 12, 2006, by and among the Company and Fusion Capital.(15)
- 10.46 Registration Rights Agreement, dated April 12, 2006, by and among the Company and Fusion Capital.(15)
- 10.47 Supply Agreement with Hollister-Stier Laboratories LLC. (16)
- 10.48 Manufacturing and Safety Agreement with Hyaluron, Inc. (16)
- 10.49 April 19, 2006 Amendment to Common Stock Purchase Agreement by and among the Company and Fusion Capital.(16)
- 10.50 July 21, 2006 Letter Amendment to Common Stock Purchase Agreement by and among the Company and Fusion Capital.(16)
- 10.51 Royalty Purchase Agreement with Stem Cell Innovations, Inc. (16)
- 10.52 Biken Activating Agreement. (17)
- 10.53 Biken Material Evaluation Agreement. (17)
- 21 Subsidiaries of the Registrant.
- 23.1 Consent of McGladrey & Pullen, LLP
- 23.2 Consent of BDO Seidman, LLP.
- 23.3 Consent of Silverman Sclar Shin & Byrne PLLC, legal counsel (included in Exhibit 5.1).
- 24.1 Powers of Attorney (included in Signature Pages to this Registration Statement on Form S-1).\*

---

\*

Previously filed



- (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 as an exhibit to the Company's Registration Statement on Form S-1 (Registration No. 33-93314) declared effective by the Securities and Exchange Commission on November 2, 1995.
- (3) Filed with the Securities and Exchange Commission as exhibits to the Company's Definitive Proxy Statement (No. 1-13441) filed on July 31, 2006 and the Company's Revised Definitive Proxy Statement (No. 1-13441) filed on July 23, 2003 and are hereby incorporated by reference.
- (4) 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. 0-27072) 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 June 27, 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 July 14, 2003 and is hereby incorporated by reference.
- (7) 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.
- (8) 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.
- (9) 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 March 31, 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 July 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 (No. 1-13441) dated August 6, 2004 and is hereby incorporated by reference.

- (12) 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.
- (13) 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.
- (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 September 15, 2004 and is hereby incorporated by reference.
- (15) 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.
- (16) 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.
- (17) 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.
- (18) 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, 2002 and is hereby incorporated by reference.
- (a) Financial Statements and Schedules - See index to financial statements on page F-1 of the Company's Annual Report on Form 10-K for the year ended December 31, 2007, incorporated by reference herein. 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.

## **ITEM 17. UNDERTAKINGS**

(a) The undersigned registrant hereby undertakes:

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

i. To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

ii. To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

iii. To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

i. If the registrant is relying on Rule 430B:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

ii. If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

i. Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

ii. Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

iii. The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

iv. Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

(d) The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

II-12

---

**SIGNATURES**

Pursuant to the requirement of the Securities Act of 1933, this Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-1 and has duly caused this Post-Effective amendment No. 2 to the Registrant's registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Philadelphia, Commonwealth of Pennsylvania, on the 24 day of April, 2008.

**HEMISPHERX BIOPHARMA, INC.**

(Registrant)

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

Pursuant to the requirements of the Securities Act of 1933, this Post-Effective Amendment No. 2 to the Registrant's registration statement has been signed by the following persons in the capacities indicated on the dates indicated.

Signature	Title	Date
s/William A. Carter William A. Carter, M.D.	Chairman of the Board, Chief Executive Officer (Principal Executive) and Director	April 24, 2008
* Richard C. Piani	Director	April 24, 2008
* Robert E. Peterson	Chief Financial Officer and Chief Accounting Officer	April 24, 2008
* Ransom W. Etheridge	Secretary, General Counsel And Director	April 24, 2008
* William M. Mitchell, M.D., Ph.D.	Director	April 24, 2008
* Iraj-Eqhbali Kiani, Ph.D.	Director	April 24, 2008

\* s/ William A. Carter  
By: William A. Carter, M.D.,  
Attorney-in-Fact

Hemispherx Biopharma, Inc.  
Post-Effective Amendment No. 2 to  
Form S-1  
Index to Exhibits

Exhibit No. Description

21	Subsidiaries of the Registrant.
23.1	Consent of McGladrey & Pullen, LLP, independent registered public accounting firm.
23.2	Consent of BDO Seidman, LLP, independent registered public accounting firm.

---