As filed with the Securities and Exchange Commission on September 25, 2006.

Registration No. 333-136622

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

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

EMERGENT BIOSOLUTIONS INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**2834**	**14-1902018**
(State or Other Jurisdiction of Incorporation or Organization)	*(Primary Standard Industrial Classification Code No.)*	*(I.R.S. Employer Identification No.)*

300 Professional Drive, Suite 250
Gaithersburg, Maryland 20879
(301) 944-0290
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Fuad El-Hibri
Chief Executive Officer
Emergent BioSolutions Inc.
300 Professional Drive, Suite 250
Gaithersburg, Maryland 20879
(301) 944-0290
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

David E. Redlick, Esq.	**Daniel J. Abdun-Nabi, Esq.**	**James A. Lebovitz, Esq.**
Wilmer Cutler Pickering	**General Counsel**	**Brian D. Short, Esq.**
Hale and Dorr LLP	**Emergent BioSolutions Inc.**	**Dechert LLP**
1875 Pennsylvania Avenue, NW	**300 Professional Drive, Suite 250**	**2929 Arch Street**
Washington, DC 20006	**Gaithersburg, Maryland 20879**	**Philadelphia, Pennsylvania 19104**
(202) 663-6000	**(301) 944-0290**	**(215) 994-4000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

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

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 Rule 462(c) 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 Rule 462(d) 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 _____

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(2)
Common stock, $0.001 par value per share	$86,250,000	$9,229
Series A junior participating preferred stock purchase rights(3)	—	—

(1) Estimated solely for the purpose of computing the registration fee pursuant to Rule 457(o) under the Securities Act.

(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price. This amount has been paid previously.

(3) Each share of common stock includes one series A junior participating preferred stock purchase right pursuant to a rights agreement to be entered into between the Registrant and the rights agent. The series A junior participating preferred stock purchase rights will initially trade together with the common stock. The value attributable to the series A junior participating preferred stock purchase rights, if any, is reflected in the offering price of the common stock.

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

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities, and we are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to completion, dated September 25, 2006

Prospectus

shares

Common stock

This is an initial public offering of common stock by Emergent BioSolutions Inc. No public market currently exists for our common stock. We are offering shares of our common stock. The estimated initial public offering price is between $ and $ per share.

We have applied to have our common stock listed on The NASDAQ Global Market under the symbol “EBSI.”

	Per share	Total
Initial public offering price	$	$
Underwriting discounts and commissions	$	$
Proceeds to Emergent, before expenses	$	$

The selling stockholders identified in this prospectus have granted the underwriters an option for a period of 30 days to purchase up to additional shares of common stock to cover over-allotments. We will not receive any proceeds from the sale of shares by the selling stockholders.

Investing in our common stock involves a high degree of risk. See “Risk factors” beginning on page 9.

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

The underwriters expect to deliver the shares on or about , 2006.

JPMorgan

Cowen and Company

HSBC

, 2006

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You should rely only on the information contained in this prospectus or to which we have referred you. We and the selling stockholders have not authorized anyone to provide you with different information. We and the selling stockholders are offering to sell, and are seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock. Our business, financial conditions, results of operations and prospects may have changed since that date.

No action is being taken in any jurisdiction outside the United States to permit a public offering of the common stock or possession or distribution of this prospectus in that jurisdiction. Persons who come into possession of this prospectus in any jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus applicable to that jurisdiction.

Prospectus summary

This summary highlights information contained elsewhere in this prospectus. This summary may not contain all of the information that is important to you. Before investing in our common stock, you should read this prospectus carefully in its entirety, especially the risks of investing in our common stock that we discuss under "Risk factors," and our financial statements and related notes beginning on page F-1.

Our business

We are a biopharmaceutical company focused on the development, manufacture and commercialization of immunobiotics. Immunobiotics are pharmaceutical products, such as vaccines and immune globulins, that induce or assist the body's immune system to prevent or treat disease. We operate in two business segments: biodefense and commercial. In our biodefense business, we develop and commercialize immunobiotics for use against biological agents that are potential weapons of bioterrorism. In our commercial business, we develop immunobiotics for use against infectious diseases with significant unmet or underserved medical needs.

BioThrax. We manufacture and market BioThrax®, also referred to as anthrax vaccine adsorbed, the only anthrax vaccine approved by the U.S. Food and Drug Administration, or FDA. Our total revenues from BioThrax sales were $55.5 million in 2003, $81.0 million in 2004 and $127.3 million in 2005. The U.S. Department of Defense, or DoD, and the U.S. Department of Health and Human Services, or HHS, have been the principal customers for BioThrax. Since 1998, we have been a party to two supply agreements for BioThrax with the DoD. Pursuant to these contracts, we have supplied over eight million doses of BioThrax through August 2006 to the DoD for immunization of military personnel. Since March 1998, the DoD has vaccinated more than 1.5 million military personnel with more than 5.5 million doses of BioThrax. Our current contract with the DoD provides for the supply of BioThrax to the DoD through September 30, 2006. We expect to be able to provide all of the remaining doses of BioThrax under our contract with the DoD within the contract term. In April 2006, the DoD issued a notice that it intends to negotiate a sole source fixed price contract for the purchase of up to an additional 11 million doses of BioThrax over one base contract year plus four option years. In May 2005, we entered into an agreement to supply five million doses of BioThrax to HHS for placement into the strategic national stockpile for a fixed price of $123 million. We completed delivery of all five million doses by February 2006, seven months earlier than required. In May 2006, we entered into a contract modification with HHS for the delivery of an additional five million doses of BioThrax to HHS by May 2007 for a fixed price of $120 million. We have delivered approximately one million doses of BioThrax under this contract modification through August 2006.

The National Institutes of Health, or NIH, originally approved the manufacture and sale of BioThrax in 1970. In December 2005, in reaffirming the approval of BioThrax, the FDA concluded that BioThrax is safe and effective for the prevention of anthrax infection by all routes of exposure, including inhalation. A study published in 2002 by the Institute of Medicine, which is a component of The National Academy of Sciences, supports the FDA ruling. In its study, the Institute of Medicine found that BioThrax is an effective vaccine for protection against anthrax, including inhalational anthrax, caused by any known or plausible engineered strains.

Biodefense market opportunity. The biodefense market for immunobiotics has grown dramatically as a result of the increased awareness of the threat of global terror activity in the wake of the September 11, 2001 terrorist attacks and the October 2001 anthrax letter attacks. The letter attacks involved the delivery of mail contaminated with anthrax spores to government officials and members of the media in the

United States. As a result of the letter attacks, 22 people became infected with anthrax, including 11 with inhalational anthrax, and five people died.

The U.S. government is the principal source of worldwide biodefense spending. Most U.S. government spending on biodefense programs results from procurement of countermeasures by HHS, the Centers for Disease Control and Prevention, or CDC, and the DoD and development funding from the National Institute of Allergy and Infectious Diseases of NIH, or NIAID, and the DoD. In 2004, the Project BioShield Act became law, providing $5.6 billion in appropriations over ten years and authorizing the procurement of countermeasures for biological, chemical, radiological and nuclear attacks.

Biodefense product development. In addition to BioThrax, our biodefense product portfolio includes three biodefense product candidates in preclinical development. We are developing all of our biodefense product candidates to address category A biological agents, which are the class of biological agents that the CDC has identified as the greatest possible threat to public health. Our biodefense product candidates in preclinical development are:

- *Anthrax immune globulin* — for post-exposure treatment of anthrax infection, which we are developing in part with funding from NIAID;
- *Botulinum immune globulin* — for post-exposure treatment of illness caused by botulinum toxin, which we are developing based on a new botulinum toxoid vaccine that we are developing in collaboration with the U.K. Health Protection Agency, or HPA; and
- *Recombinant bivalent botulinum vaccine* — a prophylaxis for illness caused by botulinum toxin, which we also are developing in collaboration with HPA.

We are evaluating several potential product candidates in connection with development of a next generation anthrax vaccine, featuring attributes such as self-administration and a longer shelf life.

Commercial market opportunity. Vaccines have long been recognized as a safe and cost-effective method for preventing infection caused by various bacteria and viruses. Because of an increased emphasis on preventative medicine in industrialized countries, vaccines are now well recognized as an important part of public health management strategies. According to Frost & Sullivan, a market research organization, from 2002 to 2005, annual worldwide vaccine sales increased from $6.7 billion to $9.9 billion, a compound annual growth rate of approximately 14%. Frost & Sullivan estimates that the worldwide sales of vaccines will grow at a compound annual rate of approximately 10.5% from 2005 through 2012.

Commercial product development. Our commercial product portfolio includes two product candidates in Phase II clinical development, one vaccine candidate in Phase I clinical development and two vaccine candidates in preclinical development. Our commercial product candidates in clinical development are:

- *Typhoid vaccine* — a single dose, drinkable vaccine, for which we have completed a Phase I clinical program, including trials in the United States, the United Kingdom and Vietnam, and expect to initiate a Phase II clinical trial in Vietnam in the fourth quarter of 2006;
- *Hepatitis B therapeutic vaccine* — a multiple dose, drinkable vaccine for treatment of chronic carriers of hepatitis B infection, for which we have completed a Phase I clinical trial in the United Kingdom and expect to initiate a Phase II clinical trial in the United Kingdom in the fourth quarter of 2006; and
- *Group B streptococcus vaccine* — a multiple dose, injectable vaccine for administration to women of childbearing age for protection of the fetus and newborn babies, for which we have completed a Phase I clinical trial in the United Kingdom.

Our commercial product candidates in preclinical development are a chlamydia vaccine and a meningitis B vaccine.

The Wellcome Trust provided funding for our Phase I clinical trial of our typhoid vaccine candidate in Vietnam and has agreed to provide funding for our Phase II clinical trial of this vaccine candidate in Vietnam. In May 2006, we entered into a license and co-development agreement with Sanofi Pasteur, the vaccines business of Sanofi-Aventis, under which we granted Sanofi Pasteur an exclusive, worldwide license under our proprietary technology to develop and commercialize a meningitis B vaccine candidate.

Our strategy. Our goal is to become a worldwide leader in developing, manufacturing and commercializing immunobiotics that target diseases with significant unmet or underserved medical needs. Key elements of our strategy to achieve this goal are:

- *Maximize the commercial potential of BioThrax.* We are focused on increasing sales of BioThrax to U.S. government customers, expanding the market for BioThrax to other customers and pursuing label expansions and improvements for BioThrax. The potential label expansions and improvements for BioThrax include an extension of shelf life, reductions in the number of required doses, addition of another method of administration and use as a post-exposure prophylaxis for anthrax infection in combination with antibiotic therapy.
- *Continue to develop a balanced portfolio of immunobiotic products.* We seek to maintain a balanced product portfolio that includes both biodefense and commercial immunobiotic product candidates and both vaccines and therapeutics to diversify product development and commercialization risk. We expect that biodefense product candidates may generate revenues from product sales sooner than commercial product candidates because of Project BioShield, which allows the U.S. government to purchase biodefense products for the strategic national stockpile before they are approved by the FDA.
- *Focus on core capabilities in product development and manufacturing.* We focus our efforts on immunobiotic product development and manufacturing, which we believe are our core capabilities. We seek to obtain marketed products and development stage product candidates through acquisitions and licensing arrangements with third parties.
- *Build large scale manufacturing infrastructure.* To augment our existing manufacturing capabilities, we are constructing a new 50,000 square foot manufacturing facility on our Lansing, Michigan campus. We anticipate that we will initiate large scale manufacturing of BioThrax for commercial sale at our new Lansing facility in 2008. We also own two buildings in Frederick, Maryland that we plan to build out as future manufacturing facilities.
- *Selectively establish collaborations.* For each of our product candidates, we plan to evaluate the merits of retaining commercialization rights or entering into collaboration arrangements with leading pharmaceutical or biotechnology companies or non-governmental organizations. We currently have collaborations with HPA and Sanofi Pasteur.
- *Seek governmental and other third party grants and support.* To date, the CDC, NIAID and the Wellcome Trust have provided product development support or funding. We plan to encourage government entities and non-government and philanthropic organizations to continue to conduct studies of, and pursue other development efforts and provide development funding for, BioThrax and our product candidates.

Our ability to successfully implement these strategies and achieve our goal is subject to substantial risks and uncertainties, including those described below under "— Risks associated with our business" and in the "Risk factors" section of this prospectus.

Our history. We commenced operations in September 1998 through an acquisition from the Michigan Biologic Products Institute of rights to BioThrax, vaccine manufacturing facilities at a multi-building campus on approximately 12.5 acres in Lansing, Michigan and vaccine development and production know-how. We acquired our pipeline of commercial vaccine candidates through our acquisition of Microscience Limited in 2005 and our acquisition of substantially all of the assets of Antex Biologics, Inc. in 2003.

Risks associated with our business

Our business is subject to numerous risks, as more fully described in the section entitled "Risk factors" immediately following this prospectus summary. We have derived substantially all of our revenue from sales of BioThrax under contracts with the DoD and HHS. Our ongoing U.S. government contracts do not necessarily increase the likelihood that we will secure future comparable contracts with the U.S. government. We expect that a significant portion of the business that we will seek in the near future, in particular for BioThrax, will be under government contracts that present a number of risks that are not typically present in the commercial contracting process. Our U.S. government contracts for BioThrax require annual funding decisions by the government and are subject to unilateral termination and modification by the government. We may fail to achieve significant sales of BioThrax to customers in addition to the U.S. government, which would harm our growth opportunities. We may not be able to sustain or increase profitability. We are spending significant amounts for the expansion of our manufacturing facilities. We may not be able to manufacture BioThrax consistently in accordance with FDA specifications. Other than BioThrax, all of our product candidates are undergoing clinical trials or are in early stages of development, and failure is common and can occur at any stage of development. None of our product candidates other than BioThrax has received regulatory approval.

Our corporate information

We were incorporated as BioPort Corporation under the laws of Michigan in May 1998. In June 2004, we completed a corporate reorganization in which Emergent BioSolutions Inc., a Delaware corporation formed in December 2003, issued shares of class A common stock to stockholders of BioPort in exchange for an equal number of outstanding shares of common stock of BioPort. As a result of this reorganization, BioPort became a wholly owned subsidiary of Emergent.

Our principal executive offices are located at 300 Professional Drive, Suite 250, Gaithersburg, Maryland 20879, and our telephone number is (301) 944-0290. Our website address is www.emergentbiosolutions.com. We have included our website address as an inactive textual reference only. The information contained on, or that can be accessed through, our website is not a part of this prospectus.

In this prospectus, unless otherwise stated or the context otherwise requires, references to "Emergent," "we," "us," "our" and similar references refer to Emergent BioSolutions Inc. BioThrax® and *spi*-Vec® are our registered trademarks. Other trademarks, trade names or service marks appearing in this prospectus are the property of their respective owners.

The offering

Common stock offered by us	shares
Common stock offered by the selling stockholders	shares if the underwriters exercise their over-allotment option in full
Common stock to be outstanding after this offering	shares
Preferred stock purchase rights	Each share of common stock offered hereby will have associated with it one preferred stock purchase right under a rights agreement that we will enter into in connection with this offering. The preferred stock purchase rights will initially trade together with the common stock. See “Description of capital stock — Stockholder rights plan.”
Use of proceeds	We expect to use the net proceeds from this offering, together with our existing cash and cash equivalents, revenues from BioThrax product sales and other committed sources of funds, to fund development of our biodefense and commercial product candidates, a portion of the construction costs of our new manufacturing facility in Lansing, Michigan and the balance for general corporate purposes. See “Use of proceeds.” We will not receive any proceeds from the sale of shares of common stock by the selling stockholders as a result of the exercise by the underwriters of their over-allotment option.
Risk factors	See “Risk factors” and other information in this prospectus for a discussion of factors you should carefully consider before deciding to invest in shares of our common stock.
Proposed NASDAQ Global Market symbol	EBSI

The number of shares of our common stock to be outstanding immediately after this offering is based on 7,782,016 shares outstanding as of August 31, 2006, and excludes:

- 1,061,679 shares of common stock issuable upon the exercise of stock options outstanding as of August 31, 2006 at a weighted average exercise price of $6.38 per share;
- 158,306 additional shares of common stock reserved for issuance under our employee stock option plan as of August 31, 2006; and
- 175,000 additional shares of common stock that will be reserved for issuance under our 2006 stock incentive plan immediately prior to completion of this offering.

Except in our financial statements included in this prospectus, in the table set forth under “Capitalization,” in “Certain relationships and related party transactions” or where otherwise expressly indicated, all information in this prospectus assumes that, prior to the completion of this offering, our

previously existing class A common stock, $0.01 par value per share, has been reclassified as common stock, $0.001 par value per share, all previously outstanding shares of class B common stock have been converted into shares of common stock and each outstanding option to purchase class B common stock has become an option to purchase common stock.

Unless otherwise indicated, all information in this prospectus assumes:

- no exercise of the outstanding options described above; and
- no exercise by the underwriters of their option to purchase up to shares of common stock from the selling stockholders to cover over-allotments.

In addition, unless otherwise indicated, all information in this prospectus gives effect to the -for-one stock split of our common stock that will be effective prior to the completion of this offering.

Summary consolidated financial data

You should read the following summary consolidated financial data together with our consolidated financial statements and the related notes appearing at the end of this prospectus and the "Management's discussion and analysis of financial condition and results of operations" section of this prospectus.

The summary consolidated financial data for the years ended December 31, 2003, 2004 and 2005 have been derived from our historical audited consolidated financial statements. The summary consolidated financial data for the six-month periods ended June 30, 2005 and 2006 and as of June 30, 2006 have been derived from our unaudited consolidated financial statements. The unaudited summary consolidated financial data include, in the opinion of our management, all adjustments, consisting only of normal recurring adjustments, that are necessary for a fair presentation of our financial position and results of operations for these periods. Our historical results for any prior period are not necessarily indicative of results to be expected in any future period, and our results for any interim period are not necessarily indicative of results for a full fiscal year. The as adjusted consolidated balance sheet data set forth below give effect to the sale by us of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and offering expenses payable by us.

(in thousands, except share and per share data)	Year ended December 31,			Six months ended June 30,	
	2003	2004	2005	2005	2006
				(unaudited)	
Statements of operations data:					
Revenues:					
Product sales	$ 55,536	$ 81,014	$ 127,271	$ 58,506	$ 20,408
Milestones and grants	233	2,480	3,417	813	3,261
Total revenues	55,769	83,494	130,688	59,319	23,669
Operating expenses (income):					
Cost of product sales	22,342	30,102	31,603	16,490	4,370
Research and development	6,327	10,117	18,381	4,157	14,210
Selling, general & administrative	19,547	30,323	42,793	17,974	20,681
Purchased in-process research and development	1,824	—	26,575	26,575	—
Settlement of State of Michigan obligation	—	(3,819)	—	—	—
Litigation settlement	—	—	(10,000)	(10,000)	—
Total operating expenses	50,040	66,723	109,352	55,196	39,261
Income (loss) from operations	5,729	16,771	21,336	(4,123)	(15,592)
Other income (expense):					
Interest income	100	65	485	103	326
Interest expense	(293)	(241)	(767)	(402)	(232)
Other income (expense), net	168	6	55	(25)	124
Total other income (expense)	(25)	(170)	(227)	(324)	218
Income (loss) before provision for income taxes	5,704	16,601	21,109	3,799	(15,374)
Provision for (benefit from) income taxes	1,250	5,129	5,325	958	(7,684)
Net income (loss)	$ 4,454	$ 11,472	$ 15,784	$ 2,841	$ (7,690)
Earnings (loss) per share — basic	$ 0.68	$ 1.74	$ 2.21	$ 0.44	$ (0.99)
Earnings (loss) per share — diluted	$ 0.63	$ 1.61	$ 2.00	$ 0.39	$ (0.99)
Weighted average number of shares — basic	6,570,856	6,576,019	7,136,866	6,505,085	7,771,830
Weighted average number of shares — diluted	7,061,537	7,104,172	7,908,023	7,200,595	7,771,830

(in thousands)	As of June 30, 2006	
	Actual	As adjusted
		(unaudited)
Balance sheet data:		
Cash and cash equivalents	$ 15,737	$
Working capital	5,995	
Total assets	119,113	
Total long-term liabilities	18,364	
Total stockholders' equity	52,141	

The balance sheet data above do not reflect the receipt of proceeds from and the incurrence of indebtedness under a $10.0 million term loan with HSBC Realty Credit Corporation that we entered into in August 2006 to finance a portion of the costs of our facility expansion in Lansing, Michigan.

Risk factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below together with all of the other information included in this prospectus, including the financial statements and related notes appearing at the end of this prospectus, before deciding to invest in our common stock. If any of the following risks actually occurs, our business, prospects, financial condition and operating results could be materially harmed. In that event, the market price of our common stock could decline and you could lose part or all of your investment.

Risks related to our dependence on U.S. government contracts for BioThrax

We have derived substantially all of our revenue from sales of our BioThrax anthrax vaccine, our only marketed product, under contracts with the U.S. Department of Defense and the U.S. Department of Health and Human Services. If we are unable to obtain new contracts with and deliver BioThrax to these customers, our business, financial condition and operating results could be materially harmed.

We have derived and expect for the foreseeable future to continue to derive substantially all of our revenue from sales of BioThrax, our FDA approved anthrax vaccine and our only marketed product. We currently supply BioThrax to the DoD for immunization of military personnel and to HHS for placement into the strategic national stockpile. In 2005, we derived substantially all of our revenue from our BioThrax contracts with the DoD and HHS. Our current contract with the DoD expires on September 30, 2006. Although the DoD issued a notice that it intends to pursue a sole source fixed price contract to purchase up to an additional 11 million doses of BioThrax over one base contract year plus four option years, we may not be awarded a follow-on contract on favorable terms or at all. We have delivered all of the five million doses of BioThrax that HHS agreed to purchase under a contract that we entered into with HHS in May 2005. In May 2006, we entered into a contract modification with HHS for the delivery of an additional five million doses of BioThrax to HHS by May 2007. Our ongoing contracts do not necessarily increase the likelihood that we will secure future comparable contracts with the U.S. government. The success of our business and our operating results for the foreseeable future are substantially dependent on the number of doses of BioThrax that the U.S. government purchases from us.

Our business may be harmed as a result of the government contracting process, which is a competitive bidding process that involves risks not present in the commercial contracting process.

We expect that a significant portion of the business that we will seek in the near future will be under government contracts or subcontracts awarded through competitive bidding. Competitive bidding for government contracts presents a number of risks that are not typically present in the commercial contracting process, including:

- the need to devote substantial time and attention of management and key employees to the preparation of bids and proposals for contracts that may not be awarded to us;
- the need to accurately estimate the resources and cost structure that will be required to perform any contract that we might be awarded; and
- the expenses that we might incur and the delays that we might suffer if our competitors protest or challenge contract awards made to us pursuant to competitive bidding, and the risk that any such

protest or challenge could result in the resubmission of bids based on modified specifications, or in termination, reduction or modification of the awarded contract.

The U.S. government may choose to award future contracts for the supply of anthrax vaccines and other biodefense product candidates that we are developing to our competitors instead of to us. If we are unable to win particular contracts, we may not be able to operate in the market for products that are provided under those contracts for a number of years. For example, in November 2004, HHS awarded VaxGen, Inc., one of our competitors in the anthrax vaccine market, a contract for the supply of 75 million doses of a recombinant protective antigen anthrax vaccine for inclusion in the strategic national stockpile. If VaxGen is able to deliver product under its contract, HHS may eliminate or reduce future orders for other anthrax vaccines, including BioThrax.

If we are unable to consistently win new contract awards over an extended period, or if we fail to anticipate all of the costs and resources that will be required to secure such contract awards, our growth strategy and our business, financial condition, and operating results could be materially adversely affected.

Our U.S. government contracts for BioThrax require annual funding decisions by the government. The failure to fund one or more of these contracts could cause our financial condition and operating results to suffer materially.

Our principal customer for BioThrax, our only marketed product, is the U.S. government. We sell to the U.S. government under contracts with the DoD and HHS. In addition, we anticipate that the U.S. government will be the principal customer for any other biodefense products that we successfully develop. Accordingly, we are subject to a range of risks arising out of being a contractor to the U.S. government under U.S. government programs.

Over its lifetime, a U.S. government program may be implemented through the award of many different individual contracts and subcontracts. The funding of government programs is subject to Congressional appropriations. Congress generally appropriates funds on a fiscal year basis even though a program may continue for several years. For example, our DoD contracts for BioThrax have been structured with one base year during which the DoD agrees to purchase a minimum number of doses of BioThrax with options for the DoD to purchase further quantities in future years. Government programs are often only partially funded initially, and additional funds are committed only as Congress makes further appropriations. The termination of a program or failure to commit funds to a program would result in a loss of anticipated future revenues attributable to that program, which could materially harm our business. Our government customers are subject to stringent budgetary constraints and political considerations. If annual levels of government expenditures and authorizations for biodefense decrease or shift to programs in areas where we do not offer products or are not developing product candidates, our business, revenues and operating results may suffer.

The success of our business with the U.S. government depends on our compliance with additional regulations and obligations under our U.S. government contracts.

Our business with the U.S. government is subject to specific procurement regulations and a variety of other legal compliance obligations. These obligations include those related to:

- procurement integrity;
- export control;
- government security regulations;

- employment practices;
- protection of the environment;
- accuracy of records and the recording of costs; and
- foreign corrupt practices.

Compliance with these obligations increases our performance and compliance costs. Failure to comply with these regulations and requirements could lead to suspension or debarment, for cause, from government contracting or subcontracting for a period of time. The termination of a government contract or relationship as a result of our failure to satisfy any of these obligations would have a negative impact on our operations and harm our reputation and ability to procure other government contracts in the future.

The pricing under our fixed price government contracts is based on estimates of the time, resources and expenses required to deliver the specified doses of BioThrax. If our estimates are not accurate, we may not be able to earn an adequate return under these contracts.

Our current contracts for the supply of BioThrax with the DoD and HHS are fixed price contracts. In addition, we expect that our future contracts with the U.S. government for biodefense product candidates that we successfully develop may be fixed price contracts. Under a fixed price contract, we are required to deliver our products at a fixed price regardless of the actual costs we incur and absorb any costs in excess of the fixed price. Estimating costs that are related to performance in accordance with contract specifications is difficult. Our failure to anticipate technical problems, estimate costs accurately or control costs during performance of a fixed price contract could reduce the profitability of a fixed price contract or cause a loss.

Unfavorable provisions in government contracts may harm our business, financial condition and operating results.

Government contracts customarily contain provisions that give the government rights and remedies that are not typically found in commercial contracts, including provisions that allow the government to:

- terminate existing contracts, in whole or in part, for any reason or no reason;
- reduce or modify contracts or subcontracts;
- cancel multi-year contracts and related orders if funds for contract performance for any subsequent year become unavailable;
- decline to exercise an option to renew a contract;
- claim rights in products, including intellectual property, developed under the contract;
- suspend or debar the contractor from doing business with the government or a specific government agency;
- pursue criminal or civil remedies under the False Claims Act and False Statements Act; and
- control or prohibit the export of products.

Generally, government contracts, including our U.S. government contracts for BioThrax, contain provisions permitting unilateral termination or modification, in whole or in part, at the government’s convenience. Under general principles of government contracting law, if the government terminates a

contract for convenience, the terminated company may recover only its incurred or committed costs, settlement expenses and profit on work completed prior to the termination. If the government terminates a contract for default, the defaulting company is entitled to recover costs incurred and associated profits on accepted items only and may be liable for excess costs incurred by the government in procuring undelivered items from another source. One or more of our government contracts could be terminated under these circumstances.

Some government contracts grant the government the right to use, for or on behalf of the U.S. government, any technologies developed by the contractor under the government contract. If we were to develop technology under a contract with such a provision, we might not be able to prohibit third parties, including our competitors, from using that technology in providing products and services to the government.

Ongoing legal proceedings or any future similar lawsuits could limit future purchases of BioThrax by the U.S. government.

The results of ongoing legal proceedings could reduce demand for BioThrax by the U.S. government. Prior to the issuance of an order in December 2005 by the FDA and an appellate court ruling in February 2006, the DoD had been enjoined by a court order from administering BioThrax without informed consent of the recipient or a Presidential waiver. Although we are not a party to this lawsuit, if further proceedings or any similar lawsuits result in another injunction or otherwise restrict the administration of BioThrax by the DoD, the amount of future purchases of BioThrax by the DoD could be limited. Furthermore, lawsuits brought against us by third parties, even if not successful, require us to spend time and money defending the related litigation.

Risks related to our financial position and need for additional financing

We have a limited operating history and may not maintain profitability in future periods or on a consistent basis.

We have a limited operating history. We commenced operations in 1998, and the FDA approved the manufacture of BioThrax at our renovated facilities in Lansing, Michigan in December 2001. Although we were profitable for each of the last three fiscal years, we have not been profitable for every quarter during that time. In addition, we were not profitable for the six months ended June 30, 2006. We may not be able to achieve consistent profitability on a quarterly basis or sustain or increase profitability on an annual basis. Our profitability is substantially dependent on revenues from BioThrax product sales. Revenues from BioThrax product sales have fluctuated significantly in recent quarters and may continue to fluctuate significantly from quarter to quarter based on the timing of our fulfilling orders from the U.S. government. If we are unable to maintain profitability on a consistent basis, the market price of our common stock may decline, and you could lose part or all of your investment.

Our indebtedness may limit cash flow available to invest in the ongoing needs of our business.

As of August 31, 2006, we had $39.5 million principal amount of debt outstanding and remaining borrowing availability of $5.0 million under our revolving lines of credit. Our business plan also contemplates that we will raise $10 million to $20 million of additional external debt financing to fund our facility expansion in Lansing, Michigan and to provide additional financial flexibility. We also may incur additional indebtedness beyond such amount.

Our leverage could have significant adverse consequences, including:

- requiring us to dedicate a substantial portion of any cash flow from operations to the payment of interest on, and principal of, our debt, which will reduce the amounts available to fund working capital, capital expenditures, product development efforts and other general corporate purposes;
- increasing the amount of interest that we have to pay on debt with variable interest rates if market rates of interest increase;
- increasing our vulnerability to general adverse economic and industry conditions;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we compete; and
- placing us at a competitive disadvantage compared to our competitors that have less debt.

We may not have sufficient funds or may be unable to arrange for additional financing to pay the amounts due under our existing debt. In addition, a failure to comply with the covenants under our existing debt instruments could result in an event of default under those instruments. In the event of an acceleration of amounts due under our debt instruments as a result of an event of default, we may not have sufficient funds or may be unable to arrange for additional financing to repay our indebtedness or to make any accelerated payments, and the lenders could seek to enforce security interests in the collateral securing such indebtedness. Because of the covenants under our existing debt instruments and the pledge of our existing assets as collateral, we have a limited ability to obtain additional debt financing.

We expect to require additional funding and may be unable to raise capital when needed, which would harm our business, financial condition and operating results.

We expect our development expenses to increase in connection with our ongoing activities, particularly as we conduct additional and later stage clinical trials for our product candidates. In addition, we incur significant commercialization expenses for BioThrax product sales, marketing and manufacturing. We expect these commercialization expenses to increase in the future as we seek to broaden the market for BioThrax and if we receive marketing approval for additional products. We also are committed to substantial capital expenditures in connection with our facility expansion in Lansing, Michigan. We expect the construction of the facility to cost approximately $75 million, including approximately $55 million for the building and associated capital equipment, with the balance related to validation and qualification activities required for regulatory approval and initiation of manufacturing. We anticipate that we will incur approximately $42 million for these purposes during 2006. In addition, we expect to incur substantial capital expenditures in connection with our planned build out of two buildings in Frederick, Maryland as future manufacturing facilities. We anticipate that we will incur up to $5 million during 2006 related to initial engineering design and preliminary utility build out for these facilities. Because we are in the preliminary planning stages of our Frederick build out, we cannot reasonably estimate the timing and costs that will be necessary to complete this project. If we proceed with this project, we expect the costs to be substantial and to likely require external sources of funds to finance the project.

We expect to continue to fund a significant portion of our development and commercialization costs for our product candidates with internally generated funds from sales of BioThrax. If we do not obtain future contracts with, and deliver BioThrax to, the DoD and HHS, we may be forced to find additional sources of funding and to do so earlier than we currently anticipate. Our business plan currently contemplates that we will raise $10 million to $20 million of additional external debt financing to fund our facility expansion in Lansing and to provide additional financial flexibility. We may not be able to obtain this financing or

otherwise be able to raise capital when needed or on attractive terms, which would force us to delay, reduce the scope of or eliminate our research and development programs or reduce our planned commercialization efforts.

As of August 31, 2006, we had $15.4 million of cash and cash equivalents. We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, revenues from BioThrax product sales and other committed sources of funds, will be sufficient to enable us to fund our anticipated operating expenses and capital expenditure and debt service requirements for at least the next 24 months. Our future capital requirements will depend on many factors, including:

- the level and timing of BioThrax product sales and cost of product sales;
- the timing of, and the costs involved in, constructing our new manufacturing facility in Lansing, Michigan and the build out of our manufacturing facilities in Frederick, Maryland;
- the scope, progress, results and costs of our preclinical and clinical development activities;
- the costs, timing and outcome of regulatory review of our product candidates;
- the number of, and development requirements for, other product candidates that we may pursue;
- the costs of commercialization activities, including product marketing, sales and distribution;
- the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims and other patent-related costs, including litigation costs and the results of such litigation;
- the extent to which we acquire or invest in businesses, products and technologies;
- our ability to obtain development funding from government entities and non-government and philanthropic organizations; and
- our ability to establish and maintain collaborations, such as our collaboration with Sanofi Pasteur.

To the extent our capital resources are insufficient to meet our future capital requirements, we will need to finance our cash needs through public or private equity offerings, debt financings or corporate collaboration and licensing arrangements. Our only committed external sources of funds are remaining borrowing availability under our revolving lines of credit, development funding under our collaboration agreement with Sanofi Pasteur, funding from NIAID for animal efficacy studies of our anthrax immune globulin candidate and funding from the Wellcome Trust for our Phase II clinical trial of our typhoid vaccine candidate in Vietnam. Our ability to borrow additional amounts under our loan agreements is subject to our satisfaction of specified conditions. Additional equity or debt financing, grants, or corporate collaboration and licensing arrangements, may not be available on acceptable terms, if at all.

If we raise additional funds by issuing equity securities, our stockholders may experience dilution. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. Any debt financing or additional equity that we raise may contain terms, such as liquidation and other preferences, that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish valuable rights to our technologies or product candidates or grant licenses on terms that may not be favorable to us.

Risks related to manufacturing and manufacturing facilities

We have initiated a manufacturing facility expansion program. Delays in completing and receiving regulatory approvals for these manufacturing facility projects could limit our potential revenues and growth.

We are spending significant amounts for the construction of a new 50,000 square foot manufacturing facility on our Lansing, Michigan campus, which is being designed to enable us to manufacture BioThrax on a large scale for our existing and potential future customers. We are also constructing this new facility to accommodate large scale commercial manufacturing of multiple vaccine products, subject to complying with appropriate change-over procedures. We expect the construction of the facility to cost approximately $75 million, including approximately $55 million for the building and associated capital equipment, with the balance related to validation and qualification activities required for regulatory approval and initiation of manufacturing. We anticipate that we will incur approximately $42 million for these purposes during 2006. In addition, we own two buildings in Frederick, Maryland that we plan to build out as future manufacturing facilities. We anticipate that we will incur up to $5 million during 2006 related to initial engineering design and preliminary utility build out for these facilities. Because we are in the preliminary planning stages of our Frederick build out, we cannot reasonably estimate the timing and costs that will be necessary to complete this project. If we proceed with this project, we expect the costs to be substantial and to likely require external sources of funds to finance the project.

Constructing and preparing a facility for commercial vaccine manufacturing is a significant project. For example, constructing the new Lansing facility with increased manufacturing capacity requires that we scale up both fermentation and downstream processing compared to levels at our existing production facility. These projects may result in unanticipated delays and cost more than expected due to a number of factors, including regulatory requirements. The FDA must approve our new manufacturing facilities before they can be used to commercially manufacture our products. For example, we are required to show that the product we manufacture in our new Lansing facility is comparable to BioThrax manufactured in our existing production facility. The costs and time required to comply with the FDA's current Good Manufacturing Practice, or cGMP, regulations, or similar regulatory requirements for sales of our products outside the United States, may be significant. If construction or regulatory approval of our new facility in Lansing is delayed, we may not be able to manufacture sufficient quantities of BioThrax to allow us to increase sales of BioThrax to the U.S. government and other customers, which would limit our opportunities for growth. If construction or regulatory approval of our new manufacturing facilities at our Frederick site is delayed, we may not be able to independently manufacture our commercial product candidates for clinical trials or commercial sale. Cost overruns associated with constructing either our Lansing or Frederick facilities could require us to raise additional funds from external sources. We may not be able to do so on favorable terms or at all.

BioThrax and our immunobiotic product candidates are difficult to manufacture on a large scale commercial basis, which could cause us to delay product launches or experience shortages of products.

BioThrax and all our product candidates are biologics. Manufacturing biologic products, especially in large quantities, is complex. The products must be made consistently and in substantial compliance with a clearly defined manufacturing process. Accordingly, it is essential to be able to validate and control the manufacturing process to assure that it is reproducible. Slight deviations anywhere in the manufacturing process, including filling, labeling and packaging and quality control and testing, may result in lot failures or product recalls. From time to time, we experience deviations during the manufacturing process of BioThrax that can affect our release of the production lot according to our release protocols and other

acceptance criteria. Lot failures or product recalls could cause us to fail to satisfy customer orders or contractual commitments, lead to a termination of one or more of our contracts or result in litigation or regulatory action against us, any of which could be costly to us and otherwise harm our business.

For example, in late 2005, our standard product release testing identified BioThrax production lots for which follow up testing was required to determine whether we can submit these lots to the FDA for release for sale. We waited to conduct final release testing of these lots pending FDA review of an application that we submitted to amend the BioThrax release specifications. The FDA approved our amendment to the release specifications in May 2006, and we subsequently reinitiated release testing of these BioThrax lots. We will not be able to sell any lots that fail to satisfy the amended release testing specifications or that are not released for sale by the FDA.

Disruption at, damage to or destruction of our manufacturing facilities could impede our ability to manufacture BioThrax, which would harm our business, financial condition and operating results.

We currently rely on our manufacturing facilities at a single location in Lansing, Michigan for the production of BioThrax. Any interruption in manufacturing operations at this location could result in our inability to satisfy the product demands of our customers. A number of factors could cause interruptions, including:

- equipment malfunctions or failures;
- technology malfunctions;
- work stoppages;
- damage to or destruction of the facility due to natural disasters;
- regional power shortages;
- product tampering; or
- terrorist activities.

Any disruption that impedes our ability to manufacture and ship BioThrax in a timely manner could reduce our revenues and materially harm our business, financial condition and operating results.

Our business may be harmed if we do not adequately forecast customer demand.

The timing and amount of customer demand is difficult to predict. We may not be able to scale up our production quickly enough to fill any new customer orders on a timely basis. This could cause us to lose new business and possibly existing business. In addition, we may not be able to scale up manufacturing processes for our product candidates to allow production of commercial quantities at a reasonable cost or at all. Furthermore, if we overestimate customer demand, we could incur significant unrecoverable costs from creating excess capacity. For example, if we do not maintain and increase sales of BioThrax to the U.S. government and other customers, we may not be able to generate an adequate return on the significant amounts that we are spending for construction of our new manufacturing facility in Lansing. In addition, if we do not successfully develop and commercialize any of our product candidates, we may never require the production capacity that we expect to have available at our Frederick site.

If third parties do not manufacture our product candidates in sufficient quantities and at an acceptable cost or in compliance with regulatory requirements and specifications, the development and commercialization of our product candidates could be delayed, prevented or impaired.

We currently rely on third parties to manufacture the supplies of our immunobiotic product candidates that we require for preclinical and clinical development. Any significant delay in obtaining adequate supplies of our product candidates could adversely affect our ability to develop or commercialize these product candidates. Although we recently commissioned a new pilot plant manufacturing facility on our Lansing campus and plan to construct a pilot plant in Maryland for production of preclinical and clinical supplies of our product candidates, we expect that we will continue to use third parties for these purposes. In addition, we expect that we will rely on third parties for a portion of the manufacturing process for commercial supplies of product candidates that we successfully develop, including fermentation for some of our vaccine product candidates, plasma fractionation and purification for our immune globulin product candidates and contract fill and finish operations. Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our ability to develop product candidates and commercialize any products that receive regulatory approval on a timely and competitive basis.

Our only long-term manufacturing agreements are our agreement with Talecris Biotherapeutics, Inc., for purification and fractionation of plasma for our anthrax immune globulin candidate, and our collaboration with HPA, under which HPA provides specialized manufacturing capabilities for our recombinant bivalent botulinum vaccine candidate and the bivalent botulinum toxoid vaccine that we plan to use as the basis for our botulinum immune globulin candidate. Third party manufacturers under our short-term supply agreements are not obligated to accept any purchase orders we may submit. If any third party terminates its agreement with us, based on its own business priorities, or otherwise fails to fulfill our purchase orders, we would need to rely on alternative sources to satisfy our requirements. If these alternative suppliers are not available or are delayed in fulfilling our requirements, we may not be able to obtain adequate supplies of our product candidates on a timely basis. A change of manufacturers may require review from the FDA and satisfaction of comparable foreign requirements. This review may be costly and time consuming. There are a limited number of manufacturers that operate under the FDA's cGMP requirements and that are both capable of manufacturing for us and willing to do so.

We currently rely on third parties for regulatory compliance and quality assurance with respect to the supplies of our product candidates that they produce for us. We also will rely for these purposes on any third party that we use for production of commercial supplies of product candidates that we successfully develop. Manufacturers are subject to ongoing, periodic, unannounced inspection by the FDA and corresponding state and foreign agencies or their designees to ensure strict compliance with cGMP regulations and other governmental regulations and corresponding foreign standards. We cannot be certain that our present or future manufacturers will be able to comply with cGMP regulations and other FDA regulatory requirements or similar regulatory requirements outside the United States. We do not control compliance by manufacturers with these regulations and standards. If we or these third parties fail to comply with applicable regulations, sanctions could be imposed on us, which could significantly and adversely affect supplies of our product candidates. The sanctions that might be imposed include:

- fines, injunctions and civil penalties;
- refusal by regulatory authorities to grant marketing approval of our product candidates;
- delays, suspension or withdrawal of regulatory approvals, including license revocation;

- seizures or recalls of product candidates or products;
- operating restrictions; and
- criminal prosecutions.

If as a result of regulatory requirements or otherwise we or third parties are unable to manufacture our product candidates at an acceptable cost, our product candidates may not be commercially viable.

Our use of hazardous materials, chemicals, bacteria and viruses requires us to comply with regulatory requirements and exposes us to significant potential liabilities.

Our development and manufacturing processes involve the use of hazardous materials, including chemicals, bacteria, viruses and radioactive materials, and produce waste products. Accordingly, we are subject to federal, state, local and foreign laws and regulations governing the use, manufacture, distribution, storage, handling, disposal and recordkeeping of these materials. In addition to complying with environmental and occupational health and safety laws, we must comply with special regulations relating to biosafety administered by the CDC, HHS and the DoD.

The Public Health Security and Bioterrorism Preparedness and Response Act and the Agricultural Protection Act require us to register with the CDC and the Department of Agriculture our possession, use or transfer of select biological agents or toxins that could pose a threat to public health and safety, to animal or plant health or to animal or plant products. This legislation requires increased safeguards and security measures for these select agents and toxins, including controlled access and the screening of entities and personnel, and establishes a comprehensive national database of registered entities.

We also are subject to export control regulations governing the export of BioThrax and technology and materials used to develop and manufacture BioThrax and our product candidates. If we fail to comply with environmental, occupational health and safety, biosafety and export control laws, we could be held liable for fines, penalties and damages that result, and any such liability could exceed our assets and resources. In addition, we could be required to cease immediately all use of a select agent or toxin, and we could be prohibited from exporting our products, technology and materials.

Our general liability and umbrella insurance policies provide for coverage up to annual aggregate limits of $12 million with a deductible of $15,000 per occurrence, but exclude coverage for liabilities relating to the release of pollutants. We do not currently hold insurance policies expressly providing for coverage relating to our use of hazardous materials other than storage tank liability insurance for our Lansing, Michigan facility with a $1 million annual aggregate limit and a deductible of $10,000 per claim. The insurance that we currently hold may not be adequate to cover all liabilities relating to accidental contamination or injury as a result of pollution conditions or other extraordinary or unanticipated events.

If the company on whom we rely for filling BioThrax vials is unable to perform these services for us, our business may suffer.

We have outsourced the operation for filling BioThrax into vials to a single company, Hollister-Stier Laboratories LLC. Our contract with Hollister-Stier expires on December 31, 2007. We have not established internal redundancy for our filling functions and currently have no substitute provider that can handle our filling needs. If Hollister-Stier is unable to perform filling services for us or we are unable to enter into a new contract with Hollister-Stier, we would need to identify and engage an alternative filling company. Any new contract filling company will need to obtain FDA approval for filling BioThrax at its

facilities. Identifying and engaging a new contract filling company and obtaining FDA approval could involve significant cost and delay. As a result, we might not be able to deliver BioThrax orders on a timely basis and our revenues could decrease.

Risks related to product development

Our business depends significantly on our success in completing development and commercializing product candidates that are still under development. If we are unable to commercialize these product candidates, or experience significant delays in doing so, our business will be materially harmed.

We have invested a significant portion of our efforts and financial resources in the development of our immunobiotic product candidates. In addition to BioThrax product sales, our ability to generate near term revenue is particularly dependent on the success of our anthrax immune globulin candidate, which is currently in preclinical development. The commercial success of our product candidates will depend on many factors, including:

- successful completion of preclinical development;
- successful completion of clinical trials;
- receipt of marketing approvals from the FDA and similar foreign regulatory authorities;
- a determination by the Secretary of HHS that our biodefense product candidates should be purchased for the strategic national stockpile prior to FDA approval;
- establishing commercial manufacturing processes or arrangements;
- launching commercial sales of the product, whether alone or in collaboration with others; and
- acceptance of the product by potential government customers, physicians, patients, healthcare payors and others in the medical community.

We expect to rely on FDA regulations known as the animal rule to obtain approval for our biodefense product candidates. The animal rule permits the use of animal efficacy studies together with human clinical safety and immunogenicity trials to support an application for marketing approval. These regulations are relatively new, and we have limited experience in the application of these rules to the product candidates that we are developing. It is possible that results from these animal efficacy studies may not be predictive of the actual efficacy of our immunobiotic product candidates in humans. In addition, our development plans for our botulinum immune globulin candidate require the development of a new botulinum toxoid vaccine that we would use to vaccinate individuals who would then donate plasma for use in our botulinum immune globulin candidate. If the development of this new botulinum toxoid vaccine is delayed or not completed, for regulatory or other reasons, we may not be able to successfully develop our botulinum immune globulin candidate.

If we are not successful in completing the development and commercialization of our immunobiotic product candidates, or if we are significantly delayed in doing so, our business will be materially harmed.

We will not be able to commercialize our product candidates if our preclinical development efforts are not successful, our clinical trials do not demonstrate safety or our clinical or animal trials do not demonstrate efficacy.

Before obtaining regulatory approval for the sale of our product candidates, we must conduct extensive preclinical development, clinical trials to demonstrate the safety of our product candidates and clinical or animal trials to demonstrate the efficacy of our product candidates. Preclinical and clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. Success in preclinical testing and early clinical trials does not ensure that later clinical trials or animal efficacy trials will be successful, and interim results of a clinical trial or animal efficacy trial do not necessarily predict final results. A failure of one or more of our clinical trials or animal efficacy trials can occur at any stage of testing. We may experience numerous unforeseen events during, or as a result of, preclinical testing and the clinical or animal efficacy trial process that could delay or prevent our ability to receive regulatory approval or commercialize our product candidates, including:

- regulators or institutional review boards may not authorize us to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may decide, or regulators may require us, to conduct additional preclinical testing or clinical trials, or we may abandon projects that we expect to be promising, if our preclinical tests, clinical trials or animal efficacy trials produce negative or inconclusive results;
- we might have to suspend or terminate our clinical trials if the participating patients are being exposed to unacceptable health risks;
- regulators or institutional review boards may require that we hold, suspend or terminate clinical development for various reasons, including noncompliance with regulatory requirements;
- the cost of our clinical trials may be greater than we currently anticipate;
- any regulatory approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the product not commercially viable; and
- the effects of our product candidates may not be the desired effects or may include undesirable side effects or the product candidates may have other unexpected characteristics.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete our clinical trials or other testing or if the results of these trials or tests are not positive, we may:

- be delayed in obtaining marketing approval for our product candidates;
- not be able to obtain marketing approval; or
- obtain approval for indications that are not as broad as intended.

For example, the FDA could require us to conduct additional clinical development in our botulinum immune globulin program that we currently do not plan to conduct. We expect to rely on safety and immunogenicity data from a pentavalent botulinum toxoid vaccine previously manufactured by the State of Michigan in the development of a new bivalent botulinum toxoid vaccine that we plan to use as the basis for our botulinum immune globulin candidate. We plan to conduct a Phase I clinical trial to evaluate the safety of the botulinum toxoid vaccine. If the results are favorable, we expect that the Phase I clinical trial will provide data sufficient to support an acceptable dose for the vaccine and the optimal dosing schedule. As a result, we anticipate that the FDA will not require us to conduct a Phase II clinical trial for

the botulinum toxoid vaccine before permitting us to initiate a donor stimulation program for our botulinum immune globulin candidate. If the FDA requires us to conduct a Phase II clinical trial for the botulinum toxoid vaccine, the development plans for our botulinum immune globulin candidate will be delayed.

Our product development costs will also increase if we experience delays in testing or approvals. Significant clinical trial delays also could allow our competitors to bring products to market before we do and impair our ability to commercialize our products or product candidates.

Under Project BioShield, the Secretary of HHS can contract to purchase countermeasures for the strategic national stockpile prior to FDA approval of the countermeasure in specified circumstances. Project BioShield also allows the Secretary of HHS to authorize the emergency use of medical products that have not yet been approved by the FDA. However, our product candidates may not be selected by the Secretary under this authority. Moreover, this authority could result in increased competition for our products and product candidates, as has occurred in the case of the HHS procurement contract for VaxGen's anthrax vaccine candidate and as discussed below under "— Risks related to commercialization — We face substantial competition, which may result in others developing or commercializing products before or more successfully than we do."

Risks related to commercialization

If we fail to achieve significant sales of BioThrax to customers in addition to the U.S. government, our opportunities for growth could be harmed.

An element of our business strategy is to establish a market for sales of BioThrax to customers in addition to the U.S. government. These potential customers include the U.S. Postal Service, foreign governments, state and local governments, which we expect will be interested in BioThrax to protect first responders, such as police, fire and emergency medical personnel, multinational companies, non-governmental organizations and hospitals. The market for sales of BioThrax to customers other than the U.S. government is new and undeveloped, and we may not be successful in generating meaningful sales of BioThrax to these potential customers. To date, we have made only minimal sales to these customers. In particular, we have supplied small amounts of BioThrax directly to several foreign governments. In 2005, our sales of BioThrax to customers other than the U.S. government represented only one percent of our revenue. If we fail to significantly increase our sales of BioThrax to these customers, our business and opportunities for growth could be materially harmed.

Government regulations and the terms of our U.S. government contracts may make it difficult for us to achieve significant sales of BioThrax to customers other than the U.S. government. For example, we are subject to export control laws imposed by the U.S. government. Although there are currently only limited restrictions on the export of BioThrax, the U.S. government may decide, particularly in the current environment of elevated concerns about global terrorism, to increase the scope of export prohibitions. These controls could limit our sales of BioThrax to foreign governments and other foreign customers.

In addition, the DoD has contractual and statutory rights that could interfere with sales of BioThrax to customers other than the U.S. government. For example, our efforts to develop domestic commercial and international sales may be impeded by the DoD's right under the Defense Production Act to require us to deliver more doses than are otherwise specified in our contract with the DoD. If the DoD required delivery of these additional doses, it could affect our production schedule and deplete BioThrax supplies that would otherwise be available for commercial sales. In addition, the DoD could either sell BioThrax directly to foreign governments at a lower price than we may offer or donate BioThrax to foreign governments under the DoD's Foreign Military Sales program.

Our ability to meet any increased demand that develops for sales of BioThrax to customers other than the U.S. government depends on our available production capacity. We use substantially all of our current production capacity at our facility in Lansing, Michigan to manufacture BioThrax for sale to U.S. government customers. We expect to complete construction of our new manufacturing facility in Lansing in mid 2007. We anticipate that we will initiate large scale manufacturing of BioThrax for commercial sale at the new facility in 2008. Until the new manufacturing facility is available for commercial use, we will not have sufficient available production capacity to allow us to significantly increase sales of BioThrax to customers other than the U.S. government.

The commercial success of BioThrax and any products that we may develop will depend upon the degree of market acceptance by the government, physicians, patients, healthcare payors and others in the medical community.

Any products that we bring to the market may not gain or maintain market acceptance by potential government customers, physicians, patients, healthcare payors and others in the medical community. In particular, our biodefense immunobiotic products and product candidates are subject to the product criteria that may be specified by potential U.S. government customers. The product specifications in any government procurement request may prohibit or preclude us from participating in the government program if our products or product candidates do not satisfy the stated criteria. For example, in 2004, HHS issued a request for proposals for the supply of anthrax vaccine for the strategic national stockpile. The HHS request was limited to a recombinant anthrax vaccine. Recombinant technology comprises scientific techniques that allow for the manipulation of genetic material. Scientists apply these techniques to disease-causing organisms known as pathogens. Using recombinant technology, it is possible to delete a virulent gene from a pathogen or isolate the gene directing the production of the component of a pathogen known as an antigen and move the antigen into a harmless organism that can be purified and used as a vaccine. Because BioThrax is not a recombinant vaccine, BioThrax was precluded from consideration under that procurement program.

In May 2006, an HHS official stated in Congressional testimony that HHS maintains a commitment to develop a next generation recombinant protective antigen anthrax vaccine. A significant portion of future government anthrax vaccine procurement requests may specify a recombinant anthrax vaccine, which would limit, possibly significantly, the market for BioThrax. In May 2006, NIAID issued a notice seeking statements of capability for the advanced development and testing of next generation anthrax vaccine candidates with specified properties, including the ability to generate protective immune response in one or two doses, the ability to be self administered or rapidly inoculated into large numbers of people and a superior safety profile to BioThrax. Although we are evaluating several potential product candidates in connection with development of a next generation anthrax vaccine with these properties, we may not be successful in our development efforts.

In addition, notwithstanding favorable findings regarding the safety and efficacy of BioThrax by the FDA in its final ruling in December 2005, the U.S. Government Accountability Office reiterated concerns regarding BioThrax in Congressional testimony in May 2006 that it had previously identified beginning in 1999. These concerns include the need for a six dose regimen and annual booster doses, questions about the long-term and short-term safety of the vaccine, including how safety is affected by gender differences, and uncertainty about the vaccine's efficacy.

The use of vaccines carries a risk of adverse health effects that must be weighed against the expected health benefit of the product. The adverse reactions that have been associated with the administration of BioThrax are similar to those observed following the administration of other adult vaccines and include local reactions, such as redness, swelling and limitation of motion in the inoculated arm, and systemic

reactions, such as headache, fever, chills, nausea and general body aches. In addition, some serious adverse events have been reported to the vaccine adverse event reporting system database maintained by the CDC and the FDA with respect to BioThrax. The report of any such adverse event to the vaccine adverse event reporting system database is not proof that the vaccine caused such event. These serious adverse events, including diabetes, heart attacks, autoimmune diseases, including Guillian Barre syndrome, lupus and multiple sclerosis, lymphoma and death, have not been causally linked to the administration of BioThrax.

If any products that we develop do not achieve an adequate level of acceptance, we may not generate material revenues with respect to these products. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the prevalence and severity of any side effects;
- the efficacy and potential advantages over alternative treatments;
- the ability to offer our product candidates for sale at competitive prices;
- relative convenience and ease of administration;
- the willingness of the target patient population to try new products and of physicians to prescribe these products;
- the strength of marketing and distribution support; and
- sufficient third party coverage or reimbursement.

Political or social factors, including related litigation, may delay or impair our ability to market BioThrax and our biodefense product candidates and may require us to spend time and money to address these issues.

Products developed to treat diseases caused by or to combat the threat of bioterrorism will be subject to changing political and social environments. The political and social responses to bioterrorism have been highly charged and unpredictable. Political or social pressures or changes in the perception of the risk that military personnel or civilians could be exposed to biological agents as weapons of bioterrorism may delay or cause resistance to bringing our products to market or limit pricing or purchases of our products, which would harm our business. In addition, substantial delays or cancellations of purchases could result from protests or challenges from third parties. Furthermore, lawsuits brought against us by third parties or activists, even if not successful, require us to spend time and money defending the related litigation. The need to address political and social issues may divert our management's time and attention from other business concerns.

For example, between 2001 and 2004, members of the military and various activist groups filed a citizen's petition with the FDA and various lawsuits seeking the revocation of the license for BioThrax and the termination of the DoD program for the mandatory administration of BioThrax to military personnel. In October 2004, a federal court ruled that the FDA, as part of its review of all biological products approved prior to 1972, had not properly issued a final order determining that BioThrax is safe and effective and not misbranded. As a result, the court issued an injunction prohibiting the DoD from administering BioThrax to military personnel without informed consent of the recipient or a Presidential waiver. Although the FDA issued a final order in December 2005 determining that BioThrax is safe and effective and not misbranded and, as a result, an appellate court ruled in February 2006 that the injunction was dissolved, these actions created negative publicity about BioThrax. Similar or other such

lawsuits or publicity campaigns could limit demand for BioThrax and our biodefense product candidates and harm our future business.

We have a small marketing and sales group. If we are unable to expand our sales and marketing capabilities or enter into sales and marketing agreements with third parties, we may be unable to generate product sales revenue from sales to customers other than the U.S. government.

To achieve commercial success for any approved product, we must either develop a sales and marketing organization or outsource these functions to third parties. We currently market and sell BioThrax directly to the DoD and HHS through a small, targeted marketing and sales group. We plan to continue to do so and expect that we will use a similar approach for sales to the U.S. government of any other biodefense product candidates that we successfully develop. However, to increase our sales of BioThrax to state and local governments and foreign governments and create an infrastructure for future sales of other biodefense products to these customers, we plan to expand our sales and marketing organization. In addition, we expect to establish a separate internal organization to market and sell commercial products for which we retain commercialization or co-commercialization rights.

We may not be able to attract, hire, train and retain qualified sales and marketing personnel to build a significant or effective marketing and sales force for sales of biodefense product candidates to customers other than the U.S. government or for sales of our commercial product candidates. If we are not successful in our efforts to expand our internal sales and marketing capability, our ability to independently market and sell BioThrax and any other product candidates that we successfully develop will be impaired. Expanding our internal sales and marketing capability will be expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed as a result of FDA requirements or other reasons, we would incur related expenses too early relative to the product launch. This may be costly, and our investment would be lost if we cannot retain our sales and marketing personnel.

We face substantial competition, which may result in others developing or commercializing products before or more successfully than we do.

The development and commercialization of new immunobiotics is highly competitive. We face competition with respect to BioThrax, our current product candidates and any products we may seek to develop or commercialize in the future from major pharmaceutical companies and biotechnology companies worldwide. Potential competitors also include academic institutions, government agencies, and other public and private research institutions that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization. Our competitors may develop products that are safer, more effective, have fewer side effects, are more convenient or are less costly than any products that we may develop. Our competitors may also obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours. We believe that our most significant competitors in the area of immunobiotics are a number of pharmaceutical companies that have vaccine programs, including GlaxoSmithKline, Sanofi-Aventis, Wyeth, Merck and Novartis, as well as smaller more focused companies engaged in immunobiotic development, such as VaxGen, Cangene, Human Genome Sciences, Acambis, Avant Immunotherapeutics and Avecia Group.

Any immunobiotic product candidate that we successfully develop and commercialize is likely to compete with currently marketed products, such as vaccines and therapeutics, including antibiotics, and with other product candidates that are in development for the same indications. In many cases, the currently marketed products have well known brand names, are distributed by large pharmaceutical companies

with substantial resources and have achieved widespread acceptance among physicians and patients. In addition, we are aware of product candidates of third parties that are in development, which, if approved, would compete against product candidates for which we receive marketing approval.

Although BioThrax is the only anthrax vaccine approved by the FDA for the prevention of anthrax infection, we face significant competition for the supply of this vaccine to the U.S. government. We believe our most significant competitor for the supply of BioThrax to the U.S. government is VaxGen. HHS has awarded VaxGen a contract to supply 75 million doses of recombinant protective antigen vaccine for the strategic national stockpile.

We also face significant competition for our biodefense immunobiotic product candidates. HHS has awarded strategic national stockpile supply contracts to Cangene for an anthrax immune globulin and Human Genome Sciences for a monoclonal antibody to *Bacillus anthracis* as a post-exposure therapeutic for anthrax infection. Several companies have botulinum vaccines in early clinical or preclinical development. HHS has awarded Cangene a contract to develop a heptavalent botulinum immune globulin derived from equine plasma and supply a botulinum immune globulin for the strategic national stockpile.

One oral typhoid vaccine and one injectable typhoid vaccine are currently approved and administered in the United States and Europe. Numerous companies have vaccine candidates in development that would compete with any of our commercial immunobiotic product candidates for which we obtain marketing approval.

Many of our competitors have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring products, product candidates and technologies complementary to, or necessary for, our programs or advantageous to our business.

Legislation and contractual provisions limiting or restricting liability of manufacturers, such as us, may not be adequate to protect us from all liabilities associated with the manufacture, sale and use of our products.

Provisions of our BioThrax contracts with the DoD and HHS and federal legislation enacted to protect manufacturers of biodefense and anti-terrorism countermeasures may limit our potential liability related to the manufacture, sale and use of BioThrax and our biodefense product candidates. However, these contractual provisions and legislation may not fully protect us from all related liabilities.

The Public Readiness and Emergency Preparedness Act, which was signed into law in December 2005, creates general immunity for manufacturers of biodefense countermeasures, including security countermeasures, when the Secretary of HHS issues a declaration for their manufacture, administration or use. The declaration is meant to provide general immunity from all claims under state or federal law for loss arising out of the administration or use of a covered countermeasure. Manufacturers are not entitled to this protection in cases of willful misconduct.

Upon a declaration by the Secretary, a compensation fund is created to provide “timely, uniform, and adequate compensation to eligible individuals for covered injuries directly caused by the administration or use of a covered countermeasure.” The “covered injuries” to which the program applies are defined as serious physical injuries or death. Individuals are permitted to bring a willful misconduct action against a

manufacturer only after they have exhausted their remedies under the compensation program. However, a willful misconduct action could be brought against us if any individuals exhausted their remedies under the compensation program and thereby expose us to liability. Although we may petition the Secretary to make such a declaration with respect to anthrax generally and BioThrax specifically, we do not know if any such petition would be successful or that, if successful, the Act will provide adequate coverage or survive anticipated legal challenges to its validity.

In August 2006, the Department of Homeland Security approved our application under the Safety Act enacted by the U.S. Congress in 2002 for liability protection for sales of BioThrax. The Safety Act creates product liability limitations for qualifying anti-terrorism technologies for claims arising from or related to an act of terrorism. In addition, the Safety Act provides a process by which an anti-terrorism technology may be certified as an "approved product" by the Department of Homeland Security and therefore entitled to a rebuttable presumption that the government contractor defense applies to sales of the product. The government contractor defense, under specified circumstances, extends the sovereign immunity of the United States to government contractors who manufacture a product for the government. Specifically, for the government contractor defense to apply, the government must approve reasonably precise specifications, the product must conform to those specifications and the supplier must warn the government about known dangers arising from the use of the product. Although we are entitled to the benefits of the Safety Act, it may not provide adequate protection from any claims made against us.

In addition, although our existing contracts with the DoD and HHS provide that the government will indemnify us for any damages resulting from product liability claims, we cannot be certain that we will be able to continue to negotiate similar rights in future contracts or that the U.S. government will honor this obligation. For example, although we have notified the DoD of the lawsuits filed against us by current and former members of the U.S. military claiming damages as the result of personal injuries allegedly suffered from vaccination with BioThrax, the DoD has not yet acted on our claim for indemnification pending resolution of our claims under our product liability insurance.

In addition, members of Congress have proposed and may in the future propose legislation that reduces or eliminates these and other liability protections for manufacturers of biodefense countermeasures.

Product liability lawsuits could cause us to incur substantial liabilities and require us to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the sale of BioThrax and any other products that we successfully develop and the testing of our product candidates in clinical trials. We currently are a defendant in three federal lawsuits filed on behalf of three individuals vaccinated with BioThrax by the U.S. Army that claim damages resulting from personal injuries allegedly suffered because of the vaccination. The plaintiff in each of these three lawsuits claims different injuries and seeks varying amounts of damages. The first plaintiff alleges that the vaccine caused erosive rheumatoid arthritis and requests damages in excess of $1 million. The second plaintiff alleges that the vaccine caused Bell's palsy and other related conditions and requests damages in excess of $75,000. The third plaintiff alleges that the vaccine caused a condition that originally was diagnosed as encephalitis related to a gastrointestinal infection and caused him to fall into a coma for many weeks and requests damages in excess of $10 million.

If we cannot successfully defend ourselves against claims that our product or product candidates caused injuries and we are not entitled to indemnity by the U.S. government, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or products that we may develop;
- injury to our reputation;
- withdrawal of clinical trial participants;
- withdrawal of a product from the market;
- costs to defend the related litigation;
- substantial monetary awards to trial participants or patients;
- loss of revenue; and
- the inability to commercialize any products that we may develop.

We have product liability insurance for coverage up to a $10 million annual aggregate limit with a deductible of $75,000 per claim. The amount of insurance that we currently hold may not be adequate to cover all liabilities that may occur. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost and we may not be able to obtain insurance coverage that will be adequate to satisfy any liability that may arise. For example, from 2002 through February 2006, we were unable to obtain product liability insurance for sales of BioThrax on commercially reasonable terms. We do not believe that the amount of insurance we have been able to obtain for BioThrax is sufficient to manage the risk associated with the potential deployment of BioThrax as a countermeasure to bioterrorism threats. We rely on contractual indemnification provisions and statutory protections to limit our liability for BioThrax.

If we are unable to obtain adequate reimbursement from governments or third party payors for any products that we may develop or to obtain acceptable prices for those products, our revenues will suffer.

Our revenues and profits from any products that we successfully develop, other than with respect to sales of our biodefense products under government contracts, will depend heavily upon the availability of adequate reimbursement for the use of such products from governmental and other third party payors, both in the United States and in other markets. Reimbursement by a third party payor may depend upon a number of factors, including the third party payor's determination that use of a product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Obtaining a determination that a product is covered is a time-consuming and costly process that could require us to provide supporting scientific, clinical and cost-effectiveness data for the use of our products to each payor. We may not be able to provide data sufficient to gain coverage. Even when a payor determines that a product is covered, the payor may impose limitations that preclude payment for some

uses that are approved by the FDA or comparable authorities but are determined by the payor to not be medically reasonable and necessary. Moreover, eligibility for coverage does not imply that any product will be covered in all cases or that reimbursement will be available at a rate that permits the health care provider to cover its costs of using the product. We expect that the success of some of our commercial vaccine candidates for which we obtain marketing approval will depend on inclusion of those product candidates in government immunization programs.

Most non-pediatric commercial vaccines are purchased and paid for, or reimbursed by, managed care organizations, other private health plans or public insurers or paid for directly by patients. In the United States, pediatric vaccines are funded by a variety of federal entitlements and grants, as well as state appropriations. Foreign governments also commonly fund pediatric vaccination programs through national health programs. In addition, with respect to some diseases affecting the public health generally, particularly in developing countries, public health authorities or nongovernmental, charitable or philanthropic organizations fund the cost of vaccines.

Federal legislation, enacted in December 2003, has altered the way in which physician-administered drugs and biologics covered by Medicare are reimbursed. Under the new reimbursement methodology, physicians are reimbursed based on a product's "average sales price." This new reimbursement methodology has generally led to lower reimbursement levels. The new federal legislation also has added an outpatient prescription drug benefit to Medicare, which went into effect January 2006. These benefits will be provided primarily through private entities, which we expect will attempt to negotiate price concessions from pharmaceutical manufacturers.

Any products we may develop may also be eligible for reimbursement under Medicaid. If the state-specific Medicaid programs do not provide adequate coverage and reimbursement for any products we may develop, it may have a negative impact on our operations.

The scope of coverage and payment policies varies among third party private payors, including indemnity insurers, employer group health insurance programs and managed care plans. These third party carriers may base their coverage and reimbursement on the coverage and reimbursement rate paid by carriers for Medicare beneficiaries. Furthermore, many such payors are investigating or implementing methods for reducing health care costs, such as the establishment of capitated or prospective payment systems. Cost containment pressures have led to an increased emphasis on the use of cost-effective products by health care providers. If third party payors do not provide adequate coverage or reimbursement for any products we may develop, it could have a negative effect on revenues and results of operations.

Foreign governments tend to impose strict price controls, which may adversely affect our revenues.

In some foreign countries, particularly the countries of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be adversely affected.

Legislation has been introduced into Congress that, if enacted, would permit more widespread re-importation of drugs from foreign countries into the United States, which may include re-importation from foreign countries where the drugs are sold at lower prices than in the United States. Such

legislation, or similar regulatory changes, could decrease the price we receive for any approved products which, in turn, could adversely affect our operating results and our overall financial condition.

If we fail to attract and keep senior management and key scientific personnel, we may be unable to successfully sustain or expand our BioThrax operations or develop or commercialize our product candidates.

Our success depends on our continued ability to attract, retain and motivate highly qualified managerial and key scientific personnel. We consider Fuad El-Hibri, our president, chief executive officer and chairman of our board of directors, Steven N. Chatfield, our chief scientific officer and president of Emergent Product Development UK Limited, Edward J. Arcuri, our executive vice president and chief operating officer, and Robert G. Kramer, president and chief executive officer of BioPort, to be key to our BioThrax operations and our efforts to develop and commercialize our product candidates. All of these key employees, other than Dr. Chatfield, are at will employees and can terminate their employment at any time. Our employment agreement with Dr. Chatfield is terminable by him on short notice. We do not maintain “key person” insurance on any of our employees.

In addition, our growth will require us to hire a significant number of qualified scientific and commercial personnel, including clinical development, regulatory, marketing and sales executives and field sales personnel, as well as additional administrative personnel. There is intense competition from other companies and research and academic institutions for qualified personnel in the areas of our activities. If we cannot continue to attract and retain, on acceptable terms, the qualified personnel necessary for the continued development of our business, we may not be able to sustain our operations or grow.

Additional risks related to sales of biodefense products to the U.S. government

Our business could be adversely affected by a negative audit by the U.S. government.

U.S. government agencies such as the Defense Contract Audit Agency, or the DCAA, routinely audit and investigate government contractors. These agencies review a contractor’s performance under its contracts, cost structure and compliance with applicable laws, regulations and standards. The DCAA also reviews the adequacy of, and a contractor’s compliance with, its internal control systems and policies, including the contractor’s purchasing, property, estimating, compensation and management information systems. Any costs found to be improperly allocated to a specific contract will not be reimbursed, while such costs already reimbursed must be refunded. If an audit uncovers improper or illegal activities, we may be subject to civil and criminal penalties and administrative sanctions, including:

- termination of contracts;
- forfeiture of profits;
- suspension of payments;
- fines; and
- suspension or prohibition from doing business with the U.S. government.

In addition, we could suffer serious reputational harm if allegations of impropriety were made against us.

Laws and regulations affecting government contracts make it more costly and difficult for us to successfully conduct our business.

We must comply with numerous laws and regulations relating to the formation, administration and performance of government contracts, which can make it more difficult for us to retain our rights under these contracts. These laws and regulations affect how we do business with federal, state and local government agencies. Among the most significant government contracting regulations that affect our business are:

- the Federal Acquisition Regulations, and agency-specific regulations supplemental to the Federal Acquisition Regulations, which comprehensively regulate the procurement, formation, administration and performance of government contracts;
- the business ethics and public integrity obligations, which govern conflicts of interest and the hiring of former government employees, restrict the granting of gratuities and funding of lobbying activities and incorporate other requirements such as the Anti-Kickback Act and Foreign Corrupt Practices Act;
- export and import control laws and regulations; and
- laws, regulations and executive orders restricting the use and dissemination of information classified for national security purposes and the exportation of certain products and technical data.

In addition, *qui tam* lawsuits have been brought against us in which the plaintiffs argued that we defrauded the U.S. government by distributing non-compliant doses of BioThrax. This litigation was brought against us under a provision of the False Claims Act that allows a private citizen to file a suit in the name of the U.S. government charging fraud by government contractors and other entities who receive or use government funds and share in any money recovered. Although a federal district court dismissed the litigation, and a federal appeals court subsequently upheld that decision, we spent significant time and money defending the litigation.

The states, many municipalities and foreign governments typically also have laws and regulations governing contracts with their respective agencies. These domestic and foreign laws and regulations affect how we and our customers can do business and, in some instances, impose added costs on our business. Any changes in applicable laws and regulations could restrict our ability to maintain our existing contracts and obtain new contracts, which could limit our ability to conduct our business and materially adversely affect our revenues and results of operations.

We rely on property and equipment owned by the Department of Defense in the manufacturing process for BioThrax.

Our BioThrax supply contract with the DoD grants us the right to use property and equipment owned by the DoD in the manufacture of BioThrax. This property and equipment, referred to as government furnished equipment, is in service at our Lansing site. Some of this government furnished equipment is important to our business. We pay the DoD a small usage fee for the government furnished equipment based on the number of doses of BioThrax that we produce for sale to customers other than the U.S. government. We have the option to purchase all or part of the government furnished equipment at any time during the contract period for approximately $21 million. If the DOD modifies the terms under which we use the government furnished equipment in a manner unfavorable to us, including raising the usage fee, our business could be harmed. If DoD terminated our contract, we could be required to rent or purchase all or a part of the government furnished equipment to continue production of BioThrax in our current facility.

Risks related to regulatory approvals

If we are not able to obtain required regulatory approvals, we will not be able to commercialize our product candidates, and our ability to generate revenue will be materially impaired.

Our product candidates and the activities associated with their development and commercialization, including their testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in other countries. Failure to obtain regulatory approval for a product candidate will prevent us from commercializing the product candidate. We have only limited experience in preparing, filing and prosecuting the applications necessary to gain regulatory approvals and expect to rely on third party contract research organizations and consultants to assist us in this process. Securing FDA approval requires the submission of extensive preclinical and clinical data, information about product manufacturing processes and inspection of facilities and supporting information to the FDA to establish the product candidate's safety and efficacy. Our future products may not be effective, may be only moderately effective or may prove to have significant side effects, toxicities or other characteristics that may preclude our obtaining regulatory approval or prevent or limit commercial use.

In the United States, BioThrax, our biodefense product candidates and our commercial product candidates are regulated by the FDA as biologics. To obtain approval from the FDA to market these product candidates, other than biodefense products purchased by HHS for the strategic national stockpile, we will be required to submit to the FDA a biologics license application, or BLA. Ordinarily, the FDA requires a sponsor to support a BLA application with substantial evidence of the product's safety and effectiveness in treating the targeted indication based on data derived from adequate and well controlled clinical trials, including Phase III safety and efficacy trials conducted in patients with the disease or condition being targeted.

Because humans are rarely exposed to anthrax or botulinum toxins under natural conditions, and cannot be intentionally exposed, statistically significant effectiveness of our biodefense product candidates cannot be demonstrated in humans, but instead must be demonstrated, in part, by utilizing animal models before they can be approved for marketing. We believe that, according to the FDA's current BLA requirements for biologics that cannot be ethically or feasibly tested in humans in Phase III efficacy trials, we may instead be able to obtain BLA approval based on clinical data from Phase II and Phase III trials in healthy subjects that demonstrate adequate safety and immune response and effectiveness data from studies in animals. Specifically, we intend to pursue FDA approval of our immune globulin candidates and our recombinant bivalent botulinum vaccine candidate under the FDA animal rule. Under the animal rule, if human efficacy trials are not ethical or feasible, the FDA can approve drugs or biologics used to treat or prevent serious or life threatening conditions caused by exposure to lethal or permanently disabling toxic chemical, biological, radiological or nuclear substances based on human clinical data demonstrating safety and immunogenicity and evidence of efficacy from appropriate non-clinical animal studies and any additional supporting data. Products approved under the animal rule are subject to additional regulation not normally required of other products. Additional regulation may include post-marketing study requirements, restrictions imposed on marketing or distribution or requirements to provide information to patients.

Based on an interim analysis of data from an ongoing clinical trial of BioThrax being conducted by the CDC, we have applied to the FDA to reduce the number of required doses of BioThrax for pre-exposure prophylaxis from six to five, with an annual booster dose thereafter. In April 2006, the FDA issued a complete response letter to our application, requesting clarification and requiring additional analysis of the data that we submitted. We are in the process of responding to this letter and amending our

application. If the FDA does not find our response to be adequate, we might be required to conduct additional independent testing to continue to pursue the development of this dosing regimen. Responding to the FDA's complete response letter will delay potential approval of our application. If we are unable ultimately to respond satisfactorily to the FDA, our application will not be approved.

The process of obtaining regulatory approvals is expensive, often takes many years, if approval is obtained at all, and can vary substantially based upon the type, complexity and novelty of the product candidates involved. Changes in the regulatory approval policy during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. The FDA has substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent regulatory approval of a product candidate.

Our products could be subject to restrictions or withdrawal from the market and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

Any immunobiotic product for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such product, will be subject to continual requirements of and review by the FDA and other regulatory bodies, including through inspections of our facilities. As an approved product, BioThrax is subject to these requirements and ongoing review. These requirements include submissions of safety and other post-marketing information and reports, registration requirements, cGMP requirements relating to quality control, quality assurance and corresponding maintenance of records and documents, and recordkeeping. The FDA enforces its cGMP and other requirements through periodic unannounced inspections of manufacturing facilities. The FDA is authorized to inspect manufacturing facilities without a warrant at reasonable times and in a reasonable manner.

After we acquired BioThrax and related vaccine manufacturing facilities in Lansing, Michigan in 1998 from the Michigan Biologic Products Institute, we spent significant amounts of time and money renovating those facilities before the FDA approved a supplement to our manufacturing facility license in December 2001. The State of Michigan had initiated renovations after the FDA issued a notice of intent to revoke the FDA license to manufacture BioThrax in 1997. The notice of intent to revoke cited significant deviations by the Michigan Biologic Products Institute from cGMP requirements, including quality control failures. After approving the renovated Lansing facilities in December 2001, the FDA conducted routine, biannual inspections of the Lansing facilities in September 2002, May 2004 and May 2006. Following each of these inspections, the FDA issued inspectional observations on Form FDA 483. We responded to the FDA regarding the inspectional observations relating to each inspection and, where necessary, implemented corrective action. In December 2005, the FDA stated in its final order on BioThrax that at that time we were in compliance with all regulatory requirements related to the manufacture of BioThrax and that the FDA would continue to evaluate the production of BioThrax to assure compliance with federal standards and regulations. Although we have filed with the FDA our response to the inspectional observations relating to the May 2006 inspection, the FDA may not find our response to be adequate. If the FDA finds that we are not in substantial compliance with cGMP requirements, the FDA may undertake enforcement action against us.

Even if regulatory approval of a product is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, or contain

requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the product. Later discovery of previously unknown problems with our products or manufacturing processes, or failure to comply with regulatory requirements, may result in:

- restrictions on the marketing or manufacturing of a product;
- warning letters;
- withdrawal of the product from the market;
- refusal to approve pending applications or supplements to approved applications;
- voluntary or mandatory product recall;
- fines or disgorgement of profits or revenue;
- suspension or withdrawal of regulatory approvals, including license revocation;
- refusal to permit the import or export of products;
- product seizure; and
- injunctions or the imposition of civil or criminal penalties.

We may not be able to obtain orphan drug exclusivity for our products. If our competitors are able to obtain orphan drug exclusivity for their products that are the same as our products, we may not be able to have competing products approved by the applicable regulatory authority for a significant period of time.

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs and biologics for relatively small patient populations as orphan drugs. Generally, if a product with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the product is entitled to a seven-year period of marketing exclusivity, which precludes the FDA from approving another marketing application for the same drug or biologic for that time period for the same indication. Orphan drug exclusivity in Europe lasts for ten years, but can be reduced to six years if a drug or biologic no longer meets the criteria for orphan drug designation or if the drug or biologic is sufficiently profitable so that market exclusivity is no longer justified. If a competitor obtains orphan drug exclusivity for an indication for a product that competes with one of the indications for one of our product candidates before we obtain orphan drug designation, and if the competitor's product is the same drug as ours, the FDA would be prohibited from approving our product candidate for the same orphan indication unless we demonstrate that our product is clinically superior. None of our products or product candidates have been designated as orphan drugs. Even if we obtain orphan drug exclusivity for one or more indications for one of our product candidates, we may not be able to maintain it. For example, if a competitive product that is the same drug or biologic as our product is shown to be clinically superior to our product, any orphan drug exclusivity we have obtained will not block the approval of that competitive product.

Failure to obtain regulatory approval in international jurisdictions would prevent us from marketing our products abroad.

We intend to have our products marketed outside the United States. To market our products in the European Union and many other foreign jurisdictions, we may need to obtain separate regulatory approvals and comply with numerous and varying regulatory requirements. With respect to some of our

product candidates, we expect that a future collaborator will have responsibility to obtain regulatory approvals outside the United States, and we will depend on our collaborators to obtain these approvals. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ from that required to obtain FDA approval. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval. We may not obtain foreign regulatory approvals on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries or jurisdictions or by the FDA. We and our collaborators may not be able to file for regulatory approvals and may not receive necessary approvals to commercialize our products in any market.

Risks related to our dependence on third parties

We may not be successful in maintaining and establishing collaborations, which could adversely affect our ability to develop and, particularly in international markets, commercialize our product candidates.

For each of our product candidates, we plan to evaluate the merits of retaining commercialization rights for ourselves or entering into collaboration arrangements with leading pharmaceutical or biotechnology companies or non-governmental organizations, such as our collaboration agreement with Sanofi Pasteur for our meningitis B vaccine candidate. We expect that we will selectively pursue collaboration arrangements in situations in which the collaborator has particular expertise or resources for the development or commercialization of our products and product candidates or to access particular markets. If we are unable to reach agreements with suitable collaborators, we may fail to meet our business objectives for the affected product or program. We face, and will continue to face, significant competition in seeking appropriate collaborators. Moreover, collaboration arrangements are complex and time consuming to negotiate, document and implement. We may not be successful in our efforts to establish and implement collaborations or other alternative arrangements. The terms of any collaborations or other arrangements that we establish may not be favorable to us.

Any collaboration that we enter into may not be successful. The success of our collaboration arrangements will depend heavily on the efforts and activities of our collaborators. It is likely that our collaborators will have significant discretion in determining the efforts and resources that they will apply to these collaborations. In particular, the successful development of our meningitis B vaccine candidate will initially depend on the success of our research collaboration with Sanofi Pasteur and whether Sanofi Pasteur selects one or more viable candidates pursuant to the collaboration for development of a product. Thereafter, Sanofi Pasteur will have significant discretion in the development and commercialization of any such candidate. Sanofi Pasteur may choose not to pursue further development and commercialization of any candidate that it selects based on many factors outside our control. Sanofi Pasteur has the ability to suspend development of a candidate under the collaboration in various circumstances. The risks that we are subject to in our current collaborations, and anticipate being subject to in future collaborations, include the following:

- our collaboration agreements are likely to be for fixed terms and subject to termination by our collaborators in the event of a material breach by us;
- our collaborators may have the first right to maintain or defend our intellectual property rights and, although we would have the right to assume the maintenance and defense of our intellectual property rights if our collaborators do not do so, our ability to maintain and defend our intellectual property rights may be compromised by our collaborators' acts or omissions; and

- our collaborators may utilize our intellectual property rights in such a way as to invite litigation that could jeopardize or invalidate our intellectual property rights or expose us to potential liability.

Collaborations with pharmaceutical companies and other third parties often are terminated or allowed to expire by the other party. For example, Sanofi Pasteur has the right to terminate our meningitis B vaccine collaboration at any time after April 1, 2007 upon six months' prior written notice. Sanofi Pasteur can also terminate the collaboration upon a change of control or insolvency event involving us or upon our uncured material breach. Those terminations or expirations would adversely affect us financially and could harm our business reputation.

If third parties on whom we rely for clinical trials do not perform as contractually required or as we expect, we may not be able to obtain regulatory approval for or commercialize our product candidates, and our business may suffer.

We do not have the ability to independently conduct the clinical trials required to obtain regulatory approval for our products. We depend on independent clinical investigators, contract research organizations and other third party service providers to conduct the clinical trials of our product candidates and expect to continue to do so.

We rely heavily on these third parties for successful execution of our clinical trials, but do not exercise day-to-day control over their activities. We are responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with standards, commonly referred to as Good Clinical Practices, for conducting and recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements. Third parties may not complete activities on schedule, or may not conduct our clinical trials in accordance with regulatory requirements or our stated protocols. The failure of these third parties to carry out their obligations could delay or prevent the development, approval and commercialization of our product candidates.

In addition, we encourage government entities and non-government organizations to conduct studies of, and pursue other development efforts for, our product candidates. For example, the CDC is currently conducting an independent clinical trial to evaluate the administration of BioThrax in a regimen of fewer doses. We participate in monthly meetings with the trial investigators and in the annual review meeting for this trial and provide input to the CDC for responses to FDA questions and requests for additional information. We expect to rely on data from these development efforts in seeking marketing approval for our product candidates. For example, our BLA supplement for a label expansion of BioThrax for a regimen of fewer doses is based on the interim trial report provided to us by the CDC from its ongoing clinical trial. However, these government entities and non-government organizations have no obligation or commitment to us to conduct or complete any of these studies or clinical trials and may choose to discontinue these development efforts at any time. In addition, government entities depend on annual Congressional appropriations to fund these development efforts. In prior years, there has been some uncertainty whether Congress would choose to fund the CDC trial. Although the trial has been funded to date, Congress may not continue to fund the trial.

Risks related to our intellectual property

We may fail to protect our intellectual property rights, which would harm our business.

Our success, particularly with respect to our commercial business, will depend in large part on our ability to obtain and maintain protection in the United States and other countries for the intellectual property covering or incorporated into our technology and products. The patent situation in the field of immunobiotics and other pharmaceuticals generally is highly uncertain and involves complex legal and scientific questions. We may not be able to obtain additional issued patents relating to our technology or products. Even if issued, patents may be challenged, narrowed, invalidated or circumvented, which could limit our ability to stop competitors from marketing similar products or limit the length of term of patent protection we may have for our products. Changes in patent laws or administrative patent office rules or changes in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection.

Our patents also may not afford us protection against competitors with similar technology. Because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in the scientific literature often lag behind actual discoveries, neither we nor our licensors can be certain that we or they were the first to make the inventions claimed in issued patents or pending patent applications, or that we or they were the first to file for protection of the inventions set forth in these patent applications. In addition, patents generally expire, regardless of their date of issue, 20 years from the earliest claimed non-provisional filing date. As a result, the time required to obtain regulatory approval for a product candidate may consume part or all of the patent term. We are not able to accurately predict the remaining length of the applicable patent term following regulatory approval of any of our product candidates.

Our collaborators and licensors may not adequately protect our intellectual property rights. These third parties may have the first right to maintain or defend our intellectual property rights and, although we would have the right to assume the maintenance and defense of our intellectual property rights if these third parties do not do so, our ability to maintain and defend our intellectual property rights may be compromised by the acts or omissions of these third parties. Under our collaboration agreement with Sanofi Pasteur for our meningitis B vaccine candidate, we have the right to prosecute and maintain our patent rights under the collaboration agreement. Sanofi Pasteur is responsible for prosecuting and maintaining joint patent rights under the collaboration agreement, although we have the right to support the continued prosecution or maintenance of the joint patent rights if Sanofi Pasteur fails to do so. In addition, Sanofi Pasteur has the first right to pursue claims against third parties for infringement of the patent rights under the collaboration agreement and assume the defense of any infringement claims that may arise, although we have the right to pursue infringement claims against third parties and assume the defense of infringement claims if Sanofi Pasteur fails to do so. Under our licenses with HPA relating to our recombinant bivalent botulinum vaccine candidate and the botulinum toxoid vaccine that we plan to use as the basis for our botulinum immune globulin candidate, HPA is responsible for prosecuting and maintaining patent rights, although we have the right to support the continued prosecution or maintenance of the patent rights if HPA fails to do so. In addition, we have the first right to pursue claims against third parties for infringement of the patent rights and assume the defense of any infringement claims that may arise.

If we fail to comply with our obligations in our intellectual property licenses with third parties, we could lose license rights that are important to our business.

We are a party to a number of license agreements. We consider our licenses with HPA relating to our recombinant bivalent botulinum vaccine candidate and the botulinum toxoid vaccine that we plan to use as the basis for our botulinum immune globulin candidate to be material to our business. Under these license agreements, we obtained the exclusive, worldwide right to develop, manufacture and commercialize pharmaceutical products that consist of botulinum toxoid components or recombinant botulinum toxin components for the prevention or treatment of illness in humans caused by exposure to the botulinum toxin, subject to HPA's non-exclusive right to make, use or sell recombinant botulinum products to meet public health requirements in the United Kingdom. We expect to enter into additional licenses in the future. Our existing licenses impose, and we expect future licenses will impose, various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, the licensor may have the right to terminate the license, in which event we might not be able to market any product that is covered by the licensed patents.

If we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.

In addition to patented technology, we rely upon unpatented proprietary technology, processes and know-how, particularly as to our proprietary manufacturing processes. Because we do not have patent protection for BioThrax, the label expansions and improvements that we are pursuing for BioThrax or our anthrax immune globulin candidate, our only intellectual property protection for BioThrax and our anthrax immune globulin candidate is confidentiality regarding our manufacturing capability and specialty know-how, such as techniques, processes and biological starting materials. However, these types of trade secrets can be difficult to protect. We seek to protect this confidential information, in part, with agreements with our employees, consultants and third parties. These agreements may be breached, and we may not have adequate remedies for any such breach. In addition, our trade secrets may otherwise become known or be independently developed by competitors. If we are unable to protect the confidentiality of our proprietary information and know-how, competitors may be able to use this information to develop products that compete with our products, which could adversely impact our business.

If we infringe or are alleged to infringe intellectual property rights of third parties, it will adversely affect our business.

Our development and commercialization activities, as well as any product candidates or products resulting from these activities, may infringe or be claimed to infringe patents or patent applications under which we do not hold licenses or other rights. Third parties may own or control these patents and patent applications in the United States and abroad. These third parties could bring claims against us or our collaborators that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages. Further, if a patent infringement suit were brought against us or our collaborators, we or they could be forced to stop or delay development, manufacturing or sales of the product or product candidate that is the subject of the suit.

As a result of patent infringement claims, or to avoid potential claims, we or our collaborators may choose or be required to seek a license from the third party and be required to pay license fees or royalties or both. These licenses may not be available on acceptable terms, or at all. Even if we or our collaborators were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be prevented from

commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we or our collaborators are unable to enter into licenses on acceptable terms. This could harm our business significantly.

There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the biotechnology and pharmaceutical industries. In addition to infringement claims against us, we may become a party to other patent litigation and other proceedings, including interference and reexamination proceedings declared by the United States Patent and Trademark Office and opposition proceedings in the European Patent Office, regarding intellectual property rights with respect to our products and technology. We may also become a party to trademark invalidation and interference proceedings in foreign trademark offices. The cost to us of any patent litigation or other proceeding, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Patent litigation and other proceedings may also absorb significant management time.

Risks related to our acquisition strategy

Our strategy of generating growth through acquisitions may not be successful.

We have pursued an acquisition strategy since our inception to build our business of developing, manufacturing and commercializing immunobiotics. We commenced operations in September 1998 through an acquisition of rights to BioThrax, vaccine manufacturing facilities at a multi-building campus on approximately 12.5 acres in Lansing, Michigan and vaccine development and production know-how from the Michigan Biologic Products Institute. We acquired our pipeline of commercial vaccine candidates through our acquisition of Microscience in 2005 and our acquisition of substantially all of the assets of Antex in 2003.

In the future, we may be unable to license or acquire suitable products or product candidates from third parties for a number of reasons. In particular, the licensing and acquisition of pharmaceutical and biological products is a competitive area. A number of more established companies are also pursuing strategies to license or acquire products in the immunobiotics field. These established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities. Other factors that may prevent us from licensing or otherwise acquiring suitable products and product candidates include the following:

- we may be unable to license or acquire the relevant technology on terms that would allow us to make an appropriate return on the product;
- companies that perceive us to be their competitor may be unwilling to assign or license their product rights to us; or
- we may be unable to identify suitable products or product candidates within our areas of expertise.

In addition, we expect competition for acquisition candidates in the immunobiotic field to increase, which may mean fewer suitable acquisition opportunities for us as well as higher acquisition prices. If we are unable to successfully obtain rights to suitable products and product candidates, our business, financial condition and prospects for growth could suffer.

If we fail to successfully manage any acquisitions, our ability to develop our product candidates and expand our product candidate pipeline may be harmed.

As part of our business strategy, we intend to continue to seek to obtain marketed products and development stage product candidates through acquisitions and licensing arrangements with third parties. The failure to adequately address the financial, operational or legal risks of these transactions could harm our business. Financial aspects of these transactions that could alter our financial position, reported operating results or stock price include:

- use of cash resources;
- higher than anticipated acquisition costs and expenses;
- potentially dilutive issuances of equity securities;
- the incurrence of debt and contingent liabilities, impairment losses or restructuring charges;
- large write-offs and difficulties in assessing the relative percentages of in-process research and development expense that can be immediately written off as compared to the amount that must be amortized over the appropriate life of the asset; and
- amortization expenses related to other intangible assets.

Operational risks that could harm our existing operations or prevent realization of anticipated benefits from these transactions include:

- challenges associated with managing an increasingly diversified business;
- disruption of our ongoing business;
- difficulty and expense in assimilating the operations, products, technology, information systems or personnel of the acquired company;
- diversion of management's time and attention from other business concerns;
- inability to maintain uniform standards, controls, procedures and policies;
- the assumption of known and unknown liabilities of the acquired company, including intellectual property claims; and
- subsequent loss of key personnel.

If we are unable to successfully manage our acquisitions, our ability to develop new products and continue to expand our product pipeline may be limited.

Risks related to the offering

Fuad El-Hibri, our president, chief executive officer and chairman of our board of directors, will continue to have substantial control over us after this offering, including through his ability to control the election of the members of our board of directors, and could delay or prevent a change of control.

Even after this offering, Mr. El-Hibri will be able to control the election of the members of our board of directors through his ownership interests and voting arrangements among our significant stockholders. Immediately prior to this offering, Mr. El-Hibri was the beneficial owner of 99.6% of our outstanding

common stock. Immediately following this offering, Mr. El-Hibri will be the beneficial owner of % of our outstanding common stock, or % of our outstanding common stock if the underwriters exercise their over-allotment option in full.

Because Mr. El-Hibri will be able to control the election of the members of our board, and because of his substantial control of our capital stock, Mr. El-Hibri will likely have the ability to delay or prevent a change of control of our company that may be favored by other directors or stockholders and otherwise exercise substantial control over all corporate actions requiring board or stockholder approval, including any amendment of our certificate of incorporation or by-laws. The control by Mr. El-Hibri may prevent other stockholders from influencing significant corporate decisions and may result in conflicts of interest that could cause our stock price to decline.

Provisions in our corporate charter documents and under Delaware law may prevent or frustrate attempts by our stockholders to change our management and hinder efforts to acquire a controlling interest in us.

Provisions of our certificate of incorporation and by-laws may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions include:

- the classification of our directors;
- limitations on changing the number of directors then in office;
- limitations on the removal of directors;
- limitations on filling vacancies on the board;
- limitations on the removal and appointment of the chairman of our board of directors;
- following the second anniversary of the completion of this offering, advance notice requirements for stockholder nominations for election of directors and other proposals;
- the inability of stockholders to act by written consent;
- the inability of stockholders to call special meetings; and
- the ability of our board of directors to designate the terms of and issue new series of preferred stock without stockholder approval.

Until the second anniversary of the completion of this offering, the affirmative vote of holders of our capital stock representing a majority of the voting power of all outstanding stock entitled to vote is required to amend or repeal the above provisions of our certificate of incorporation. Following the second anniversary of the completion of this offering, the affirmative vote of holders of our capital stock representing at least 75% of the voting power of all outstanding stock entitled to vote is required to amend or repeal the above provisions of our certificate of incorporation. Until the second anniversary of the completion of this offering, the affirmative vote of either at least 75% of the directors then in office or holders of our capital stock representing a majority of the voting power of all outstanding stock entitled to vote is required to amend or repeal our by-laws. Following the second anniversary of the completion of this offering, the affirmative vote of either a majority of the directors present at a meeting of our board of directors or holders of our capital stock representing at least 75% of the voting power of all outstanding stock entitled to vote is required to amend or repeal or by-laws.

In addition, Section 203 of the General Corporation Law of Delaware prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns or within the last three years has owned 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. Accordingly, Section 203 may discourage, delay or prevent a change in control of our company.

Our stockholder rights plan could prevent a change in control of our company in instances in which some stockholders may believe a change in control is in their best interests.

In connection with this offering, we will enter into a rights agreement that establishes our stockholder rights plan. Under the rights agreement, we will issue to our stockholders one preferred stock purchase right for each outstanding share of our common stock. Each right, when exercisable, will entitle its holder to purchase from us a unit consisting of one one-thousandth of a share of series A junior participating preferred stock at a purchase price to be determined by our board of directors at the same time the initial public offering price of our common stock is determined. Our stockholder rights plan is intended to protect stockholders in the event of an unfair or coercive offer to acquire our company and to provide our board of directors with adequate time to evaluate unsolicited offers. The rights plan may have anti-takeover effects. The rights plan will cause substantial dilution to a person or group that attempts to acquire us on terms that our board of directors does not believe are in our best interests and those of our stockholders and may discourage, delay or prevent a merger or acquisition that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares.

If you purchase shares of our common stock in this offering, you will suffer immediate and substantial dilution of your investment.

The initial public offering price of our common stock is substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, your interest will be diluted immediately to the extent of the difference between the initial public offering price per share of our common stock and the net tangible book value per share of our common stock after this offering. Based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, investors in this offering will incur immediate dilution of $ per share. To the extent outstanding options are exercised, you will incur further dilution. In addition, based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, investors in this offering will have contributed approximately % of the total consideration paid by all purchasers of our common stock but will own only approximately % of our common stock outstanding after this offering. See “Dilution.”

An active trading market for our common stock may not develop.

Prior to this offering, there has been no public market for our common stock. The initial public offering price for our common stock was determined through negotiations with the underwriters. Although we have applied to have our common stock listed on The NASDAQ Global Market, an active trading market for our shares may never develop or be sustained following this offering. If an active market for our common stock does not develop, it may be difficult to sell shares you purchase in this offering without depressing the market price for the shares or at all.

If our stock price is volatile, purchasers of our common stock could incur substantial losses.

Our stock price is likely to be volatile. The stock market in general and the market for biotechnology companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the initial public offering price. The market price for our common stock may be influenced by many factors, including:

- the success of competitive products or technologies;
- results of clinical trials of our product candidates or those of our competitors;
- decisions and procurement policies by the U.S. government affecting BioThrax and our biodefense product candidates;
- regulatory developments in the United States and foreign countries;
- developments or disputes concerning patents or other proprietary rights;
- the recruitment or departure of key personnel;
- variations in our financial results or those of companies that are perceived to be similar to us;
- market conditions in the pharmaceutical and biotechnology sectors and issuance of new or changed securities analysts' reports or recommendations;
- general economic, industry and market conditions; and
- the other factors described in this "Risk factors" section.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our product candidates. Pending their use, we may invest our net proceeds from this offering in a manner that does not produce income or that loses value.

We do not anticipate paying any cash dividends in the foreseeable future.

We currently intend to retain our future earnings, if any, to fund the development and growth of our business. Any future debt agreements that we enter into may limit our ability to pay dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market

price of our common stock. Upon the completion of this offering, we will have outstanding shares of common stock, after giving effect to the issuance of shares of common stock in this offering and assuming no exercise of options outstanding as of August 31, 2006. Of the shares to be outstanding after the completion of this offering, the shares of common stock sold in this offering will be freely tradable without restriction under the Securities Act unless purchased by our "affiliates," as that term is defined in Rule 144 under the Securities Act. The remaining shares of our common stock are "restricted securities" under Rule 144. Substantially all of these restricted securities will be subject to the 180-day lock-up period described below. After the 180-day lock-up period, these restricted securities may be sold in the public market only if registered or if they qualify for an exemption from registration under Rule 144 or 701 under the Securities Act.

We expect that the holders of substantially all of our currently outstanding capital stock will agree that, without the prior written consent of J.P. Morgan Securities Inc., they will not, during the period ending 180 days after the date of this prospectus, subject to exceptions specified in the lock-up agreements, offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock or enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of our common stock. Further, these holders have agreed that, during this period, they will not make any demand for, or exercise any right with respect to, the registration of our common stock or any security convertible into or exercisable or exchangeable for our common stock. The 180-day lock-up period may be extended under specified circumstances. The lock-up restrictions, specified exceptions and the circumstances under which the 180-day lock-up period may be extended are described in more detail under "Underwriting."

Upon expiration of the 180-day lock-up period, 7,782,016 shares of our common stock outstanding as of August 31, 2006, representing approximately % of our common stock outstanding after this offering, will be eligible for sale under Rule 144. In general, shares eligible for sale under Rule 144 are subject to volume limitations. However, within 180 days after the date of this prospectus, 30,015 shares of our common stock outstanding as of August 31, 2006 will be eligible for sale under Rule 144(k) without regard to volume limitations. Mr. El-Hibri has the power to dispose of or direct the disposition of 5,108,718 shares of our common stock outstanding as of August 31, 2006, representing approximately % of our common stock outstanding after this offering. These shares are eligible for sale under Rule 144, subject to volume limitations.

Moreover, after this offering, holders of an aggregate of 7,752,001 shares of our common stock outstanding as of August 31, 2006 will have the right to require us to register these shares of common stock under specified circumstances.

In addition, of the 1,061,679 shares of our common stock that may be issued upon the exercise of options outstanding as of August 31, 2006, approximately shares will be vested and eligible for sale within 180 days after the date of this prospectus, subject to any lock-up agreements applicable to these shares. Promptly following this offering, we intend to file a registration statement on Form S-8 registering the sale of up to 2,678,985 shares of common stock subject to outstanding options and options and other awards issuable pursuant to our equity incentive plans. Shares registered under this registration statement on Form S-8 will be available for sale in the open market, subject to Rule 144 volume limitations applicable to affiliates, and subject to any vesting restrictions and lock-up agreements applicable to these shares.

For a further description of the eligibility of shares for sale into the public market following this offering, see "Shares eligible for future sale."

Special note regarding forward-looking statements

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this prospectus regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management are forward-looking statements. The words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “will,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements include, among other things, statements about:

- our performance under existing BioThrax sales contracts with HHS and DoD, including the timing of deliveries under these contracts;
- our plans for future sales of BioThrax;
- our plans to pursue label expansions and improvements for BioThrax;
- our plans to expand our manufacturing facilities and capabilities;
- the rate and degree of market acceptance and clinical utility of our products;
- our ongoing and planned development programs, preclinical studies and clinical trials;
- our ability to identify and acquire or in license products and product candidates that satisfy our selection criteria;
- the potential benefits of our existing collaboration agreements and our ability to enter into selective additional collaboration arrangements;
- the timing of and our ability to obtain and maintain regulatory approvals for our product candidates;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our intellectual property portfolio; and
- our estimates regarding expenses, future revenues, capital requirements and needs for additional financing.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this prospectus, particularly in the “Risk factors” section, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements.

Use of proceeds

We estimate that the net proceeds to us from this offering will be approximately $ million, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and offering expenses payable by us. A $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) our net proceeds from this offering by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions. We will not receive any proceeds from the sale of shares of common stock by the selling stockholders as a result of the exercise by the underwriters of their over-allotment option.

We currently estimate that we will use:

- approximately $10 million to $15 million of these net proceeds to fund development of our biodefense product candidates, principally for BioThrax label expansions and improvements and animal efficacy trials and clinical development of our anthrax immune globulin and botulinum immune globulin candidates;
- approximately $15 million to $20 million of these net proceeds to fund development of our commercial product candidates, principally for clinical development of our typhoid and hepatitis B therapeutic vaccine candidates;
- approximately $15 million to $20 million of these net proceeds to fund a portion of the construction costs of our new manufacturing facility in Lansing, Michigan; and
- the balance of these net proceeds for general corporate purposes, which may include the build out of our manufacturing facilities in Frederick, Maryland, the expansion of our sales and marketing organization, the acquisition or in license of technologies, products or businesses, working capital and capital expenditures.

This expected use of proceeds from this offering represents our intentions based upon our current plans and business conditions. The amounts and timing of our actual expenditures may vary significantly depending upon numerous factors, including the progress of our development and commercialization efforts, the progress of our clinical trials and our operating costs and capital expenditures, including the timing of, and the costs involved in, constructing our new manufacturing facility in Lansing, Michigan and the build out of our manufacturing facilities in Frederick, Maryland. As a result, we will retain broad discretion in the allocation of the net proceeds from this offering. We have no current understandings, commitments or agreements to acquire or in license any technologies, products or businesses.

We do not expect that our existing cash and cash equivalents, committed sources of funds and net proceeds from this offering alone will be sufficient to enable us to fund the completion of the development of all of our product candidates or all of the construction costs of our new manufacturing facility in Lansing. We expect to continue to fund a significant portion of our development and commercialization costs with internally generated funds from sales of BioThrax. Accordingly, our need for additional external sources of funds for these purposes will depend significantly on the level and timing of our sales of this product. Our business plan also contemplates that we will raise $10 million to $20 million of additional external debt financing to fund the Lansing facility construction and to provide additional financial flexibility. If we do not obtain this additional debt financing, we may need to reduce spending for other purposes in order to complete this construction project.

Pending use of the proceeds from this offering, we intend to invest the proceeds in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing instruments.

Dividend policy

We currently intend to retain all of our future earnings to finance the growth and development of our business. We do not intend to pay cash dividends to our stockholders in the foreseeable future.

On June 15, 2005, our board of directors declared a special cash dividend to the holders of our outstanding shares of common stock in an aggregate amount of approximately $5.4 million. Our board of directors declared this special dividend in order to distribute the net proceeds of a payment that we received as a result of the settlement of litigation that we initiated against Elan Pharmaceuticals, Inc., Athena Neurosciences, Inc. and Solstice Neurosciences, Inc. We paid the special cash dividend on July 13, 2005 to stockholders of record as of June 15, 2005. Prior to this special cash dividend, we had never declared or paid any cash dividends on our common stock.

Capitalization

The following table sets forth our capitalization as of June 30, 2006:

- on an actual basis; and
- on an as adjusted basis to give effect to:
  - the reclassification of our class A common stock, $0.01 par value per share, as common stock, $0.001 par value per share, and the conversion of each outstanding share of our class B common stock into one share of common stock prior to the completion of this offering; and
  - the sale of shares of common stock that we are offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and offering expenses payable by us.

Our capitalization following this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this table together with our financial statements and the related notes appearing at the end of this prospectus and the "Management's discussion and analysis of financial condition and results of operations" section of this prospectus.

	As of June 30, 2006	
(in thousands, except share and per share data)	**Actual**	**As adjusted(1)**
		(unaudited)
Long-term indebtedness, including current portion	$19,533	$
Notes payable to employees	63	
Stockholders' equity:		
Common stock, class A, $0.01 par value per share; 10,000,000 shares authorized and 7,752,001 shares issued and outstanding, actual; no shares authorized, issued or outstanding, as adjusted	78	
Common stock, class B, $0.01 par value per share; 2,000,000 shares authorized and 30,015 shares issued and outstanding, actual; no shares authorized, issued or outstanding, as adjusted	—	
Common stock, $0.001 par value per share; no shares authorized, issued or outstanding, actual; 100,000,000 shares authorized and shares issued and outstanding, as adjusted	—	
Preferred stock, $0.01 par value per share, 3,000,000 shares authorized, actual; $0.001 par value per share, 15,000,000 shares authorized, as adjusted; no shares issued or outstanding, actual and as adjusted	—	
Additional paid-in capital	34,871	
Accumulated other comprehensive loss	(313)	
Retained earnings	17,505	
Total stockholders' equity	52,141	
Total capitalization	$71,737	$

(1) A $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) each of additional paid-in capital, total stockholders' equity and total capitalization by approximately $ million, assuming that the number of shares offered by us, as

set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions.

The table above does not include:

- the receipt of proceeds from and the incurrence of indebtedness under a $10.0 million term loan with HSBC Realty Credit Corporation that we entered into in August 2006 to finance a portion of the costs of our facility expansion in Lansing, Michigan;
- 1,087,479 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2006 at a weighted average exercise price of $6.46 per share;
- 132,506 additional shares of common stock reserved for issuance under our employee stock option plan as of June 30, 2006; and
- 175,000 additional shares of common stock that will be reserved for issuance under our 2006 stock incentive plan immediately prior to completion of this offering.

Dilution

If you invest in our common stock, your interest will be diluted immediately to the extent of the difference between the public offering price per share of our common stock and the net tangible book value per share of our common stock after this offering.

Our actual net tangible book value as of June 30, 2006 was $52.1 million or $6.70 per share of our common stock. Net tangible book value per share represents the amount of our total tangible assets less total liabilities, divided by the number of shares of common stock outstanding.

After giving effect to the issuance and sale by us of shares of common stock in this offering, at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, less estimated underwriting discounts and commissions and offering expenses payable by us, our net tangible book value as of June 30, 2006 would have been $ million, or $ per share of common stock. This represents an immediate increase in net tangible book value per share of $ to existing stockholders and immediate dilution of $ per share to new investors. Dilution per share to new investors is determined by subtracting the net tangible book value per share after this offering from the initial public offering price per share paid by a new investor. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share of common stock		$
Actual net tangible book value per share as of June 30, 2006	$ 6.70	
Increase in net tangible book value per share attributable to new investors		
Adjusted net tangible book value per share after this offering		
Dilution per share to new investors		$

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) our adjusted net tangible book value per share after this offering by approximately $ and dilution per share to new investors by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions.

If any shares are issued in connection with outstanding options, you will experience further dilution.

The following table summarizes as of June 30, 2006 the number of shares of common stock purchased from us, the total consideration paid and the average price per share paid by existing stockholders and by new investors in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, before deducting estimated underwriting discounts and commissions and offering expenses payable by us.

	Shares purchased		Total consideration		Average price per share
	Number	Percentage	Amount	Percentage	
Existing stockholders	7,782,016	%	$ 34,949,011	%	$ 4.49
New investors					
Total		100%	$	100%	$

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the total consideration paid by new investors by $ million and increase (decrease) the percentage of total consideration paid by new investors by approximately %, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same.

The table above is based on shares outstanding as of June 30, 2006 and excludes:

- 1,087,479 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2006 at a weighted average exercise price of $6.46 per share;
- 132,506 additional shares of common stock reserved for issuance under our employee stock option plan as of June 30, 2006; and
- 175,000 additional shares of common stock that will be reserved for issuance under our 2006 stock incentive plan immediately prior to completion of this offering.

If the underwriters exercise their over-allotment option in full, the following will occur:

- the number of shares of common stock held by existing stockholders will decrease to , or approximately % of the total number of shares of our common stock outstanding after this offering; and
- the number of shares of common stock held by new investors will increase to , or approximately % of the total number of shares of our common stock outstanding after this offering.

Selected consolidated financial data

You should read the following selected consolidated financial data together with our consolidated financial statements and the related notes appearing at the end of this prospectus and the “Management’s discussion and analysis of financial condition and results of operations” section of this prospectus.

We have derived the consolidated statement of operations data for the years ended December 31, 2003, 2004 and 2005 and the consolidated balance sheet data as of December 31, 2004 and 2005 from our audited consolidated financial statements, which are included in this prospectus. We have derived the consolidated statements of operations data for the years ended December 31, 2001 and 2002 and the consolidated balance sheets data as of December 31, 2001, 2002 and 2003 from our audited consolidated financial statements, which are not included in this prospectus. We have derived the consolidated statement of operations data for the six-month periods ended June 30, 2005 and 2006 and the consolidated balance sheet data as of June 30, 2006 from our unaudited consolidated financial statements, which are included in this prospectus. The unaudited consolidated financial data include, in the opinion of our management, all adjustments, consisting only of normal recurring adjustments, that are necessary for a fair presentation of our financial position and results of operations for these periods. Our historical results for any prior period are not necessarily indicative of results to be expected in any future period, and our results for any interim period are not necessarily indicative of results for a full fiscal year.

	Year ended December 31,					Six months ended June 30,	
(in thousands, except share and per share data)	**2001**	**2002**	**2003**	**2004**	**2005**	**2005**	**2006**
						(unaudited)	
Statements of operations data:							
Revenues:							
Product sales	$ 45,309	$ 78,541	$ 55,536	$ 81,014	$ 127,271	$ 58,506	$ 20,408
Milestones and grants	—	—	233	2,480	3,417	813	3,261
Total revenues	45,309	78,541	55,769	83,494	130,688	59,319	23,669
Operating expenses (income):							
Cost of product sales	34,367	24,569	22,342	30,102	31,603	16,490	4,370
Research and development	382	2,808	6,327	10,117	18,381	4,157	14,210
Selling, general & administrative	10,924	13,397	19,547	30,323	42,793	17,974	20,681
Purchased in-process research and development	—	—	1,824	—	26,575	26,575	—
Settlement of State of Michigan Obligation	—	—	—	(3,819)	—	—	—
Litigation settlement	—	—	—	—	(10,000)	(10,000)	—
Total operating expenses	45,673	40,774	50,040	66,723	109,352	55,196	39,261
Income (loss) from operations	(364)	37,767	5,729	16,771	21,336	4,123	(15,592)
Other income (expense):							
Interest income	122	80	100	65	485	103	326
Interest expense	(193)	(451)	(293)	(241)	(767)	(402)	(232)
Other income (expense), net	(119)	(271)	168	6	55	(25)	124
Total other income (expense)	(190)	(642)	(25)	(170)	(227)	(324)	218
Income (loss) before provision for income taxes	(554)	37,125	5,704	16,601	21,109	3,799	(15,374)
Provision for (benefit from) income taxes	—	733	1,250	5,129	5,325	958	(7,684)
Net income (loss)	$ (554)	$ 36,392	$ 4,454	$ 11,472	$ 15,784	$ 2,841	$ (7,690)
Earnings (loss) per share — basic	$ (0.10)	$ 5.68	$ 0.68	$ 1.74	$ 2.21	$ 0.44	$ (0.99)
Earnings (loss) per share — diluted	$ (0.10)	$ 5.05	$ 0.63	$ 1.61	$ 2.00	$ 0.39	$ (0.99)
Weighted average number of shares — basic	5,651,192	6,409,661	6,570,856	6,576,019	7,136,866	6,505,085	7,771,830
Weighted average number of shares — diluted	5,561,192	7,212,903	7,061,537	7,104,172	7,908,023	7,200,595	7,771,830

(in thousands)	As of December 31, 2001	2002	2003	2004	2005	As of June 30, 2006 (unaudited)
Balance sheet data:						
Cash and cash equivalents	$ 5,854	$ 4,891	$ 7,119	$ 6,821	$ 36,294	$ 15,737
Working capital	(35,299)	1,130	(3,147)	7,509	29,023	5,995
Total assets	25,423	22,790	37,127	69,056	100,332	119,113
Total long-term liabilities	4,857	4,592	1,228	11,921	10,502	18,364
Total stockholders' equity (deficit)	(32,295)	4,155	8,448	22,949	59,737	52,141

The balance sheet data above do not reflect the receipt of proceeds from and the incurrence of indebtedness under a $10.0 million term loan with HSBC Realty Credit Corporation that we entered into in August 2006 to finance a portion of the costs of our facility expansion in Lansing, Michigan.

Management's discussion and analysis of financial condition and results of operations

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and the related notes and other financial information included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. You should review the "Risk factors" section of this prospectus for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a biopharmaceutical company focused on the development, manufacture and commercialization of immunobiotics. We operate in two business segments: biodefense and commercial. We commenced operations as BioPort Corporation in September 1998 through an acquisition from the Michigan Biologic Products Institute of rights to our marketed product, BioThrax, vaccine manufacturing facilities at a multi-building campus on approximately 12.5 acres in Lansing, Michigan and vaccine development and production know-how. Following this acquisition, we completed renovations at the Lansing facilities that had been initiated by the State of Michigan. In December 2001, the FDA approved a supplement to our manufacturing facility license for the manufacture of BioThrax at the renovated facilities.

In June 2004, we completed a corporate reorganization in which we:

- issued 6,487,950 shares of class A common stock in exchange for 6,262,554 shares of BioPort class A common stock and 225,396 shares of BioPort class B common stock;
- repurchased and retired all other issued and outstanding shares of BioPort class B common stock; and
- assumed all outstanding stock options to purchase BioPort class B common stock and granted option holders replacement stock options to purchase an equal number of shares of our class B common stock.

As a result of the reorganization, BioPort became a wholly owned subsidiary of Emergent. We acquired our portfolio of commercial vaccine candidates through our acquisition of Microscience in a share exchange in June 2005 and our acquisition of substantially all of the assets of Antex for cash in May 2003. We subsequently renamed Microscience as Emergent Product Development UK. We expect to continue to seek to obtain marketed products and development stage product candidates through acquisitions and licensing arrangements with third parties.

Our biodefense business has generated net income for each of the last three fiscal years. However, in our commercial business, we have not received approval to market any of our product candidates and, to date, have received no product sales revenues. Our only sources of revenue in our commercial business are development grant funding and an upfront license fee and additional payments for development work under a collaboration agreement with Sanofi Pasteur. As a result, our commercial business has incurred a net loss for each of the last three fiscal years.

Biodefense

In our biodefense business, we develop and commercialize immunobiotics for use against biological agents that are potential weapons of bioterrorism. Our marketed product, BioThrax, is the only vaccine approved by the FDA for the prevention of anthrax infection. In addition to BioThrax, our biodefense product portfolio includes three biodefense product candidates in preclinical development. The DoD and HHS have been the principal customers for BioThrax. In addition, we have supplied small amounts of BioThrax directly to several foreign governments. Since 1998, we have been a party to two supply agreements for BioThrax with the DoD. Pursuant to these contracts, we have supplied over eight million doses of BioThrax through August 2006 for immunization of military personnel. Under a contract that we entered into with HHS in May 2005, we have supplied five million doses of BioThrax to HHS for placement into the strategic national stockpile for a fixed price of $123 million. In May 2006, we entered into a contract modification with HHS for the delivery of an additional five million doses of BioThrax to HHS by May 2007 for a fixed price of $120 million. We have delivered approximately one million doses of BioThrax under this contract modification through August 2006.

We have derived and expect for the foreseeable future to continue to derive substantially all of our revenue from sales of BioThrax. Our total revenues from BioThrax sales were $55.5 million in 2003, $81.0 million in 2004 and $127.3 million in 2005. We are focused on increasing sales of BioThrax to U.S. government customers, expanding the market for BioThrax to other customers and pursuing label expansions and improvements for BioThrax.

We are collaborating with HPA in the development of a recombinant bivalent botulinum vaccine candidate and a new botulinum toxoid vaccine that we plan to use as the basis for a botulinum immune globulin candidate. We are independently developing an anthrax immune globulin candidate, in part with funding from NIAID. We also are evaluating several potential product candidates in connection with development of a next generation anthrax vaccine, featuring attributes such as self-administration and a longer shelf life. We are actively pursuing additional government sponsored development grants and working with various government agencies to encourage them to conduct studies relating to BioThrax and our biodefense product candidates.

Commercial

In our commercial business, we develop immunobiotics for use against infectious diseases with significant unmet or underserved medical needs. Our commercial product portfolio includes a typhoid vaccine candidate and a hepatitis B therapeutic vaccine candidate, both of which are in Phase II clinical development, a group B streptococcus vaccine candidate in Phase I clinical development and a chlamydia vaccine candidate and a meningitis B vaccine candidate, both of which are in preclinical development. In May 2006, we entered into a license and co-development agreement with Sanofi Pasteur under which we granted Sanofi Pasteur an exclusive, worldwide license under our proprietary technology to develop and commercialize a meningitis B vaccine candidate.

We plan to encourage government entities and non-government and philanthropic organizations to provide development funding for, or to conduct clinical studies of, one or more of our commercial product candidates. For example, the Wellcome Trust provided funding for our Phase I clinical trial of our typhoid vaccine candidate in Vietnam and has agreed to provide funding for our Phase II clinical trial of this vaccine candidate in Vietnam.

Manufacturing infrastructure

To augment our existing manufacturing capabilities, we are constructing a new 50,000 square foot manufacturing facility on our Lansing, Michigan campus. We expect the construction of the facility to cost approximately $75 million, including approximately $55 million for the building and associated capital equipment, with the balance related to validation and qualification activities required for regulatory approval and initiation of manufacturing. We anticipate that we will incur approximately $42 million for these purposes during 2006. We expect to complete construction of this facility in mid 2007, with validation and qualification activities required for regulatory approval continuing thereafter. We are constructing this new facility as a large scale manufacturing plant that we can use to produce multiple vaccine products, subject to complying with appropriate change-over procedures. We anticipate that we will initiate large scale manufacturing of BioThrax for commercial sale at the new facility in 2008. We also own two buildings in Frederick, Maryland that we plan to build out as new manufacturing facilities. We anticipate that we will incur up to $5 million during 2006 related to initial engineering design and preliminary utility build out for these facilities. Because we are in the preliminary planning stages of our Frederick build out, we cannot reasonably estimate the timing and costs that will be necessary to complete this project. If we proceed with this project, we expect the costs to be substantial and to likely require external sources of funds to finance the project.

Critical accounting policies and estimates

Our discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses. On an ongoing basis, we evaluate our estimates and judgments, including those related to accrued expenses, fair valuation of stock related to stock-based compensation and income taxes. We based our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the reported amounts of revenues and expenses that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our financial statements.

Revenue recognition

We recognize revenues from product sales in accordance with Staff Accounting Bulletin No. 104, *Revenue Recognition*, or SAB 104. SAB 104 requires recognition of revenues from product sales that require no continuing performance on our part if four basic criteria have been met:

- there is persuasive evidence of an arrangement;
- delivery has occurred or title has passed to our customer based on contract terms;
- the fee is fixed and determinable and no further obligation exists; and
- collectibility is reasonably assured.

We have generated BioThrax sales revenues under U.S. government contracts with the DoD and HHS. Under our DoD contract, we invoice the DoD for progress payments upon reaching contractually specified stages in the manufacture of BioThrax. We record as deferred revenue the full amount of each progress

payment invoice that we submit to the DoD. Title to the product passes to the DoD upon submission of the first invoice. The earnings process is complete upon FDA release of the product for sale and distribution. Following FDA release of the product, we segregate the product for later shipment and recognize as period revenue all deferred revenue related to the released product in accordance with the “bill and hold” sale requirements under SAB 104. At that time, we also invoice the DoD for the final progress payment and recognize the amount of that invoice as period revenue. Our contract with HHS does not provide for progress payments. We invoice HHS and recognize the related revenue upon delivery of the product to the government carrier, at which time title to the product passes to HHS. We do not record allowances for sales returns, rebates or special promotional programs for sales of BioThrax or provisions for sales made in prior periods.

Under the collaboration agreement that we entered into with Sanofi Pasteur in May 2006 for our meningitis B vaccine candidate, we received an upfront license fee and are entitled to additional payments for development work under the collaboration and upon achieving contractually defined development and commercialization milestones. We recorded the amount of the upfront license fee as deferred revenue. We are recognizing this revenue over the estimated development period under the contract, currently estimated at seven years, as adjusted from time to time for any delays or acceleration in the development of the product candidate. We also will be entitled to royalty payments on net sales of this product. Under the collaboration agreement, we have contracted to perform development work for Sanofi Pasteur for which we are entitled to payments up to specified levels. We invoice Sanofi Pasteur in the beginning of each quarter for the estimated work to occur in that quarter. We record the invoice amount as deferred revenue. As services are completed, we recognize the amount of the related deferred revenue as period revenue. We evaluate the various components of a collaboration in accordance with Emerging Issues Task Force, or EITF, Issue No. 00-21, *Accounting for Revenue Arrangements with Multiple Deliverables*, or EITF No. 00-21, which addresses whether, for revenue recognition purposes, there is one or several elements in an arrangement. We concluded that under EITF No. 00-21, the upfront license fee, the development work and the milestone payments under our agreement with Sanofi Pasteur should be accounted for as a single unit of accounting. We recognize amounts received under this agreement over the estimated development period as we perform services.

From time to time, we are awarded development grant contracts with government entities and non-government and philanthropic organizations. Under these contracts, we typically are reimbursed for our costs in connection with specific development activities and may also be entitled to additional fees. We record the reimbursement of our costs and any associated fees as grant revenue and the associated costs as research and development expense. We issue invoices under these contracts after we incur the reimbursable costs. We recognize revenue upon invoicing the sponsoring organization.

Accounts receivable

Accounts receivable are stated at invoice amounts and consist primarily of amounts due from the DoD and HHS as well as amounts due under reimbursement contracts with other government entities and non-government and philanthropic organizations. Because the prior collection history for receivables from these entities indicate that collection is likely, we do not currently record an allowance for doubtful accounts.

Inventories

Inventories are stated at the lower of cost or market, with cost being determined using a standard cost method, which approximates average cost. Average cost consists primarily of material, labor and manufacturing overhead expenses and includes the services and products of third party suppliers. We analyze our inventory levels quarterly and write down in the applicable period inventory that has become

obsolete, inventory that has a cost basis in excess of its expected net realizable value and inventory in excess of expected customer demand. We also write off in the applicable period the costs related to expired inventory.

Accrued expenses

As part of the process of preparing financial statements, we are required to estimate accrued expenses. This process involves identifying services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for such service where we have not yet been invoiced or otherwise notified of actual cost. We make these estimates as of each balance sheet date in our financial statements. Examples of estimated accrued expenses include:

- fees payable to contract research organizations in conjunction with clinical trials;
- fees payable to third party manufacturers in conjunction with the production of clinical trial materials; and
- professional service fees.

In accruing service fees, we estimate the time period over which services were provided and the level of effort in each period. If the actual timing of the provision of services or the level of effort varies from the estimate, we will adjust the accrual accordingly. The majority of our service providers invoice us monthly in arrears for services performed. In the event that we do not identify costs that have begun to be incurred or we underestimate or overestimate the level of services performed or the costs of such services, our actual expenses could differ from such estimates. The date on which some services commence, the level of services performed on or before a given date and the cost of such services are often subjective determinations. We make judgments based upon the facts and circumstances known to us.

Purchased in-process research and development

We account for purchased in-process research and development in accordance with Statement of Financial Accounting Standards, or SFAS, No. 2, *Accounting for Research and Development Costs* along with Financial Accounting Standards Board, or FASB, Interpretation No. 4, *Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method.*

Under these standards, we are required to determine whether the technology relating to a particular research and development project we acquire has an alternative future use. If we determine that the technology has no alternative future use, we expense the value of the research and development project not directly attributed to fixed assets. Otherwise, we capitalize the value of the research and development project not attributable to fixed assets as an intangible asset and conduct an impairment analysis at least annually. In connection with our acquisition of Microscience and our acquisition of substantially all of the assets of Antex, we allocated the value of the purchase consideration to current assets, current liabilities, fixed assets and development programs. Because we determined that the development programs at Microscience and Antex had no future alternative use, we charged the value attributable to the development programs as in-process research and development. For the Microscience acquisition, which was a share exchange, our board of directors determined the fair value of our shares issued in the exchange for financial statement purposes after taking into account the recommendations of management and the assessments provided by a third party valuation specialist. For the Antex acquisition, which was a cash transaction, no fair value determination was necessary.

Stock-based compensation

Through December 31, 2005, in accordance with SFAS No. 123, *Accounting for Stock-Based Compensation*, or SFAS No. 123, we elected to account for our employee stock-based compensation using the intrinsic value method in accordance with Accounting Principles Board, or APB, Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations, or APB No. 25, rather than the alternative fair value accounting method provided for under SFAS No. 123. Accordingly, we did not record compensation expense on employee stock options granted in fixed amounts and with fixed exercise prices when the exercise prices of the options were equal to the fair value of the underlying common stock on the date of grant. Pro forma information regarding net loss and loss per share is required by SFAS No. 123 and has been determined as if we had accounted for employee stock option grants under the fair value method prescribed by that statement. We provide this pro forma disclosure in our financial statements. We account for transactions in which services are received in exchange for equity instruments based on the fair value of the services received from non-employees or of the equity instruments issued, whichever is more reliably measured, in accordance with SFAS No. 123 and EITF Issue No. 96-18, *Accounting for Equity Instruments that Are Issued to Other than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*, or EITF No. 96-18. In accordance with EITF No. 96-18, we periodically remeasure stock-based compensation for options granted to non-employees as the underlying options vest. As of June 30, 2006, we had no outstanding options that had been granted to non-employees other than our directors.

In December 2004, the FASB issued SFAS No. 123 (revised 2004), *Share-Based Payment*, or SFAS No. 123(R), which is a revision of SFAS No. 123. SFAS No. 123(R) supersedes APB No. 25 and amends SFAS No. 95, *Statement of Cash Flows.* Generally, the approach in SFAS No. 123(R) is similar to the approach described in SFAS No. 123. However, SFAS No. 123(R) requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their estimated fair values. Pro forma disclosure is no longer an alternative. We adopted SFAS No. 123(R) on January 1, 2006 using the modified prospective method. We will continue to value our share-based payment transactions using a Black-Scholes valuation model. Under the modified prospective method, we recognize compensation cost in our financial statements for all awards granted after January 1, 2006 and for all awards outstanding as of January 1, 2006 for which the requisite service had not been rendered as of the date of adoption. Prior period operating results have not been restated. We measure the amount of compensation cost based on the fair value of the underlying common stock on the date of grant. We recognize compensation cost over the period that an employee provides service in exchange for the award.

As a result of our adoption of SFAS No. 123(R) effective January 1, 2006, we recorded stock-based compensation expense of $289,000 for the six months ended June 30, 2006. This expense related to stock options that were outstanding and had not completely vested as of January 1, 2006. During the six months ended June 30, 2006, we granted 57,500 stock options. We granted all of these stock options on June 30, 2006, the last day of the period. As such, we did not record any additional stock-based compensation expense related to these options during the six months ended June 30, 2006. Both basic and diluted loss per share for the six months ended June 30, 2006 are $0.04 less than if we had continued to account for stock-based compensation under APB No. 25. The effect of adopting SFAS No. 123(R) on net loss and net loss per share is not necessarily representative of the effects in future years due to, among other things, the vesting period of the stock options and the fair value of additional stock option grants in future years. Based on options granted to employees as of June 30, 2006, total compensation expense not yet recognized related to unvested options is approximately $870,000, after tax. We expect to recognize that expense over a weighted average period of 3.5 years. Based on options granted to employees as of June 30, 2006, we expect to recognize amortization of stock-based

compensation, after tax, of approximately $240,000 during the remainder of 2006, $386,000 in 2007, $164,000 in 2008 and $80,000 in 2009.

The factors that most affect charges or credits to operations related to stock-based compensation are the fair value of the common stock underlying stock options for which stock-based compensation is recorded, the volatility of fair value of the common stock, the expected life of the instrument and the assumed risk free rate of return. Because shares of our common stock have not been publicly traded, our board of directors has determined the fair value of our common stock for accounting purposes. There is no certainty that the results of our board's determination would be the value at which the shares would be traded for cash. In determining the fair value of our common stock, our board of directors considered:

- the history and nature of our business and results of operations;
- our prospects for growth, including potential contracts for BioThrax product sales;
- our available cash, assets and financial condition;
- prior determinations of the fair value of the common stock underlying stock options granted and the effect of corporate developments, including the progress of our product candidates, that have occurred between the time of the grants;
- rights and preferences of the security being granted compared to the rights and preferences of our other outstanding equity;
- values of public companies that we believe are comparable to us, adjusted for the risks related to and the lack of a liquid market for the shares;
- the time frame in which a liquid market would likely be available for the shares;
- the assessments provided by independent valuation specialists;
- business developments involving our direct competitors; and
- general economic trends and the economic outlook and market conditions for our industry.

If our estimates of the fair value of these equity instruments are too high or too low, it would have the effect of overstating or understating expenses.

Our board of directors considered the assessments of independent valuation specialists in determining the fair value of our class B common stock underlying stock options granted during 2003, 2004, 2005 and 2006. The assessments of these valuation specialists were based upon the application of the income and market approaches consistent with the practice aid issued by the American Institute of Certified Public Accountants entitled *Valuation of Privately Held Company Equity Securities Issued as Compensation.* Under the income approach, the valuation specialists used a discounted cash flow analysis based on projections of future cash flow to determine an estimated value. Under the market approach, the valuation specialists analyzed comparable public companies and developed an estimated value for the class B common stock based on revenues, earnings and enterprise values. The values derived by each of these methods were adjusted for lack of voting rights, minority interest and lack of marketability of the class B common stock.

In 2004, in connection with our reorganization, we recorded stock-based compensation expense as a result of the issuance of stock options to purchase our class B common stock to replace the outstanding stock options to purchase BioPort class B common stock. The exercise period of these replacement options was extended to June 2007. Based upon the guidance in APB No. 25, because the stock options

granted for our class B common stock provided for an extended term over that of the cancelled BioPort options, a new measurement date was created and we recorded as stock-based compensation expense the excess of the intrinsic value of the modified options over the intrinsic value of the BioPort options when originally issued. This resulted in stock-based compensation expense of $4.3 million for 2004. We did not record any stock-based compensation expense for options granted during 2003 or 2005.

Income taxes

Our deferred tax assets include the unamortized portion of in-process research and development expenses, the anticipated future benefit of the net operating losses that we have incurred and other timing differences between financial reporting basis of assets and liabilities. We have historically incurred net operating losses for income tax purposes in some states and in some foreign jurisdictions, primarily the United Kingdom. The amount of the deferred tax assets on our balance sheet reflects our expectations regarding our ability to use our net operating losses to offset future taxable income. The applicable tax rules in particular jurisdictions limit our ability to use net operating losses as a result of ownership changes. In particular, we believe that these rules will significantly limit our ability to use net operating losses generated by Microscience and Antex prior to our acquisition of Microscience in June 2005 and our acquisition of substantially all of the assets of Antex in May 2003.

We review our deferred tax assets on a quarterly basis to assess our ability to realize the benefit from these deferred tax assets. If we determine that it is more likely than not that the amount of our expected future taxable income will not be sufficient to allow us to fully utilize our deferred tax assets, we increase our valuation allowance against deferred tax assets by recording a provision for income taxes on our income statement, which reduces net income, or increases net loss, for that period and reduces our deferred tax assets on our balance sheet. If we determine that the amount of our expected future taxable income will allow us to utilize net operating losses in excess of our net deferred tax assets, we reduce our valuation allowance by recording a benefit from income taxes on our income statement, which increases net income, or reduces net loss, for that period and increases our deferred tax assets on our balance sheet.

Financial operations overview

Revenues

We have generated substantially all of our revenues from sales of BioThrax. BioThrax product sales accounted for 97% of our total revenues in 2005 and 86% of our total revenues in the six months ended June 30, 2006. The DoD and HHS have been the principal customers for BioThrax. We also have had limited sales of BioThrax to foreign governments and private industry. In addition, we periodically realize revenues from grants from government entities and non-government and philanthropic organizations and from licensing fees, milestone payments and development reimbursement. These items accounted for 3% of our total revenues in 2005 and 14% of our total revenues in the six months ended June 30, 2006. If our ongoing development efforts are successful, we would expect to generate revenues from sales of additional products and milestone payments, development payments and royalties on sales of products that we license to third parties.

In May 2005, we entered into an agreement to supply five million doses of BioThrax to HHS for placement into the strategic national stockpile for a fixed price of $123 million. We completed delivery of all five million doses by February 2006, seven months earlier than required. In May 2006, we entered into a contract modification with HHS for the delivery of an additional five million doses of BioThrax to HHS by May 2007 for a fixed price of $120 million. We have delivered approximately one million doses of BioThrax under this contract modification through August 2006. We expect to deliver to HHS between

1.25 million and 1.75 million doses of BioThrax in each of October 2006 and December 2006, with the balance, if any, to be delivered in the first half of 2007.

In January 2004, we entered into our current contract with the DoD for the delivery of a minimum number of doses of BioThrax over one base contract year plus two option periods for a minimum fixed price of approximately $91 million. Under this contract, we were required to deliver a minimum of approximately 2.8 million total doses in 2004 and 2005. We delivered approximately 4.0 million total doses in 2004 and 2005 under DoD purchase orders. We are required to deliver approximately an additional 1.0 million doses of BioThrax between January 1, 2006 and September 30, 2006. As of June 30, 2006, we had not begun delivery of these additional required doses. We expect to be able to provide all of the remaining doses before expiration of this contract in September 2006. We have invoiced the DoD, as contemplated under this contract, for progress payments as doses of BioThrax are manufactured for sale to the DoD. In accordance with our revenue recognition policy, we record deferred revenue for invoiced amounts until the FDA releases the product for sale and delivery. As of June 30, 2006, the amount of our deferred revenue for DoD sales was $26.3 million. In April 2006, the DoD issued a notice that it intends to negotiate a sole source fixed price contract for the purchase of up to an additional 11 million doses of BioThrax over one base year plus four option years. Although we are in discussions with the DoD, we have not yet entered into an agreement with the DoD for this procurement.

In May 2006, we entered into a collaboration agreement with Sanofi Pasteur relating to the development and commercialization of our meningitis B vaccine candidate and received a $3.8 million upfront license fee. This agreement also provides for a series of milestone payments upon the achievement of specified development and commercialization objectives, payments for development work under the collaboration and royalties on net sales of this product. We recognize the upfront license fee, milestone payments and development payments under this agreement as revenue in accordance with our revenue recognition policies.

Our revenue, operating results and profitability have varied, and we expect that they will continue to vary, on a quarterly basis primarily because of the timing of our fulfilling orders for BioThrax. We expect milestone and grant revenues to increase in 2006 as we receive reimbursement for development expenses under our meningitis B collaboration with Sanofi Pasteur, funding from the Wellcome Trust for costs associated with our completed Phase I clinical trial and planned Phase II clinical trial of our typhoid vaccine candidate in Vietnam and funding from NIAID for costs associated with our animal efficacy studies in rabbits of our anthrax immune globulin candidate.

Cost of product sales

The primary expense that we incur to deliver BioThrax to our customers is manufacturing costs, which are primarily fixed costs. These fixed manufacturing costs consist of attributable facilities, utilities and salaries and personnel related expenses for indirect manufacturing support staff. Variable manufacturing costs for BioThrax consist primarily of costs for materials, direct labor and contract filling operations. In 2005, we improved manufacturing efficiencies for BioThrax by extending the hours of operation for our manufacturing facility. As a result, the cost of product sales per dose of BioThrax decreased in 2005 compared to 2004. We do not expect further significant improvements in manufacturing efficiencies for BioThrax until we complete our new manufacturing facility in Lansing, Michigan. We currently are producing BioThrax at close to the maximum capacity of our existing manufacturing facility. We expect our manufacturing costs to remain relatively stable for the remainder of 2006 and during 2007.

We determine the cost of product sales for doses sold for a period based on the average manufacturing cost per dose for that period. We calculate the average manufacturing cost per dose by dividing the actual costs of manufacturing in the applicable period by the number of units produced in that period. In addition to the fixed and variable manufacturing costs described above, the average manufacturing cost per dose depends on the efficiency of the manufacturing process, utilization of available manufacturing capacity and the production yield for any period.

Research and development expenses

We expense research and development costs as incurred. Our research and development expenses consist primarily of:

- salaries and related expenses for personnel;
- fees to professional service providers for, among other things, independently monitoring our clinical trials and acquiring and evaluating data from our clinical trials;
- costs of contract manufacturing services;
- costs of materials used in clinical trials and research and development;
- depreciation of capital assets used to develop our products; and
- operating costs, such as the cost of facilities and the legal costs of pursuing patent protection of our intellectual property.

The successful development of our product candidates is highly uncertain. We believe that significant investment in product development is a competitive necessity and plan to continue these investments in order to be in a position to realize the potential of our product candidates. We cannot reasonably estimate or know the nature, timing and projected costs of the efforts that will be necessary to complete the remainder of the development of, or the period, if any, in which material net cash inflows may commence from any of our product candidates. This is due to the numerous risks and uncertainties associated with developing drugs, including the uncertainty of:

- the scope, rate of progress and expense of our clinical trials and other research and development activities;
- the potential benefits of our product candidates over other products;
- our ability to market, commercialize and achieve market acceptance for any of our product candidates that we are developing or may develop in the future;
- future clinical trial results;
- the terms and timing of regulatory approvals; and
- the expense of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate.

We expect that development spending will increase for all of our biodefense product candidates as our product development activities continue and we prepare for regulatory submissions and other regulatory

activities. We expect our development expenses in our commercial business to increase in connection with our ongoing activities, particularly as we conduct additional and later stage clinical trials for our product candidates.

We expect that the magnitude of any increase in our research and development spending will be dependent upon such factors as the results from our ongoing preclinical studies and clinical trials, the size, structure and duration of any follow on clinical program that we may initiate, our ability to use data generated by government agencies, such as the ongoing CDC studies with BioThrax, and our ability to rely upon and utilize clinical and nonclinical data, such as the data generated by CDC from use of the pentavalent botulinum toxoid vaccine previously manufactured by the State of Michigan. Furthermore, if the FDA or other regulatory authority were to require us to conduct clinical trials beyond those which we currently anticipate will be required for the completion of clinical development of a product candidate or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development.

Selling, general and administrative expenses

General and administrative expenses consist primarily of salaries and other related costs for personnel serving the executive, business development, finance, accounting, information technology, legal and human resource functions. Other costs include facility costs not otherwise included in cost of product sales or research and development expense and professional fees for legal and accounting services. We expect that our general and administrative expenses will increase as we add personnel to support the increased scale of our operations and become subject to the reporting obligations applicable to public companies. Our general and administrative expenses have increased as a result of preparing for this offering and supporting the overall growth of the company. We currently market and sell BioThrax directly to the DoD and HHS with a small, targeted marketing and sales group. Accordingly, our marketing and sales expense for these efforts has been limited. As we seek to broaden the market for BioThrax and if we receive marketing approval for additional products, we expect that we will increase our spending for marketing and sales activities.

Total other income (expense)

Total other income (expense) consists principally of interest income and interest expense. We earn interest on our cash, cash equivalents and short-term investments, and we incur interest expense on our indebtedness. Our net interest expense will increase in future periods as compared to prior periods as a result of the mortgage loan that we entered into in April 2006 and the term loan that we entered into in August 2006, as well as any borrowings under our revolving lines of credit. In addition, some of our existing debt arrangements provide for increasing amortization of principal payments in future periods. See “Liquidity and capital resources — Debt financing” for additional information.

Results of operations

Six months ended June 30, 2006 compared to six months ended June 30, 2005

Revenues

Product sales revenues, which relate only to the biodefense segment, decreased by $38.1 million, or 65%, to $20.4 million for the six months ended June 30, 2006 from $58.5 million for the six months ended June 30, 2005. This decrease in product sales revenues was primarily due to a 66% decrease in the number of doses we delivered as a result of the timing of our fulfilling orders from the DoD and HHS.

Product sales revenues in the six months ended June 30, 2006 consisted of BioThrax sales to HHS of $17.9 million, sales to the DoD of $1.9 million and sales to the Canadian government of $630,000. Product sales revenues in the six months ended June 30, 2005 consisted of BioThrax sales to HHS of $43.7 million, sales to the DoD of $14.5 million and other sales of $282,000.

Milestone and grant revenues increased by $2.4 million to $3.3 million for the six months ended June 30, 2006 from $813,000 for the six months ended June 30, 2005. Milestone and grant revenues for the six months ended June 30, 2006 consisted of $1.8 million in upfront and development program revenue from the Sanofi Pasteur collaboration and $1.5 million in grant revenue from the Wellcome Trust. Milestone and grant revenues for the six months ended June 30, 2005 resulted from reimbursement from the DoD for expenses related to production development and supply chain management improvements for BioThrax incurred in prior periods, and for additional work that we performed on a project basis for the DoD's Defense Advanced Research Projects Agency, or DARPA, to evaluate a new vaccine adjuvant for BioThrax.

Cost of product sales

Cost of product sales, which relate only to the biodefense segment, consists of expenses incurred in the manufacture of BioThrax. Cost of product sales decreased by $12.1 million, or 73%, to $4.4 million for the six months ended June 30, 2006 from $16.5 million for the six months ended June 30, 2005. This decrease was attributable to the delivery of 1.6 million fewer doses of BioThrax in the six months ended June 30, 2006 and improved utilization of our manufacturing capacity for BioThrax as a result of extending the hours of operation for our manufacturing facility. The reduction in the number of doses delivered resulted in a reduction in costs of approximately $11.0 million. Manufacturing efficiencies resulted in a cost savings of approximately $1.1 million.

Research and development expenses

Research and development expenses increased by $10.1 million to $14.2 million for the six months ended June 30, 2006 from $4.2 million for the six months ended June 30, 2005. This increase reflects increased expenses of $5.0 million in the biodefense segment and $6.2 million in the commercial segment, offset by a reduction of $1.1 million in other research and development expenses.

The increase in biodefense spending was attributable to increased efforts on all our biodefense programs as we completed various studies and began subsequent studies and trials. This increase primarily reflects additional personnel and contract service costs. The increase in spending for BioThrax enhancements related to preparing for animal efficacy studies to support applications for marketing approval of these enhancements, which we expect to submit to the FDA later in 2006 and in 2007. The increase in spending for immune globulin development related primarily to costs associated with our plasma donor stimulation program for our anthrax immune globulin candidate. The increase in spending for the recombinant botulinum vaccine and next generation anthrax vaccine programs, both of which are in preclinical development, resulted from advancing these programs to the process development stage and the manufacture of supplies of product candidates required for clinical development.

The increase in commercial spending was mainly attributable to spending on the commercial products listed in the table below following our acquisition of Microscience in June 2005. This increase primarily reflects additional personnel and contract service costs. Research and development spending by Microscience prior to our acquisition of Microscience in June 2005 is not included in our results for the six

months ended June 30, 2005. The spending in the six months ended June 30, 2006 for our typhoid vaccine candidate resulted from ongoing work for the Phase I clinical trial in Vietnam that we recently completed and preparing for our Phase II clinical trial in Vietnam that we plan to initiate in the fourth quarter of 2006. The spending in the six months ended June 30, 2006 for our hepatitis B therapeutic vaccine candidate resulted from preparing for our Phase II clinical trial that we plan to initiate in the fourth quarter of 2006. The spending in the six months ended June 30, 2006 for our group B streptococcus vaccine candidate resulted from costs associated with our analysis of results from the Phase I clinical trial that we recently completed for one of the protein components of the vaccine candidate and preparation for Phase I clinical trials for the two other protein components of the vaccine candidate. Both our chlamydia vaccine and meningitis B vaccine candidates are in preclinical development.

The decrease in spending on other research and development expenses was attributable to our discontinuation of preclinical programs that we acquired from Antex and determined not to pursue.

Our principal research and development expenses for the six months ended June 30, 2005 and 2006 are shown in the following table:

	Six months ended June 30,	
(in thousands)	**2005**	**2006**
Biodefense:		
BioThrax enhancements	$ 800	$ 1,843
Immune globulin development	957	3,858
Recombinant bivalent botulinum vaccine	319	701
Next generation anthrax vaccine	80	772
Total biodefense	2,156	7,174
Commercial:		
Typhoid vaccine	313	2,247
Hepatitis B therapeutic vaccine	52	1,541
Group B streptococcus vaccine	3	1,181
Chlamydia vaccine	156	624
Meningitis B vaccine	49	1,159
Total commercial	573	6,752
Other	1,428	284
Total	$ 4,157	$ 14,210

Selling, general and administrative expenses

Selling, general and administrative expenses increased by $2.7 million, or 15%, to $20.7 million for the six months ended June 30, 2006 from $18.0 million for the six months ended June 30, 2005. Selling, general and administrative expenses related to the biodefense segment increased by $219,000, or 1%, to $15.6 million for the six months ended June 30, 2006 from $15.4 million for the six months ended June 30, 2005. Selling, general and administrative expenses related to the commercial segment increased

by $2.5 million, or 95%, to $5.1 million for the six months ended June 30, 2006 from $2.6 million for the six months ended June 30, 2005. The increase in the biodefense segment was primarily attributable to an increase in sales and marketing expenses of $257,000 resulting from the establishment of a sales and marketing subsidiary in Germany in the second half of 2005. The increase in the commercial segment was primarily attributable to an increase in general and administrative expenses of $2.6 million resulting from the addition of personnel and facilities for Emergent Product Development UK following our acquisition of Microscience in June 2005.

Purchased in-process research and development

In June 2005, we recorded a non-cash charge for purchased in-process research and development of $26.6 million associated with our acquisition of Microscience. We valued the 1,264,051 shares of class A common stock that we issued in the acquisition at $28.2 million after the inclusion of acquisition costs. Of this amount, we identified $1.4 million as current assets, $0.9 million as fixed assets, $0.7 million as current liabilities and $26.6 million as the value attributable to development programs. Because we determined that the development programs had no future alternative use, we charged the value attributable to the development programs as purchased in-process research and development. This charge is being amortized for tax purposes over 15 years.

Litigation settlement

In June 2005, we recorded a gain of $10.0 million relating to a settlement of a litigation matter that we initiated to resolve a contract and intellectual property dispute. There were no settlements for the six months ended June 30, 2006.

Total other income (expense)

Total other income increased by $542,000 to $218,000 for the six months ended June 30, 2006 from a loss of $324,000 for the six months ended June 30, 2005. The increase resulted principally from an increase in interest income of $223,000 as a result of higher investment return on increased average cash balances, a decrease in interest expense of $170,000 related to the capitalization of interest associated with our facility expansion in Lansing and an increase in other income (expense) of $149,000.

Income taxes

We recorded a benefit from income taxes of $7.7 million for the six months ended June 30, 2006 compared to a provision for income taxes of $958,000 for the six months ended June 30, 2005. The benefit from income taxes for the six months ended June 30, 2006 resulted primarily from our loss before benefit from income taxes of $15.4 million and an estimated effective annual tax rate of 50%. The provision for income taxes for the six months ended June 30, 2005 resulted primarily from our income before provision for income taxes of $3.8 million and an estimated effective annual tax rate of 25%. The increase in the estimated effective annual tax rate by 25% is due primarily to an increase in the valuation allowance related to foreign and state net operating losses. While the net operating losses for foreign and state jurisdictions have been recorded as deferred tax assets, a full valuation allowance also has been recorded due to current uncertainty as to whether we will generate sufficient future taxable income in the applicable jurisdictions to fully utilize these net operating losses.

Year ended December 31, 2005 compared to year ended December 31, 2004

Revenues

Product sales revenues increased by $46.3 million, or 57%, to $127.3 million for 2005 from $81.0 million for 2004. This increase in product sales revenues was primarily due to a 52% increase in the number of doses delivered. Product sales revenues in 2005 consisted of BioThrax sales to HHS of $111.2 million, sales to the DoD of $14.5 million and aggregate sales to the governments of Canada and Taiwan of $1.6 million. Product sales revenues in 2004 consisted of BioThrax sales to the DoD of $80.6 million and sales to the Canadian government of $360,000.

Milestone and grant revenues increased by $937,000, or 38%, to $3.4 million in 2005 from $2.5 million in 2004 primarily as a result of additional work that we performed on a project basis for DARPA to evaluate a new vaccine adjuvant for BioThrax.

Cost of product sales

Cost of product sales increased by $1.5 million, or 5%, to $31.6 million for 2005 from $30.1 million for 2004. This increase was attributable to the delivery of 1.8 million additional doses of BioThrax in 2005 and a decrease in production yield, resulting in a higher average manufacturing cost per dose in 2005, offset by improved utilization of our manufacturing capacity for BioThrax as a result of extending the hours of operation for our manufacturing facility. The increase in the number of doses delivered combined with the decrease in production yield resulted in additional costs of $6.6 million. Manufacturing efficiencies resulted in a cost savings of $5.1 million.

Research and development expenses

Research and development expenses increased by $8.3 million, or 82%, to $18.4 million for 2005 from $10.1 million for 2004. This increase reflects increased expenses of $4.0 million in the biodefense segment and $5.8 million in the commercial segment, offset by a reduction of $1.6 million in other research and development expenses.

The increase in biodefense spending resulted from costs associated with our plasma donor stimulation program for our anthrax immune globulin candidate, process development related to our recombinant botulinum vaccine candidate and evaluation of third party technology related to our next generation anthrax vaccine program for potential acquisition or in-license, offset by decreased spending on BioThrax enhancements. In 2004, the immune globulin program was in initial studies and we had not yet begun work on the recombinant botulinum vaccine and next generation anthrax vaccine candidates. The decrease in spending on BioThrax enhancements resulted from substantial completion during 2004 of research regarding manufacturing process development for BioThrax to improve the stability and consistency of production lots.

The increase in spending in the commercial segment was attributable to spending on the commercial programs listed in the table below following our acquisition of Microscience in June 2005. Research and development spending by Microscience is not included in our results prior to the acquisition date. The commercial spending in 2005 resulted from the Phase I clinical trial in Vietnam for our typhoid vaccine candidate, preparation for a planned Phase II clinical trial for our hepatitis B therapeutic vaccine candidate, including the manufacture of clinical trial material, preparation for one of three planned Phase I

clinical trials related to one of the protein components of our group B streptococcus vaccine candidate and preclinical work for our chlamydia vaccine and meningitis B vaccine candidates.

The decrease in spending on other research and development expenses was attributable to our discontinuation of preclinical programs that we acquired from Antex and determined not to pursue.

Our principal research and development expenses for 2004 and 2005 are shown in the following table:

(in thousands)	Year ended December 31, 2004	2005
Biodefense:		
BioThrax enhancements	$ 5,929	$ 2,883
Immune globulin development	350	5,309
Recombinant bivalent botulinum vaccine	—	1,708
Next generation anthrax vaccine	—	427
Total biodefense	6,279	10,327
Commercial:		
Typhoid vaccine	—	1,477
Hepatitis B therapeutic vaccine	—	1,558
Group B streptococcus vaccine	—	2,433
Chlamydia vaccine	1,136	837
Meningitis B vaccine	—	656
Total commercial	1,136	6,961
Other	2,702	1,093
Total	$ 10,117	$ 18,381

Selling, general and administrative expenses

Selling, general and administrative expenses increased by $12.5 million, or 41%, to $42.8 million for 2005 from $30.3 million for 2004. Selling, general and administrative expenses related to our biodefense segment increased by $6.4 million to $35.4 million for 2005 from $29.0 million for 2004. Selling, general and administrative expenses related to our commercial segment increased by $6.0 million to $7.3 million for 2005 from $1.3 million for 2004. The increase in the biodefense segment was attributable to an increase in general and administrative expenses of $5.5 million resulting from additional personnel professional service providers for our headquarters organization who devoted time to the biodefense segment and an increase in sales and marketing expenses of $1.0 million resulting from the addition of sales personnel to investigate potential other markets for BioThrax. The increase in the commercial segment was attributable to an increase in general and administrative expenses of $5.3 million resulting from the addition of personnel for Emergent Product Development UK and legal expenses associated with reorganizing our corporate structure following our acquisition of Microscience in June 2005.

Purchased in-process research and development

In 2005, as described above, we recorded a non-cash charge of $26.6 million for purchased in-process research and development associated with our acquisition of Microscience.

Litigation settlement

In 2005, we recorded a gain of $10.0 million relating to a settlement of a litigation matter that we initiated to resolve a contract and intellectual property dispute. There were no settlements in 2004.

Total other income (expense)

Total other expense increased by $57,000 to $227,000 for 2005 from $170,000 for 2004. This increase resulted primarily from an increase in interest expense associated with our financing of the acquisition costs for one building at our Frederick facility.

Income taxes

Provision for income taxes increased by $196,000, or 4%, to $5.3 million for 2005 from $5.1 million for 2004. The provision for income taxes for 2005 resulted primarily from our income before provision for income taxes of $21.1 million and an effective annual tax rate of 25%. The provision for income taxes for 2004 resulted primarily from our income before provision for income taxes of $16.6 million and an effective annual tax rate of 31%. The provision for income taxes also reflects research and development tax credits of $474,000 for 2005 and $492,000 for 2004 and small amounts of permanent tax differences in each year.

Year ended December 31, 2004 compared to year ended December 31, 2003

Revenues

Product sales revenues increased by $25.5 million, or 46%, to $81.0 million for 2004 from $55.5 million for 2003. This increase in product sales revenues was primarily due to a 45% increase in the number of doses delivered. Product sales revenues in 2004 consisted of BioThrax sales to the DoD of $80.6 million and sales to the Canadian government of $360,000. Product sales revenues in 2003 consisted of BioThrax sales to the DoD of $55.2 million and sales to the Canadian government of $270,000.

Milestones and grant revenues increased to $2.5 million in 2004 from $233,000 in 2003 primarily as a result of additional work that we performed on a project basis for DARPA to evaluate a new vaccine adjuvant for BioThrax.

Cost of product sales

Cost of product sales increased by $7.8 million, or 35%, to $30.1 million for 2004 from $22.3 million for 2003. This increase was attributable to the delivery of approximately 1.0 million additional doses of BioThrax in 2004. We were able to deliver these additional doses as a result of increasing our manufacturing capacity at our Lansing facility in 2004 by extending the hours of operation of the facility. The increase in the number of doses delivered resulted in additional costs of $3.5 million. Increasing manufacturing capacity resulted in additional costs of $4.3 million, primarily for the training of new personnel. Our increase in manufacturing capacity allowed us to spread our fixed manufacturing costs

over a greater number of doses, which resulted in a decrease in the cost of product sales per dose of BioThrax in 2004 compared to 2003.

Research and development expenses

Research and development expenses increased by $3.8 million, or 60%, to $10.1 million for 2004 from $6.3 million for 2003. This increase reflects increased expenses of $1.9 million in the biodefense segment and $1.8 million in the commercial segment. The increase in the biodefense segment was attributable to work on the initiation of programs for BioThrax enhancements and consisted primarily of personnel and contract service costs. The increase in the commercial segment was attributable to spending on commercial product candidates acquired from Antex in May 2003. Research and development spending by Antex is not included in our results prior to the acquisition date.

Selling, general and administrative expenses

Selling, general and administrative expenses increased by $10.8 million, or 55%, to $30.3 million for 2004 from $19.5 million for 2003. Selling, general and administrative expenses related to the biodefense segment increased by $9.5 million to $29.0 million for 2004 from $19.5 million for 2003. This increase was attributable to growth in corporate staff to support expanding business activity and increased costs for professional service providers. Selling, general and administrative expenses related to the commercial segment increased by $1.3 million for 2004 from an immaterial amount for 2003 as we hired additional employees to support the newly acquired Antex operations. The overall increase in selling, general and administrative expenses was primarily attributable to an increase of $7.0 million in general and administrative expenditures as a result of our corporate reorganization in June 2004 and the formation of our headquarters organization, including a non-cash stock-based compensation charge of $4.3 million. In addition, general and administrative expenses increased $1.1 million as a result of our acquisition of assets from Antex. Selling and marketing expense increased to $843,000 for 2004 from an immaterial amount for 2003. This increase in spending resulted from the addition of personnel and outside consulting fees.

Purchased in-process research and development

In 2003, we recorded a non-cash charge of $1.8 million associated with our acquisition of assets from Antex. The purchase consideration was $3.4 million in cash. We valued the transaction at $3.8 million after the inclusion of acquisition costs. Of this amount, we identified $300,000 as current assets, $1.7 million as fixed assets and $1.8 million as the value attributable to development programs. Because we determined that the development programs had no future alternative use, we charged the value attributable to the development programs as purchased in-process research and development. We will amortize this charge for tax purposes over 15 years.

Settlement of State of Michigan obligation

In 2004, we recorded a gain of $3.8 million from the satisfaction for less than originally estimated of an obligation to the State of Michigan related to our acquisition of assets from the Michigan Biologic Products Institute in 1998. We have no ongoing obligations to the State of Michigan related to our acquisition of assets from the Michigan Biologic Products Institute. There was no settlement of obligations in 2003.

Total other income (expense)

Total other expense, net, increased to $170,000 for 2004 from $25,000 for 2003. The increase resulted principally from a decrease in other income of $162,000.

Income taxes

Provision for income taxes increased by $3.9 million to $5.1 million for 2004 from $1.3 million for 2003. The provision for income taxes for 2004 resulted primarily from our income before provision for income taxes of $16.6 million and an effective annual tax rate of 31%. The provision for income taxes for 2003 resulted primarily from our income before provision for income taxes of $5.7 million and an effective annual tax rate of 22%. The provision for income taxes also reflects research and development tax credits of $492,000 for 2004 and $441,000 for 2003 and small amounts of permanent tax differences in each year.

Liquidity and capital resources

Sources of liquidity

We require cash to meet our operating expenses and for capital expenditures, acquisitions and principal and interest payments on our debt. We have funded our cash requirements from inception through June 30, 2006 principally with a combination of revenues from BioThrax product sales, debt financings and facilities and equipment leases and, to a lesser extent, from the sale of our class B common stock upon exercise of stock options. We have operated profitably for each of the years in the three year period ended December 31, 2005, but incurred a loss in the six months ended June 30, 2006. As of June 30, 2006, we had cash and cash equivalents of $15.7 million.

Cash flows

The following table provides information regarding our cash flows for the years ended December 31, 2003, 2004 and 2005 and the six months ended June 30, 2005 and June 30, 2006.

	Year ended December 31,			Six months ended June 30,	
(in thousands)	**2003**	**2004**	**2005**	**2005**	**2006**
Net cash provided by (used in):					
Operating activities(1)	$11,072	$ 9,196	$41,974	$ 4,708	$ (7,882)
Investing activities	(7,917)	(18,175)	(5,841)	(1,384)	(20,203)
Financing activities	(927)	8,681	(6,660)	(531)	7,528
Total net cash provided (used)	$ 2,228	$ (298)	$29,473	$ 2,793	$(20,557)

(1) Includes the effect of exchange rate changes on cash and cash equivalents.

Net cash used in operating activities of $7.9 million in the six months ended June 30, 2006 resulted principally from our net loss of $7.7 million, an increase in inventories of $12.2 million, reflecting the value of work in process for BioThrax lots being manufactured or awaiting delivery, and a non-cash benefit from income taxes of $8.2 million, reflecting our net loss before provision for income taxes for the period, offset by an increase in deferred revenue of $22.6 million related to amounts billed under our contract with the DoD and deferral of a portion of the upfront license fee from Sanofi Pasteur. The net loss for the period and the increase in inventory are primarily related to the timing of our fulfilling orders from the DoD and HHS. The increase in deferred revenue primarily reflects progress billings to the DoD,

pursuant to our contract, for product not yet released or shipped and, therefore, not recorded as revenue during the period.

Net cash provided by operating activities of $4.7 million in the six months ended June 30, 2005 resulted principally from our net income of $2.8 million, a non-cash charge for purchased in-process research and development relating to the Microscience acquisition, which reduced net income by $26.6 million, and an increase in income taxes payable of $8.7 million related to our net income for the period and the non-deductibility of the majority of the book expense related to the charge for purchased in-process research and development, offset by a reduction in deferred revenue of $10.9 million, reflecting the recognition of revenue related to the delivery to the DoD of BioThrax lots for which we had previously invoiced the DoD for progress payments and been paid, an increase in accounts receivable of $11.6 million as a result of amounts billed to the DoD for progress payments in the manufacture of BioThrax lots and an increase in deferred tax assets of $10.4 million, reflecting a deferred tax asset recorded to reflect the timing differences between the book charge and the tax deferral of expense related to the purchased in-process research and development expense related to the Microscience acquisition.

Net cash provided by operating activities of $42.3 million in 2005 resulted principally from our net income of $15.8 million, a non-cash charge for purchased in-process research and development related to the Microscience acquisition, which reduced net income by $26.6 million, and a reduction of accounts receivable of $16.1 million as a result of the collection of amounts due from the DoD during 2005 for invoices outstanding at the end of 2004 for progress in the manufacture of BioThrax lots, offset by a reduction of deferred revenue of $10.9 million, reflecting the delivery to the DoD in the first quarter of 2005 of BioThrax lots for which we had previously invoiced the DoD for progress payments and been paid and an increase in deferred tax assets of $11.0 million, reflecting a deferred tax asset recorded to reflect the timing differences between the book charge and the tax deferral of expense related to the purchased in-process research and development expense related to the Microscience acquisition.

Net cash provided by operating activities of $9.2 million in 2004 resulted principally from our net income of $11.5 million, a non-cash stock based compensation charge that we incurred as a result of our issuance of new stock options in our corporate reorganization in June 2004, which reduced net income by $4.3 million, an increase in income taxes payable of $5.8 million related to the timing of payment of taxes and related deferred tax assets, and an increase in deferred revenue of $3.9 million, reflecting invoices to and payments from the DoD for progress in the manufacture of BioThrax lots, offset by an increase in accounts receivable of $15.7 million, reflecting invoices for amounts due from the DoD for progress in the manufacture of BioThrax lots, and a one-time non-cash gain of $3.8 million resulting from the satisfaction of an obligation to the State of Michigan for less than originally estimated.

Net cash provided by operating activities of $11.1 million in 2003 resulted principally from our net income of $4.5 million and an increase of $11.9 million in deferred revenue reflecting invoices to and payments from the DoD for progress in the manufacture of BioThrax lots, offset by an increase in inventories of $4.7 million reflecting the timing of deliveries to the DoD.

Net cash used in investing activities in the six months ended June 30, 2006 and 2005 and in 2005, 2004 and 2003 resulted principally from the purchase of property, plant and equipment. Capital expenditures in the six months ended June 30, 2006 relate primarily to costs for construction of our new building in Lansing, Michigan. Capital expenditures in 2005 were primarily attributable to investments in information technology upgrades and miscellaneous facility enhancements. Capital expenditures in 2004 include infrastructure investments of $4.7 million, $3.8 million for an enterprise resource planning system and $8.5 million for the purchase of one of our facilities in Frederick, Maryland. Capital expenditures in 2003 include infrastructure investments in our Lansing facilities. Net cash used in investing activities in 2003 also includes cash of $3.8 million used for the acquisition of assets from Antex.

Net cash provided by financing activities of $7.5 million in the six months ended June 30, 2006 resulted primarily from proceeds from notes payable related to the financing of the purchase of our Frederick facility in May 2006. Net cash used in financing activities of $531,000 in the six months ended June 30, 2005 resulted principally from the repayment of notes payable to employees and the repurchase of class B common stock.

Net cash used in financing activities of $6.7 million in 2005 resulted principally from the payment of a special dividend of $5.4 million from a portion of the proceeds of a litigation settlement and the repayment of notes payable to employees.

Net cash provided by financing activities of $8.7 million in 2004 resulted principally from an increase in notes payable as a result of $11.0 million of total debt incurred to finance the purchase of one of our facilities in Frederick, Maryland and to finance the purchase of an enterprise resource planning system, offset by the repayment of non-recurring royalty and product supply obligations to the State of Michigan of $2.4 million.

Net cash used in financing activities of $927,000 in 2003 resulted primarily from the repayment of royalty and product supply obligations to the State of Michigan.

Contractual obligations

The following table summarizes our contractual obligations at June 30, 2006.

			Payments due by period					
(in thousands)	**Total**	**2006**	**2007**	**2008**	**2009**	**2010**	**After 2010**
Contractual obligations:							
Short and long-term debt(1)(2)	$ 26,102	$ 1,787	$ 2,196	$ 1,521	$ 1,511	$ 1,504	$ 17,585
Operating lease obligations	3,338	845	1,249	1,188	56	—	—
Royalties and milestones(3)	11,400	—	—	—	—	—	11,400
Contractual settlement liabilities	200	100	100	—	—	—	—
Total contractual obligations	$ 41,040	$ 2,732	$ 3,545	$ 2,709	$ 1,567	$ 1,504	$ 29,985

(1) Includes scheduled interest payments.

(2) Does not include the incurrence in August 2006 of $10.0 million principal amount of indebtedness under a term loan with HSBC Realty Credit Corporation and $10.0 million principal amount of indebtedness under a revolving line of credit with Fifth Third Bank.

(3) Includes financially material royalties and milestone payments related to current development programs that we estimate are probable to occur.

Debt financing

As of August 31, 2006, we had $39.5 million principal amount of debt outstanding, comprised primarily of the following:

- $2.5 million outstanding under a forgivable loan from the Department of Business and Economic Development of the State of Maryland used to finance eligible costs incurred to purchase one of our facilities in Frederick, Maryland;

- $7.0 million outstanding under a mortgage loan from Mercantile Potomac Bank used to finance the remaining portion of the purchase price for the Frederick facility;
- $8.5 million outstanding under a mortgage loan from HSBC Realty Credit Corporation used to finance the purchase price for a second facility on the Frederick site;
- $1.3 million outstanding under a term loan from Fifth Third Bank used to finance the purchase of an enterprise resource planning system;
- $10.0 million outstanding under a revolving line of credit with Fifth Third Bank; and
- $10.0 million outstanding under a term loan from HSBC Realty Credit Corporation used to finance a portion of the costs of our facility expansion in Lansing, Michigan.

We also have a revolving line of credit for up to $5.0 million with HSBC Realty Credit Corporation. We can borrow under the line of credit with HSBC Realty Credit Corporation through October 2007.

Some of these debt instruments contain financial and operating covenants. In particular:

- Under our mortgage loan from Mercantile Potomac Bank for our Frederick facility, we are required to maintain at all times a minimum tangible net worth of not less than $5.0 million. In addition, we are required to maintain at all times a ratio of earnings before interest, taxes, depreciation and amortization to the sum of current obligations under capital leases and principal obligations and interest expenses for borrowed money, in each case due and payable within the following 12 months, of not less than 1.1 to 1.0.
- Under our forgivable loan from the State of Maryland, we are not required to repay the principal amount of the loan if beginning December 31, 2009 and through 2012 we maintain a specified number of employees at the Frederick site, by December 31, 2009 we have invested at least $42.9 million in total funds toward financing the purchase of the buildings on the site and for related improvements and operation of the facility and we occupy the facility through 2012.
- Under our term loan and revolving line of credit with HSBC Realty Credit Corporation, we are required to maintain on an annual basis a minimum tangible net worth of not less than the sum of 85% of our tangible net worth for the most recently completed fiscal year plus 25% of current net operating profit after taxes. In addition, we are required to maintain on a quarterly basis a ratio of earnings before interest, taxes, depreciation and amortization for the most recent four quarters to the sum of current obligations under capital leases and principal obligations and interest expenses for borrowed money, in each case due and payable for the following four quarters, of not less than 1.25 to 1.00.
- Under our line of credit with Fifth Third Bank, BioPort is required to maintain at all times a ratio of total liabilities to tangible net worth of not more than 2.5 to 1.0.

Our debt instruments also contain negative covenants restricting our activities. Our term loan and revolving line of credit with HSBC Realty Credit Corporation limit the ability of BioPort to incur indebtedness and liens, sell assets, make loans, advances or guarantees, enter into merger or similar transactions and enter into transactions with affiliates. Our term loan and revolving line of credit with HSBC Realty Credit Corporation also limit our ability to incur indebtedness and liens, enter into merger or similar transactions and enter into transactions with affiliates. Our line of credit with Fifth Third Bank limits the ability of BioPort to incur indebtedness and liens, sell assets, make loans, advances or guarantees, enter into merger or similar transactions, enter into transactions with affiliates and amend the terms of any government contract.

The facilities and software and other equipment that we purchased with the proceeds of our loans from Mercantile Potomac Bank, the State of Maryland, HSBC Realty Credit Corporation and Fifth Third Bank serve as collateral for these loans. Our line of credit with Fifth Third Bank is secured by accounts receivable under our DoD and HHS contracts. Our term loan and revolving line of credit with HSBC Realty Credit Corporation are secured by substantially all of Bio Port's assets, other than accounts receivable under our DoD and HHS contracts. The covenants under our existing debt instruments and the pledge of our existing assets as collateral limit our ability to obtain additional debt financing.

Under our mortgage loan from Mercantile Potomac Bank, we are required to make monthly principal payments beginning in November 2006. A residual principal repayment of approximately $5.0 million is due upon maturity in October 2011. Interest is payable monthly and accrues at an annual rate of 6.625% through October 2009. In October 2009, the interest rate is scheduled to be adjusted to a fixed annual rate equal to 3.20% over the yield on U.S. government securities adjusted to a constant maturity of two years.

Under our mortgage loan from HSBC Realty Credit Corporation, we are required to make monthly principal payments. A residual principal repayment of approximately $7.5 million is due upon maturity in April 2011. Interest is payable monthly and accrues at an annual rate equal to LIBOR plus 3.00%.

Under our term loan from Fifth Third Bank, we make monthly principal payments through maturity in September 2007. Interest is payable monthly and accrues at an annual rate equal to 0.375% less than the prime rate of interest established from time to time by Fifth Third Bank.

Under our term loan with HSBC Realty Credit Corporation, we are required to make monthly principal payments beginning in April 2007. A residual principal payment of approximately $4.0 million is due upon maturity in August 2011. Upon our request, the term loan is subject to an extension term in the sole discretion of HSBC Realty Credit Corporation for five additional years until August 2016 for an extension fee of 1.00% of the principal balance of the loan. If the term of the loan were extended, we would be required to continue to make monthly principal payments through maturity in August 2016 in lieu of the residual principal payment otherwise due in August 2011. Interest is payable monthly and accrues at an annual rate equal to LIBOR plus 3.75%.

Under our revolving line of credit with Fifth Third Bank, any outstanding principal under the revolving line of credit is due upon maturity in October 2006. Interest is payable monthly and accrues at an annual rate equal to 0.375% less than the prime rate of interest established from time to time by Fifth Third Bank.

Under our revolving line of credit with HSBC Realty Credit Corporation, we are not required to repay outstanding principal until October 2007. In October 2007, the outstanding principal under the revolving line of credit will convert to a term loan with required monthly principal payments through maturity in August 2011. Interest is payable monthly and accrues at an annual rate equal to LIBOR plus 3.75%. We also are required to pay a fee on a quarterly basis equal to 0.50% of the average daily difference between $5.0 million and the amount outstanding under the revolving line of credit.

Tax benefits

In connection with our facility expansion in Lansing, the State of Michigan and the City of Lansing have provided us a variety of tax credits and abatements. We estimate that the total value of these tax benefits may be up to $18.5 million over a period of up to 15 years. These tax benefits are based on our $75 million planned additional investment in our Lansing facilities. In addition, we must maintain a specified number of employees in Lansing to continue to qualify for these tax benefits.

Funding requirements

We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, revenues from BioThrax product sales and other committed sources of funds, will be sufficient to enable us to fund our anticipated operating expenses and capital expenditure and debt service requirements for at least the next 24 months. We have based this estimate on assumptions that may prove to be wrong. We expect to continue to fund a significant portion of our development and commercialization costs for our product candidates with internally generated funds from sales of BioThrax. There are numerous risks and uncertainties associated with BioThrax product sales and with the development and commercialization of our product candidates. Our business plan also contemplates that we will raise $10 million to $20 million of additional external debt financing to fund our facility expansion in Lansing and to provide additional financial flexibility. Our only committed external sources of funds are remaining borrowing availability under our revolving lines of credit with HSBC Realty Credit Corporation and Fifth Third Bank, development funding under our collaboration agreement with Sanofi Pasteur, funding from NIAID for animal efficacy studies of our anthrax immune globulin candidate and funding from the Wellcome Trust for our Phase II clinical trial of our typhoid vaccine candidate in Vietnam. Our ability to borrow additional amounts under our loan agreements is subject to our satisfaction of specified conditions. Our future capital requirements will depend on many factors, including:

- the level and timing of BioThrax product sales and cost of product sales;
- the timing of, and the costs involved in, constructing our new manufacturing facility in Lansing, Michigan and the build out of our manufacturing facilities in Frederick, Maryland;
- the scope, progress, results and costs of our preclinical and clinical development activities;
- the costs, timing and outcome of regulatory review of our product candidates;
- the number of, and development requirements for, other product candidates that we may pursue;
- the costs of commercialization activities, including product marketing, sales and distribution;
- the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims and other patent-related costs, including litigation costs and the results of such litigation;
- the extent to which we acquire or invest in businesses, products and technologies;
- our ability to obtain development funding from government entities and non-government and philanthropic organizations; and
- our ability to establish and maintain collaborations, such as our collaboration with Sanofi Pasteur.

We may require additional sources of funds for future acquisitions that we may make or, depending on the size of the obligation, to meet balloon payments upon maturity of our current borrowings. To the extent our capital resources are insufficient to meet our future capital requirements, we will need to finance our cash needs through public or private equity offerings, debt financings or corporate collaboration and licensing arrangements.

Additional equity or debt financing, grants, or corporate collaboration and licensing arrangements, may not be available on acceptable terms, if at all. If adequate funds are not available, we may be required to delay, reduce the scope of or eliminate our research and development programs or reduce our planned commercialization efforts. If we raise additional funds by issuing equity securities, our stockholders may experience dilution. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital

expenditures or declaring dividends. Any debt financing or additional equity that we raise may contain terms, such as liquidation and other preferences, that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish valuable rights to our technologies or product candidates or grant licenses on terms that may not be favorable to us.

Quantitative and qualitative disclosures about market risk

Our exposure to market risk is currently confined to our cash and cash equivalents and restricted cash that have maturities of less than three months. We currently do not hedge interest rate exposure. We have not used derivative financial instruments for speculation or trading purposes. Because of the short-term maturities of our cash and cash equivalents, we do not believe that an increase in market rates would have any significant impact on the realized value of our investments, but may increase the interest expense associated with our debt.

Effects of inflation

Our most liquid assets are cash, cash equivalents and short-term investments. Because of their liquidity, these assets are not directly affected by inflation. We also believe that we have intangible assets in the value of our intellectual property. In accordance with generally accepted accounting principles, we have not capitalized the value of this intellectual property on our balance sheet. Due to the nature of this intellectual property, we believe that these intangible assets are not affected by inflation. Because we intend to retain and continue to use our equipment, furniture and fixtures and leasehold improvements, we believe that the incremental inflation related to replacement costs of such items will not materially affect our operations. However, the rate of inflation affects our expenses, such as those for employee compensation and contract services, which could increase our level of expenses and the rate at which we use our resources.

Recent accounting pronouncements

In June 2006, the FASB also issued FASB Interpretation 48, *Accounting for Uncertainty in Income Taxes — an interpretation of FASB Statement No. 109*, *Accounting for Income Taxes*, or FIN 48. FIN 48 clarifies the accounting for uncertainty in income taxes. FIN 48 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. FIN 48 requires that we recognize in the financial statements, the impact of a tax position, if that position is more likely than not of being sustained on audit, based on the technical merits of the position. FIN 48 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods and disclosure. The provisions of FIN 48 are effective for fiscal years beginning after December 15, 2006, with the cumulative effect of the change in accounting principle recorded as an adjustment to opening retained earnings. We are currently evaluating the impact of adopting FIN 48 on our financial statements.

In March 2006, the FASB issued Statement No. 156, *Accounting for Servicing of Financial Assets — an amendment of FASB Statement No. 140*, or SFAS No. 156. SFAS No. 156 requires an entity to recognize a servicing asset or servicing liability each time it undertakes an obligation to service a financial asset by entering into a servicing contract based on certain conditions. The provisions of SFAS No. 156 are effective for fiscal years beginning after September 15, 2006. SFAS No. 156 will have no immediate impact on our consolidated financial statements.

In February 2006, the FASB issued Statement No. 155, *Accounting for Certain Hybrid Financial Instruments — an amendment of FASB Statements No. 133 and 140*, or SFAS No. 155. SFAS No. 155 permits fair value remeasurement for any hybrid financial instrument that contains an embedded

derivative that otherwise would require bifurcation, clarifies which interest-only strips and principal-only strips are not subject to the requirements of Statement No. 133, establishes a requirement to evaluate interests in securitized financial assets to identify interests that are freestanding derivatives or that are hybrid financial instruments that contain an embedded derivative requiring bifurcation, clarifies that concentrations of credit risk in the form of subordination are not embedded derivatives and amends Statement No. 140 to eliminate the prohibition on a qualifying special-purpose entity from holding a derivative financial instrument that pertains to a beneficial interest other than another derivative financial instrument. The provisions of SFAS No. 156 are effective for fiscal years beginning after September 15, 2006. SFAS No. 155 will have no immediate impact on our consolidated financial statements.

Business

Overview

We are a biopharmaceutical company focused on the development, manufacture and commercialization of immunobiotics. Immunobiotics are pharmaceutical products, such as vaccines and immune globulins that induce or assist the body's immune system to prevent or treat disease. We operate in two business segments: biodefense and commercial. In our biodefense business, we develop and commercialize immunobiotics for use against biological agents that are potential weapons of bioterrorism. In our commercial business, we develop immunobiotics for use against infectious diseases with significant unmet or underserved medical needs. Our marketed product, BioThrax, is the only vaccine approved by the U.S. Food and Drug Administration, or FDA, for the prevention of anthrax infection. In addition to BioThrax, our biodefense product portfolio includes three biodefense product candidates in preclinical development. Our commercial product portfolio includes a typhoid vaccine candidate and a hepatitis B therapeutic vaccine candidate, both of which are in Phase II clinical development, one vaccine candidate in Phase I clinical development and two vaccine candidates in preclinical development.

We manufacture and market BioThrax, also referred to as anthrax vaccine adsorbed, the only FDA approved anthrax vaccine. BioThrax was originally approved in the United States in 1970. There have been more than 20 published studies of the use of BioThrax in humans. In December 2005, based on a review of the human efficacy data used to support the approval of BioThrax and other studies of BioThrax, the FDA reaffirmed that BioThrax is safe and effective for the prevention of anthrax infection by all routes of exposure, including inhalation. Our total revenues from BioThrax sales were $55.5 million in 2003, $81.0 million in 2004 and $127.3 million in 2005. The U.S. Department of Defense, or DoD, and the U.S. Department of Health and Human Services, or HHS, have been the principal customers for BioThrax. Under two contracts with the DoD, we have supplied over eight million doses of BioThrax through August 2006 for immunization of military personnel. Since March 1998, the DoD has vaccinated more than 1.5 million military personnel with more than 5.5 million doses of BioThrax. In April 2006, the DoD issued a notice that it intends to negotiate a sole source fixed price contract for the purchase of up to an additional 11 million doses of BioThrax over one base contract year plus four option years. Under a contract that we entered into with HHS in May 2005, we supplied five million doses of BioThrax to HHS for placement into the strategic national stockpile for a fixed price of $123 million. In May 2006, we entered into a contract modification with HHS for the delivery of an additional five million doses of BioThrax to HHS by May 2007 for a fixed price of $120 million. We have delivered approximately one million doses of BioThrax under this contract modification through August 2006.

The September 11, 2001 terrorist attacks and the October 2001 anthrax letter attacks significantly affected political and budgetary attitudes toward the threat of bioterrorism. Following these attacks, the U.S. government enacted measures to provide incentives for private industry to develop and manufacture biodefense products. In particular, in 2004, the Project BioShield Act became law, providing $5.6 billion in appropriations over ten years and authorizing the procurement of countermeasures for biological, chemical, radiological and nuclear attacks. Project BioShield provides for the procurement of countermeasures for anthrax and botulism, which are two of the biological agents that the Centers for Disease Control and Prevention, or CDC, has identified as the greatest possible threat to public health. The U.S. government procures most biodefense countermeasures through HHS, the CDC and the DoD and provides biodefense research and development funding through the National Institute of Allergy and Infectious Diseases, or NIAID, of the National Institutes of Health, or NIH, and the DoD.

In addition to BioThrax, we are developing three other biodefense immunobiotic product candidates, all of which are in preclinical development. These product candidates are:

- *Anthrax immune globulin* — for post-exposure treatment of anthrax infection, which we are developing in part with funding from NIAID;
- *Botulinum immune globulin* — for post-exposure treatment of illness caused by botulinum toxin, which we are developing based on a new botulinum toxoid vaccine that we are developing in collaboration with the U.K. Health Protection Agency, or HPA; and
- *Recombinant bivalent botulinum vaccine* — a prophylaxis for illness caused by botulinum toxin, which we also are developing in collaboration with HPA.

We also are evaluating several potential product candidates in connection with development of a next generation anthrax vaccine, featuring attributes such as self-administration and a longer shelf life.

In our commercial business, we are developing a range of immunobiotic product candidates for use against infectious diseases with significant unmet or underserved medical needs. Our commercial product candidates in clinical development are:

- *Typhoid vaccine* — a single dose, drinkable vaccine, for which we have completed a Phase I clinical program, including trials in the United States, the United Kingdom and Vietnam, and expect to initiate a Phase II clinical trial in Vietnam in the fourth quarter of 2006;
- *Hepatitis B therapeutic vaccine* — a multiple dose, drinkable vaccine for treatment of chronic carriers of hepatitis B infection, for which we have completed a Phase I clinical trial in the United Kingdom and expect to initiate a Phase II clinical trial in the United Kingdom in the fourth quarter of 2006; and
- *Group B streptococcus vaccine* — a multiple dose, injectable vaccine for administration to women of childbearing age for protection of the fetus and newborn babies, for which we have completed a Phase I clinical trial in the United Kingdom.

In addition, we are developing a chlamydia vaccine and a meningitis B vaccine, each of which is currently in preclinical development.

The Wellcome Trust provided funding for our Phase I clinical trial of our typhoid vaccine candidate in Vietnam and has agreed to provide funding for our Phase II clinical trial of this vaccine candidate in Vietnam. In May 2006, we entered into a license and co-development agreement with Sanofi Pasteur, the vaccines business of Sanofi-Aventis, under which we granted Sanofi Pasteur an exclusive, worldwide license under our proprietary technology to develop and commercialize a meningitis B vaccine candidate.

Our strategy

Our goal is to become a worldwide leader in developing, manufacturing and commercializing immunobiotics that target diseases with significant unmet or underserved medical needs. Key elements of our strategy to achieve this goal are:

Maximize the commercial potential of BioThrax. We are focused on increasing sales of BioThrax to U.S. government customers, expanding the market for BioThrax to other customers and pursuing label expansions and improvements for BioThrax. The potential label expansions and improvements for BioThrax include an extension of shelf life, reductions in the number of required doses, addition of another method of administration and use as a post-exposure prophylaxis for anthrax infection in combination with antibiotic therapy.

Continue to develop a balanced portfolio of immunobiotic products. We seek to maintain a balanced product portfolio that includes both biodefense and commercial immunobiotic product candidates and both vaccines and therapeutics to diversify product development and commercialization risk. We use multiple technologies in our development programs, which we believe significantly reduces our risk in these activities. We expect that biodefense product candidates may generate revenues from product sales sooner than commercial product candidates because of Project BioShield, which allows the U.S. government to purchase biodefense products for the strategic national stockpile before they are approved by the FDA.

Focus on core capabilities in product development and manufacturing. We focus our efforts on immunobiotic product development and manufacturing, which we believe are our core capabilities. This approach enables us to avoid the expense and time entailed in early stage research activities and, we believe, reduces product development and commercialization risk. We seek to obtain marketed products and development stage product candidates through acquisitions and licensing arrangements with third parties. We believe that we have secured, and will be able to continue to secure, rights to a diverse product pipeline that targets diseases with significant unmet or underserved medical needs. We also believe that this approach may enable us to accelerate product development timelines through our preclinical and clinical development and regulatory expertise and manufacturing capabilities.

Build large scale manufacturing infrastructure. To augment our existing manufacturing capabilities, we are constructing a new 50,000 square foot manufacturing facility on our Lansing, Michigan campus. We also own two buildings in Frederick, Maryland that we plan to build out as future manufacturing facilities. We are constructing our new facility in Lansing as a large scale commercial manufacturing plant that we can use to produce multiple vaccine products, subject to complying with appropriate change-over procedures. We anticipate that we will initiate large scale manufacturing of BioThrax for commercial sale at our new Lansing facility in 2008. We are constructing this facility to accommodate production of up to 40 million doses of BioThrax per year on a single production line, which we could expand for production of up to 80 million doses per year through the addition of a second production line. In comparison, our current facility has a maximum production capacity of approximately nine million doses of BioThrax per year.

Selectively establish collaborations. For each of our product candidates, we plan to evaluate the merits of retaining commercialization rights for ourselves or entering into collaboration arrangements with leading pharmaceutical or biotechnology companies or non-governmental organizations. We expect that we will selectively pursue collaboration arrangements in situations in which the collaborator has particular expertise or resources for the development or commercialization of our products and product candidates or to access particular markets. We recently entered into a collaboration with Sanofi Pasteur for our meningitis B vaccine candidate as we believe that the value of this vaccine candidate may be maximized if it is sold in combination with other vaccines offered by Sanofi Pasteur. We are currently collaborating with HPA for the development of both a new botulinum toxoid vaccine, which we plan to use to develop our botulinum immune globulin candidate, and our recombinant bivalent botulinum vaccine candidate, which has given us access to HPA's technology and manufacturing capabilities.

Seek governmental and other third party grants and support. The biodefense immunobiotic product candidates that we are developing are of significant interest to the U.S. and potentially other governments. The CDC currently is independently conducting a clinical trial to evaluate the administration of BioThrax in a regimen of fewer doses. In addition, NIAID has completed an independent animal efficacy study of BioThrax in combination with antibiotics as a post-exposure prophylaxis for anthrax infection. NIAID has awarded us grant funding for animal efficacy studies of our anthrax immune globulin candidate. We believe that some of our commercial immunobiotic product candidates that may benefit people in the developing world are of interest to charitable and philanthropic organizations. The

Wellcome Trust provided funding for our Phase I clinical trial of our typhoid vaccine candidate in Vietnam and has agreed to provide funding for our Phase II clinical trial of this vaccine candidate in Vietnam. We plan to encourage government entities and non-government and philanthropic organizations to continue to conduct studies of, and pursue other development efforts and provide development funding for, BioThrax and our product candidates.

Market opportunity

We focus on the biodefense and commercial markets for immunobiotics.

The biodefense market

The biodefense market for immunobiotics has grown dramatically as a result of the increased awareness of the threat of global terror activity in the wake of the September 11, 2001 terrorist attacks and the October 2001 anthrax letter attacks. The letter attacks involved the delivery of mail contaminated with anthrax spores to government officials and members of the media in the United States. As a result of the letter attacks, 22 people became infected with anthrax, including 11 with inhalational anthrax, and five people died.

The U.S. government is the principal source of worldwide biodefense spending. Most U.S. government spending on biodefense programs results from procurement of countermeasures by HHS, the CDC and the DoD and development funding from NIAID and the DoD. The U.S. government is now the largest source of funding for academic institutions and biotechnology companies conducting biodefense basic research or developing novel vaccines and other immunobiotic therapeutics.

Department of Health and Human Services. In 2004, the Project BioShield Act became law. This statute provides $5.6 billion in appropriations over ten years and authorizes the procurement of countermeasures for biological, chemical, radiological and nuclear attacks. Pursuant to Project BioShield, HHS has begun to procure vaccines and other products for a strategic national stockpile. The strategic national stockpile is a national repository of medical assets and countermeasures designed to provide state and local public health agencies with medical supplies needed to treat those affected by terrorist attacks, natural disasters, industrial accidents and other public health emergencies, such as a flu epidemic. Materials from the strategic national stockpile were deployed following both the September 11, 2001 terrorist attacks and the October 2001 anthrax letter attacks. We expect that HHS will procure supplies of vaccines for the strategic national stockpile on an ongoing basis and replenish the stockpile as the existing inventories reach the end of their shelf lives.

Pursuant to Project BioShield, the CDC has categorized bioterrorism agents into three categories from A to C based on the perceived risk of the agent to national security. The highest risk category is category A. The six agents that the CDC has classified as category A are anthrax, botulism, plague, smallpox, tularemia and viral hemorrhagic fevers. The Secretary of HHS has directed most of the BioShield procurement efforts and funding to date to category A agents. Under Project BioShield, the Secretary of HHS can contract to purchase countermeasures for the strategic national stockpile prior to FDA approval of the countermeasure in specified circumstances. To be eligible for purchase under these provisions, the Secretary of HHS must determine that there is sufficient and satisfactory clinical results or research data, including data, if available, from preclinical and clinical trials, to support a reasonable conclusion that the countermeasure will qualify for approval or licensing within eight years, even though the product has not completed clinical trials and has not yet been approved by the FDA. Project BioShield also

allows the Secretary of HHS to authorize the emergency use of medical products that have not yet been approved by the FDA.

Members of Congress have proposed and may in the future propose legislation that expands the funding and coverage of Project BioShield. We believe that continued assessments of the threat that bioterrorism poses to the public health are likely to advance these legislative initiatives.

Centers for Disease Control. The U.S. Congress provides annual funding to the CDC for the procurement of medical assets and countermeasures for the strategic national stockpile. This appropriation funding supplements amounts available under Project BioShield for procurement of countermeasures. Congress provided funding to CDC of $525 million in fiscal year 2006 and $467 million in fiscal year 2005 for this purpose.

Department of Defense. The DoD procures biodefense immunobiotics that it administers primarily through the Military Vaccine Agency, or MilVax. MilVax administers various vaccination programs for military personnel, including vaccines for common infectious diseases, such as influenza, and vaccines to protect against specific bioterrorism threats, such as anthrax and smallpox. The DoD has included anthrax at the top of its biological threat list. The level of spending by the DoD for MilVax is a function of the size of the U.S. military and the approach of the DoD with respect to vaccine stockpile and use, particularly whether the DoD mandates that members of the military participate in vaccination programs. Absent a Presidential waiver or the informed consent of the recipient, the DoD is required to use FDA approved products, if available, and not investigational products under development, in MilVax vaccination programs. The DoD provides development funding for biodefense vaccines through its Joint Vaccine Acquisition Program.

National Institute of Allergy and Infectious Diseases. Beginning with fiscal year 2003, the U.S. Congress added approximately $1.5 billion per year to the biodefense research funding budget for NIAID. In fiscal year 2004, NIAID awarded more than 700 research project grants for biodefense research. In fiscal year 2004, biodefense funding by NIAID totaled $1.6 billion, which was more than one-third of NIAID's total budget.

There are also a number of potential additional customers for biodefense immunobiotics. These include:

- the U.S. Postal Service;
- foreign governments;
- state and local governments, which we expect will be interested in these products to protect first responders, such as police, fire and emergency medical personnel;
- multinational companies and non-governmental organizations; and
- hospitals.

Although there have been minimal sales to these customers to date, we believe that they may comprise an important component of the overall biodefense market in the future.

The commercial market

Vaccines have long been recognized as a safe and cost-effective method for preventing infection caused by various bacteria and viruses. Because of an increased emphasis on preventative medicine in industrialized countries, vaccines are now well recognized as an important part of public health

management strategies. According to Frost & Sullivan, a market research organization, from 2002 to 2005, annual worldwide vaccine sales increased from $6.7 billion to $9.9 billion, a compound annual growth rate of approximately 14%. Frost & Sullivan estimates that the worldwide sales of vaccines will grow at a compound annual rate of approximately 10.5% from 2005 through 2012. As of 2005, Frost & Sullivan estimates that approximately two-thirds of global vaccine sales were attributable to pediatric vaccines. In addition, vaccines sold in developed markets represented approximately 80% of worldwide vaccine revenues. New vaccine technologies and a greater understanding of how disease-causing organisms, or pathogens, cause disease are leading to the introduction of new vaccine products. Moreover, while existing marketed vaccines generally are designed to prevent infections, new vaccine technologies have also led to a focus on the development of vaccines for therapeutic purposes. Potential therapeutic vaccines extend beyond infectious diseases to cancer, autoimmune diseases and allergies.

Most non-pediatric commercial vaccines are purchased and paid for, or reimbursed by, managed care organizations, other private health plans or public insurers or paid for directly by patients. With respect to some diseases affecting the public health generally, particularly in developing countries, public health authorities or nongovernmental, charitable or philanthropic organizations fund the cost of vaccines. According to Frost & Sullivan, public purchases of vaccines, including for immunization programs and government stockpiles, account for approximately 90% of the total volume of worldwide vaccine sales. Although accounting for only 10% of the total volume of worldwide vaccine sales, private market purchases of vaccines accounted for approximately 60% of total worldwide vaccine sales revenues in 2005.

Scientific background

The immune system

The immune system provides protection against pathogens, such as bacteria and viruses, through immune responses that are generated by a type of white blood cells known as lymphocytes. Immune responses that depend on lymphocyte recognition of components of pathogens, called antigens, have two important characteristics. First, these immune responses are specific, which means that lymphocytes recognize particular antigens on pathogens. Second, these immune responses induce memory so that when the antigen is encountered again, the immune response is enhanced. Generally, there are two types of specific immunity: humoral immunity and cell mediated immunity. Humoral immunity is provided by proteins, known as antibodies or immune globulins, that are produced by lymphocytes. Antibodies are effective in dealing with pathogens before the pathogens enter cells. Cell mediated immunity is provided by lymphocytes that generally deal with threats from cells that are already infected with pathogens by directly killing infected cells or interacting with other immune cells to initiate the production of antibodies or activate cells that kill and eliminate infected cells.

Vaccines

A vaccine is normally given to a healthy person as a prophylaxis in order to generate immune responses that will protect against future infection and disease caused by pathogens. Following vaccination, the immune system’s memory of antigens presented by a vaccine allows for an immune response to be generated to a pathogen to provide protection against disease. Therapeutic vaccines also are being developed to strengthen or modify the immune response in patients already infected with bacterial and viral pathogens to clear the pathogens from their bodies. Without treatment, these patients can be subject to recurring bouts of the disease.

There are three basic types of vaccines: live attenuated vaccines, inactivated whole cell vaccines and subunit vaccines. Live attenuated vaccines are made from weakened, or attenuated, viruses or bacteria that are designed to mimic some of the early stages of infection without causing disease. Inactivated whole cell vaccines are made by growing the infectious organism in culture media or mammalian cells and then inactivating the organisms. Subunit vaccines are derived from individual antigens that can be purified and used as vaccines. Culture filtrate vaccines are a type of subunit vaccine. These vaccines are based on components that are secreted by pathogens grown in a culture media and then purified by filtration of the culture media.

Live attenuated vaccines can produce stronger, longer lasting immunity than inactivated whole cell vaccines and often are effective after only a single dose. However, live attenuated vaccines are subject to safety concerns related to the risk that they may revert to the virulent form or cause disease in patients with weakened immune systems. Inactivated whole cell vaccines have been successfully developed for some pathogens, but large quantities of the infectious organism have to be grown to make the vaccine. This poses a safety risk for people involved in the manufacturing process and requires high levels of containment. Subunit vaccines generally produce fewer side effects than vaccines that use the whole organism, but often are not as immunogenic as inactivated whole cell or live attenuated vaccines. Adjuvants, which augment or enhance the immune responses to vaccine antigens, are often used in combination with weaker antigens, such as subunit vaccines.

Scientists have applied recombinant technology, which allows for the manipulation of the genetic material of pathogens, in the development of new live attenuated and subunit vaccines. For live attenuated vaccines, genes involved in virulence can be completely deleted from a pathogen so that the organism can no longer cause disease or revert to the virulent form. For subunit vaccines, the gene directing the production of the antigen can be isolated and moved into a harmless organism where it can be expressed at high levels and purified. In addition, scientists have used recombinant technology to develop vector systems to deliver multiple vaccine antigens from different disease-causing organisms in a single live attenuated vaccine by inserting genes coding for these antigens into the genetic material of the vector. Currently, the only recombinant vaccines approved by the FDA are those for the prevention of hepatitis B infection, including both stand-alone vaccines and combination vaccines that include the recombinant hepatitis B component. The only recombinant vaccines currently licensed by the European Medicines Agency for marketing in the European Union member states are several vaccines that contain recombinant hepatitis B and one vaccine that includes a recombinant cholera toxin B subunit. We believe that the primary application for recombinant technology in the vaccine field will be for the development of vaccines in situations in which other vaccine technologies have not been successful or in which recombinant technology permits vaccine production with a lower level of safety containment.

Immune globulins

Immune globulins are normally made by collecting plasma from individuals who have contracted or been vaccinated for a particular disease and whose plasma contains protective antibodies, known as IgG, generated by a humoral immune response to pathogen exposure or vaccination. These antibodies are isolated by fractionation of the plasma, purified and then administered intravenously to patients, providing an immediate protective effect. Because it normally takes several weeks to generate antibodies after vaccination, immune globulins are used in situations in which it is not possible to wait for active immunization to generate the protective immune response.

Products

The following table summarizes key information about our marketed product, BioThrax, and our biodefense and commercial immunobiotic product candidates. We utilize a wide array of technologies to develop and manufacture our marketed product and product candidates, including conventional and recombinant technologies. For each development program, we select and apply the technology that we believe is best suited to address the particular disease based on our evaluation of factors such as safety, efficacy, manufacturing requirements, regulatory pathway and cost. We currently hold all commercial rights to BioThrax and all of our immunobiotic product candidates, other than our recombinant bivalent botulinum vaccine, for which HPA has the non-exclusive right to make, use and sell to meet public health requirements in the United Kingdom, and our meningitis B vaccine candidate that we are developing in collaboration with Sanofi Pasteur. For more information about our agreements with HPA, see “Intellectual property and licenses — License agreements — HPA agreements.” For more information about our collaboration with Sanofi Pasteur, see “— Sanofi Pasteur collaboration.”

Immunobiotic	Therapeutic/ prophylactic	Stage of development	Status	Collaboration/external relationship
Biodefense				
Anthrax				
BioThrax (anthrax vaccine adsorbed)	Prophylactic	FDA approved	Commercially marketed six dose regimen	
	Prophylactic	Post-approval label expansion	BLA supplement submitted for five dose regimen and intramuscular injection; CDC clinical trial ongoing	CDC — independent clinical trial
	Prophylactic	Post-approval label expansion	Single dose syringe development program initiated	
BioThrax (anthrax vaccine absorbed)*	Post-exposure prophylactic	Post-approval label expansion	Plan to file IND in 2006; two proof-of-concept animal studies completed	
Anthrax immune globulin*	Therapeutic	Preclinical	Plasma donor stimulation program ongoing; animal efficacy studies planned; plan to file IND in late 2006 or early 2007	NIAID — funding for animal efficacy studies in rabbits
Botulinum				
Recombinant bivalent botulinum vaccine*	Prophylactic	Preclinical	Proof-of-concept animal study completed	HPA — collaboration
Botulinum immune globulin*	Therapeutic	Preclinical	Proof-of-concept animal studies planned	HPA — collaboration for development of a new botulinum toxoid vaccine
Commercial				
Typhoid vaccine	Prophylactic	Phase II	Phase I clinical trial in Vietnam completed; plan to initiate Phase II clinical trial in Vietnam in the fourth quarter of 2006	Wellcome Trust — funding for Phase I and Phase II clinical trials in Vietnam
Hepatitis B therapeutic vaccine	Therapeutic	Phase II	Phase I clinical trial in the United Kingdom completed; clinical trial application approved in the United Kingdom for a Phase II clinical trial	
Group B streptococcus vaccine	Prophylactic	Phase I	One Phase I clinical trial in the United Kingdom completed; two additional Phase I clinical trials planned	
Chlamydia vaccine	Prophylactic	Preclinical	Proof-of-concept animal study completed	
Meningitis B vaccine	Prophylactic	Preclinical	Antigen identification completed	Sanofi Pasteur — collaboration

* We currently intend to rely on the FDA animal rule in seeking marketing approval for these product candidates. Under the animal rule, if human efficacy trials are not ethical or feasible, the FDA can approve drugs or biologics used to treat or prevent serious or life threatening conditions caused by exposure to lethal or permanently disabling toxic chemical, biological, radiological or nuclear substances based on human clinical data demonstrating safety and immunogenicity and evidence of efficacy from appropriate non-clinical animal studies and any additional supporting data. For more information about the FDA animal rule, see "— Government regulation — Clinical trials."

No assessment of the safety or efficacy of our vaccine candidates can be considered definitive until all clinical trials needed to support a submission for marketing approval are completed. The results of our completed preclinical tests and Phase I clinical trials do not ensure that our planned later stage clinical trials for our vaccine candidates will be successful. A failure of one or more of our clinical trials can occur at any stage of testing.

Biodefense business

In our biodefense business, we are developing and commercializing immunobiotics for use against biological agents that are potential weapons of bioterrorism. Our marketed product, BioThrax, is the only vaccine approved by the FDA for the prevention of anthrax infection. In addition to BioThrax, our biodefense product portfolio includes three product candidates in preclinical development. We are developing all of our biodefense product candidates to address category A biological agents, which are the class of biological agents that the CDC has identified as the greatest possible threat to public health.

BioThrax (anthrax vaccine adsorbed)

Anthrax overview. Anthrax is a potentially fatal disease caused by the spore forming bacterium *Bacillus anthracis*. Anthrax bacteria are naturally occurring and spores are found in soil throughout the world. Anthrax spores can withstand extreme heat, cold and drought for long periods without nutrients or air. Anthrax infections occur if the spores enter the body through a cut, abrasion or open sore, referred to as cutaneous anthrax, or by ingestion or inhalation of the spores. Once inside the body, anthrax spores germinate into bacteria that then multiply. Anthrax bacteria secrete three toxin proteins, protective antigen, lethal factor and edema factor, which are individually non-toxic but can become highly toxic if allowed to interact on the surface of human or animal cells.

Cutaneous anthrax, although rare in the United States, is the most common type of naturally acquired anthrax. Cutaneous anthrax is typically acquired through contact with contaminated animals and animal products. The fatality rate for untreated cases of cutaneous anthrax is estimated to be approximately 20%.

Inhalational anthrax is the most lethal form of anthrax. We believe that aerosolized anthrax spores are the most likely method to be used in a potential anthrax bioterrorism attack. Inhalational anthrax has been reported to occur from one to 43 days after exposure to aerosolized spores. Initial symptoms of inhalational anthrax are non-specific and may include sore throat, mild fever, cough, achiness or weakness, lasting up to a few days. After a brief period of improvement, the release of anthrax toxins may cause an abrupt deterioration of the infected person, with the sudden onset of symptoms, including fever, respiratory failure as the lungs fill with fluids and shock. Hemorrhagic meningitis is common. Death often occurs within 24 hours of the onset of advanced respiratory complications. The fatality rate for inhalational anthrax is estimated to be between 45% and 90%, depending on whether aggressive, early treatment is provided.

To date, the principal customer for anthrax vaccines has been the U.S. government. Because of concerns regarding the use of anthrax spores as a biological weapon during the first Persian Gulf War, the DoD began administering BioThrax to military personnel in 1990. Since 1998, we have been a party to two supply agreements for BioThrax with the DoD. Pursuant to these contracts, we supplied over eight million doses of BioThrax through August 2006 to the DoD for immunization of military personnel. Since March 1998, the DoD has vaccinated more than 1.5 million military personnel with more than 5.5 million doses of BioThrax. The DoD currently administers BioThrax under its MilVax program on a voluntary basis.

In May 2005, we entered into an agreement to supply five million doses of BioThrax to HHS for placement into the strategic national stockpile for a fixed price of $123 million. We completed delivery of all five

million doses by February 2006, seven months earlier than required. In May 2006, we entered into a contract modification with HHS for the delivery of an additional five million doses of BioThrax to HHS by May 2007 for a fixed price of $120 million. We have delivered approximately one million doses of BioThrax under this contract modification through August 2006.

Following the October 2001 anthrax letter attacks, HHS provided BioThrax under an investigational new drug application, or IND, protocol for administration on a voluntary basis to Capitol Hill employees and others who may have been exposed to anthrax. In addition, we have supplied small amounts of BioThrax directly to several foreign governments. It is our understanding that the DoD has sold BioThrax to the governments of a number of other foreign countries for the protection of military personnel. We believe that state and local governments and several foreign governments are significant potential customers for BioThrax. Our total revenues from BioThrax sales were $55.5 million in 2003, $81.0 million in 2004 and $127.3 million in 2005.

Current treatments. The only FDA approved product for pre-exposure prophylaxis of anthrax infection is BioThrax. The only FDA approved products for post-exposure prophylaxis of anthrax infection are antibiotics, which are typically administered over a 60-day period. Antibiotics prevent anthrax disease by killing the anthrax bacteria before the bacteria can release anthrax toxins into the body. However, antibiotics are not effective against anthrax toxins after the toxins have been released into the body and do not kill anthrax spores that may remain in the body for extended periods after exposure. Anthrax spores that remain in the body can potentially lead to infection following the end of antibiotic treatment. Infection also may occur if patients do not adhere to the prolonged course of antibiotic treatment or are not able to remain on antibiotics for extended periods of time. Because of these limitations, the CDC recommends administering BioThrax in combination with antibiotics under an IND with informed consent of the patient as a post-exposure prophylaxis for anthrax infection as an emergency public health intervention. While BioThrax is not currently approved by the FDA for post-exposure prophylaxis, as discussed below, we are actively pursuing a label expansion for this indication.

Description and benefits of BioThrax. BioThrax is the only FDA approved vaccine for the prevention of anthrax infection. It is approved by the FDA as a pre-exposure prophylaxis for use in adults who are at high risk of exposure to anthrax spores. BioThrax is manufactured from a culture filtrate, made from a non-virulent strain of *Bacillus anthracis,* and contains no dead or live bacteria. BioThrax is administered by subcutaneous injection in three initial doses followed by three additional doses, with an annual booster dose recommended thereafter. The initial three doses are given two weeks apart followed by three additional doses given at six, 12 and 18 months following first vaccination. BioThrax includes aluminum hydroxide, or alum, as an adjuvant.

The NIH originally approved the manufacture and sale of BioThrax by the Michigan Department of Public Health in 1970. In 1972, responsibility for approving biological products transferred from the NIH to the FDA. Following that transfer of responsibility, the FDA established procedures for reviewing the safety and efficacy of biological products, including BioThrax, that had been previously approved by the NIH. The FDA set out to categorize the products according to evidence of safety and effectiveness and determine if the products should remain approved and on the market. In December 1985, the FDA issued a proposed rule containing a finding that BioThrax was safe and effective. However, the FDA did not finalize that proposed rule pursuant to applicable notice and comment requirements. In December 2005, based on a review of data from the study used to support the original marketing approval of BioThrax and other studies of the use of BioThrax in humans, including studies by the CDC and the DoD, the FDA issued a final order regarding BioThrax. In the final order, the FDA affirmed the approval of BioThrax and found, among other things, that:

- BioThrax is safe and effective;

- the study used to support the original marketing approval of BioThrax constituted a well controlled human efficacy study in which BioThrax was 92.5% effective in preventing inhalational and cutaneous anthrax;
- as reported by the National Academy of Science's Institute of Medicine, studies in humans and animal models support the conclusion that BioThrax is effective against anthrax strains that are dependent upon the anthrax toxin as a mechanism of virulence by all routes of exposure, including inhalation;
- periodic evaluations of reports in the vaccine adverse event reporting system database maintained by the CDC and the FDA confirm that BioThrax continues to be safe for its intended use; and
- as reported by an independent advisory panel to the FDA, CDC data suggest that BioThrax is fairly well tolerated with severe local reactions and systemic reactions being relatively rare.

In a study published in 2002, the Institute of Medicine, which is a component of The National Academy of Sciences and provides independent, unbiased, evidence-based advice on matters pertaining to public health, found that BioThrax is an effective vaccine for protection against anthrax, including inhalational anthrax, caused by any known or plausible engineered strains and that no convincing evidence exists that people face an increased risk of experiencing short-term life-threatening or permanently disabling adverse effects from BioThrax or developing any adverse effects from long-term use of BioThrax.

As with any pharmaceutical product, the use of vaccines carries a risk of adverse health effects that must be weighed against the expected health benefit of the product. The adverse reactions that have been associated with the administration of BioThrax are similar to those observed following the administration of other adult vaccines and include local reactions, such as redness, swelling and limitation of motion in the inoculated arm, and systemic reactions, such as headache, fever, chills, nausea and general body aches. In addition, some serious adverse events have been reported to the vaccine adverse event reporting system database maintained by the CDC and the FDA with respect to BioThrax. The report of any such adverse event to the vaccine adverse event reporting system database is not proof that the vaccine caused such event. These serious adverse events, including diabetes, heart attacks, autoimmune diseases, including Guillian Barre syndrome, lupus and multiple sclerosis, lymphoma and death, have not been causally linked to the administration of BioThrax.

BioThrax development activities. In its 2002 study, the Institute of Medicine recommended characteristics for the development of a new anthrax vaccine. Based on these recommendations, we are actively pursuing label expansions and improvements for BioThrax, including the following:

- *Extend shelf life.* In 2005, the FDA approved an extension of BioThrax shelf life from two to three years, which will allow BioThrax to be stockpiled for a longer period of time. We are conducting ongoing stability testing of BioThrax, and, depending on the outcome of these tests, we may apply for a further extension of BioThrax shelf life to five years in 2007.
- *Reduce doses for pre-exposure prophylaxis.* Based on an interim analysis of data from an ongoing clinical trial of BioThrax being conducted by the CDC, we have applied to the FDA to reduce the number of required doses of BioThrax for pre-exposure prophylaxis from six to five, with an annual booster dose thereafter. In April 2006, the FDA issued a complete response letter to our application, requesting clarification and requiring additional analysis of the data that we submitted. We are in the process of responding to this letter and amending our application.
- *Add second route of administration.* We have applied to the FDA to add a second route of administration of BioThrax to include intramuscular injection in addition to subcutaneous injection. We believe that intramuscular injection will result in fewer injection site reactions than subcutaneous injection.

- *Single dose syringe.* We believe that products that are administered in a single dose syringe are of significant interest to HHS for inclusion in the strategic national stockpile. As a result, we have initiated a development program to make BioThrax available in single dose syringes.

Post-exposure prophylaxis. We also plan to seek approval of BioThrax in combination with antibiotic therapy as a post-exposure prophylaxis for anthrax infection. We expect that we will use three doses of BioThrax given two weeks apart for this indication. In 2005, NIAID completed a proof-of-concept study of BioThrax in which rabbits infected with anthrax were treated with the antibiotic levofloxacin or with levofloxacin in combination with two doses of BioThrax in one of three dose amounts. One of the dose amounts tested was a dilution of BioThrax designed to elicit an immune response that is proportional to the effect of an undiluted dose in humans. This is referred to as a humanized dose. Only 44% of the rabbits treated with antibiotics alone survived, while 100% of the rabbits treated with either humanized doses or undiluted human doses of BioThrax in combination with levofloxacin survived. In the trial, there were statistically significant increases in survival rates for rabbits treated with all dose amounts of BioThrax in combination with the antibiotic compared to rabbits treated with levofloxacin alone. These results were consistent with an earlier animal test conducted by the U.S. Army Medical Research Institute of Infectious Diseases, or USAMRIID, involving undiluted human doses of BioThrax in combination with an antibiotic administered to nonhuman primates infected with anthrax.

To advance the development of BioThrax for this additional indication, we plan to conduct three animal efficacy studies in accordance with the FDA animal rule. We plan to evaluate the effect of a humanized dose of BioThrax in combination with an antibiotic compared to the antibiotic alone in rabbits and nonhuman primates exposed by inhalation to anthrax spores. We plan to file an IND with the FDA in 2006 to initiate a human clinical trial of BioThrax for this indication using three doses of BioThrax given two weeks apart. The purpose of this trial will be to obtain additional immunogenicity data regarding BioThrax using the planned three dose regimen. We expect to conduct this clinical trial concurrently with our planned animal efficacy studies. Under the FDA animal rule, we believe that, if the results are favorable, the rabbit and nonhuman primate animal efficacy studies together with our planned human immungenicity clinical trial would be sufficient to support the filing with the FDA of a biologics license application, or BLA, supplement for marketing approval of BioThrax for this indication in the second half of 2007.

Next generation anthrax vaccine. We are evaluating several potential product candidates in connection with development of a next generation anthrax vaccine, featuring attributes such as self-administration and a longer shelf life. In September 2006, we submitted three separate proposals in response to a request for proposals issued by NIAID in June 2006 for the advanced development and testing of next generation anthrax vaccine candidates. The NIAID request for proposals specified properties desirable for a biodefense vaccine to be stored in the strategic national stockpile, including the following:

- shelf life of three years or longer at room temperature;
- the ability to generate protective immune response in one or two doses; and
- the ability to be safely self administered or rapidly inoculated into large numbers of people.

The NIAID request stated that anthrax vaccine candidates should maintain a superior safety profile to BioThrax, contain a protective antigen that has been shown to be efficacious against anthrax spore challenge in animal models and have progressed through a proof-of-concept efficacy study in a relevant spore challenged animal model. NIAID is not obligated to make any award, and may decide not to make any award, for development funding pursuant to this request for proposals or otherwise.

Anthrax immune globulin

We are developing an anthrax immune globulin as a single dose intravenous therapeutic for treatment of patients with manifest symptoms of anthrax disease resulting from the release of anthrax toxins into the body. If successfully developed, we expect our anthrax immune globulin therapeutic to be prescribed for administration in these circumstances either as a monotherapy or in conjunction with an antibiotic.

There are no approved products for the effective treatment of anthrax disease after anthrax toxins have been released into the body. Cangene, in collaboration with the CDC, is currently developing an anthrax immune globulin for use in these circumstances based on plasma collected from military personnel who have been vaccinated with BioThrax. Pursuant to the first in a series of three anticipated requests for proposals, HHS awarded a contract to Cangene in 2005 to supply anthrax immune globulin for use in preliminary efficacy testing. In July 2006, HHS exercised an option under a modification to this contract for Cangene to supply 10,000 doses of anthrax immune globulin for the strategic national stockpile. This contract modification has a total value of approximately $143 million. Cangene has announced that it expects to deliver these doses of anthrax immune globulin to the strategic national stockpile beginning in late 2007 through the end of 2009. HHS also awarded a contract to Human Genome Sciences in 2005 to supply a monoclonal antibody to Bacillus anthracis for evaluation of efficacy as a post-exposure therapeutic for anthrax infection. In June 2006, HHS awarded a development and supply agreement with a value of $165 million to Human Genome Sciences for this monoclonal antibody, referred to as ABthrax. The contract provides for the supply of 20,000 treatment courses of ABthrax for the strategic national stockpile. Human Genome Sciences has announced that it expects to deliver ABthrax to the strategic national stockpile in 2008. The FDA has granted ABthrax an orphan drug designation for the treatment of inhalational anthrax.

Our plan is to develop our anthrax immune globulin therapeutic using antibodies that are produced by healthy donors immunized with BioThrax. We recently completed a plasma donor stimulation program in which we collected plasma from our employees and military personnel who had been vaccinated with BioThrax. We are currently designing a civilian donor stimulation program. We have collected a sufficient amount of plasma to initiate manufacturing of the anthrax immune globulin under current good manufacturing practice, or cGMP, requirements in a validated and approved process. The manufacturing process entails fractionating the plasma and purifying the immune globulin. We have engaged Talecris Biotherapeutics, Inc. to perform the plasma fractionation and purification processes and contract filling for our anthrax immune globulin candidate at its FDA approved facilities. We expect that the anthrax immune globulin that we manufacture will be acceptable under the FDA's rules for use in both preclinical studies and human clinical trials.

We plan to rely on the FDA animal rule in connection with the development of our anthrax immune globulin candidate. Specifically, we plan to conduct efficacy studies of this product candidate in infected rabbits and then infected nonhuman primates. Concurrently, we plan to file an IND for a Phase I clinical trial to evaluate the safety and pharmacokinetics of our anthrax immune globulin candidate in healthy volunteers. We currently anticipate filing such an IND in late 2006 or early 2007. We believe that favorable data from these animal efficacy studies and the safety and pharmacokinetic clinical trial would be sufficient to support an application to the FDA for marketing approval. NIAID has provided us grant funding of up to $3.7 million for the studies designed to assess the tolerability, pharmacokinetics and efficacy of this product candidate in infected rabbits and the development and validation of product assays. We believe that our anthrax immune globulin would be eligible to be procured by HHS under Project BioShield for inclusion in the strategic national stockpile after we file an IND and prior to receiving marketing approval.

Recombinant bivalent botulinum vaccine

Disease overview. Botulism is a frequently fatal disease caused by botulinum toxins produced by the bacterium *Clostridium botulinum*. *Clostridium botulinum* is widely distributed in soil and aquatic environments throughout the world. Botulinum bacteria produce seven distinct serotypes, each of which elicits a distinct antibody response. Naturally occurring outbreaks of botulism in humans have been reported from exposure to four of the seven serotypes: A, B, E and F. Botulism normally occurs when an individual consumes contaminated food containing botulinum toxin. Once consumed, the toxin rapidly attacks nerve cells, resulting in paralysis of peripheral muscles, including the muscles involved in respiration. Botulism can also be contracted if botulinum bacteria contaminate wounds or colonize in the intestine of infants, which is referred to as infant botulism.

Botulinum toxins are among the most potent and dangerous of potential biological weapons. Exposure to very small quantities of botulinum toxin can cause the rapid onset of life threatening paralytic disease syndrome. It has been estimated that a single gram of toxin evenly dispersed and inhaled could kill more than one million people.

Market opportunity and current treatment. Because botulinum toxin is stable when purified and extremely potent when administered in very small quantities, it has the potential to be used directly as a biological weapon, either through deliberate contamination of food or drinking water or as an aerosol. As with anthrax vaccines, we believe that the U.S. government will be the principal customer for a botulinum vaccine, particularly in the near term. We believe that state and local governments, which we expect will be interested in a botulinum vaccine to protect first responders to a bioterrorism attack, and several foreign governments are significant potential customers for a botulinum vaccine.

The Michigan Department of Public Health first developed a pentavalent botulinum toxoid vaccine in the late 1960s and began manufacturing the pentavalent vaccine for use under an IND in 1969. This vaccine is called pentavalent because it addresses five serotypes of botulinum neurotoxin. Since 1989, the CDC and the DoD have distributed the pentavalent botulinum toxoid vaccine under this IND for vaccination of at risk laboratory workers and military personnel as an adjunct to other measures of protection. The pentavalent botulinum toxoid vaccine exhibited an acceptable safety profile in connection with the immunization of over 5,000 individuals with more than 21,000 doses of the vaccine. Approximately 90% of injections were followed by no, or mild, local reactions. Only 0.3% of injections were followed by severe local reactions. A total of 5.1% of injections were followed by reported systemic reactions. In connection with our acquisition of assets from the Michigan Biologic Products Institute in 1998, we acquired rights to the pentavalent vaccine, know-how relating to the development of the pentavalent vaccine and rights to a master botulinum cell bank, which provides starting materials for the pentavalent vaccine.

After more than 15 years of use, the supplies of pentavalent botulinum toxoid vaccine are dwindling and in need of replacement. In August 2003, HHS issued a pre-solicitation notice for the acquisition of up to ten million doses of a recombinant trivalent botulinum vaccine, which would address botulinum serotypes A, B and E. HHS was seeking a trivalent vaccine because botulinum serotype F is more difficult to produce under cGMP conditions and does not appear to represent the same level of threat as other serotypes of botulinum neurotoxin. We also believe that botulinum serotype E does not represent the same level of threat as serotypes A and B. Botulinum serotypes A and B are responsible for approximately 85% of all cases of botulism.

In November 1997, the DoD, through its Joint Vaccine Acquisition Program, awarded a contract for $322 million to DynPort Vaccine Company for the development of various biodefense vaccines. In April

2005, the DoD provided additional funding to DynPort for the continued development of a recombinant bivalent botulinum vaccine for protection against botulinum serotypes A and B.

Description and development status. We are developing a recombinant protein subunit bivalent botulinum vaccine for protection against botulinum serotypes A and B in collaboration with HPA. We hold an exclusive license from HPA to the recombinant technology that we are using in the development of our vaccine candidate. HPA is also providing us with process development and toxicology expertise, access to its facilities and specialized manufacturing capabilities. We are designing our vaccine candidate to be administered by intramuscular injection with an alum adjuvant in a three dose regimen. Our recombinant vaccine candidate is based on a fragment of the botulinum toxin that we have selected as an antigen because we believe it to be non-toxic and immunogenic. We are producing this recombinant antigen in an E. coli expression system. We believe that our technology will allow us to develop a stable product with possible cross-protection against a range of toxin subtypes and ease of formulation into a multivalent vaccine.

We have completed initial proof-of-concept studies of this vaccine candidate in mice for botulinum serotypes A and B. In these studies, the vaccine elicited antibodies and provided protection against challenge with the botulinum toxin. We plan to initiate additional proof-of-concept animal studies in mice for botulinum serotype E and then to evaluate the toxicity of the vaccine in other animal studies so that we will be in a position, if we determine to do so, to develop a recombinant trivalent botulinum vaccine instead of a recombinant bivalent botulinum vaccine.

We have established a small scale production process for botulinum serotypes A and B. We anticipate that we will be able to manufacture our recombinant vaccine in a cGMP facility that will not require the high level of containment that is required for the production of conventional, non-recombinant toxoid vaccines that involve cultivation of the disease-causing organism. We plan to rely on the FDA animal rule in connection with the development of our recombinant bivalent botulinum vaccine candidate.

Botulinum immune globulin

We are developing our botulinum immune globulin candidate in collaboration with HPA as an intravenous therapeutic for treatment of symptomatic botulinum exposure. Because of the rapid onset of symptoms following infection with botulinum toxin, prophylactic vaccines, which take several weeks to create an effective protective immune response, are not useful as post-exposure treatments for botulism. In addition, antibiotics are not effective post-exposure treatments since they work by killing the botulinum bacteria that produce the toxin, but do not act directly against the botulinum toxin.

We believe that an intravenous botulinum immune globulin has the potential to provide immediate protection from the effects of botulinum toxin. A third party's FDA approved botulinum immune globulin was tested in a five-year, randomized, double-blind, placebo controlled trial in 122 infants with infant botulism and a subsequent six-year, open-label study in 382 infants. In the placebo controlled trial, infants treated with the botulinum immune globulin had statistically significant reductions in the average length of hospital stay, duration of intensive care, duration of mechanical ventilation, duration of tube or intravenous feeding and hospital charges. In the open-label study, the early treatment of patients with infant botulism shortened the average length of stay significantly more than later treatment.

The only current recommended therapy for exposure to botulism consists of passive immunization with an immune globulin derived from equine plasma. The components of a previously approved trivalent equine immune globulin that contained antibodies against botulinum toxin types A, B, and E have been reformulated into an approved bivalent product and an investigational monovalent product. However, the equine immune globulin is subject to important shortcomings. First, because the human body recognizes

the equine immune globulin as a foreign substance, its efficacy may be limited. In addition, the antibody immune response against the equine immune globulin can lead to potential severe side effects, including anaphylactic shock, if the equine immune globulin is administered more than once. To screen for sensitivity to the equine immune globulin, patients are given small challenge doses of the equine immune globulin before receiving a full dose.

In June 2006, HHS awarded a five-year development and supply contract with a base value of $362 million to Cangene for a heptavalent botulinum immune globulin derived from equine plasma. The contract provides for the supply of 200,000 doses of a botulinum immune globulin for the strategic national stockpile. Cangene has announced that it expects to produce and deliver usable product to the strategic national stockpile from mid to late 2007. The contract also provides for optional task orders worth up to an extra $234 million, which may be awarded at the sole discretion of HHS. Cangene previously began development work on the project under a research and development contract with the CDC.

We plan to rely on the FDA animal rule in connection with the development of our botulinum immune globulin candidate. Specifically, we plan to conduct efficacy studies of this product candidate in an infected rodent population and then infected nonhuman primates. Concurrently, we expect to file an IND for a Phase I clinical trial to evaluate the safety and pharmacokinetics of the botulinum immune globulin in healthy volunteers. We believe that favorable data from these animal efficacy studies and the safety and pharmacokinetic clinical trial would be sufficient to support an application to the FDA for marketing approval.

As the first step in the development of our botulinum immune globulin candidate, we are initiating production of a bivalent botulinum toxoid vaccine using botulinum serotypes A and B derived from the starting material for the pentavalent vaccine developed by the Michigan Department of Public Health. We are designing this botulinum toxoid vaccine to be administered by injection with an alum adjuvant. We anticipate that several doses will be needed to elicit a strong immune response. We are performing development activities at existing HPA facilities, which we expect may expedite production of clinical material for the vaccine. HPA is also providing us with process development and specialized manufacturing capabilities for the vaccine.

We plan to conduct a preclinical proof-of-concept study of this vaccine candidate in mice to confirm the suitability of the vaccine for further development. If the results of this proof-of-concept study are favorable, based on a demonstration of protective efficacy or an immune response associated with protection, we plan to file an IND to initiate a Phase I clinical trial to evaluate the safety of this vaccine in healthy volunteers. We expect that the Phase I clinical trial will provide data sufficient to support an acceptable dose for the vaccine and the optimal dosing schedule. If the results of the Phase I clinical trial are favorable, we intend to initiate a donor stimulation program in which we will immunize healthy volunteers with the vaccine and collect plasma for fractionation for the manufacture of our botulinum immune globulin candidate. We expect to rely on safety and immunogenicity data from the pentavalent botulinum toxoid vaccine previously manufactured by the State of Michigan in the development of this bivalent botulinum toxoid vaccine. This data includes the results of a Phase II safety and immunogenicity clinical trial conducted by the DoD from July 1998 to May 2000, animal efficacy trial data and the extensive use of the pentavalent vaccine by the CDC in immunizing at risk laboratory personnel. As a result, we anticipate that the FDA will not require us to conduct a Phase II clinical trial for the bivalent botulinum toxoid vaccine before permitting us to initiate the donor stimulation program.

Our current plan is to develop the botulinum toxoid vaccine that we are using in the development of our botulinum immune globulin candidate through Phase I clinical trials. At that point, we expect to assess our future development plans based on the U.S. government’s interest in providing funding for the further development or procurement of this toxoid vaccine, either instead of or in addition to a

recombinant botulinum vaccine, as a pre-exposure prophylaxis for botulinum toxin. We believe that this type of government funding may become available as there is currently no botulinum vaccine available for the military or the strategic national stockpile. Moreover, we believe that the well-established nature of the manufacturing process for a toxoid vaccine, the availability of safety data from the pentavalent botulinum vaccine, our access to know-how from the development and manufacturing of the pentavalent botulinum vaccine by the State of Michigan and access to HPA technology would all facilitate our development of a bivalent botulinum toxoid vaccine.

Commercial business

In our commercial business, we are developing a range of commercial immunobiotic product candidates for use against infectious diseases with significant unmet or underserved medical needs.

Typhoid vaccine

Disease overview. Typhoid, also known as typhoid fever, is caused by infection with the bacterium *Salmonella typhi.* Typhoid is characterized by fever, headache, constipation, malaise, stomach pains, anorexia and myalgia. Severe cases of typhoid can result in confusion, delirium, intestinal perforation and death. Typhoid is transmitted by consuming contaminated food or drinks. Contamination usually results from poor hygiene and sanitation. Typhoid is often endemic in developing countries in which there is limited access to treated water supplies and sanitation.

Market opportunity and current treatment. According to the CDC, approximately 400 cases of typhoid are reported annually in the United States, of which approximately 70% are contracted abroad. An estimated 22 million cases of typhoid occur per year worldwide, resulting in approximately 200,000 deaths annually. The CDC recommends that all persons from the United States traveling to developing countries consider receiving a typhoid vaccination, with travelers to Asia, Africa and Latin America deemed to be especially at risk. U.S. military personnel deployed in these areas are also at risk of infection.

One oral typhoid vaccine and one injectable typhoid vaccine are currently approved and administered in both the United States and Europe. The approved oral typhoid vaccine is available in liquid and capsule formulations. Both formulations require three to four doses to generate a protective immune response. The capsule formulation requires a booster every five years thereafter. The liquid formulation has been reported to provide 77% of recipients in clinical trials with protection three years after vaccination. The approved injectable vaccine requires only a single dose. However, it is poorly immunogenic in children, requires a booster dose every three years thereafter and was effective in only 55% to 75% of recipients in clinical trials. Both approved vaccines have good safety profiles with relatively few adverse events reported. Antibiotics are used to treat typhoid after infection and usually lead to recovery commencing within four days. Without antibiotic therapy, the CDC estimates that the mortality rate of a typhoid infection is as high as 20%.

Description and development status. We are developing a live attenuated typhoid vaccine that contains deletions in two genes of the *Salmonella typhi* bacterium designed to eliminate virulence. We have designed our vaccine candidate to be administered in a single drinkable dose prior to travel to countries where typhoid is endemic. We believe that, if approved, the method of administration of our vaccine candidate would provide a competitive advantage compared to both currently approved typhoid vaccines.

We have completed preclinical studies in which we assessed the immunogenicity and toxicity of our vaccine candidate, with the following results:

- In *in vitro* tests in which human cells were exposed to our vaccine candidate, the live attenuated bacteria contained in the vaccine did not multiply.
- In pharmacology studies in mice, our vaccine candidate was immunogenic and had higher relative immunogenicity when delivered subcutaneously than the currently approved oral typhoid vaccine.
- In safety and toxicity studies in mice, a strain of *Salmonella* that causes a disease similar to typhoid in mice, which contained deletions of the genes that are also deleted in our vaccine candidate, did not cause disease.

We also have completed the following clinical trials of our typhoid vaccine candidate in the United States and Europe:

- An open-label, non-placebo controlled, pilot study conducted in the United Kingdom in nine healthy adult volunteers. The purpose of this study was to evaluate the safety and immunogenicity of our vaccine candidate. In this study, our vaccine candidate was immunogenic, eliciting both cell mediated and humoral immunogenicity, and well tolerated.
- A double-blind, placebo controlled, single dose escalating Phase I clinical trial conducted in the United States in 60 healthy adult volunteers. The purpose of this trial was to evaluate the safety, tolerability and immunogenicity of three dose levels of our vaccine candidate. In this trial, our vaccine candidate was immunogenic and well tolerated at all dose levels.
- An open-label, non-placebo controlled, single dose Phase I clinical trial conducted in the United States in 32 healthy adult volunteers. The purpose of this trial was to evaluate the safety and immunogenicity of two different presentations of the vaccine candidate, one using bottled water and another using tap water. We vaccinated 16 subjects with each presentation. Because one subject who received the tap water presentation of the vaccine candidate was excluded from the trial results due to a lack of post-baseline immunology data, the tap water presentation data reflected data from only 15 subjects. More than 90% of the subjects vaccinated with each presentation had a humoral antibody response to *S. typhi*. Because the two presentations were equally immunogenic and both were well tolerated by trial participants, we selected the tap water presentation for further development based on its relative convenience.

In these three clinical trials, our vaccine candidate demonstrated immunogenicity response levels following a single drinkable dose similar to those seen with multiple doses of the currently approved oral vaccine. As a result of these trials, we were able to establish the dose and regimen for our vaccine candidate with a formulation that we believe is appropriate for commercialization.

We recently completed a single-blind, placebo controlled Phase I clinical trial of our vaccine candidate in Vietnam in 27 healthy adult volunteers using the dose and regimen established in our Phase I clinical trials in the United States. The Wellcome Trust provided funding for the trial. The purpose of the trial was to evaluate the safety and immunogenicity of the vaccine candidate in adults living in an endemic area. In this trial, the vaccine candidate met the criterion for immunogenicity, with approximately 68% of subjects who received the vaccine candidate mounting a humoral antibody response. The vaccine candidate was well tolerated by trial participants, with no serious adverse events reported.

The remainder of our planned clinical development program for this vaccine candidate consists of the following:

- *Phase II clinical trial.* In the fourth quarter of 2006, we plan to initiate a single-blind, placebo controlled Phase II clinical trial in Vietnamese children between five and 14 years of age. The Wellcome Trust has agreed to provide funding for this trial. The purpose of this trial will be to evaluate the safety and immunogenicity of our vaccine candidate. The trial design calls for 100 subjects to receive vaccine and 50 to receive placebo, with at least 70% of the subjects being between five and ten years of age. We will assess safety and immunogenicity up to 28 days after vaccination.
- *Disease surveillance study.* Concurrently with the planned Phase II clinical trial, we plan to conduct a disease surveillance study in the areas where we are considering conducting a Phase III clinical trial of our vaccine candidate in order to confirm that a sufficient number of subjects will be included in the Phase III trial.
- *Phase III clinical trial.* We plan to conduct a single-blind Phase III clinical trial in an area where typhoid is endemic. The purpose of this trial will be to evaluate the efficacy of our vaccine candidate in children who are likely to be exposed to the typhoid bacterium. We expect to undertake an interim analysis of the data from the trial after approximately one year, which, if the results are favorable, we plan to use to support the filing with the FDA of a BLA for marketing approval of our vaccine candidate. We plan to continue to monitor the incidence of typhoid in the trial participants for several years after vaccination.
- *Tolerability and immunogenicity study.* Concurrently with our Phase III clinical trial, we plan to conduct a Phase III clinical trial in the United States or Europe in healthy volunteers. The purpose of this trial will be to evaluate the safety and immunogenicity of our vaccine candidate in the target population to support marketing approval in the United Sates and Europe.

Since typhoid fever in Asia is largely a disease of children, we plan to conduct our Phase II and Phase III clinical trials in this age group. We plan to conduct our Phase II and Phase III clinical trials in endemic areas because there are no agreed immune correlates of efficacy for live attenuated typhoid vaccines and it is not practicable to demonstrate clinical efficacy in travelers from the United States or Europe due to the prohibitively large number of subjects that would be needed. The currently approved typhoid vaccines relied on similar clinical trials for regulatory approval.

We plan to seek additional grant funding for development of this product candidate.

Hepatitis B therapeutic vaccine

Disease overview. Hepatitis B is a highly infectious virus transmitted from person to person by contact with blood and bodily fluids. Most hepatitis B infections in adults result in acute hepatitis, with the immune system eventually clearing the infection. However, in approximately 8% to 10% of infected adults and a much larger proportion of infected children, the immune system fails to clear the virus, resulting in immune tolerance of the virus and chronic infection. In addition, pregnant women suffering from hepatitis B can pass the infection on to their babies during childbirth. Babies born infected rarely clear the infection, with over 90% becoming chronically infected. According to the World Health Organization, approximately 25% of people with chronic hepatitis B infection develop serious liver disease, including cirrhosis and liver cancer.

Market opportunity and current treatment. Chronic infection with the hepatitis B virus is a global problem, with an estimated 350 million carriers worldwide. The World Health Organization estimates that approximately one million people per year worldwide die from complications of hepatitis B infection.

Infection rates are highest in the developing world, posing an infection risk to travelers from industrialized countries. Infection is less common in the United States and Europe. In the United States, there are an estimated 1.2 million people with chronic hepatitis B infection, resulting in approximately 4,000 to 5,000 deaths annually.

Prophylactic vaccines based on recombinant protein subunit preparations are effective in preventing hepatitis B infection. Childhood vaccination with these vaccines is common in industrialized countries and in some of the developing world. Childhood immunization programs have reduced the number of carriers of chronic hepatitis B infection by up to 90% in parts of the world where hepatitis B is most common. In the United States, infection rates for acute hepatitis B have decreased by approximately 77% over the past 20 years. However, these existing vaccines have not proven to be effective in treating people with chronic hepatitis B infection. As a result, there remain a large number of people who are chronically infected with hepatitis B and require treatment to prevent the development of liver disease and reduce the risk of transmitting the infection to others.

There is no vaccine currently on the market that is licensed for therapeutic use for chronic hepatitis B infection. Currently available therapies for this patient population consist mainly of antiviral drugs, such as an immunotherapy with interferons. However, these treatments are subject to a number of shortcomings. Both of these treatments can only be used in a subset of patients, and their efficacy is limited. In addition, the use of antiviral drugs may lead to the development of resistant forms of the virus and Interferon has side effects that reduce patient compliance.

Description and development status. We are developing a live attenuated therapeutic vaccine for treatment of patients with chronic hepatitis B infection. We have designed our vaccine candidate to be administered in multiple drinkable doses over several months. It may require further booster doses. Because chronic carriers have weak cellular responses to the hepatitis B virus, they cannot clear the virus. Our vaccine candidate is intended to redirect the immune system to make strong cellular responses to a hepatitis B antigen known as hepatitis B core in chronic carriers, leading to suppression of viral replication and associated liver damage.

Our vaccine candidate uses our proprietary *spi*-VEC® oral delivery system technology to deliver hepatitis B core antigen to the human immune system. *Spi*-VEC is based on our live attenuated typhoid vaccine and employs recombinant technology to insert the gene for hepatitis B core into the live attenuated S*almonella* bacteria. The bacteria produce the antigen once inside the patient. Because we are relying on recombinant technology to insert the gene for hepatitis B core into a vector delivery system, we do not need to separately purify the vaccine.

We have completed a program of pharmacology and toxicity studies of our hepatitis B therapeutic vaccine candidate in animals. In mice that were administered our vaccine candidate, the hepatitis B core antigen was manufactured and immune responses were elicited against the antigen. In separate toxicity studies also conducted in mice, our vaccine candidate was non-toxic.

In February 2004, we completed an open-label, dose escalating Phase I clinical trial of our vaccine candidate in the United Kingdom in 30 healthy adult volunteers. The purpose of this trial was to evaluate the safety and immunogenicity of our vaccine candidate. In this trial, we administered volunteers two doses of vaccine over a period of approximately two months. The vaccine elicited a cellular immune response in all subjects after two doses, indicating that the antigen had been successfully delivered to the immune system. In addition, 100% of subjects in the high dose group and 90% of subjects in the low dose group demonstrated the type of immune response known to be important in promoting clearance of hepatitis B. The vaccine candidate was well tolerated by trial participants, with no serious adverse events reported.

In March 2006, the U.K. Medicines and Healthcare Products Regulatory Agency approved our clinical trial application, including a trial protocol to initiate a Phase II clinical trial of our vaccine candidate in patients chronically infected with hepatitis B. The protocol provides for a placebo controlled, randomized, dose escalating study to be conducted in the United Kingdom in 45 chronic carriers of hepatitis B. If necessary, we may expand the study to additional sites in Europe to increase the recruitment rate. The primary purpose of this trial will be to evaluate the safety and tolerability of six monthly doses of our vaccine candidate. The secondary purpose will be to investigate whether the vaccine candidate can reduce the hepatitis B viral DNA load, a recognized surrogate endpoint for treatment of hepatitis B using current therapeutics. We expect to begin dosing patients in the trial in the fourth quarter of 2006.

If the results of this Phase II clinical trial are favorable, we expect to submit an IND to the FDA to conduct one or more clinical trials of this vaccine candidate in the United States as may be appropriate. The IND must become effective before we can conduct any clinical trials in the United States.

Group B streptococcus vaccine

Disease overview. Group B streptococcus is a bacterium that causes illness in newborn babies, pregnant women, the elderly and adults with other illnesses, such as diabetes or liver disease. Group B streptococcus is the most common cause of sepsis and meningitis in newborns in the developed world and is a frequent cause of pneumonia in newborns. It affects more babies than any other newborn health problem. Group B streptococcus bacteria can cause bladder and womb infections in pregnant women that in turn lead to infection of the fetus and premature delivery and stillbirth. In pregnant women carrying the group B streptococcus bacteria, the baby may become infected either before or during birth.

In the United States, approximately half of all neonatal group B streptococcus infections occur in newborns less than seven days old and are categorized as “early onset disease.” Infections in babies between seven days and three months old are categorized as “late onset disease.” Early onset disease is often associated with complicated or premature deliveries and usually results in pneumonia and the blood infection septicemia in the baby. It is also associated with meningitis. Approximately 5% of babies with early onset disease die. A high number of survivors of early onset disease are left with significant permanent disabilities, including sight or hearing loss and mental retardation. The majority of late onset cases occur in the first month of life. Late onset disease usually results in meningitis. Up to 5% of babies with late onset disease die. A high number of survivors of late onset disease are left with permanent disabilities, with up to one-third suffering long-term mental or physical handicaps.

Group B streptococcus infections in the elderly cause blood infections, skin or soft tissue infections and pneumonia.

Market opportunity and current treatment. The NIH has identified prevention of group B streptococcus infection in newborns as a major vaccine objective. Concern about the number of group B streptococcus neonatal infections prompted the CDC to recommend routine screening of pregnant women for group B streptococcus bacteria and preventative antibiotic treatment at the time of labor for women found to be infected. Screening of pregnant women for infection is recommended during weeks 35 to 37 of pregnancy. Approximately 10% to 30% of women are found to be carrying the bacterium as a normal component of the vaginal microflora. These women are offered intravenous antibiotics throughout their labor as a preventative measure. In the absence of antibiotic treatment, the CDC estimates that the risk is one in 200 of delivering a baby with group B streptococcus infection. While the level of group B streptococcus disease decreased in the United States from 1.7 cases per 1,000 live births in 1993 to 0.4 cases per 1,000 live births in 2002, the CDC projects that there are approximately 2,750 neonatal

infections each year in the United States. In a study of 338 of these cases of neonatal infections, the death rate was approximately 6%. We expect the target market for our vaccine candidate to be women of childbearing age.

The existing method of prevention of group B streptococcus infection in neonates is the targeted administration of intravenous antibiotics to women during labor. However, this approach is invasive and only partially effective. In addition, antibiotics create the risk of possible adverse reactions and may lead to the development of antibiotic resistant strains of the disease. Direct vaccination of newborns is not effective because their immune system is too immature to respond to the vaccine. Antibiotics are used to treat babies after infection.

Approximately 17,500 cases of group B streptococcus infection occur each year in the U.S. population over one year of age, with most occurring in those over age 50. According to the CDC, the average death rates for invasive infections are approximately 8% to 10% for adults 18 to 64 years of age and 15% to 25% for adults 65 years of age and over. Antibiotics are used to treat infected individuals.

Description and development status. We are developing a recombinant protein subunit group B streptococcus vaccine initially for administration to women of childbearing age for protection of the fetus and newborn babies. We are designing our vaccine candidate to be administered by injection with an alum adjuvant in a three dose regimen. We expect that a booster dose may also be required. We anticipate that the vaccine will elicit an antibody response resulting in the production of antibody in the mother, which may the cross the placenta to protect the fetus and the newborn baby by passive immunity.

We have identified several novel surface associated proteins and are working on the development of three of these proteins as components of our vaccine candidate. We believe that a combination of proteins will be required to provide effective protection. We have completed preclinical studies in which we evaluated the safety and immunogenicity of our vaccine candidate, with the following results:

- In studies in rabbits and mice, the three protein components of our vaccine candidate were immunogenic.
- In a passive immunization study in which we administered rabbit antibody to rat pups, the rat pups were protected against challenge with disease.
- Antibodies elicited by one of the protein components of our vaccine candidate recognized a number of group B streptococcus types, indicating that the protein component has potential to generate immune responses with broad coverage.
- In a toxicology study in mice with one of the protein components of our vaccine candidate, the protein was non-toxic.

We have completed an open-label, dose escalating Phase I clinical trial of the first protein component of our vaccine candidate in the United Kingdom in 47 healthy adult volunteers. The purpose of this trial was to evaluate the safety and immunogenicity of this protein as an individual recombinant protein. We adjuvanted the protein with alum and tested it at four different strengths, with two doses given 28 days apart. In this trial, the protein was immunogenic at all doses tested. The immunogenic response rate was 83% at the lowest dose tested and 100% at the highest dose tested. The vaccine candidate was well tolerated by trial participants at all dose levels tested, with no serious adverse events reported. None of the subjects withdrew due to an adverse event.

As the next steps in our development plan, we plan to initiate two additional Phase I clinical trials for the other two proposed protein components of our vaccine candidate. First, we plan to evaluate the safety

and immunogenicity of the protein that we already have tested together with one of these other proteins in a Phase I clinical trial in healthy adults. If the results of that trial are favorable, we plan to evaluate the safety and immunogenicity of all three proteins together in a further Phase I clinical trial. If the results of these Phase I clinical trails are favorable, we expect to submit an IND to the FDA to conduct more advanced clinical trials in the United States. The IND must become effective before we can conduct any clinical trials in the United States.

Chlamydia vaccine

Disease overview. Chlamydia is the most prevalent sexually transmitted disease in the world. It is caused by infection with the bacterium *Chlamydium trachomatis. Chlamydia trachomatis* can cause urogenital disorders such as uritheritis, cervicitis, pelvic inflammatory disease, ectopic pregnancy and infertility among females and is the leading cause of non-gonococcal uritheritis and epidemiditis in males. *Chlamydia trachomatis* also causes the ocular disease trachoma, which is a form of vesicular conjunctivitis. Trachoma is the leading cause of preventable blindness worldwide.

Market opportunity and current treatment. The World Health Organization estimates that approximately 92 million new cases of *Chlamydia trachomatis* infection occur annually worldwide, approximately four million of which occur in North America. *Chlamydia trachomatis* infections are the most commonly reported notifiable disease in the United States, with an estimated 2.8 million Americans becoming infected with *Chlamydia trachomatis* each year. Epidemiological studies indicate that in the United States, *Chlamydia trachomatis* infections are most prevalent among young sexually active individuals between the ages of 15 to 24 years of age. There is no vaccine currently on the market for *Chlamydia trachomatis*. However, screening tests and effective antibiotic treatments have been effective at containing *Chlamydia trachomatis* in the United States and Europe. Although *Chlamydia trachomatis* infection can be treated with antibiotics, control measures based on antimicrobial treatment alone are difficult due to the incidence of infection, the percentage of asymptomatic infections and deficiencies in diagnosis.

Description and development status. We are developing a recombinant protein subunit chlamydia vaccine for all clinically relevant strains of *Chlamydia trachomatis*, including strains that cause ocular disease. We are designing our vaccine candidate to be administered by injection with a novel adjuvant in a three dose regimen. We are currently evaluating in-license opportunities for the adjuvant. We have cloned our vaccine candidate and produced it in *E. coli*. In studies in mice, our vaccine candidate protected against both upper reproductive tract disease and lower reproductive tract infection induced by *Chlamydia trachomatis*. In addition, there was no evidence of infertility in the mice following treatment with our vaccine candidate.

Meningitis B vaccine

Disease overview. Meningococcal disease is a life threatening condition caused by infection with the bacterium *Neisseria meningitidis. Neisseria meningitidis* is classified into 12 groups based on differences in the surface coating of the bacterium that elicit distinct immune responses. According to the World Health Organization, group B is the most common cause of endemic meningitis in industrialized countries, accounting for 30% to 40% of cases in North America and 30% to 80% of cases in Europe. Meningococcal disease has a fatality rate of approximately 10%. The infection can develop very rapidly and cause death within 24 hours of the symptoms first becoming apparent. Children from six months to two years of age are at the highest risk of group B meningococcal infection, with teenagers also at enhanced risk.

Market opportunity and current treatment. The World Health Organization estimates that approximately 1.2 million cases of bacterial meningitis occur annually worldwide, resulting in approximately 135,000 deaths. The World Health Organization estimates that approximately 500,000 of these cases and 50,000 of these deaths are caused by the bacterium *Neisseria meningitidis*. In the United States, 2,333 cases of meningococcal disease were reported in 2001, with approximately one-third due to group B. In 2003, 1,756 cases of meningococcal disease were reported in the United States. Currently, there is no meningitis vaccine on the market that is protective against group B meningococcal infection. Current meningitis B treatments include antibiotics and clinical support. The rapid progression of the infection means that antibiotic therapy can be ineffective in preventing serious morbidity and mortality.

Description and development status. We are developing a recombinant protein subunit meningitis B vaccine for babies, children and adolescents. We are designing our vaccine candidate to be administered by injection with an alum adjuvant in a two dose regimen for children under age five and a single dose regimen for children over age five. We do not expect that a booster dose will be required. We anticipate that the vaccine will consist of two or three protein antigens. We are currently evaluating a pool of 46 protein candidates in a number of preclinical studies. We are producing recombinant proteins in *E. coli.*

We have entered into a collaboration agreement with Sanofi Pasteur for this vaccine candidate.

Sanofi Pasteur collaboration

In May 2006, we entered into a license and co-development agreement effective April 1, 2006 with Sanofi Pasteur, the vaccines business of Sanofi-Aventis, pursuant to which we granted Sanofi Pasteur an exclusive, worldwide license to develop and commercialize a meningitis vaccine that contains program antigens evaluated and selected under the agreement. We retain the right and obligation to conduct development activities through Phase I clinical trials. Under specified circumstances, we also retain the right to exploit antigens that have been terminated from development under the agreement on an exclusive basis and other specified antigens on a co-exclusive basis. Sanofi Pasteur has agreed to use commercially reasonable efforts to develop and commercialize a meningitis B vaccine in the United States, the European Union and other major market countries.

A steering committee made up of an equal number of representatives from us and Sanofi Pasteur oversees all development and commercialization activities under the agreement. The steering committee has the authority to make strategic decisions by unanimous vote relating to the development of a meningitis vaccine. Sanofi Pasteur has ultimate decision-making authority over matters that are not resolved at the steering committee and executive officer levels, but does not have the unilateral authority to amend the agreement or the development plan in a manner that would alter our obligations. In addition, Sanofi Pasteur has the right to make all strategic decisions relating to the development of any combination product and has sole discretion over the commercialization of any meningitis vaccine developed under the agreement.

Under the agreement, Sanofi Pasteur paid us initial fees of €3 million. In addition, Sanofi Pasteur has agreed to pay all expenses incurred by us under the development program. We are also eligible to receive payments of up to a maximum of €73 million upon the achievement of specified research, development and commercialization milestones. Sanofi Pasteur has agreed to pay royalties to us based on net sales by Sanofi Pasteur, its affiliates and sublicensees of licensed products from the collaboration, including specified minimum royalties with respect to sales of any combination product. In addition, Sanofi Pasteur has agreed to pay us a portion of specified sublicense income received by Sanofi Pasteur or its affiliates.

The term of the agreement ends, on a country-by-country basis, upon the later of ten years from first commercial sale or the expiration of the last-to-expire patent covering a licensed product in such country.

Sanofi Pasteur may terminate the agreement for convenience beginning April 1, 2007 upon six months' prior written notice. Sanofi Pasteur also may terminate the agreement upon any change of control involving us or as a result of our uncured material breach of the agreement or bankruptcy.

Facilities

The following table sets forth general information regarding our materially important facilities.

Location	Use	Segment	Approximate square feet	Owned/leased
Lansing, Michigan	Manufacturing operations facility and office space	Biodefense	214,000	Owned
Frederick, Maryland	Future manufacturing facilities	Biodefense/ Commercial	290,000	Owned
Gaithersburg, Maryland	Office and laboratory space	Biodefense/ Commercial	36,000	Leases expire 2008
Rockville, Maryland	Office space	Biodefense/ Commercial	23,000	Lease expires 2016
Wokingham, England	Office and laboratory space	Commercial	16,000	Leases expire 2016

Lansing, Michigan. We own a multi-building campus on approximately 12.5 acres in Lansing, Michigan that includes facilities for bulk manufacturing of BioThrax, including fermentation, filtration and formulation, as well as for raw material storage and in-process and final product warehousing. The campus is secured through perimeter fencing, limited and controlled ingress and egress and 24 hour on-site security personnel. We acquired these facilities in 1998 from the Michigan Biologic Products Institute after the State of Michigan, with the concurrence of the DoD, suspended the production of BioThrax to renovate these manufacturing facilities. Following our acquisition of BioThrax, we completed the facility renovations initiated by the State of Michigan. Our comprehensive renovations included the implementation of work plans to systematically improve numerous aspects of the production and release of BioThrax, including process validation, quality systems and testing methods. In December 2001, the FDA approved a supplement to our manufacturing facility license for the manufacture of BioThrax at the renovated facilities.

In February 2006, we began construction of a new 50,000 square foot manufacturing facility on our Lansing campus. We expect the construction of the facility to cost approximately $75 million, including approximately $55 million for the building and associated capital equipment. We are constructing this new facility as a large scale commercial manufacturing plant that we can use to produce multiple vaccine products, subject to complying with appropriate change-over procedures. Subject to regulatory approval, we expect that the new manufacturing facility will serve as our primary BioThrax manufacturing facility. We anticipate that we will initiate large scale manufacturing of BioThrax for commercial sale at the new facility in 2008. We are constructing this facility to accommodate production of up to 40 million doses of BioThrax per year on a single production line, which we could expand for production of up to 80 million doses per year through the addition of a second production line. In comparison, our current facility has a maximum production capacity of approximately nine million doses of BioThrax per year. In addition to construction of a new manufacturing facility, we recently commissioned a new pilot plant on our Lansing campus. Our Lansing facilities and substantially all of the other assets of BioPort, other than accounts receivable under our DoD and HHS contracts, serve as collateral for our financing obligations. For more information, see "Management's discussion and analysis of financial condition and results of operations — Liquidity and capital resources — Debt financing."

Frederick, Maryland. We own two buildings of approximately 145,000 square feet each on a 15-acre site in Frederick, Maryland. We financed the purchase of these buildings with a forgivable loan from the Department of Business and Economic Development of the State of Maryland and mortgage loans from commercial lenders. These buildings serve as collateral for our financing obligations. For more information, see “Management’s discussion and analysis of financial condition and results of operations — Liquidity and capital resources — Debt financing.”

We are in the preliminary phase of establishing plans to build out this site for a portion of our potential future product manufacturing requirements. Our preliminary plans contemplate that the site would be designed to provide pilot plant production capabilities, full scale commercial manufacturing operations, warehouse and storage facilities and fill and finish operations. We expect that we will complete the build out of this site in two stages. In the first stage, our preliminary plans contemplate a build out of one of the two buildings on this site to accommodate pilot plant and initial product launch capabilities. In the second stage, our preliminary plans contemplate a build out of commercial manufacturing operations.

Other. We lease two separate product development facilities. Our facility in Gaithersburg, Maryland of approximately 36,000 square feet contains a combination of laboratory and office space, including our executive offices. We conduct product development programs at this site for both our biodefense and commercial product candidates. Our facility in Wokingham, England of approximately 16,000 square feet contains a combination of laboratory and office space. We conduct product development programs at this site primarily for our commercial product candidates. Our facility in Rockville, Maryland contains approximately 23,000 square feet of office space for our future needs.

Manufacturing

We manufacture BioThrax at our facilities in Lansing, Michigan using well established vaccine manufacturing procedures. We currently rely on contract manufacturers and other third parties to manufacture the supplies of our immunobiotic product candidates that we require for preclinical and clinical development. We acquire these supplies on a purchase order basis. We anticipate that we will use our existing plant facilities in Michigan, including our recently commissioned pilot plant, and, when constructed and approved, our planned new plant facilities in Michigan and Maryland to support both continued process development and the manufacture of clinical supplies of our product candidates. We believe that manufacturing our products and product candidates independently will provide us cost savings and greater control over the manufacturing and regulatory approval and oversight process, accelerate product development timelines and allow us to expand our base of manufacturing know-how that we can then apply to the development and manufacture of future product candidates.

Hollister-Stier Laboratories LLC performs the contract filling operation for BioThrax vials at its FDA approved facility located in Spokane, Washington. Hollister-Stier has agreed to meet all of our firm purchase orders for contract filling of BioThrax based on a good faith annual estimate that we provide prior to each calendar year. In addition, Hollister-Stier has agreed to accommodate fill requests in excess of our annual estimate subject to its available production capacity. Our contract with Hollister-Stier expires December 31, 2007. The contract also can be terminated by either party following an uncured material breach by the other party.

Talecris Biotherapeutics has agreed to perform plasma fractionation and purification and contract filling relating to the manufacture of our anthrax immune globulin candidate at its FDA approved facilities located in Melville, New York and Clayton, North Carolina. Subject to limited exceptions, we have agreed to obtain all of our anthrax immune globulin requirements exclusively from Talecris. While our agreement

with Talecris remains in effect, Talecris has agreed not to market, sell or acquire any competing product that contains anthrax immune globulin as an active ingredient.

Talecris has agreed to perform plasma fractionation and purification and contract filling for the manufacture of our anthrax immune globulin candidate for preclinical or animal studies, for clinical use or for non-clinical testing required for clinical trials and for commercial sale. We have agreed to pay Talecris royalties on net sales on a country-by-country basis for commercial product manufactured by Talecris under the contract.

Our contract with Talecris expires December 31, 2013 or five years following initiation of commercial manufacturing. We have the option to extend the term for an additional five-year period upon notice to Talecris at least 12 months prior to the expiration of the initial term. After three years following initiation of commercial manufacturing, either party may terminate the contract upon two years' advance notice. The contract can also be terminated by either party following an uncured material breach by the other party. We have the right to terminate the contract, under specified circumstances, if we discontinue our production of anthrax immune globulin source plasma or the development of our anthrax immune globulin candidate.

We expect to engage one or more third parties to perform the plasma fractionation and purification processes and contract filling for our botulinum immune globulin candidate.

We rely on third parties for supplies and raw materials used for the production of BioThrax and our immunobiotic product candidates. We purchase these supplies and raw materials from various suppliers in quantities adequate to meet our needs. We believe that there are adequate alternative sources of supply available if any of our current suppliers were unable to meet our needs.

Marketing and sales

We currently market and sell BioThrax directly to the DoD and HHS with a small, targeted marketing and sales group. We plan to continue to do so and expect that we will use a similar approach for sales to the U.S. government of any other biodefense product candidates that we successfully develop. We plan to expand our sales and marketing organization as we broaden our sales activities of biodefense products to state and local governments, which we expect will be interested in these products to protect first responders, such as police, fire and emergency medical personnel. We have established marketing and sales offices in Singapore and Munich, Germany to target sales of biodefense products to foreign governments. We have engaged third party marketing representatives to market BioThrax in the Middle East, Turkey, India, Australia and several Scandinavian countries in Europe.

We expect to establish a separate internal organization to market and sell commercial products for which we retain commercialization or co-commercialization rights. We anticipate that our internal marketing and sales organization will be complemented by selective co-promotion and other arrangements with leading pharmaceutical and biotechnology companies.

We generally expect to retain commercial rights for our product candidates that we successfully develop in situations in which we believe it is possible to access the market through a focused, specialized sales force. In particular, we believe that such a sales force could address commercial markets, such as the market for typhoid vaccines and other vaccines for travelers to developing countries, that overlap with markets for our biodefense products. We expect that we will selectively pursue collaboration arrangements in situations in which the collaborator has particular expertise or resources for the development or commercialization of our products or product candidates or to access particular markets.

Competition

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. While we believe that our technologies, knowledge, experience, and resources provide us with competitive advantages, we face potential competition from many different sources, including commercial pharmaceutical and biotechnology companies, academic institutions, government agencies and private and public research institutions.

GlaxoSmithKline, Sanofi-Aventis, Wyeth, Merck and Chiron generated approximately 85% of total vaccine revenues in 2005. The concentration of the industry reflects a number of factors, including:

- the need for significant, long-term investment in research and development;
- the importance of manufacturing capacity, capability and specialty know-how, such as techniques, processes and biological starting materials; and
- the high regulatory burden for prophylactic products, which generally are administered to healthy people.

These factors have created a significant barrier to entry into the vaccine industry.

Many of our competitors, including those named above, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. These companies also compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring products, product candidates and technologies complementary to, or necessary for, our programs. Smaller or more focused companies, including Vaxgen, Cangene, Human Genome Sciences, Acambis, Avant Immunotherapeutics and Avecia, may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer side effects, are more convenient or are less expensive than any products that we may develop. In addition, we may not be able to compete effectively if our products and product candidates do not satisfy government procurement requirements, particularly requirements of the U.S. government with respect to biodefense products.

Any immunobiotic product candidates that we successfully develop and commercialize is likely to compete with currently marketed products, such as vaccines and therapeutics, including antibiotics, and with other product candidates that are in development for the same indications.

BioThrax. Although BioThrax is the only product approved by the FDA for human use for the prevention of anthrax infection, we face significant competition for the supply of this vaccine to the U.S. government. The NIAID Biodefense Research Agenda for CDC Category A Agents includes the development of an anthrax vaccine based on recombinant protective antigen. In September 2003, NIAID awarded joint three-year contracts totaling $151.6 million to VaxGen and Avecia to fund development of a recombinant protective antigen anthrax vaccine. In November 2004, HHS awarded VaxGen a contract with a value of $877.5 million to supply 75 million doses of recombinant protective antigen vaccine for the strategic national stockpile. Avecia submitted a competing proposal to supply vaccine for the strategic national stockpile, which HHS did not accept. The HHS procurement request was limited to a recombinant anthrax vaccine. Because BioThrax is not a recombinant vaccine, BioThrax was precluded from consideration under that procurement program.

The VaxGen vaccine candidate is based on technology developed by USAMRIID. VaxGen has announced that studies of its vaccine candidate in animal models have indicated results that are approximately equivalent to those experienced with BioThrax. VaxGen has not yet delivered any vaccine doses under its contract with HHS. In May 2006, VaxGen announced that HHS unilaterally modified its contract to provide its anthrax vaccine for the strategic national stockpile. The contract modification extends the deadlines by which VaxGen is required to complete various milestones, including deliveries, and imposes additional requirements for clinical and non-clinical studies to be completed prior to the initiation of vaccine deliveries to the strategic national stockpile. VaxGen announced that meeting the new requirements would delay deliveries to the strategic national stockpile to the end of 2007 at best or more likely into 2008. VaxGen is obligated under the modified contract to initiate deliveries no later than November 2008. Prior to the modification, VaxGen had stated that it intended to initiate deliveries by the end of 2006 or early 2007. According to VaxGen, the new requirements under the contract modification and the delays in delivery will increase the cost of contract performance for VaxGen and postpone revenues triggered by delivery of a vaccine to the stockpile. As a result, VaxGen announced that it is pursuing financial compensation for the unilateral contract modifications. In May 2006, an HHS official stated in Congressional testimony that delays in accelerated development programs are not unexpected or unprecedented and that HHS maintains a commitment to develop a next generation recombinant protective antigen anthrax vaccine.

HPA manufactures an anthrax vaccine for use by the government of the United Kingdom. In addition, other countries may have anthrax vaccines for use by or in development for their own internal purposes.

Other biodefense products. The competition for our biodefense immunobiotic product candidates includes the following:

- *Anthrax immune globulin.* Cangene, in collaboration with the CDC, is currently developing an anthrax immune globulin using plasma collected from military personnel who have been vaccinated with BioThrax. In July 2006, HHS exercised an option under a modification to an existing development and supply contract for Cangene to supply 10,000 doses of anthrax immune globulin for the strategic national stockpile. In June 2006, HHS awarded a contract to Human Genome Sciences to supply 20,000 treatment courses of a monoclonal antibody to *Bacillus anthracis*, referred to as ABthrax, for the strategic national stockpile.
- *Recombinant bivalent botulinum vaccine.* DynPort Vaccine Company has a recombinant bivalent botulinum vaccine in Phase I clinical development with funding from the DoD and NIAID.
- *Botulinum immune globulin.* The current recommended therapy for clinical symptoms of botulism following exposure consists of passive immunization with an immune globulin derivied from equine plasma. In June 2006, HHS awarded a five-year development and supply contract to Cangene for a heptavalent botulinum immune globulin derived from equine plasma. The contract provides for the supply of 200,000 doses of a botulinum immune globulin for the strategic national stockpile.

BioThrax and our biodefense product candidates also face competition for BioShield funds from other defensive measures, including protective gear such as bio-suits and gas masks.

Commercial products. The competition for our commercial immunobiotic product candidates includes the following:

- *Typhoid vaccine.* One oral typhoid vaccine and one injectable typhoid vaccine are currently approved and administered in the United States and Europe. In addition, combination vaccines are available for the prevention of hepatitis A and typhoid infections. Antibiotics typically are used to treat typhoid after infection. For more information, see “— Products — Commercial business — Typhoid vaccine.” We

believe that Avant Immunotherapeutics Inc. has an oral, single dose, live attenuated typhoid vaccine candidate in Phase I clinical development with funding from NIAID.

- *Hepatitis B therapeutic vaccine.* There is no vaccine currently on the market that is licensed for therapeutic use for hepatitis B infection. Currently available therapies for this patient population consist mainly of antiviral drugs, such as an immunotherapy with interferons. For more information, see "— Products — Commercial business — Hepatitis B therapeutic vaccine." Several other companies have vaccine candidates in clinical development, including Enzo Biochem, Oxxon Therapeutics and Genencor International.
- *Group B streptococcus vaccine.* The existing method of prevention of group B streptococcus infection in neonates is the targeted administration of intravenous antibiotics to women during labor. A number of competitors have passive immune vaccines in preclinical development.
- *Chlamydia vaccine.* There is no vaccine currently on the market for chlamydia, and we are not aware of any competing chlamydia vaccine candidate in clinical development. Several competitors may have chlamydia vaccine candidates in preclinical development. Screening tests and effective antibiotic treatments have been effective at containing chlamydia in the United States and Europe.
- *Meningitis B vaccine.* Currently, there is no meningitis vaccine on the market that is protective against group B meningococcal infection. Novartis markets a meningitis B vaccine in New Zealand to people under the age of 20 and is also developing a broad coverage protein subunit vaccine candidate. Current meningitis B treatment strategies include antibiotics and clinical support.

Intellectual property and licenses

Our success, particularly with respect to our commercial business, depends in part on our ability to obtain and maintain proprietary protection for our product candidates, technology and know-how, to operate without infringing the proprietary rights of others and to prevent others from infringing our proprietary rights. Our policy is to seek to protect our proprietary position by, among other methods, filing U.S. and foreign patent applications related to our proprietary technology, inventions, and improvements that are important to the development of our business. U.S. patents generally have a term of 20 years from the date of nonprovisional filing. We also rely on trade secrets, know-how, continuing technological innovation and in-licensing opportunities to develop and maintain our proprietary position.

As of August 31, 2006, we owned or licensed a total of 40 U.S. patents and 45 U.S. patent applications relating to our biodefense and commercial product candidates described in this prospectus, as well as numerous foreign counterparts to many of these patents and patent applications. Our patent portfolio includes patents and patent applications with claims directed to compositions of matter, pharmaceutical formulations and methods of use.

We consider the patent rights that we have licensed from HPA relating to our recombinant bivalent botulinum vaccine candidate and our botulinum toxoid vaccine, which we plan to use in the development of our botulinum immune globulin candidate, to be most important to the protection of our biodefense product portfolio. These patents rights are described below under "— License agreements — HPA agreements."

We consider the following patents that we own or license to be most important to the protection of our vaccine candidates in our commercial business that are in clinical development.

- *Typhoid vaccine.* We hold five U.S. patents relating to our typhoid vaccine candidate. Some of these patents have claims to the composition of matter of the vaccine candidate and methods of use of

attenuated *Salmonella typhi* bacteria as vaccines for the treatment and prevention of typhoid and for the delivery of vaccine antigens. In addition, we have two pending U.S. patent applications with claims to additional compositions and methods of therapy that are generally related to our typhoid vaccine candidate. Our issued U.S. patents expire, and, if issued, our U.S. patent applications would expire, between 2015 and 2020. We hold 25 foreign counterparts to our issued U.S. patents relating to our typhoid vaccine candidate, including counterparts under the European Patent Convention and in Japan, that expire, and 31 foreign patent applications that, if issued, would expire, between 2015 and 2020.

- *Hepatitis B therapeutic vaccine.* Our hepatitis B therapeutic vaccine candidate uses our proprietary *spi*-VEC oral delivery system technology to deliver hepatitis B core antigen to the human immune system. *Spi*-VEC is based on our live attenuated typhoid vaccine candidate and employs recombinant technology to insert the gene for hepatitis B core into the live attenuated S*almonella* bacteria. As a result, the patents relating to our typhoid vaccine candidate also protect our hepatitis B therapeutic vaccine candidate. We also hold one U.S. patent with claims to the use of attenuated *Salmonella* organisms for the delivery of hepatitis B vaccine antigens, which expires in 2019. In addition, we have one pending U.S. patent application relating to our hepatitis B therapeutic vaccine candidate, which if issued also would expire in 2019. We have four foreign patent applications relating to our hepatitis B therapeutic vaccine candidate that, if issued, would expire in 2019.
- *Group B streptococcus vaccine.* We hold two U.S. patents relating to our group B streptococcus vaccine candidate with claims to the composition of matter of the vaccine candidate and methods of use for the prevention or treatment of infection caused by *Streptococcus agalactiae*. In addition, we have four pending U.S. patent applications with claims to additional compositions and methods of therapy relating to our group B streptococcus vaccine candidate. Our issued U.S. patents expire, and, if issued, our U.S. patent applications would expire, between 2019 and 2022. We hold 19 foreign counterparts to our issued U.S. patents relating to our group B streptococcus vaccine candidate, including counterparts under the European Patent Convention and in Japan, that expire, and 39 foreign patent applications that, if issued, would expire, in 2019.
- *STM technology.* We jointly own with Imperial College Innovations Limited patents with claims to methods for the identification of virulence genes using our signature tagged mutagenesis, or STM, technology, which we used to identify and develop the gene mutations that form the basis of our typhoid vaccine and hepatitis B therapeutic vaccine candidates. We also jointly own with Imperial Innovations the composition of matter patents covering these gene mutations. We have exclusive rights, even as to Imperial Innovations, under these jointly owned patents in all fields of use, except in the field of diagnosis, prevention, treatment, or palliation of microbial diseases, disorders and infections in humans and animals where our rights are generally non-exclusive and are subject to existing license agreements with third parties. Because our typhoid vaccine and hepatitis B therapeutic vaccine candidates are outside of this non-exclusive field of use, we have exclusive rights with respect to these vaccine candidates. We exclusively own the composition of matter patents covering the specific combination of mutations employed in our typhoid vaccine and hepatitis B therapeutic vaccine candidates.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. Our ability to maintain and solidify our proprietary position for our technology will depend on our success in obtaining effective claims and enforcing those claims once granted. We do not know whether any of our patent applications or those patent applications that we license will result in the issuance of any patents. Our issued patents and those that may issue in the future, or those licensed to us, may be challenged, invalidated or circumvented, which could limit our ability to stop competitors from marketing related products or the length of term of patent protection that we may have for our

products. In addition, our competitors may independently develop similar technologies or duplicate any technology developed by us, and the rights granted under any issued patents may not provide us with any meaningful competitive advantages against these competitors. Furthermore, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any of our products can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent.

We also rely on trade secrets relating to manufacturing processes and product development to protect our business. Because we do not have patent protection for BioThrax, the label expansions and improvements that we are pursuing for BioThrax or our anthrax immune globulin candidate, our only intellectual property protection for BioThrax and our anthrax immune globulin candidate is confidentiality regarding our manufacturing capability and specialty know-how, such as techniques, processes and biological starting materials. However, these types of trade secrets can be difficult to protect. We seek to protect this confidential information, in part, with agreements with our employees, consultants, scientific advisors and contractors. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our consultants or contractors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

License agreements

We are a party to a number of license agreements under which we license patents, patent applications, and other intellectual property. We enter into these agreements to augment our owned intellectual property. These agreements impose various diligence and financial payment obligations on us. We expect to continue to enter into these types of license agreements in the future. The only existing licenses that we consider to be material to our business, are our agreements with HPA, which are described below.

HPA agreements. In November 2004, we entered into two separate license agreements with HPA for our botulinum toxoid vaccine and our recombinant bivalent botulinum vaccine candidate. Under the license agreements, we obtained the exclusive, worldwide right to develop, manufacture and commercialize pharmaceutical products that consist of botulinum toxoid components or recombinant botulinum toxin components for the prevention or treatment of illness in humans caused by exposure to the botulinum toxin, subject to HPA's non-exclusive right to make, use or sell recombinant botulinum products to meet public health requirements in the United Kingdom.

The licensed patent portfolio includes one U.S. patent with claims to the composition of matter of recombinant components of *Clostridium botulinum*, which expires in 2016. Additional composition of matter and method of use claims are pending in three U.S. patent applications, which if issued as patents also would expire in 2016. The licensed portfolio also includes seven foreign applications, which if issued would expire in 2016.

Under each license agreement, we are required to pay HPA royalties on sales of the licensed product by us, our affiliates or third party sublicensees in the major market countries of the United States, United Kingdom, France, Germany, Italy and Japan, and a separate royalty on sales of the licensed product by us and our affiliates in any other country.

Under each license agreement, we are generally obligated to use commercially reasonable efforts to respond to applicable solicitations or procurement proposals from, and to enter into contracts with, governmental agencies in each of the major market countries with respect to the licensed product. We may satisfy this obligation by filing an IND with respect to a licensed product by November 2009. If we fail to file an IND within that time period under either of the license agreements, we are obligated to pay HPA an annual fee until an IND has been filed.

In November 2004, we also entered into two separate development agreements with HPA pursuant to which HPA agreed to conduct specified tests, studies and other development activities with respect to the botulinum toxoid product and the recombinant botulinum product in accordance with mutually-agreed development plans. We have paid minimum contractual commitments of $1.0 million under each development agreement to compensate HPA for this development work. HPA also agreed to provide us with clinical supplies of the botulinum toxoid product and the recombinant botulinum product for clinical trials.

The term of each development agreement lasts until the development activities are completed. HPA may terminate each development agreement as a result of our uncured material breach or insolvency. Each of the development agreements automatically terminates if the applicable license agreement is terminated.

The term of each license agreement lasts until the expiration of all of our royalty obligations under the applicable license agreement. We are obligated to pay royalties under each license agreement, on a product-by-product and country-by-country basis, until the later of seven years from first commercial sale of the first licensed product in that country and the expiration of the last-to-expire licensed patent in that country. HPA may terminate each license agreement if we terminate the applicable development agreement without cause before we have paid, or if HPA terminates such development agreement due to our failure to pay, the minimum commitment amount set forth in such development agreement. In addition, HPA may terminate each license agreement as a result of our uncured material breach or insolvency.

Government contracts

We have an ongoing BioThrax supply contract with the DoD, which purchases BioThrax for immunization of military personnel. In addition, we supply BioThrax to HHS for placement into the strategic national stockpile.

Department of Defense. Since 1998, we have been a party to two supply agreements for BioThrax with the DoD. We have completed delivery of all of the doses of BioThrax under our first contract with the DoD. In November 2003, we entered into a follow-on, second supply contract with the DoD. This second contract is referred to as an indefinite delivery/indefinite quantity contract. Under this contract, the DoD is obligated to acquire a minimum number of doses of BioThrax and has the right to acquire up to a maximum number of doses. We invoice the DoD for progress payments under the contract upon reaching pre-determined process stages in the manufacture of BioThrax. The contract provides for the supply of BioThrax to the DoD through September 30, 2006. We expect to be able to provide all of the remaining doses of BioThrax under our contract with the DoD within the contract term.

Department of Health and Human Services. In May 2005, we entered into an agreement to supply five million doses of BioThrax to HHS for placement into the strategic national stockpile for a fixed price of $123 million. We have completed delivery of all of the five million doses of BioThrax to HHS. In May 2006, we entered into a contract modification with HHS for the delivery of an additional five million doses of BioThrax to HHS by May 2007 for a fixed price of $120 million. We expect to complete delivery of all five million additional doses by the first half of 2007. Our contract with HHS does not provide for

progress payments. We invoice HHS under the contract upon completing delivery of the specified doses of BioThrax.

U.S. government indemnification. Under contractual provisions, the U.S. government indemnifies us against claims by third parties for death, personal injury and other damages related to BioThrax, including reasonable litigation and settlement costs, to the extent that the claim or loss results from specified risks not covered by insurance or caused by our grossly negligent or criminal behavior. As required under such contracts, we have notified the DoD of personal injury claims that have been filed against us as a result of the vaccination of U.S. military personnel with BioThrax and are seeking reimbursement from DoD for all costs incurred in defending these claims. In addition, HHS has agreed that BioThrax delivered for inclusion in the strategic national stockpile will not be used in humans unless mutually agreeable indemnification is approved.

Safety Act and other statutory protections. In August 2006, the Department of Homeland Security approved our application under the Safety Act enacted by the U.S. Congress in 2002 for liability protection for sales of BioThrax. The Safety Act creates product liability limitations for qualifying anti-terrorism technologies for claims arising from or related to an act of terrorism. In addition, the Safety Act provides a process by which an anti-terrorism technology may be certified as an “approved product” by the Department of Homeland Security and therefore entitled to a rebuttable presumption that the government contractor defense applies to sales of the product.

The government contractor defense, under specified circumstances, extends the sovereign immunity of the United States to government contractors who manufacture a product for the government. Specifically, for the government contractor defense to apply, the government must approve reasonably precise specifications, the product must conform to those specifications and the supplier must warn the government about known dangers arising from the use of the product. We have successfully asserted the government contractor defense in product liability litigation in federal district court in Michigan.

As part of the 2006 Defense Authorization Act, the U.S. Congress adopted the Public Readiness and Emergency Preparedness Act, which offers targeted liability protections to those involved in the development, manufacturing and deployment of pandemic and epidemic products and security countermeasures. The Public Readiness and Emergency Preparedness Act provides immunity, subject to limited exceptions, for claims arising out of, related to or resulting from the administration or use of a covered countermeasure.

Government regulation

The FDA and comparable regulatory agencies in state and local jurisdictions and in foreign countries impose substantial requirements for the preclinical and clinical development, manufacture, distribution and marketing of pharmaceutical and biological products, including immunobiotics. These agencies and other federal, state and local entities regulate research and development activities and the testing, manufacture, quality control, safety, effectiveness, labeling, storage, distribution, recordkeeping, approval, advertising, sale, promotion, import, and export of our products and product candidates.

U.S. government regulation

In the United States, BioThrax and our product candidates are regulated by the FDA as biological products. Biologics are subject to regulation under the Federal Food, Drug, and Cosmetic Act, or the FDCA, the Public Health Service Act, or the PHSA, the regulations promulgated under the FDCA and the PHSA and other federal, state, and local statutes and regulations. Violations of regulatory requirements at any stage may result in various adverse consequences, including delay in approving or refusal to approve

a product. Violations of regulatory requirements also may result in enforcement actions, including withdrawal of approval, labeling restrictions, seizure of products, fines, injunctions or civil or criminal penalties.

The process required by the FDA under these laws before our product candidates may be marketed in the United States generally involves the following:

- preclinical laboratory and animal tests;
- submission to the FDA of an IND, which must become effective before clinical trials may begin;
- completion of human clinical trials and other studies to establish the safety and efficacy of the proposed product for each intended use;
- FDA review of whether the facility in which the product is manufactured, processed, packed or held complies with cGMP requirements designed to assure the product's continued quality; and
- submission to the FDA and approval of an NDA in the case of a drug, or a BLA in the case of a biologic, containing preclinical and clinical data, proposed labeling and information to demonstrate that the product will be manufactured to appropriate standards of identity, purity and quality.

The research, development and approval process requires substantial time, effort and financial resources, and approvals may not be granted on a timely or commercially viable basis, if at all.

Preclinical studies

Preclinical studies include laboratory evaluation of the product candidate, its chemistry, formulation and stability, as well as animal studies to assess its potential safety and efficacy. We submit the results of the preclinical studies, together with manufacturing information, analytical data and any available clinical data or literature to the FDA as part of an IND, which must become effective before we may begin human clinical trials. The IND submission also contains clinical trial protocols, which describe the design of the proposed clinical trials. The IND becomes effective 30 days after the FDA receives the filing, unless the FDA, within the 30-day time period, raises concerns or questions about the conduct of the preclinical trials or the design of the proposed clinical trials as outlined in the IND. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can begin. In addition, an independent Institutional Review Board charged with protecting the welfare of human subjects involved in research at each medical center proposing to conduct the clinical trials must review and approve any clinical trial. Furthermore, study subjects must provide informed consent for their participation in the clinical trial.

Clinical trials

Human clinical trials are typically conducted in three sequential phases, which may overlap:

- In a Phase I clinical trial, the drug or biologic is initially administered into healthy human subjects or subjects with the target condition and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion.
- In a Phase II clinical trial, the drug or biologic is administered to a limited subject population to identify possible adverse effects and safety risks, the efficacy of the product for specific targeted diseases and dosage tolerance and optimal dosage.

- A Phase III clinical trial is undertaken if a Phase II clinical trial demonstrates that a dosage range of the drug or biologic is effective and has an acceptable safety profile. In a Phase III clinical trial, the drug or biologic is administered to an expanded population, often at geographically dispersed clinical trial sites, to further evaluate dosage and clinical efficacy and to further test for safety.

U.S. law requires that trials to support approval for product marketing be “adequate and well controlled.” In general, this means that pivotal clinical trials typically must be prospective, randomized, blinded and controlled. The design of the clinical trials must be described in appropriate protocols submitted to the FDA and approved by an Institutional Review Board. Clinical trials typically compare the experimental product to either a placebo or, in some cases, a product already approved for the treatment of the applicable disease or condition. Trials must also be conducted in compliance with good clinical practice, or GCP, requirements.

In the case of product candidates that are intended to treat rare life-threatening diseases, such as infection caused by exposure to the anthrax toxin, conducting controlled clinical trials to determine efficacy may be unethical or infeasible. Under regulations issued by the FDA in 2002, often referred to as “the animal rule,” the FDA described the circumstances under which it will rely on evidence from studies in animals to provide substantial evidence of efficacy for products for which human efficacy studies are not ethical or feasible. The animal rule provides that, under these circumstances, approval of the product can be based on clinical data from trials in healthy subjects that demonstrate adequate safety and immunogenicity and efficacy data from adequate and well controlled animal studies. Among other requirements, the animal studies must establish that the biological product is reasonably likely to produce clinical benefits in humans. Because the FDA must agree that data derived from animal studies may be extrapolated to establish safety and effectiveness in humans, these studies add complexity and uncertainty to the testing and approval process. In addition, products approved under the animal rule are subject to additional regulation not normally required of other products. Additional regulation may include post-marketing study requirements, restrictions imposed on marketing or distribution or requirements to provide information to patients.

We may not successfully complete Phase I, Phase II or Phase III testing of our product candidates within any specific time period, if at all. Furthermore, the FDA or the Institutional Review Boards or the sponsor may prevent clinical trials from beginning or may place clinical trials on hold or terminate them at any point in this process if, among other reasons, they conclude that study subjects are being exposed to an unacceptable health risk.

Marketing approval

In the United States, the results of product development, preclinical studies and clinical trials must be submitted to the FDA for review and approval prior to marketing and commercial shipment of the product candidate. If the product is regulated as a drug, an NDA must be submitted and approved before commercial marketing may begin. If the product is regulated as a biologic, a BLA must be submitted and approved before commercial marketing may begin. The NDA or BLA must include a substantial amount of data and other information concerning the safety and effectiveness and, in the case of a biologic, purity and potency of the product candidate from laboratory, animal and clinical testing, as well as data and information on the finished product, including manufacturing, product stability and proposed product labeling.

Each domestic and foreign manufacturing establishment, including any contract manufacturers we may decide to use, must be listed in the NDA or BLA and must be registered with the FDA. The FDA generally will not approve an application until the FDA conducts a manufacturing inspection, approves the

applicable manufacturing process for the drug or biological product and determines that the facility is in compliance with cGMP requirements. If the manufacturing facilities and processes fail to pass the FDA inspection, we will not receive approval to market these products.

Under applicable laws and FDA regulations, each NDA or BLA submitted for FDA approval is usually reviewed for administrative completeness and reviewability within 45 to 60 days following submission of the application. If deemed complete, the FDA will "file" the NDA or BLA, thereby triggering substantive review of the application. The FDA can refuse to file any NDA or BLA that it deems incomplete or not properly reviewable.

The FDA may deny an NDA or BLA if the applicable regulatory criteria are not satisfied or may require additional clinical data. Even if additional clinical data is submitted, the FDA may ultimately decide that the NDA or BLA does not satisfy the criteria for approval. If the FDA approves a product, it may limit the approved therapeutic uses for the product as described in the product labeling, require that contraindications, warning statements or precautions be included in the product labeling, require that additional studies be conducted following approval as a condition of the approval, impose restrictions and conditions on product distribution, prescribing or dispensing in the form of a risk management plan or otherwise limit the scope of any approval or post-approval, or limit labeling. Once issued, the FDA may withdraw product approval if compliance with regulatory standards is not maintained or if problems occur after the product reaches the market. In addition, the FDA may require testing and surveillance programs to monitor the effect of approved products that have been commercialized. The FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs.

Satisfaction of FDA requirements or similar requirements of state, local and foreign regulatory agencies often takes many years and the actual time required may vary substantially, based upon the type, complexity and novelty of the product candidate. Government regulation may delay or prevent marketing of potential products for a considerable period of time or permanently and impose costly procedures upon our activities. The FDA or other regulatory agencies may not grant approval for any of our product candidates on a timely basis, or on a commercially viable basis, if at all. Success in preclinical testing or early clinical trials does not ensure that later clinical trials will be successful, and interim results of a clinical trial do not necessarily predict final results. Data obtained from preclinical and clinical activities is not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. Even if a product candidate receives regulatory approval, the approval may be significantly limited to specific indications. Furthermore, later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market.

Ongoing regulation

Any products manufactured or distributed by us pursuant to FDA clearances or approvals are subject to pervasive and continuing regulation by the FDA, including:

- recordkeeping requirements;
- periodic reporting requirements;
- cGMP requirements related to all stages of manufacturing, testing, storage, packaging, labeling and distribution of finished dosage forms of the product;

- reporting of adverse experiences with the drug or biologic; and
- advertising and promotion restrictions.

The FDA's rules for advertising and promotion require in particular that we not promote our products for unapproved uses and that our promotion be fairly balanced and adequately substantiated. We must also submit appropriate new and supplemental applications and obtain FDA approval for some changes to the approved product, product labeling or manufacturing process.

Drug and biologics manufacturers and their subcontractors are required to register their establishments with the FDA and state agencies. The cGMP requirements for biological products are extensive and require considerable time, resources, and ongoing investment to comply. The regulations require manufacturers to establish validated systems to ensure that products meet high standards of sterility, purity and potency. The requirements apply to all stages of the manufacturing process, including the synthesis, processing, sterilization, packaging, labeling, storage and shipment of the biological product. The regulations require investigation and correction of any deviations from cGMP and impose documentation requirements upon us and any third party manufacturers that we may decide to use. Manufacturing establishments are subject to periodic unannounced inspections by the FDA and state agencies for compliance with cGMP. The FDA is authorized to inspect manufacturing facilities without a warrant at reasonable times and in a reasonable manner. We or our present or future suppliers may not be able to comply with cGMP and other FDA regulatory requirements.

In addition, cGMP requirements are constantly evolving, and new or different requirements may apply in the future. We, our collaborators or third party contract manufacturers may not be able to comply with the applicable regulations. After regulatory approvals are obtained, the subsequent discovery of previously unknown problems, or the failure to maintain compliance with existing or new regulatory requirements, may result in:

- restrictions on the marketing or manufacturing of a product;
- warning letters;
- withdrawal of the product from the market;
- refusal to approve pending applications or supplements to approved applications;
- voluntary or mandatory product recall;
- fines or disgorgement of profits or revenue;
- suspension or withdrawal of regulatory approvals;
- refusal to permit the import or export of products;
- product seizure; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's policies may change and additional government regulations may be enacted that could prevent or delay regulatory approval of our product candidates. Moreover, increased attention to the containment of health care costs in the United States and in foreign markets could result in new government regulations. We cannot predict the likelihood, nature or extent of adverse governmental regulation that might arise from future legislative or administrative action in the United States or abroad. We and our product candidates are also subject to a variety of state laws and regulations in those states or localities

where they are or will be marketed. Any applicable state or local regulations may hinder our ability to market our product candidates in those states or localities.

Biologics review for BioThrax

The NIH originally approved the manufacture and sale of BioThrax in 1970 pursuant to the regulatory process in effect at the time. In 1972, responsibility for approving biological products was transferred from the NIH to the FDA. Following that transfer of responsibility, the FDA established procedures for reviewing the safety, efficacy and labeling of biological products, including BioThrax, that had been approved by the NIH prior to July 1, 1972. Under the biologics review process, the FDA appointed advisory panels of independent experts to evaluate previously approved biologic products and to advise the FDA as to whether the products were safe, effective and not misbranded. After reviewing a particular panel's recommendation, the FDA publishes the panel's report, along with a proposed order recommending classification of the biological product into one of three categories: Category I, safe, effective and not misbranded; Category II, unsafe, ineffective or misbranded; or Category III, not within Category I or Category II because further studies are required. After a ninety-day comment period, the FDA reviews any comments and then publishes a final rule or order classifying the product at issue as Category I, II or III. Only after publishing a final order does the FDA then take action with respect to individual products. For example, if the biologics review determines that a specific product is not safe and effective, the FDA would initiate the process of revoking the approval for the product. Likewise, if further study is required before the status of a product can be determined, the sponsor would be required to come forward with additional data within prescribed time periods. The FDA completed the biologics review for BioThrax in 2005, classifying the product as Category I, safe, effective and not misbranded.

Regulation of immune globulin products

Products derived from humans, including our immune globulin candidates, are subject to additional regulation. The FDA regulates the screening and vaccination of human donors and the process of collecting source plasma. FDA regulations require that all donors be tested for suitability and provide informed consent prior to vaccination or collection of source plasma for the immune globulin. The vaccination and collection of source plasma may also be subject to Institutional Review Board approval or to an IND, depending on factors such as whether donors are to be vaccinated according to the vaccine's approved schedule. The FDA also regulates the process of testing, storage and processing of source plasma, which is used to manufacture immune globulin candidates for use in clinical trials and, after approval by the FDA, for commercial distribution.

Regulation related to bioterrorism counteragents and pandemic preparedness

Because some of our products or product candidates are intended for the treatment of diseases that may result from acts of bioterrorism or for pandemic preparedness, they may be subject to the specific requirements described below.

Project BioShield

The Project BioShield Act of 2004 provides expedited procedures for bioterrorism related procurement, hiring and awarding of research grants, making it easier for HHS to quickly commit funds to countermeasure projects. Project BioShield relaxes procedures under the Federal Acquisition Regulation for procuring up to $25 million of property or services used in performing, administering or supporting biomedical countermeasure research and development. In addition, if the Secretary of HHS deems that

there is a pressing need, Project BioShield authorizes the Secretary to use an expedited award process, rather than the normal peer review process, for grants, contracts and cooperative agreements related to biomedical countermeasure research and development activity. This power is limited to awards of $1.5 million or less.

Under Project BioShield, the Secretary of HHS, with the concurrence of the Secretary of the Department of Homeland Security and upon the approval of the President, can contract to purchase unapproved countermeasures for the strategic national stockpile in specified circumstances. Congress is notified of a recommendation for a stockpile purchase after Presidential approval. Project BioShield specifies that a company supplying the countermeasure to the strategic national stockpile is paid on delivery of a substantial portion of the countermeasure. To be eligible for purchase under these provisions, the Secretary of HHS must determine that there is sufficient and satisfactory clinical results or research data, including data, if available, from preclinical and clinical trials, to support a reasonable conclusion that the countermeasure will qualify for approval or licensing within eight years. Project BioShield also allows the Secretary of HHS to authorize the emergency use of medical products that have not yet been approved by the FDA. To exercise this authority, the Secretary of HHS must conclude that:

- the agent for which the countermeasure is designed can cause serious or life-threatening disease;
- the product may reasonably be believed to be effective in detecting, diagnosing, treating or preventing the disease;
- the known and potential benefits of the product outweigh its known and potential risks;
- there is no adequate alternative to the product that is approved and available; and
- any other criteria prescribed in regulations are met.

Although this provision permits the Secretary of HHS to circumvent the FDA approval process, its use would be limited to rare circumstances. We cannot predict whether these authorities would be applicable to any of our current product candidates.

Safety Act

The Safety Act enacted by the U.S. Congress in 2002 creates product liability limitations for qualifying anti-terrorism technologies for claims arising from or related to an act of terrorism. In addition, the Safety Act provides a process by which an anti-terrorism technology may be certified as an “approved product” by the Department of Homeland Security and therefore entitled to a rebuttable presumption that the government contractor defense applies to sales of the product. The government contractor defense, under specified circumstances, extends the sovereign immunity of the United States to government contractors who manufacture a product for the government. Specifically, for the government contractor defense to apply, the government must approve reasonably precise specifications, the product must conform to those specifications and the supplier must warn the government about known dangers arising from the use of the product. Although sales of BioThrax are subject to the protections of the Safety Act, our product candidates may not qualify for the protections of the Safety Act or the government contractor defense.

Public Readiness and Emergency Preparedness Act

The Public Readiness and Emergency Preparedness Act enacted by the U.S. Congress in 2005 provides immunity for manufacturers from all claims under state or federal law for “loss” arising out of the administration or use of a “covered countermeasure.” “Covered countermeasures” include security

countermeasures and “qualified pandemic or epidemic products,” including products intended to diagnose or treat pandemic or epidemic disease, such as pandemic vaccines, as well as treatments intended to address conditions caused by such products. For these immunities to apply, the Secretary of HHS must issue a declaration in cases of public health emergency or “credible risk” of a future public health emergency. In the declaration, the Secretary may recommend the manufacture, administration or use of one or more countermeasures. Once the Secretary issues a declaration invoking the immunity provisions of the Act for the specified countermeasures, immunity applies with regard to administration or use of those countermeasures during the effective period of the declaration and for the diseases specified in the declaration. However, injured persons may still bring a suit for “willful misconduct” against the manufacturer under some circumstances. A declaration also triggers the establishment of a compensation program. If Congress funds the compensation program, persons injured by a qualified countermeasure must first seek compensation under the program before they may bring a suit alleging willful misconduct. We cannot predict whether our products or product candidates would fall within the provisions of this law, whether Congress would fund the relevant compensation program or if the necessary prerequisites for immunity would be triggered.

Foreign regulation

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval of a product by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The actual time required to obtain clearance to market a product in a particular foreign jurisdiction may vary substantially, based upon the type, complexity and novelty of the pharmaceutical product candidate and the specific requirements of that jurisdiction. The requirements governing the conduct of clinical trials, marketing authorization, pricing and reimbursement vary from country to country.

In the European Union, our products are subject to extensive regulatory requirements. As in the United States, the marketing of medicinal products has for many years been subject to the granting of marketing authorizations by regulatory agencies. European Union member states require both regulatory clearance and a favorable ethics committee opinion prior to the commencement of a clinical trial, whatever its phase. Under European Union regulatory systems, we may submit marketing authorization applications either under a centralized or decentralized procedure.

The centralized procedure provides for the grant of a single marketing authorization that is valid for all European Union member states. The centralized procedure is currently mandatory for products developed by means of a biotechnological process, including recombinant DNA technology, the controlled expression of genes coding for biologically active proteins and monoclonal antibody methods, and new chemical entities for the treatment of acquired immune deficiency syndrome, cancer and neurodegenerative disorder or diabetes. Beginning in May 2008, the centralized procedure will be mandatory for products for the treatment of auto-immune diseases and other immune dysfunctions and viral diseases. The centralized process is optional for medicines that constitute a “significant therapeutic, scientific or technical innovation” or for which a centralized process is in the interest of patients.

The decentralized procedure provides for mutual recognition of national approval decisions. Under this procedure, the holder of a national marketing authorization may submit an application to the remaining member states. Within 90 days of receiving the applications and an assessment report, each member state must decide whether to recognize approval. If a member state does not recognize the marketing

authorization, the disputed points are eventually referred to the European Commission, whose decision is binding on all member states.

Unlike the United States, the European Union member states do not have separate rules or review procedures for biologics and vaccines. Regulators apply broadly consistent principles and standards when reviewing applications, although they accept that the nature of the efficacy data supporting a vaccine application is likely to differ from the data that would support applications for the majority of therapeutic products. However, there are special procedures for some types of vaccine products. For example, influenza vaccines are subject to accelerated review and approval each year, following the release by the World Health Organization of the annual influenza strains. European Union member states have the discretion to require that marketing authorization holders submit samples of live vaccines or other immunological products for examination and formal batch release by a government control laboratory prior to release onto the market.

Orphan drugs

Under the Orphan Drug Act, special incentives exist for sponsors to develop products for rare diseases or conditions, which are defined to include those diseases or conditions that affect fewer than 200,000 people in the United States. A vaccine also can receive these incentives if it is expected to be administered to fewer than 200,000 persons per year. Sponsors may request that the FDA grant a drug orphan designation prior to approval. Biologics may qualify for designation as an orphan drug.

Products designated as orphan drugs are eligible for special grant funding for research and development, FDA assistance with the review of clinical trial protocols, potential tax credits for research, reduced filing fees for marketing applications and a special seven-year period of market exclusivity after marketing approval. Orphan drug exclusivity prevents FDA approval of applications by others for the same drug or biologic intended for use for the designated orphan disease or condition. The FDA may approve a subsequent application from another person if the FDA determines that the application is for a different product or different use, or if the FDA determines that the subsequent product is clinically superior or that the holder of the initial orphan drug approval cannot assure the availability of sufficient quantities of the drug or biologic to meet the public’s need. The FDA also may approve another application for the same drug or biologic that has orphan exclusivity but for a different use, in which case the competing drug or biologic could be prescribed by physicians outside its FDA approval for the orphan use notwithstanding the existence of orphan exclusivity. A grant of an orphan designation is not a guarantee that a product will be approved.

The European Union operates an equivalent system to encourage the development and marketing of medicinal products for rare diseases. Applications for orphan designations are submitted to the European Medicines Agency and reviewed by a Committee on Orphan Medicinal Products, comprising representatives of the member states, patient groups and other persons. The final decision is made by the European Commission.

A product can be designated as an orphan drug if it is intended for either a life-threatening or chronically debilitating condition affecting not more than 5 in 10,000 persons in the European Community when the application is made or a life-threatening, seriously debilitating or serious and chronic condition in the European Community for which, without incentives, it is unlikely that the marketing of the product in the Community would generate sufficient return to justify the necessary investment. In either case, the applicant must also demonstrate that there exists no satisfactory method of diagnosis, prevention or treatment of the condition in question that has been authorized in the European Community or, if such method exists, that the medicinal product will be of significant benefit to those affected by that condition.

After a marketing authorization has been granted in the European Community for an orphan product, no similar product may be approved for a period of ten years. At the end of the fifth year, however, any member state can initiate proceedings to restrict that period to six years if it believes the criteria for orphan designation no longer apply, for example, because the prevalence of disease has increased or the manufacturer is earning an unreasonable profit. In addition, competitive products can be approved during the marketing exclusivity period if they are not similar to the original product or are safer, more effective or otherwise clinically superior to it.

None of our products or product candidates have been designated as orphan drugs.

Reimbursement and pricing controls

In many of the markets where we or our potential collaborators would commercialize a product following regulatory approval, the prices of pharmaceutical products are subject to direct price controls by law and to reimbursement programs with varying price control mechanisms.

In the United States, there has been an increased focus on drug and biologic pricing in recent years. Although there are currently no direct government price controls over private sector purchases in the United States, federal legislation requires pharmaceutical manufacturers to pay prescribed rebates on specified drugs and biologics to enable them to be eligible for reimbursement under public health care programs such as Medicaid. Vaccines are generally exempt from these programs. Various states have adopted further mechanisms that seek to control drug and biologic prices, including by disfavoring higher priced products and by seeking supplemental rebates from manufacturers. Managed care has also become a potent force in the market place that increases downward pressure on the prices of pharmaceutical products. Federal legislation, enacted in December 2003, has altered the way in which physician-administered drugs and biologics covered by Medicare are reimbursed. Under the new reimbursement methodology, physicians are reimbursed based on a product's "average sales price." This new reimbursement methodology has generally led to lower reimbursement levels. The new federal legislation also has added an outpatient prescription drug benefit to Medicare, which went into effect in January 2006. These benefits will be provided primarily through private entities, which we expect will attempt to negotiate price concessions from pharmaceutical manufacturers.

Public and private health care payors control costs and influence drug and biologic pricing through a variety of mechanisms, including through negotiating discounts with the manufacturers and through the use of tiered formularies and other mechanisms that provide preferential access to particular products over others within a therapeutic class. Payors also set other criteria to govern the uses of a drug or biologic that will be deemed medically appropriate and therefore reimbursed or otherwise covered. In particular, many public and private health care payors limit reimbursement and coverage to the uses that are either approved by the FDA or that are supported by other appropriate evidence, such as published medical literature, and appear in a recognized compendium. Drug compendia are publications that summarize the available medical evidence for particular drug products and identify which uses are supported or not supported by the available evidence, whether or not such uses have been approved by the FDA.

Most non-pediatric commercial vaccines are purchased and paid for, or reimbursed by, managed care organizations, other private health plans or public insurers or paid for directly by patients. In the United States, pediatric vaccines are funded by a variety of federal entitlements and grants, as well as state appropriations. The CDC currently distributes pediatric grant funding on a discretionary basis under the Public Health Service Act. Federal and state governments purchase the majority of all pediatric vaccines produced in the United States, primarily through the Vaccine for Children Program implemented by the U.S. Congress in 1994. The Vaccine for Children Program is designed to help pay for vaccinations to

disadvantaged children, including uninsured children, children on Medicaid and underinsured children who receive vaccinations at federally qualified health centers.

Different pricing and reimbursement schemes exist in other countries. In the European Community, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs in general, particularly prescription drugs, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

Regulations regarding government contracting

Our status as a government contractor in the United States and elsewhere means that we are also subject to various statutes and regulations, including the Federal Acquisition Regulation, which govern the procurement of goods and services by agencies of the United States and other countries. These governing statutes and regulations can impose stricter penalties than those normally applicable to commercial contracts, such as criminal and civil damages liability and suspension and debarment from future government contracting. In addition, pursuant to various statutes and regulations, our government contracts can be subject to unilateral termination or modification by the government for convenience in the United States and elsewhere, detailed auditing requirements, statutorily controlled pricing, sourcing and subcontracting restrictions and statutorily mandated processes for adjudicating contract disputes.

Vaccine Injury Compensation Program

Because the cost of vaccine related litigation had reduced significantly the number of manufacturers willing to sell childhood vaccines, the U.S. Congress enacted the National Childhood Vaccine Injury Act in 1986. The Vaccine Injury Compensation Program established under the Vaccine Injury Act is a no-fault compensation program funded by an excise tax on each dose of a covered vaccine and is designed to streamline the process of seeking compensation for those injured by childhood vaccines. The Vaccine Injury Act requires all individuals injured by a vaccine to go through the compensation program before pursuing others remedies. Although claimants can reject decisions issued under the compensation program and pursue subsequent legal action through the courts, the Vaccine Injury Act determines the circumstances under which a manufacturer may be found liable in a civil action. The Vaccine Injury Act may not protect us if our products or product candidates cause injury.

Hazardous materials and select agents

Our development and manufacturing processes involve the use of hazardous materials, including chemicals, bacteria, viruses and radioactive materials, and produce waste products. Accordingly, we are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these materials. In addition to complying with environmental and occupational health and safety laws, we must comply with special regulations relating to biosafety administered by the CDC, HHS and the DoD.

The Public Health Security and Bioterrorism Preparedness and Response Act and the Agricultural Protection Act require us to register with the CDC and the Department of Agriculture our possession, use or transfer of select biological agents or toxins that could pose a threat to public health and safety, to animal or plant health or to animal or plant products. This legislation requires increased safeguards and

security measures for these select agents and toxins, including controlled access and the screening of entities and personnel, and establishes a comprehensive national database of registered entities.

In particular, this legislation and related regulations require that we:

- develop and implement biosafety, security and emergency response plans;
- restrict access to select agents and toxins;
- provide appropriate training to our employees for safety, security and emergency response;
- comply with strict requirements governing transfer of select agents and toxins;
- provide timely notice to the government of any theft, loss or release of a select agent or toxin; and
- maintain detailed records of information necessary to give a complete accounting of all activities related to select agents and toxins.

Other regulations

In the United States and elsewhere, the research, manufacturing, distribution, sale and promotion of drug and biological products are potentially subject to regulation by various federal, state and local authorities in addition to the FDA, including the Centers for Medicare and Medicaid Services, other divisions of HHS, such as the Office of Inspector General, the U.S. Department of Justice and individual U.S. Attorney offices within the Department of Justice and state and local governments. For example, sales, marketing and scientific and educational grant programs must comply with the anti-kickback and fraud and abuse provisions of the Social Security Act, the False Claims Act, the privacy provisions of the Health Insurance Portability and Accountability Act and similar state laws. Pricing and rebate programs must comply with the Medicaid rebate requirements of the Omnibus Budget Reconciliation Act of 1990 and the Veterans Health Care Act of 1992. All of these activities are also potentially subject to federal and state consumer protection and unfair competition laws.

Outside the United States, advertising and promotion of medicinal products, along with associated commercial practices, are often subject to significant government regulation. We are subject to the Export Administration Regulations implemented by the Bureau of Industry and Security governing the export of BioThrax and technology for the development and use of pathogens and toxins used in the development and manufacture of BioThrax and our product candidates. In connection with our international sales activity, we are also subject to export regulations and other sanctions imposed by the Office of Foreign Assets Control of the Department of the Treasury, the antiboycott provisions of the Export Administration Act and the Internal Revenue Code and the Foreign Corrupt Practices Act.

Litigation

BioThrax product liability litigation. We currently are a defendant in three federal lawsuits filed on behalf of three individuals vaccinated with BioThrax by the U.S. Army on October 14, 2005, January 9, 2006 and January 17, 2006 that claim damages resulting from personal injuries allegedly suffered because of the vaccination. The plaintiffs in each of these three lawsuits claim different injuries and seek varying amounts of damages. The first plaintiff alleges that the vaccine caused erosive rheumatoid arthritis and requests damages in excess of $1 million. The second plaintiff alleges that the vaccine caused Bell's palsy and other related conditions and requests damages in excess of $75,000. The third plaintiff alleges that the vaccine caused a condition that originally was diagnosed as encephalitis related to a gastrointestinal infection and caused him to fall into a coma for many weeks and requests damages in excess of $10 million.

We have moved to dismiss these three lawsuits for lack of personal jurisdiction, or, in the alternative to transfer the lawsuits to federal court in Michigan. These lawsuits are in the preliminary stages of litigation, and we believe that we are entitled to indemnification under our contract with the DoD for legal fees and any damages that may result from these claims. In April 2006, the U.S. District Court for the Western District of Michigan entered summary judgment in our favor in four other lawsuits asserting similar claims asserted by approximately 120 individuals. These four lawsuits had previously been consolidated in the Michigan District Court.

The District Court's ruling in the consolidated Michigan cases was based on two grounds. First, the District Court found that we are entitled to protection under a Michigan state statute that provides immunity for drug manufacturers if the drug was approved by the FDA and its labeling is in compliance with FDA approval, unless the plaintiffs establish that the manufacturer intentionally withheld or misrepresented information to the FDA and the drug would not have been approved, or the FDA would have withdrawn approval, if the information had been accurately submitted. Second, the District Court found that we are entitled to the immunity afforded by the government contractor defense, which, under specified circumstances, extends the sovereign immunity of the United States to government contractors who manufacture a product for the government. Specifically, the government contractor defense applies when the government approves reasonably precise specifications, the product conforms to those specifications and the supplier warns the government about known dangers arising from the use of the product. The District Court found that we established each of those factors. We intend to rely on similar defenses with respect to the substantive claims asserted in our three pending lawsuits. We expect to rely on contractual indemnification provisions with the DoD and statutory protections to limit our potential liability resulting from these three lawsuits.

MilVax litigation. In 2003, six unidentified plaintiffs filed suit in the U.S. District Court for the District of Columbia against the U.S. government seeking to enjoin the Anthrax Vaccine Immunization Program administered under MilVax under which all military personnel were required to be vaccinated with BioThrax. On October 27, 2004, the District Court enjoined the DoD from administering BioThrax to military personnel without their informed consent or a Presidential waiver. This ruling was based in part on the District Court's finding that the FDA, as part of its review of all biological products approved prior to 1972, had not properly issued a final order determining that BioThrax is safe and effective and not misbranded. In December 2005, the FDA issued a final order determining that BioThrax is safe and effective and not misbranded. On February 9, 2006, the U.S. Court of Appeals for the District of Columbia, on appeal of the injunction by the government, ruled that the injunction had dissolved by its own terms as a result of the FDA's final order and remanded the case to the District Court with instructions that the District Court consider the government's request to vacate the District Court's opinion. Although we are not a party to this lawsuit, if the District Court institutes another injunction or otherwise restricts the administration of BioThrax by the DoD, the amount of future purchases of BioThrax by the DoD could be limited.

Other. We are, and may in the future become, subject to other legal proceedings, claims and litigation arising in the ordinary course of our business in connection with the manufacture, distribution and use of our products and product candidates. For example, BioPort is a defendant, along with many other vaccine manufacturers, in a series of lawsuits that have been filed in various state and federal courts in the United States alleging that thimerosal, a mercury-containing preservative used in the manufacture of some vaccines, caused personal injuries, including brain damage, central nervous system damage and autism. No specific dollar amount of damages has been claimed. BioPort is currently a named defendant in 41 lawsuits pending in two jurisdictions: four in California and 37 in Illinois. The products at issue in these lawsuits are pediatric vaccines and immune globulins. Because we are not currently and have not historically been in the business of manufacturing or selling pediatric vaccines, we do not believe that we

manufactured the pediatric vaccines at issue in the lawsuits. Under a contractual obligation to the State of Michigan, we manufactured one batch of vaccine suitable for pediatric use. However, the contract required the State to use the vaccine solely for Michigan public health purposes. One plaintiff in a thimerosal lawsuit alleges that he was injured by immune globulin containing thimerosal. We previously manufactured human immune globulin that contained thimerosal. We no longer manufacture any products that contain thimerosal. We believe that our defense costs for these thimerosal lawsuits will be covered by applicable product liability insurance and have submitted a request for coverage to our carriers for defense costs incurred to date.

Personnel

As of August 31, 2006, we had 469 employees, including 128 employees engaged in product development, 243 employees engaged in manufacturing, six employees engaged in sales and marketing and 92 employees engaged in general and administrative activities. We believe that our future success will depend in part on our continued ability to attract, hire and retain qualified personnel. None of our employees is represented by a labor union or covered by collective bargaining agreements. We believe that our relations with our employees are good.

Management

Our executive officers and directors and their respective ages and positions as of August 31, 2006 are as follows:

Name	Age	Position
Fuad El-Hibri	48	President, Chief Executive Officer and Chairman of the Board of Directors
Edward J. Arcuri, Ph.D.	55	Executive Vice President and Chief Operating Officer
Robert G. Kramer, Sr.	49	President and Chief Executive Officer, BioPort Corporation
Steven N. Chatfield, Ph.D.	49	Chief Scientific Officer and President, Emergent Product Development UK Limited
Daniel J. Abdun-Nabi	51	Senior Vice President Corporate Affairs, General Counsel and Secretary
Kyle W. Keese	44	Senior Vice President Marketing and Communications
Thomas K. Zink, M.D.	49	Senior Vice President and Chief Medical Officer
R. Don Elsey	53	Vice President Finance, Chief Financial Officer and Treasurer
Joe M. Allbaugh	55	Director
Zsolt Harsanyi, Ph.D.(1)(2)(3)	62	Director
Jerome M. Hauer	54	Director
Shahzad Malik, M.D.(1)(2)	39	Director
Ronald B. Richard(1)(2)(3)	50	Director
Louis W. Sullivan, M.D.	72	Director

(1) Member of the Audit Committee.

(2) Member of the Compensation Committee.

(3) Member of the Nominating and Corporate Governance Committee.

Fuad El-Hibri. Mr. El-Hibri has served as chief executive officer and as chairman of our board of directors since June 2004 and as president since March 2006. Mr. El-Hibri served as chief executive officer and chairman of the board of directors of BioPort Corporation from May 1998 until June 2004, when, as a result of our corporate reorganization, BioPort became a wholly owned subsidiary of Emergent. Mr. El-Hibri has served as chairman of Digicel Holdings, Ltd., a privately held telecommunications firm, since August 2000. He served as president of Digicel from August 2000 to February 2005. Mr. El-Hibri has served as chairman of East West Resources Corporation, a venture capital and financial consulting firm, since June 1990. He served as president of East West Resources from September 1990 to January 2004. Mr. El-Hibri is a member of the board of trustees of American University and a member of the board of directors of the International Biomedical Research Alliance, an academic joint venture among the NIH, Oxford University and Cambridge University. He also serves as chairman and treasurer of El-Hibri Charitable Foundation. Mr. El-Hibri received a master’s degree in public and private management from Yale University and a B.A. in economics from Stanford University.

Edward J. Arcuri, Ph.D. Dr. Arcuri has served as executive vice president and chief operating officer since January 2005. Dr. Arcuri served as senior vice president of manufacturing operations from September 2003 to January 2005 and senior vice president of vaccine manufacturing from January 2002 to September 2003 for MedImmune, Inc., a biotechnology company. Dr. Arcuri served as senior vice president, operations from May 1999 to January 2002, vice president, manufacturing from July 1999 to May 2000 and chief operating officer from May 2001 to January 2002 at Aviron, Inc., a biotechnology company, which was acquired by MedImmune in January 2002. Prior to joining Aviron, Dr. Arcuri served in various management positions at North American Vaccine, Inc., Merck & Co. and SmithKline Beecham Pharmaceuticals, formerly SmithKline & French Laboratories. Dr. Arcuri received both a Ph.D. and an M.S. in biology from Rensselaer Polytechnic Institute and a B.S. in biology from the State University of New York at Albany.

Robert G. Kramer, Sr. Mr. Kramer has served as president and chief executive officer of BioPort Corporation since July 2004. Mr. Kramer served as chief financial officer of BioPort from February 1999 to August 2000, as chief operating officer of BioPort from September 2000 to June 2004 and as president of BioPort from October 2001 to June 2004. Prior to joining BioPort, Mr. Kramer served in various financial management positions at Pharmacia Corp., which was subsequently acquired by Pfizer Inc., and with subsidiaries of Northwest Industries. Mr. Kramer received an M.B.A. from Western Kentucky University and a B.S. in industrial management from Clemson University.

Steven N. Chatfield, Ph.D. Dr. Chatfield has served as chief scientific officer since January 2005 and as president of our subsidiary, Emergent Product Development UK Limited, since June 2005. Dr. Chatfield served as development director and chief scientific officer of Microscience Limited, a U.K. biotechnology company, from March 1999 to December 2004. We acquired Microscience in June 2005. Prior to joining Microscience, Dr. Chatfield held various positions in the field of vaccine research and development, including director of biotechnology at Medeva plc, director of research at Evans Medical and several positions at Wellcome Biotechnology and the Wellcome Foundation. Dr. Chatfield received a Ph.D. from the Council for National Academic Awards in association with the University of Birmingham in the United Kingdom.

Daniel J. Abdun-Nabi. Mr. Abdun-Nabi has served as senior vice president corporate affairs, general counsel and secretary since December 2004. Mr. Abdun-Nabi served as vice president and general counsel from May 2004 to December 2004. Mr. Abdun-Nabi served as general counsel for IGEN International, Inc., a biotechnology company, and its successor BioVeris Corporation, from September 1999 to May 2004. Prior to joining IGEN, Mr. Abdun-Nabi served as senior vice president, legal affairs, general counsel and secretary of North American Vaccine, Inc. Mr. Abdun-Nabi received an L.L.M. in taxation from Georgetown University Law Center, a J.D. from the University of San Diego School of Law and a B.A. in political science from the University of Massachusetts, Amherst.

Kyle W. Keese. Mr. Keese has served as senior vice president marketing and communications since March 2006. Mr. Keese served as vice president of sales and marketing of Emergent from June 2004 to March 2006 and of BioPort Corporation from June 2003 to June 2004. Mr. Keese served as vice president, business development for Antex Biologics, Inc., a biotechnology company, from March 2001 to May 2003, when we acquired substantially all of the assets of Antex. Prior to joining Antex, Mr. Keese served in various business development, marketing and sales management positions at IGEN International and Abbott Laboratories and as an officer in the U.S. Navy. Mr. Keese received an M.B.A. from National University and a B.A. in mathematics and computer science from Tulane University.

Thomas K. Zink, M.D. Dr. Zink has served as senior vice president of medical affairs and chief medical officer since May 2006. Dr. Zink served as the director of immunization practices and scientific affairs of GlaxoSmithKline Vaccines, USA, a subsidiary of GlaxoSmithKline plc**,** a pharmaceutical

company, from September 1999 to November 2004. After leaving GlaxoSmithKline and prior to joining Emergent, Dr. Zink served as a pro bono consultant on issues of patient safety and consumer-driven healthcare. Prior to joining GlaxoSmithKline, Dr. Zink served as the medical director for Prudential HealthCare of Kansas City, Missouri Region and as the chief medical officer of the Medicare Peer Review Organization of the State of Missouri. Dr. Zink also spent over a decade as a practicing physician specializing in emergency medicine. Dr. Zink received his joint B.A./M.D. from the University of Missouri-Kansas City and holds a current medical license as a physician and surgeon in good standing.

R. Don Elsey. Mr. Elsey has served as chief financial officer since March 2006 and as vice president finance and treasurer since June 2005. Mr. Elsey served as the director of finance and administration at IGEN International, Inc., a biotechnology company, and its successor BioVeris Corporation, from April 2000 to June 2005. Prior to joining IGEN, Mr. Elsey served as director of finance at Applera, a genomics and sequencing company, and in several finance positions at International Business Machines, Inc. Mr. Elsey received an M.B.A. in finance and a B.A. in economics from Michigan State University. Mr. Elsey is a certified management accountant.

Joe M. Allbaugh. Mr. Allbaugh has served as a director since June 2006. Mr. Allbaugh has served as president of Ecosphere Systems, Inc., a subsidiary of Ecosphere Technologies, a technology company serving the homeland security, disaster response and defense markets, since September 2006. Mr. Allbaugh has served as president and chief executive officer of The Allbaugh Company, LLC, a corporate strategy and consulting services firm, since March 2003. Mr. Allbaugh served as director of the Federal Emergency Management Agency from February 2001 to March 2003. Previously, Mr. Allbaugh served as deputy secretary of transportation of the Oklahoma Department of Transportation and manager of a number of state and federal political campaigns. Mr. Allbaugh serves on the boards of directors of Citadel Security Software Inc., a publicly held enterprise security software company, and UltraStrip Systems, Inc., a publicly held technology company in the defense, homeland security and global ship repair markets. Mr. Allbaugh also serves on the board of advisors of Compressus Inc., a privately held software company. Mr. Allbaugh received a B.A. in political science from the Oklahoma State University.

Zsolt Harsanyi, Ph.D. Dr. Harsanyi has served as a director since August 2004. Dr. Harsanyi has served as chief executive officer and chairman of the board of directors of Exponential Biotherapies Inc., a private biotechnology company, since December 2004. Dr. Harsanyi served as president of Porton International plc, a pharmaceutical and vaccine company, from January 1983 to December 2004. Dr. Harsanyi was a founder of Dynport Vaccine Company LLC in September 1996. Prior to joining Porton International, Dr. Harsanyi was vice-president of corporate finance at E.F. Hutton, Inc. Previously, Dr. Harsanyi directed the first assessment of biotechnology for the U.S. Congress' Office of Technology Assessment, served as a consultant to the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research and was on the faculties of Microbiology and Genetics at Cornell Medical College. Dr. Harsanyi received a Ph.D. from Albert Einstein College of Medicine and a B.A. from Amherst College.

Jerome M. Hauer. Mr. Hauer has served as a director since June 2005. Mr. Hauer has served as chief executive officer at The Hauer Group, a consulting services firm, since March 2006. Mr. Hauer served as senior vice president and co-chair of the homeland security practice of Fleishman-Hillard Government Relations, a government relations service firm, from January 2005 to March 2006. Prior to joining Fleishman-Hillard, Mr. Hauer served as the director of Response to Disaster and Emergencies Institute and assistant professor at the George Washington University School of Public Health from November 2003 to December 2004. Mr. Hauer served as acting assistant secretary for public health emergency preparedness of HHS from June 2002 to November 2003 and as director of the office of public health preparedness of HHS from May 2002 to June 2002. He also served as managing director of the crisis and consequence management group at Kroll Associates, a risk consulting firm, from October 2000 to February 2002. Mr. Hauer served as the first director of the New York City Mayor's Office of Emergency Management

under Mayor Rudolph Giuliani. He also served as the director of Emergency Medical Services and Emergency Management as well as director of the Department of Fire and Buildings for the State of Indiana under Governor Evan Bayh. Mr. Hauer serves on the board of directors of Hollis Eden Pharmaceuticals, Inc., a publicly held pharmaceutical company. Mr. Hauer previously served as a member of the Health Advisory Board of the Johns Hopkins School of Public Health and as a member of the National Academy of Science's Institute of Medicine's Committee to Evaluate the R&D Needs for Improving Clinical Medical Response to Chemical or Biological Terrorism Incidents. Mr. Hauer received an M.H.S. in public health from Johns Hopkins University School of Hygiene and Public Health and a B.A. from New York University.

Shahzad Malik, M.D. Dr. Malik has served as a director since June 2005. Dr. Malik has served as a general partner of Advent Venture Partners, a venture capital firm, since April 1999. Prior to joining Advent Venture Partners, Dr. Malik spent two years at McKinsey & Company where he focused on healthcare and investment banking and six years as a practicing physician specializing in cardiology. Dr. Malik also serves on the board of directors for several private biotechnology companies. Dr. Malik received his M.D. from Cambridge University and an M.A. in physiological sciences from Oxford University.

Ronald B. Richard. Mr. Richard has served as a director since January 2005. Mr. Richard has served as the president and chief executive officer of the Cleveland Foundation, the nation's oldest community foundation, since June 2003. From August 2002 to February 2003, Mr. Richard served as president of Stem Cell Preservation, Inc., a start-up medical research company. After leaving Stem Cell Preservation and prior to joining Emergent, Mr. Richard served as a strategic business advisor for IGEN International, Inc., a biotechnology company. Mr. Richard served as chief operating officer of In-Q-Tel, a venture capital fund that provides technologies to the Central Intelligence Agency, from March 2001 to August 2002. Prior to joining In-Q-Tel, Mr. Richard served in various senior management positions at Matsushita Electric Industrial Co., a consumer electronics company. Mr. Richard is a former U.S. foreign service officer. He served in Osaka/Kobe, Japan and as a desk officer for North Korean, Greek and Turkish affairs at the U.S. Department of State in Washington, D.C. Mr. Richard previously served as chairman of the board of trustees of the International Biomedical Research Alliance, an academic joint venture among the NIH, Oxford University and Cambridge University. Mr. Richard received an M.A. in international relations from Johns Hopkins University School of Advanced International Studies and a B.A. in history from Washington University. He holds an honorary doctorate in humane letters from Notre Dame College.

Louis W. Sullivan, M.D. Dr. Sullivan has served as a director since June 2006. Dr. Sullivan has served as president emeritus of Morehouse School of Medicine since July 2002. Dr. Sullivan served as president of Morehouse School of Medicine from 1981 to 1989 and from 1993 to 2002. From 1989 to 1993, Dr. Sullivan was Secretary of HHS. Dr. Sullivan also serves on the boards of directors of United Therapeutics Corporation, BioSante Pharmaceuticals, Inhibitex, Inc. and Henry Schein, Inc., publicly traded biotechnology companies. He is a founder and chairman of Medical Education for South African Blacks, Inc., a trustee of Morehouse School of Medicine and Africare and a director of the National Center on Addiction and Substance Abuse at Columbia University. Dr. Sullivan recently retired from the boards of directors of Bristol-Myers Squibb Company, 3-M Corporation, Georgia Pacific Corporation, Cigna Corporation and Equifax, Inc. Dr. Sullivan received his M.D. from Boston University and a B.S. from Morehouse College.

Board composition and election of directors

Our board of directors is currently authorized to have and currently has seven members. Upon completion of this offering, our board of directors will be divided into three classes, each of whose members will serve for staggered three-year terms:

- Mr. El-Hibri, Mr. Hauer and Mr. Richard will serve as class I directors, and their terms will expire at our 2007 annual meeting;
- Dr. Harsanyi and Dr. Sullivan will serve as class II directors, and their terms will expire at our 2008 annual meeting; and
- Mr. Allbaugh and Dr. Malik will serve as class III directors, and their terms will expire at our 2009 annual meeting.

Upon the expiration of the term of a class of directors, directors in that class will be eligible to be elected for a new three-year term at the annual meeting of stockholders in the year in which their term expires.

Until the fifth anniversary of the completion of this offering, any change in the number of directors serving on our board and the appointment and removal of the chairman of our board will require the vote of at least 75% of the directors then in office. Our directors may be removed from office only for cause and only by the affirmative vote of holders of our capital stock representing at least 75% of the voting power of all outstanding stock entitled to vote. Mr. El-Hibri, through his ownership interests in our common stock and voting arrangements among our significant stockholders, will be able to control the election of directors. See “Description of capital stock — Anti-takeover effects of Delaware law and our certificate of incorporation and by-laws.”

Four of our current directors, Mr. Allbaugh, Dr. Harsanyi, Dr. Malik and Mr. Richard are independent directors, as defined in applicable Nasdaq Stock Market rules. We refer to these directors as our “independent directors.” There are no family relationships among any of our directors or executive officers.

Board committees

Audit committee

The members of our audit committee are Dr. Harsanyi, Dr. Malik and Mr. Richard. Dr. Harsanyi chairs the committee. Our audit committee assists our board of directors in its oversight of our accounting and financial reporting processes and the integrity of our financial statements, our compliance with legal and regulatory requirements, the audits of our financial statements and the qualifications, independence and performance of our independent registered public accounting firm.

Upon the completion of this offering, our audit committee’s responsibilities will include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
- overseeing the work of our independent registered public accounting firm, including through the receipt and consideration of reports from our independent registered public accounting firm;
- reviewing and discussing with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures;

- coordinating our board of directors' oversight of internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
- establishing procedures for the receipt and retention of accounting related complaints and concerns;
- meeting independently with our independent registered public accounting firm and management; and
- preparing the audit committee report required by Securities and Exchange Commission rules.

All audit services to be provided to us and all non-audit services, other than de minimis non-audit services, to be provided to us by our independent registered public accounting firm must be approved in advance by our audit committee.

Dr. Harsanyi and Dr. Malik are audit committee financial experts. We believe that the composition of our audit committee meets the requirements for independence under current Nasdaq Stock Market and Securities and Exchange Commission rules and regulations.

Compensation committee

The members of our compensation committee are Dr. Harsanyi, Dr. Malik and Mr. Richard. Mr. Richard chairs the committee. Our compensation committee assists the board of directors in the discharge of its responsibilities relating to the compensation of our executive officers and establishing and maintaining broad-based employee benefit plans and programs.

Upon the completion of this offering, our compensation committee's responsibilities will include:

- reviewing and approving, or making recommendations to the board of directors with respect to, the compensation of our chief executive officer and our other executive officers;
- overseeing the evaluation of the performance of our senior executives;
- overseeing and administering, and making recommendations to the board of directors with respect to, our broad-based compensation programs and our cash and equity incentive plans;
- reviewing and making recommendations to the board of directors with respect to director compensation; and
- preparing the compensation committee report required by Securities and Exchange Commission rules.

Nominating and corporate governance committee

The members of our nominating and corporate governance committee are Dr. Harsanyi and Mr. Richard. Dr. Harsanyi chairs the committee.

Upon the completion of this offering, our nominating and corporate governance committee's responsibilities will include:

- recommending to the board of directors the persons to be nominated for election as directors or to fill vacancies and to be appointed to each of the board's committees;
- overseeing an annual review by the board of directors with respect to management succession planning;

- developing and recommending to the board of directors corporate governance principles and guidelines; and
- overseeing periodic evaluations of the board of directors.

Compensation committee interlocks and insider participation

None of our executive officers serves as a member of the board of directors or compensation committee, or other committee serving an equivalent function, of any entity that has one or more executive officers who serve as members of our board of directors or our compensation committee. None of the members of our compensation committee has ever been our employee.

Director compensation

Under our director compensation program, we pay each of our non-employee directors an annual retainer of $20,000 for service as a director. Each non-employee director also receives a fee for each board and committee meeting attended. The board meeting fee is $1,500 for attendance in person and $500 for attendance by telephone. The audit committee meeting fee is $1,500 for attendance in person and $500 for attendance by telephone. The compensation committee meeting fee is $1,000 for attendance in person and $300 for attendance by telephone. Following the completion of this offering, the nominating and corporate governance committee meeting fee will be $1,000 for attendance in person and $300 for attendance by telephone. Each member of our audit committee receives an additional annual retainer of $5,000. Each member of our compensation committee receives an additional annual retainer of $3,000. Following the completion of this offering, each member of our nominating and corporate governance committee will receive an annual retainer of $3,000. We reimburse our non-employee directors for out-of-pocket expenses incurred in connection with attending our board and committee meetings.

Under the director compensation program, we have granted a non-qualified option to purchase 15,000 shares of our class B common stock to each of our independent directors, unless the director's appointment was pursuant to any transaction or other arrangement requiring such appointment, and to each of our non-employee directors who does not qualify as an independent director if our board of directors determined that the option grant was necessary to attract such non-employee director to join the board. These options vest over three years and expire ten years from the date of grant, subject to the director's continued service as a director. Upon a change in control, as defined in each director stock option agreement, we will have the option to purchase and redeem all the options owned by the director, or held for the benefit of the director, for a purchase price equal to the difference between the option exercise price and the fair market value. In the event we exercise such repurchase option, any unvested options will be deemed fully vested on the day preceding the date of repurchase.

We have granted the following non-qualified stock options to our independent and non-employee directors:

- On December 1, 2004, we granted a stock option to purchase 15,000 shares at an exercise price of $7.89 per share to Dr. Harsanyi.
- On January 26, 2005, we granted a stock option to purchase 15,000 shares at an exercise price of $7.89 per share to Mr. Richard.
- On June 15, 2005, we granted a stock option to purchase 15,000 shares at an exercise price of $10.06 per share to Mr. Hauer.

- On June 30, 2006, we granted a stock option to purchase 15,000 shares at an exercise price of $29.58 per share to Dr. Sullivan.
- On June 30, 2006, we granted a stock option to purchase 15,000 shares at an exercise price of $29.58 per share to Mr. Allbaugh.

Following the completion of this offering, pursuant to automatic option grants to non-employee directors under our 2006 stock incentive plan, we will grant each of our non-employee directors a nonstatutory option to purchase:

- 7,500 shares of common stock upon commencement of service on our board of directors;
- 5,000 shares of common stock, on the date of each of our annual meetings of stockholders, provided that the director continues serving as a director after the annual meeting and has served on our board of directors for at least six months; and
- if the non-employee director is serving as the chair of one or more committees of our board of directors, an additional 2,500 shares of common stock, on the date of each of our annual meetings of stockholders, provided that the director continues serving as a director after the annual meeting and has served on our board of directors for at least six months.

See “— Stock option and other compensation plans — 2006 stock incentive plan” for additional information regarding these option grants.

Executive compensation

The following table sets forth a summary of the compensation paid or accrued during the year ended December 31, 2005 to our chief executive officer and to our four most highly compensated executive officers other than our chief executive officer who were serving as executive officers as of December 31, 2005. We refer to these individuals as our named executive officers.

Summary compensation table

Name and principal position	Annual compensation			Long-term compensation	All other compensation(1)
	Salary	Bonus	Other annual compensation	Shares underlying options	
Fuad El-Hibri President, Chief Executive Officer and Chairman of the Board of Directors	$ 490,818	$ 237,215	$ —	75,000	$ 7,000
Edward J. Arcuri, Ph.D. Executive Vice President and Chief Operating Officer	280,192	94,517	—	40,000	—
Robert G. Kramer, Sr. President and Chief Executive Officer, BioPort Corporation	371,192	140,816	—	40,000	7,000
Steven N. Chatfield, Ph.D. President, Emergent Product Development UK Limited and Chief Scientific Officer	225,162	82,250	38,752(2)	20,000	—
Daniel J. Abdun-Nabi Senior Vice President Corporate Affairs, General Counsel and Secretary	272,631	110,400	—	—	—

(1) Represents the value of our contributions on behalf of the named executive officer to our 401(k) savings plan.

(2) Represents a relocation payment of $15,000 and a living allowance of $23,752.

Stock option grants

The following table sets forth information regarding grants of stock options to purchase shares of our common stock to our named executive officers during the year ended December 31, 2005. Immediately prior to the completion of this offering, each outstanding option to purchase shares of our class B common stock automatically will become an option to purchase an equal number of shares of our common stock.

Potential realizable values are calculated using the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and assuming that the market price appreciates from this price at the indicated rate for the entire term of each option and that each option is exercised and sold on the last day of its term at the assumed appreciated price. The assumed 5% and 10% rates of stock price appreciation are required by the rules of the Securities and Exchange Commission and do not represent our estimate or projection of the future price of our common stock. Actual gains, if any, on stock option exercises depend on the future performance of our common stock and the date on which the options are exercised.

Option grants in last fiscal year

Name	Number of shares underlying options granted	Percentage of total options granted to employees in fiscal year	Exercise price per share	Expiration date	Potential realizable value at assumed annual rates of stock price appreciation for option term(1)	
					5% ($)	10% ($)
Fuad El-Hibri	75,000(2)	30.0%	$ 10.06	5/25/10		
Edward J. Arcuri, Ph.D.	40,000(3)	16.0	7.89	2/9/10		
Robert G. Kramer, Sr.	40,000(2)	16.0	10.06	5/25/10		
Steven N. Chatfield, Ph.D.	20,000(3)	8.0	7.89	2/9/10		
Daniel J. Abdun-Nabi	—	—	—	—		

(1) The dollar amounts under these columns are the result of calculations at rates set by the Securities and Exchange Commission and, therefore, are not intended to forecast possible future appreciation, if any, in the price of the underlying common stock.

(2) These options vest in three annual installments, with 40% of the original number of shares having vested on December 31, 2005 and 30% of the original number of shares vesting on each of December 31, 2006 and December 31, 2007.

(3) These options vest in three equal annual installments beginning on December 31, 2005.

Option exercises and year-end option values

The following table sets forth information regarding the number of shares of our common stock issued upon option exercises by our named executive officers during the year ended December 31, 2005 and the value realized by our named executive officers. In addition, the table sets forth information regarding the number and value of unexercised options held by our named executive officers at December 31, 2005. There was no public trading market for our common stock as of December 31, 2005. Accordingly, as permitted by the rules of the Securities and Exchange Commission, we have calculated the value of

unexercised in-the-money options at December 31, 2005 assuming that the fair market value of our common stock as of December 31, 2005 was equal to the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, less the aggregate exercise price.

Aggregated option exercises in last fiscal year and fiscal year-end option values

Name	Number of shares acquired on exercise	Value realized	Number of securities underlying unexercised options at December 31, 2005		Value of unexercised in-the-money options at December 31, 2005	
			Exercisable	Unexercisable	Exercisable	Unexercisable
Fuad El-Hibri	—	—	30,000	45,000		
Edward J. Arcuri, Ph.D.	—	—	13,334	26,666		
Robert G. Kramer, Sr.	—	—	178,500	24,000		
Steven N. Chatfield, Ph.D.	—	—	6,667	13,333		
Daniel J. Abdun-Nabi	—	—	25,900	11,100		

Employment agreement with Steven Chatfield, Ph.D.

In September 2006, our wholly owned subsidiary, Emergent Product Development UK Limited, formerly Emergent Europe Limited, entered into an employment contract with Dr. Chatfield to serve as President of Emergent Product Development UK. Under this agreement, Dr. Chatfield is entitled to an annual base salary of £149,914, which may be reviewed annually in the discretion of Emergent Product Development UK. Dr. Chatfield is also eligible to participate in any bonus plan established by Emergent Product Development UK from time to time. Under the agreement, Emergent Product Development UK agreed to contribute 10% of Dr. Chatfield's salary, which amount will be capped at Inland Revenue Limits, in equal monthly installments to a qualified pension plan, subject to Dr. Chatfield making monthly contributions to the qualified pension plan in an amount equal to 2.5% of his salary. Either party may terminate the agreement upon not less than six months' prior written notice. Emergent Product Development UK may terminate Dr. Chatfield's employment without prior notice for conduct amounting to gross misconduct or any other equivalent conduct or performance issues. Emergent Product Development UK may terminate Dr. Chatfield's employment for cause, as defined in the agreement, upon providing the statutory minimum period of notice required under English law. Subject to any contrary provision of applicable law, Dr. Chatfield's employment will end automatically without the need for notice of termination at the end of the month in which Dr. Chatfield reaches the age of 65.

Under the agreement, Dr. Chatfield is entitled to protections substantially similar to those in our severance plan and termination protection program, except Dr. Chatfield is not entitled to a gross-up payment with respect to applicable taxes in the circumstances provided in the severance plan and termination protection program. See "— Severance plan and termination protection program" for additional information about our severance plan and termination protection program. If Emergent Product Development UK terminates Dr. Chatfield's employment without cause, as defined in the agreement, then Dr. Chatfield is entitled to 75% of his annual base salary and continued eligibility for employee benefits for a period of nine months following the date of termination. Dr. Chatfield is entitled to 100% of his annual base salary and continued eligibility for employee benefits for a period of

12 months following the date of termination of his employment under the circumstances described in the severance plan and termination protection program in connection with a change of control, as defined in the agreement.

Under the terms of a prior employment contract with us, which has been superseded in all other respects, Dr. Chatfield remains subject to the following noncompetition obligations. Dr. Chatfield is prohibited from competing with us during the term of his employment and for a period thereafter of not less than six months and not more than 12 months as may be required by us, provided that we notify Dr. Chatfield in writing not less than three months prior to expiration of employment or any severance pay period, or in the event of termination by us for cause, at the time of termination, and that we continue to pay Dr. Chatfield 50% of his base salary in effect at termination during the additional period. Dr. Chatfield is also prohibited, during his term of employment and for a period of six months after termination of employment, from inducing or soliciting our employees, including any employees who left our employ within the previous six months, to leave our employ or inducing or soliciting customers, clients or business partners to reduce their relationship or breach their agreements with us. Dr. Chatfield is also bound by the terms of Emergent Product Development UK's standard non-disclosure, invention and assignment agreement.

Dr. Chatfield currently serves as our chief scientific officer pursuant to a letter agreement dated July 11, 2006.

Severance plan and termination protection program

In May 2006, our board of directors approved a severance plan and termination protection program effective April 1, 2006 for the benefit of employees with the title of chief executive officer, president, executive vice president, senior vice president or vice president who have been designated to participate in the severance plan by our board of directors or, with the authorization of our board of directors, by our chief executive officer. Our chief executive officer may designate the greater of 7% of the total number of our employees or 35 employees to be participants in the severance plan at any particular time, on the basis of name, title, function or compensation level. Our chief executive officer will at all times be a participant under the severance plan and shall have no less favorable rights under the severance plan than any other participant. Each of our executive officers based in the United States is currently a participant in the severance plan.

The severance plan is effective through December 31, 2009. Commencing on December 31, 2009, and on December 31 of each year thereafter, the severance plan will automatically extend for additional one-year periods unless we provide 90 days' prior written notice that the term will not be extended.

If during the term of the severance plan, we terminate a participant's employment without cause, as defined in the severance plan, then the participant will be entitled to:

- any unpaid base salary and accrued paid time-off through the date of termination;
- a pro rata target annual bonus in respect of the year of termination;
- any bonus earned but unpaid as of the date of termination for any previously completed year;
- reimbursement for any unreimbursed expenses incurred by the participant prior to the date of termination;
- an amount equal to a specified percentage of the participant's annual base salary;

- employee and fringe benefits and perquisites, if any, to which the participant may be entitled as of the date of termination under our relevant plans, policies and programs; and
- continued eligibility for the participant and his or her eligible dependents to receive employee benefits, for a stated period following the participant's date of termination, except when the provision of employee benefits would result in a duplication of benefits provided by any subsequent employer.

The following table sets forth the percentage of base salary and the stated period for continued employee benefits that each of our executive officers who participates in the plan is entitled if we terminate the executive officer's employment without cause.

Name	Percentage of annual base salary	Stated period for continued employee benefits
Fuad El-Hibri	150%	18 months
Robert G. Kramer, Sr.	100	12 months
Edward J. Arcuri, Ph.D.	100	12 months
Daniel J. Abdun-Nabi	100	12 months
Kyle W. Keese	100	12 months
Thomas K. Zink, M.D.	75	9 months
R. Don Elsey	75	9 months

We may pay any amount under the severance plan, in our sole and absolute discretion, either in a single lump sum amount within 30 days following termination or in equal monthly installments over the same stated period during which we have agreed to provide continued employee benefits to the terminated employee.

As a condition to payment of any amounts under the severance plan, the participant is required:

- for the same stated period during which we have agreed to provide continued employee benefits to the terminated employee, not to:
  - induce, counsel, advise, solicit or encourage our employees to leave our employ or to accept employment with any other person or entity,
  - induce, counsel, advise, solicit or encourage any person who we employed within six months prior to that time to accept employment with any person or entity besides us or hire or engage that person as an independent contractor,
  - solicit, interfere with or endeavor to cause any of our customers, clients or business partners to cease or reduce its relationship with us or induce any such customer, client or business partner to breach any agreement that such customer, client or business partner may have with us, and
  - engage in or have a financial interest in any business competing with us within any state, region or locality in which we are then doing business or marketing products;
- upon reasonable notice and at our expense, to cooperate fully with any reasonable request that may be made by us in connection with any investigation, litigation or other similar activity to which we are or may be a party or may otherwise be involved and for which the participant may have relevant information; and

- to sign and deliver a suitable waiver and release under which the participant will release and discharge us from and on account of any and all claims that relate to or arise out of our employment relationship.

In connection with our implementation of the severance plan, in August 2006, we agreed to the following modifications and clarifications to Mr. El-Hibri's contractual obligations and duties:

- Mr. El-Hibri's service as chairman of Digicel Holdings, chairman of East West Resources, general manager of Intervac, L.L.C. and Intervac Management, L.L.C., a member of the board of trustees of American University, a member of the board of directors of the International Biomedical Research Alliance and director and treasurer of El-Hibri Charitable Foundation and his management of his personal investments at levels of time and attention comparable to those that Mr. El-Hibri provided to such entities within the preceding twelve months, do not violate his contractual obligations to us or interfere with his ability to perform his duties to us;
- it is not a violation of Mr. El-Hibri's contractual obligations to us if he pursues a business transaction or opportunity where such transaction or opportunity was first presented to Mr. El-Hibri in his capacity as an officer or director of the entities listed above or where such transaction or opportunity was first presented to us and our board of directors declined to pursue such transaction or opportunity; and
- with respect to three employees who, at Mr. El-Hibri's invitation, left their employment with East West Resources to accept employment with us, it is not a violation of Mr. El-Hibri's non-solicitation agreement to induce, counsel, advise, solicit or encourage, or attempt to induce, counsel, advise, solicit or encourage those employees to return to employment with East West Resources.

If during the term of the severance plan, we terminate a participant's employment with cause, then the participant will not be entitled to receive any compensation, benefits or rights under the severance plan, and any stock options or other equity participation benefits vested on or prior to the date of the termination, but not yet exercised, will immediately terminate.

If during the term of the severance plan, we terminate a participant's employment without cause or a participant resigns for good reason, as defined in the severance plan, in each case within 18 months following a change of control, as defined in the severance plan, or we terminate a participant's employment prior to a change of control, which subsequently occurs, at the request of a party involved in the change of control, or otherwise in connection with or in anticipation of a change of control, then the participant will be entitled to:

- a lump sum amount, payable within 30 days following the date of termination, equal to the sum of:
  - any unpaid base salary and accrued paid time-off through the date of termination,
  - a pro rata target annual bonus in respect of the year of termination,
  - any bonus earned but unpaid as of the date of termination for any previously completed year,
  - any unreimbursed expenses incurred by the participant prior to the date of termination, and
  - an amount equal to a specified percentage of the sum of the participant's base salary and the greater of the annual bonus that was paid to the participant in respect of the most recently completed year or the maximum annual bonus that could have been paid to the participant under an established bonus plan for the most recently completed year;
- employee and fringe benefits and perquisites, if any, to which the participant may be entitled as of the date of termination of employment under our relevant plans, policies and programs;

- any unvested stock options held by the participant that are outstanding on the date of termination will become fully vested as of that date, and the period, during which any stock options held by the participant that are outstanding on that date may be exercised, shall be extended to a date that is the later of the 15th day of the third month following the termination date, or December 31 of the calendar year in which the stock option would otherwise have expired if the exercise period had not been extended, but not beyond the final date the stock option could have been exercised if the participant's employment had not terminated, in each case based on the term of the option at the original grant date;
- continued eligibility for the participant and his or her eligible dependents to receive employee benefits, for a stated period following the participant's date of termination, except when the provision of employee benefits would result in a duplication of benefits provided by any subsequent employer;
- a gross-up payment with respect to applicable taxes on any payment to the participant;
- the retention for the maximum period permitted by applicable law of all rights the participant has to indemnification from us immediately prior to the change of control and the continuation throughout the period of any applicable statute of limitations of any director's and officer's liability insurance covering the participant immediately prior to the change of control; and
- the advancement to the participant of all costs and expenses, including attorney's fees and disbursements, incurred by the participant in connection with any legal proceedings that relate to the termination of employment or the interpretation or enforcement of any provision of the severance plan, for which the participant will have no obligation to reimburse us if the participant prevails in the proceeding with respect to at least one material issue or the proceeding is settled.

The following table sets forth the percentage of base salary and the stated period for continued employee benefits that each of our executive officers who participates in the plan is entitled under the circumstances described above in connection with a change of control.

Name	Percentage of annual base salary	Stated period for continued employee benefits
Fuad El-Hibri	250%	30 months
Robert G. Kramer, Sr.	200	24 months
Edward J. Arcuri, Ph.D.	200	24 months
Daniel J. Abdun-Nabi	150	18 months
Kyle W. Keese	100	12 months
Thomas K. Zink, M.D.	75	9 months
R. Don Elsey	75	9 months

Our chief executive officer may designate up to two participants for whom any reason for resigning within the 30-day period following the first anniversary of a change of control shall also constitute good reason. Mr. El-Hibri has been designated as a participant to receive this benefit.

All payments under the severance plan will be reduced by any applicable taxes required by applicable law to be paid or withheld by us. All payments and benefits provided under the severance plan are intended to either comply with or be exempt from Section 409A of the Internal Revenue Code. If at the time a participant's employment is terminated, the participant is a specified employee within the meaning of Section 409A(a)(2)(B)(ii), then any payments to the participant that constitute nonqualified deferred

compensation within the meaning of Section 409A will be delayed by a period of six months. All such payments that would have been made to the participant during the six-month period will be made in a lump sum in the seventh month following the date of termination, and all remaining payments will commence in the seventh month following the date of termination.

Our board of directors or any committee of our board of directors is authorized to administer the plan and has authority to adopt, amend and repeal the administrative rules, guidelines and practices relating to the severance plan as it deems advisable.

Limitation of liability and indemnification

Our certificate of incorporation that will be in effect upon the completion of this offering limits the personal liability of directors for breach of fiduciary duty to the maximum extent permitted by the General Corporation Law of Delaware. Our certificate of incorporation provides that no director will have personal liability to us or to our stockholders for monetary damages for breach of fiduciary duty or other duty as a director. However, these provisions do not eliminate or limit the liability of any of our directors:

- for any breach of their duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- for voting or assenting to unlawful payments of dividends or other distributions; or
- for any transaction from which the director derived an improper personal benefit.

Any amendment to or repeal of these provisions will not eliminate or reduce the effect of these provisions in respect of any act or failure to act, or any cause of action, suit or claim that would accrue or arise prior to any amendment or repeal or adoption of an inconsistent provision. If the General Corporation Law of Delaware is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the General Corporation Law of Delaware.

In addition, our certificate of incorporation provides that we must indemnify our directors and officers and we must advance expenses, including attorneys' fees, to our directors and officers in connection with legal proceedings, subject to limited exceptions.

We have entered into agreements to indemnify our directors and executive officers. These agreements, among other things, provide that we will indemnify the director or executive officer to the fullest extent permitted by law for claims arising in his or her capacity as our director, officer, manager, employee, agent or representative and advance expenses, including attorneys' fees, to these individuals in connection with legal proceedings, subject to limited exceptions. The indemnification agreements also establish the procedures that will apply in the event a director or officer makes a claim for indemnification.

Stock option and other compensation plans

Employee stock option plan

Our employee stock option plan was adopted by our board of directors and approved by our stockholders on June 30, 2004 and amended and restated on January 26, 2005. We refer to this employee stock option plan, as amended and restated, as our employee stock option plan. Our employee

stock option plan became effective on the date that our board of directors adopted the plan. We assumed all options outstanding under the BioPort Corporation employee stock option plan as of June 30, 2004 and granted option holders replacement stock options to purchase an equal number of shares of our class B common stock under our employee stock option plan. Under our employee stock option plan, the exercise period for options under the BioPort Corporation employee stock option plan that would have otherwise expired on June 30, 2004 was extended to June 30, 2007. For incentive stock options, the extension of the exercise period caused the options to be considered nonqualified stock options after June 30, 2004. Under our employee stock option plan, 1,250,000 shares of our class B common stock are reserved for issuance. Our board of directors has authorized our compensation committee to administer our employee stock option plan. Immediately prior to the completion of this offering, each outstanding option to purchase shares of our class B common stock automatically will become an option to purchase an equal number of shares of our common stock, with no other changes to the option.

If a merger or other reorganization event occurs, options granted under our employee stock option plan may be substituted or assumed. In the event of our merger, consolidation or combination with or into another corporation, other than a merger, consolidation or combination in which we are the surviving corporation and which does not result in any reclassification or other change in the number of outstanding shares of our common stock, each option holder will have the right after the merger, consolidation or combination and during the term of the option to receive upon exercise of the option, for each share of common stock as to which the option could be exercised, the kind and amount of shares of the surviving or new corporation, cash, securities, evidence of indebtedness, other property or any combination which would have been received upon the merger, consolidation or combination by the holder of a share of common stock immediately prior to the merger, consolidation or combination. Upon the occurrence of a change in control, as defined in our employee stock option plan, we have the option to purchase and redeem from any option holder all the options owned by the option holder for a purchase price equal to the difference between the option exercise price and the fair market value of the common stock. In the event that we exercise our right to repurchase the options, any unvested options will be deemed fully vested on the day preceding the date we exercise our repurchase option. We may exercise this option at any time during the six-month period following the date of change in control or such longer period of time as is reasonable.

Under our employee stock option plan, no award may be granted under the plan after June 30, 2009, unless the plan is terminated sooner. Our board of directors may amend, suspend or discontinue the employee stock option plan at any time, except that stockholder approval will be required for any revision that would increase the number of shares reserved for issuance under the plan, or otherwise as required to comply with applicable law or stock market requirements. No amendment may materially impair any rights or materially increase any obligations of an option holder under an outstanding option without the consent of the option holder.

As of August 31, 2006, options to purchase 1,061,679 shares of our class B common stock at a weighted average exercise price of $6.38 were outstanding under our employee stock option plan, options to purchase 68,999 shares of class B common stock have been exercised and options to purchase 140,551 shares of class B common stock have been forfeited. After the effective date of our 2006 stock incentive plan, which is described below, we will grant no additional options under our employee stock option plan.

2006 stock incentive plan

Our 2006 stock incentive plan was adopted by our board of directors on May 9, 2006 and approved by our stockholders on , 2006. The 2006 stock incentive plan will become effective immediately

prior to the completion of this offering. The 2006 stock incentive plan provides for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock, restricted stock units and other stock unit awards. Our 2006 stock incentive plan provides that 175,000 shares of common stock, plus the number of shares of common stock, up to shares, reserved for issuance under our existing employee stock option plan that remain available for grant as of the completion of this offering, will be reserved for issuance under the 2006 stock incentive plan immediately following this offering.

In addition, our 2006 stock incentive plan contains an "evergreen provision" that allows for increases in the number of shares available for issuance under our 2006 stock incentive plan on the first day of the first and third quarter of each year from 2007 though 2009. Each semi-annual increase in the number of shares will be equal to the lowest of a specified number of shares, a specified percentage of the aggregate number of shares outstanding and an amount determined by our board of directors. The following table sets forth the maximum specified number of shares and maximum specified percentage of outstanding shares for each semi-annual increase in the number of shares.

	Maximum specified number of shares	Maximum specified percentage of outstanding shares
First Quarter of 2007	149,000	1.5%
Third Quarter of 2007	161,000	1.5
First Quarter of 2008	322,000	3.0
Third Quarter of 2008	162,000	1.5
First Quarter of 2009	326,000	3.0
Third Quarter of 2009	164,000	1.5

Our employees, officers, directors, consultants and advisors are eligible to receive awards under our 2006 stock incentive plan. Incentive stock options may only be granted to our employees. The maximum number of shares of common stock with respect to which awards may be granted to any participant under the plan is 100,000 per fiscal year.

In accordance with the terms of the 2006 stock incentive plan, our board of directors has authorized our compensation committee to administer the plan. Our compensation committee selects the recipients of awards and determines:

- the number of shares of common stock covered by options and the dates upon which the options become exercisable;
- the exercise price of options, which may not be less than 100% of the fair market value of the stock on the date of grant;
- the duration of options, which may not be in excess of 10 years;
- the method of payment of the exercise price; and
- the number of shares of common stock subject to any stock appreciation right, restricted stock, restricted stock units or other stock-unit awards and the terms and conditions of such awards, including conditions for exercise, repurchase, issue price and repurchase price.

If our board of directors delegates authority to an executive officer, the executive officer has the power to make awards to all of our employees, except to executive officers. Our board of directors will fix the terms of the awards to be granted by such executive officer, including the exercise price of such awards and the maximum number of shares subject to awards that such executive officer may make.

Our 2006 stock incentive plan provides for an automatic grant of options to non-employee directors as follows:

- 7,500 shares of common stock, upon the commencement of service on our board of directors;
- 5,000 shares of common stock, on the date of each of our annual meetings of stockholders, provided that the director continues serving as a director after the annual meeting and has served on our board of directors for at least six months; and
- if the non-employee director is serving as the chair of one or more committees of our board of directors, an additional 2,500 shares of common stock, on the date of each of our annual meetings of stockholders, provided that the director continues serving as a director after the annual meeting and has served on our board of directors for at least six months.

Automatic option grants to directors will:

- have an exercise price equal to the closing sale price of the common stock on the Nasdaq Stock Market or the national securities exchange on which the common stock is then traded on the trading date immediately prior to the date of grant, or the fair market value of the common stock on such date as determined by our board of directors, if the common stock is not then traded on The Nasdaq Stock Market or on a national securities exchange;
- vest in three equal annual installments beginning on the anniversary of the date of grant provided that the individual is serving on our board of directors on such date, or, with respect to annual grants, on the date which is one business day prior to the date of our next annual meeting, if earlier, provided that no additional vesting will take place after the individual ceases to serve as a director and that our board of directors may provide for accelerated vesting in the case of death, disability, attainment of mandatory retirement age or retirement following at least 10 years of service;
- expire on the earlier of 10 years from the date of grant or three months following cessation of service on our board of directors; and
- contain other terms and conditions as our board of directors determines.

Our board of directors may increase or decrease the number of shares subject to automatic option grants to directors.

If a merger or other reorganization event occurs, our board of directors will provide that all of our outstanding options are to be assumed or substituted by the successor corporation. If the merger or reorganization event also constitutes a change in control event, as defined under our 2006 stock incentive plan, the assumed or substituted options will become immediately exercisable in full if on or prior to the first anniversary of the reorganization event an option holder’s employment with us or our succeeding corporation is terminated by the option holder for good reason or is terminated by us or the succeeding corporation without cause, each as defined in our 2006 stock incentive plan. In the event the succeeding corporation does not agree to assume, or substitute for, outstanding options, then our board of directors will provide that all unexercised options will become exercisable in full prior to the completion of the merger or other reorganization event and that these options will terminate immediately prior to the completion of the merger or other reorganization event if not previously exercised. Our board of

directors may also provide for a cash out of the value of any outstanding options. In addition, upon the occurrence of a change in control event that does not also constitute a reorganization event under our 2006 stock incentive plan, each option will continue to vest according to its original vesting schedule, except that an option will become immediately exercisable in full if on or prior to the first anniversary of the change in control event an option holder's employment with us or our succeeding corporation is terminated by the option holder for good reason or is terminated by us or our succeeding corporation without cause.

No award may be granted under the 2006 stock incentive plan after December 31, 2009, but the vesting and effectiveness of awards granted before that date may extend beyond that date. Our board of directors may amend, suspend or terminate the 2006 stock incentive plan at any time, except that stockholder approval will be required for any revision that would materially increase the number of shares reserved for issuance, expand the types of awards available under the plan, materially modify plan eligibility requirements, extend the term of the plan or materially modify the method of determining the exercise price of options granted under the plan, or otherwise as required to comply with applicable law or stock market requirements.

401(k) retirement plan

We maintain a 401(k) retirement plan that is intended to be a tax-qualified defined contribution savings plan under Section 401(k) of the Internal Revenue Code. Substantially all of our employees are eligible to participate. The 401(k) plan includes a salary deferral arrangement pursuant to which participants may elect to reduce their current compensation by up to the statutorily prescribed limit, equal to $15,000 in 2006, and have the amount of the reduction contributed to the 401(k) plan. We are permitted to match employees' 401(k) plan contributions. For the year ended December 31, 2005, we have elected to match 50% of the first 6% of the eligible employees' contributions to the 401(k) plan.

Rule 10b5-1 trading plans

We expect that many of our executive officers and directors will adopt written plans, known as Rule 10b5-1 trading plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 trading plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The officer or director may amend or terminate the plan in some circumstances. Our executive officers and directors may also buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information. Under the terms of the lock-up agreements that our executive officers and directors have signed with the underwriters for this offering, our executive officers and directors can enter into Rule 10b5-1 trading plans during the 180-day lock-up period, provided that such plan does not provide for any transfers of common stock during the lock-up period or any extension thereof pursuant to the lock-up agreement.

Certain relationships and related party transactions

Since January 1, 2003, we have engaged in the following transactions with our executive officers, directors and holders of more than 5% of our voting securities, and affiliates of our executive officers, directors and holders of more than 5% of our voting securities. We believe that all of these transactions were on terms as favorable as could have been obtained from unrelated third parties.

Corporate reorganization

On June 30, 2004, we completed a corporate reorganization in which:

- Emergent BioSolutions Inc., a newly formed Delaware corporation, issued 6,487,950 shares of class A common stock to stockholders of BioPort Corporation in exchange for 6,262,554 shares of BioPort class A common stock and 225,396 shares of BioPort class B common stock;
- we repurchased and retired all other issued and outstanding shares of BioPort class B common stock; and
- we assumed all outstanding stock options to purchase BioPort class B common stock and granted option holders replacement stock options to purchase an equal number of shares of our class B common stock under our employee stock option plan.

As a result of this reorganization, BioPort became a wholly owned subsidiary of Emergent.

Issuance of class A common stock

The following table sets forth the number of shares of our class A common stock that we issued to the former stockholders of BioPort in our corporate reorganization.

Name	Number of shares of class A common stock
Intervac, L.L.C.	2,890,000
BioPharm, L.L.C.	1,412,896
Michigan Biologics Products, Inc.	672,500
BioVac, L.L.C.	555,822
Biologika, LLC	477,941
Intervac Management, L.L.C.	250,000
ARPI, L.L.C.	228,791

Intervac, BioPharm, Michigan Biologics Products, Biovac, Biologika, Intervac Management and ARPI are parties to a voting agreement dated June 30, 2004. We refer to these stockholders collectively as the voting group. Under the voting agreement, each stockholder in the voting group has agreed to vote all shares of our capital stock owned by it for and against and abstain from voting with respect to any matter as directed by a majority in interest of the voting group as measured by the aggregate percentage of ownership of our capital stock. Fuad El-Hibri, our president, chief executive officer and chairman of our board of directors, has the power to direct the voting of a majority in interest of the voting group. As a result, Mr. El-Hibri is considered the beneficial owner of all of the shares held by Intervac, BioPharm, Michigan Biologics Products, BioVac, Biologika, Intervac Management and ARPI. See “Principal and selling stockholders” for additional information regarding the beneficial ownership of our common stock.

Grant of options to purchase class B common stock

The following table sets forth the number of shares of our class B common stock underlying options that we granted under our employee stock option plan to our executive officers and directors contemporaneously with our corporate reorganization.

Name	Number of shares of class B common stock underlying options granted
Robert G. Kramer, Sr.	162,500
Daniel J. Abdun-Nabi	37,000
Kyle W. Keese	15,000

Special cash dividend

On June 15, 2005, our board of directors declared a special cash dividend to the holders of our outstanding shares of common stock in an aggregate amount of approximately $5.4 million. Our board of directors declared this special dividend in order to distribute the net proceeds of a payment that we received as a result of the settlement of litigation that we initiated against Elan Pharmaceuticals, Inc., Athena Neurosciences, Inc. and Solstice Neurosciences, Inc. BioPort filed the lawsuit in 2002 in an effort to clarify intellectual property rights and recover royalties that BioPort asserted were owed under a series of agreements regarding the development of botulinum toxin products. We paid the special cash dividend on July 13, 2005 to stockholders of record as of June 15, 2005. The following table sets forth the amount of the special cash dividend that we paid to our 5% stockholders and their affiliates.

Name		Amount of special cash dividend
Intervac, L.L.C.	$	2,402,864
BioPharm, L.L.C.		1,174,739
Michigan Biologics Products, Inc.		559,144
BioVac, L.L.C.		462,133
Biologika, LLC		397,380
Intervac Management, L.L.C.		207,860
ARPI, L.L.C.		190,226

See “Principal and selling stockholders” for additional information regarding the beneficial ownership of our common stock.

Microscience acquisition

On June 23, 2005, we acquired all of the outstanding shares of capital stock of Microscience Limited from Microscience Investments Limited, formerly Microscience Holdings plc, in exchange for 1,264,051 shares of our class A common stock. We subsequently renamed Microscience Limited as Emergent Product Development UK Limited.

Registration rights

Upon the completion of this offering, holders of 7,752,001 shares of our common stock as of August 31, 2006 will have the right to require us to register these shares of common stock under the Securities Act of 1933, as amended, or the Securities Act, under specified circumstances. In connection with our acquisition of Microscience Limited, we granted to Microscience Investments registration rights with respect to the shares of our common stock that we issued to Microscience Investments in the acquisition. We also have granted registration rights with respect to shares of our common stock to the holders of our existing class A common stock, in addition to Microscience Investments. The following table sets forth the number of shares of our common stock subject to these registration rights that are held by our 5% stockholders and their affiliates.

Name	Number of shares of common stock
Intervac, L.L.C.	2,890,000
BioPharm, L.L.C.	1,412,896
Microscience Investments Limited	1,264,051
Michigan Biologics Products, Inc.	672,500
BioVac, L.L.C.	555,822
Biologika, LLC	477,941
Intervac Management, L.L.C.	250,000
ARPI, L.L.C.	228,791

See “Description of capital stock — Registration rights” for additional information regarding these registration rights. See “Principal and selling stockholders” for additional information regarding the beneficial ownership of our common stock.

Consulting agreements

In January 2005, we entered into an agreement with Fleishman-Hillard Inc. under which Fleishman-Hillard provided us government relations, strategic consulting and communication services. Jerome Hauer, a member of our board of directors, was a senior vice president of Fleishman-Hillard until March 2006. Under the agreement, we have agreed to pay Fleishman-Hillard $20,000 per month for its services. The monthly fee increased to $30,000 per month in March 2005. We paid Fleishman-Hillard $342,663 in 2005 and $87,059 in the three months ended March 31, 2006 for these services. The agreement terminated on March 31, 2006.

In March 2006, we entered into an agreement with The Hauer Group under which The Hauer Group provides us strategic consulting and domestic marketing advice. Jerome Hauer is the chief executive officer of The Hauer Group. Mr. Hauer and his wife are the sole owners of The Hauer Group. Under the terms of the agreement, we agreed to pay The Hauer Group $15,000 per month for its services. The agreement expires on March 31, 2007.

In November 2004, we entered into a consulting services agreement with Yasmine Gibellini to provide public relations services. Ms. Gibellini is the sister of Fuad El-Hibri, our president, chief executive officer and chairman of our board of directors. Under the agreement, we agreed to pay Ms. Gibellini $220 per hour for a maximum of 20 hours per week, as needed, for her services, the total of which was not to exceed $60,000, and reimburse her reasonable out-of-pocket expenses. The agreement expired in June

2005. In March 2005, we entered into a separate consulting agreement with Ms. Gibellini to provide sales and marketing services. We agreed to pay Ms. Gibellini $700 per day for a time commitment of approximately two to three days per week, as needed, for her services, the total of which was not to exceed $60,000, and reimburse her reasonable out-of-pocket expenses. In addition, we agreed to pay Ms. Gibellini a sales commission equal to 4% of BioThrax net sales, not to exceed $2.00 per dose, from contracts to any customer in which Ms. Gibellini had direct involvement. The agreement terminated on August 31, 2005. We paid Ms. Gibellini $39,353 in 2005 and $25,200 in 2006 under these agreements.

From September 2004 through November 2004, we retained Louis W. Sullivan, M.D., a member of our board of directors, to provide consulting services for a fixed fee of $25,000 per month.

Agreements with Intergen N.V.

In November 1997, BioPort entered into a marketing agreement, which was amended and restated in January 2000, with Intergen N.V. Yasmine Gibellini, the chairperson of Intergen N.V., is the sister of Fuad El-Hibri, our president, chief executive officer and chairman of our board of directors. Ibrahim El-Hibri, the president of Intergen, is the father of Fuad El-Hibri. Ibrahim El-Hibri and his wife are the sole stockholders of Intergen. Under the agreement, Intergen is the sole and exclusive marketing representative for BioThrax and any other biodefense vaccine that BioPort becomes licensed to manufacture or sell in countries in the Middle East and North Africa, except Israel and those countries to which export is prohibited by the U.S. government. Under the agreement, we agreed to pay Intergen a fee equal to 40% of the gross sales in these countries. We have not paid Intergen any fee under the agreement. The term of the agreement is scheduled to expire in November 2007. The agreement will automatically extend for an additional five years if BioPort achieves $5.0 million of sales in the territory during the initial three-year term of the agreement.

In January 2000, BioPort entered into a termination and settlement agreement with Intergen. Under the agreement, BioPort is obligated to pay Intergen a $70,000 settlement payment when it receives more than $3.0 million pursuant to a contract for sale of anthrax vaccine to a party other than the U.S. government. The settlement payment is in consideration for Intergen's agreement to terminate a consulting agreement entered into between the parties in November 1997 and reduce the scope of its rights under the marketing agreement described above. This settlement payment has not yet become due and has not been paid.

Agreements with East West Resources Corporation

In January 2004, BioPort entered into a consulting agreement with East West Resources Corporation under which East West Resources provided financial analysis, business modeling and corporate and business development consulting services. Fuad El-Hibri is the chairman of East West Resources and was president of East West Resources from September 1990 to January 2004. Fuad El-Hibri and his wife are the sole stockholders of East West Resources. The agreement terminated in September 2005. We paid East West Resources $180,000 in 2004 and $135,000 in 2005 under the agreement.

In January 2004, BioPort entered into an amended and restated sublease and office services agreement with East West Resources under which East West Resources leased us office space in Rockville, Maryland and provided us administrative, transportation and logistics support. Under the agreement, we agreed to pay East West Resources monthly rent of $10,707. The monthly rent increased by 3% each year. In September 2004, we terminated in part the agreement with respect to the lease of office space for a settlement fee of $69,687, an amount equal to eight months' rent, including the 3% escalation fee, but excluding the portion of monthly rent applicable to transportation and logistics support. We paid East

West Resources $120,000 in 2003, $173,647 in 2004, $33,750 in 2005 and $16,040 in the six months ended June 30, 2006 under the agreement. The agreement expired on July 31, 2006.

In August 2006, we entered into a services agreement with East West Resources under which East West Resources agreed to provide us transportation and logistics support. Under the agreement, we agreed to pay East West Resources a fee of $2,450 per month and reimburse fees and expenses associated with these services. The term of the agreement ends on July 31, 2007. The agreement will automatically extend for additional successive terms of one year unless terminated by either party with at least 60 days' notice. Under the agreement, the monthly fee increases by 3% each year upon extension of the term.

Airplane charter from Simba LLC

From time to time from March 2004 until April 2006, we chartered a private airplane for business purposes from Simba LLC. Fuad El-Hibri and his wife own 100% of the interests in Simba. Mr. El-Hibri also is the managing member of Simba. Simba sold the airplane in May 2006. The plane was managed and chartered by Frederick Aviation and was available for charter by the general public. We paid Simba $32,148 in 2004, $33,999 in 2005 and $13,283 in the six months ended June 30, 2006 for charter fees and reimbursement of costs. Frederick Aviation provided us with a discount of $300 per hour from its commercial charter rate. In all other respects, the fees and expenses that we paid to Simba were equivalent to fees charged to third parties for charter flights.

Employee relationships

Mauro Gibellini, a brother-in-law of Fuad El-Hibri, is our vice president corporate planning and business development. In addition, Mauro Gibellini and his wife, Yasmine Gibellini, as tenants by the entirety, hold 100% of the ownership interests in Biologika LLC, one of our 5% stockholders, and have the power to dispose of all shares of our capital stock held by Biologika. We paid total cash compensation to Mr. Gibellini of $228,994 in 2003 and $320,765 in 2004. We paid total cash compensation to Mr. Gibellini of $278,969 for 2005, including an annual bonus for 2005 paid in 2006. Mr. Gibellini's current annual base salary is $195,624. He is also eligible for an annual bonus for 2006. Mr. Gibellini is a participant in our severance plan and termination protection program. As of August 31, 2006, we have granted Mr. Gibellini options to purchase 25,000 shares of our class B common stock at a weighted average exercise price of $4.83 per share.

Mark Grunenwald, a brother-in-law of Fuad El-Hibri, is our manager of information systems. We paid total cash compensation to Mr. Grunenwald of $1,115 in 2003 and $63,282 in 2004. We paid total cash compensation to Mr. Grunenwald of $69,337 for 2005, including an annual bonus for 2005 paid in 2006. Mr. Grunenwald's current annual base salary is $74,000. He is also eligible for an annual bonus for 2006.

Robert Myers, who serves as senior policy and science advisor and director of BioPort Corporation, is also the President of Michigan Biologics Products, Inc., one of our 5% stockholders, and has the power to direct the disposition of all shares of our capital stock held by Michigan Biologics Products. We paid total cash compensation to Dr. Myers of $492,351 in 2003, $258,369 in 2004 and $204,655 in 2005. In June 2005, BioPort entered into an employment agreement with Dr. Myers in his role as senior policy and science advisor to BioPort. Under this employment agreement, Dr. Myers is entitled to an annual base salary of $180,000 and an annual bonus of $15,000. The employment agreement terminates upon the completion of this offering. Upon the completion of this offering, Dr. Myers is entitled to the following termination benefits:

- payment of any previously unpaid base salary and accrued paid time off and other benefits through the date of termination;

- payment of any unpaid, pro-rated bonus through the date of termination; and
- a lump sum payment in the amount of $100,000, less applicable withholding and related taxes.

As of August 31, 2006, we have granted Dr. Myers options to purchase 159,604 shares of our common stock at an exercise price of $0.25 per share.

Executive compensation

See “Management — Executive compensation” and “Management — Stock option grants” for additional information regarding compensation of our executive officers.

Director compensation

See “Management — Director compensation” for a discussion of options granted and other compensation to our non-employee directors.

Severance plan and termination protection program

Our executive officers participate in our severance plan and termination protection program. See “Management — Severance plan and termination protection program” for additional information regarding these arrangements.

Indemnification agreements

We have entered into an indemnification agreement with each of our executive officers and directors. See “Management — Limitation of liability and indemnification” for additional information regarding these agreements.

Principal and selling stockholders

The following table sets forth information with respect to the beneficial ownership of our common stock as of August 31, 2006 by:

- each of our named executive officers;
- each of our directors;
- all of our executive officers and directors as a group; and
- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock.

The information in the following table assumes that our previously existing class A common stock has been reclassified as common stock and all previously outstanding shares of class B common stock have been converted into shares of common stock prior to the completion of this offering. The column entitled “Percentage of shares beneficially owned before offering” is based on 7,782,016 shares of our common stock outstanding as of August 31, 2006. The column entitled “Percentage of shares beneficially owned after offering” is based on shares of our common stock to be outstanding immediately after the completion of this offering, including the shares of common stock that we are selling in this offering. The holders of our existing class A common stock have granted an option to the underwriters to purchase up to an aggregate of additional shares of our common stock to cover over-allotments. For more information regarding the shares subject to the over-allotment option, see “— Selling stockholders” below. No other stockholder is participating in the offering.

Beneficial ownership is determined in accordance with the rules and regulations of the Securities and Exchange Commission and includes voting or investment power with respect to our common stock. In computing the number of shares of common stock beneficially owned and percentage ownership, shares subject to options held by a person are deemed to be outstanding and beneficially owned by that person if the options are currently exercisable or exercisable within 60 days of August 31, 2006. Shares subject to options are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person. Except as otherwise noted, the persons and entities in this table have sole voting and investing power with respect to all of the shares of common stock beneficially owned by them, subject to community property laws, where applicable. Except as otherwise set forth below, the address of the beneficial owner is c/o Emergent BioSolutions Inc., 300 Professional Drive, Suite 250, Gaithersburg, Maryland 20879.

Name of beneficial owner	Number of shares beneficially owned	Percentage of shares beneficially owned	
		Before offering	After offering
Executive officers and directors			
Fuad El-Hibri(1)	7,782,001	99.6%	
Edward J. Arcuri, Ph.D.(2)	13,334	*	
Robert G. Kramer, Sr.(3)	178,500	2.2	
Steven N. Chatfield, Ph.D.(4)	6,667	*	
Daniel J. Abdun-Nabi(5)	25,900	*	
Joe M. Allbaugh	—	—	
Zsolt Harsanyi, Ph.D.(6)	10,000	*	
Jerome M. Hauer(7)	5,000	*	
Shahzad Malik, M.D.	—	—	
Ronald B. Richard(8)	5,000	*	
Louis W. Sullivan, M.D.	—	—	
All executive officers and directors as a group (14 persons)(9)	8,038,902	99.6	
5% stockholders			
Stockholder voting group under voting agreement dated June 30, 2004(10)	7,752,001	99.6	
Microscience Investments Limited(11)	1,264,051	16.2	
Robert Myers, D.V.M.(12)	832,104	10.5	
Mauro and Yasmine Gibellini(13)	502,941	6.4	

* Less than 1%.

(1) Consists of the following shares of our common stock:

- 2,890,000 shares held by Intervac, L.L.C.;
- 1,412,896 shares held by BioPharm, L.L.C.;
- 672,500 shares held by Michigan Biologics Products, Inc.;
- 555,822 shares held by Biovac, L.L.C.;
- 477,941 shares held by Biologika LLC;
- 250,000 shares held by Intervac Management, L.L.C.;
- 228,791 shares held by ARPI, L.L.C.;
- 1,264,051 shares held by Microscience Investments Limited; and
- 30,000 shares subject to stock options held by Mr. El-Hibri exercisable within 60 days of August 31, 2006.

If the underwriters exercise their over-allotment option in full, Mr. El-Hibri will beneficially own shares of our common stock after this offering, or % of our outstanding common stock, consisting of the following shares of our common stock:

- shares held by Intervac, L.L.C.;

- shares held by BioPharm, L.L.C.;
- shares held by Michigan Biologics Products, Inc.;
- shares held by Biovac, L.L.C.;
- shares held by Biologika LLC;
- shares held by Intervac Management, L.L.C.;
- shares held by ARPI, L.L.C.;
- shares held by Microscience Investments Limited; and

• 30,000 shares subject to stock options held by Mr. El-Hibri exercisable within 60 days of August 31, 2006.

Robert Myers has the power to direct the disposition of all shares of our capital stock held by Michigan Biologics Products.

Mauro and Yasmine Gibellini, as tenants by the entirety, have the power to dispose of all shares of our capital stock held by Biologika.

Janice Mugrditchian has the power to dispose of all shares of our capital stock held by ARPI.

The holders of series B preferred ordinary shares of Microscience Investments have the power to dispose of all shares of our capital stock held by Microscience Investments and share the power to vote these shares with BioPharm, L.L.C.

For more information regarding the beneficial ownership of these shares, see "— Stockholder arrangements" below.

(2) Consists of 13,334 shares of common stock subject to stock options exercisable within 60 days of August 31, 2006.

(3) Consists of 178,500 shares of common stock subject to stock options exercisable within 60 days of August 31, 2006.

(4) Consists of 6,667 shares of common stock subject to stock options exercisable within 60 days of August 31, 2006.

(5) Consists of 25,900 shares of common stock subject to stock options exercisable within 60 days of August 31, 2006.

(6) Consists of 10,000 shares of common stock subject to stock options exercisable within 60 days of August 31, 2006.

(7) Consists of 5,000 shares of common stock subject to stock options exercisable within 60 days of August 31, 2006.

(8) Consists of 5,000 shares of common stock subject to stock options exercisable within 60 days of August 31, 2006.

(9) Consists of 286,901 shares of common stock subject to stock options exercisable within 60 days of August 31, 2006.

(10) Consists of the following shares of our common stock:

• 2,890,000 shares held by Intervac, L.L.C.;

• 1,412,896 shares held by BioPharm, L.L.C.;

• 672,500 shares held by Michigan Biologics Products, Inc.;

• 555,822 shares held by Biovac, L.L.C.;

• 477,941 shares held by Biologika LLC;

• 250,000 shares held by Intervac Management, L.L.C.;

• 228,791 shares held by ARPI, L.L.C.; and

• 1,264,051 shares held by Microscience Investments Limited.

If the underwriters exercise their over-allotment option in full, these stockholders will beneficially own shares of our common stock after this offering, or % of our outstanding common stock, consisting of the following shares of our common stock:

- shares held by Intervac, L.L.C.;
- shares held by BioPharm, L.L.C.;
- shares held by Michigan Biologics Products, Inc.;
- shares held by Biovac, L.L.C.;
- shares held by Biologika LLC;
- shares held by Intervac Management, L.L.C.;
- shares held by ARPI, L.L.C.; and
- shares held by Microscience Investments Limited.

Intervac, BioPharm, Michigan Biologics Products, Biovac, Biologika, Intervac Management and ARPI are parties to a voting agreement dated June 30, 2004. BioPharm also is a party to separate voting agreements with Michigan Biologics Products, Biologika and Microscience Investments.

Robert Myers has the power to direct the disposition of all shares of our capital stock held by Michigan Biologics Products.

Mauro and Yasmine Gibellini, as tenants by the entirety, have the power to dispose of all shares of our capital stock held by Biologika.

Janice Mugrditchian has the power to dispose of all shares of our capital stock held by ARPI.

The holders of series B preferred ordinary shares of Microscience Investments have the power to dispose of all shares of our capital stock held by Microscience Investments.

For more information regarding the beneficial ownership of these shares, see “— Stockholder arrangements” below.

(11) The holders of series B preferred ordinary shares of Microscience Investments have the power to dispose of all shares of our capital stock held by Microscience Investments and share the power to vote these shares with BioPharm, L.L.C. Investment funds affiliated with Apax Funds Nominees Limited, Advent Private Equity Funds, JP Morgan Partners LLC and The Merlin Biosciences Funds are the holders of the Microscience Investments series B preferred ordinary shares. No holder or group of affiliated holders of series B preferred ordinary shares of Microscience Investments alone has the power to direct the disposition of the shares of our capital stock held by Microscience Investments. Microscience Investments is a party to a voting agreement with BioPharm. For more information regarding this voting agreement, see “— Stockholder arrangements” below.

(12) Consists of the following shares of our common stock:

• 672,500 shares held by Michigan Biologics Products, Inc.; and

• 159,604 shares subject to stock options held by Dr. Myers exercisable within 60 days of August 31, 2006.

If the underwriters exercise their over-allotment option in full, Dr. Myers will beneficially own shares of our common stock after this offering, or % of our outstanding common stock, consisting of the following shares of our common stock:

- shares held by Michigan Biologics Products, Inc.; and
- 159,604 shares subject to stock options held by Dr. Myers exercisable within 60 days of August 31, 2006.

Dr. Myers has the power to direct the disposition of all shares of our capital stock held by Michigan Biologics Products. Mr. El-Hibri has the power to direct the voting of all shares of our capital stock held by Michigan Biologics Products. For more information regarding the beneficial ownership of these shares, see "— Stockholder arrangements" below.

(13) Consists of the following shares of our common stock:

- 477,941 shares held by Biologika LLC; and
- 25,000 shares subject to stock options held by Mr. Gibellini exercisable within 60 days of August 31, 2006.

If the underwriters exercise their over-allotment option in full, Mr. and Mrs. Gibellini will beneficially own shares of our common stock after this offering, or % of our outstanding common stock, consisting of the following shares of our common stock:

- shares held by Biologika LLC; and
- 25,000 shares subject to stock options held by Mr. Gibellini exercisable within 60 days of August 31, 2006.

Mr. and Mrs. Gibellini, as tenants by the entirety, have the power to dispose of all shares of our capital stock held by Biologika. Mr. El-Hibri has the power to direct the voting of all shares of our capital stock held by Biologika. For more information regarding the beneficial ownership of these shares, see "— Stockholder arrangements" below.

Selling stockholders

The holders of our existing class A common stock have granted an option to the underwriters to purchase up to an aggregate of additional shares of our common stock to cover over-allotments. The following table sets forth for each selling stockholder the number of shares of our common stock subject to the over-allotment option.

Name	Number of shares of common stock

Stockholder arrangements

Our principal stockholders are parties to voting agreements that result in Mr. El-Hibri having the power to direct the voting of all shares of our capital stock owned by the stockholders who are party to these voting agreements. A description of these voting agreements and additional information regarding the beneficial ownership of the shares held by our principal stockholders are set forth below.

Voting agreement dated June 30, 2004

Intervac, BioPharm, Michigan Biologics Products, Biovac, Biologika, Intervac Management and ARPI are parties to a voting agreement dated June 30, 2004. We refer to these stockholders collectively as the voting group. Under the voting agreement, each stockholder in the voting group has agreed to vote all shares of our capital stock owned by it for and against and abstain from voting with respect to any matter as directed by a majority in interest of the voting group as measured by the aggregate percentage of ownership of our capital stock. As described below, Mr. El-Hibri has the power to direct the voting of a majority in interest of the voting group. In addition, under the voting agreement, each stockholder in the voting group has appointed Mr. El-Hibri, in his capacity as the general manager of Intervac, as proxy to vote the shares of our capital stock in the manner provided in the voting agreement. The voting agreement automatically terminates on June 30, 2014. Under the voting agreement, any person to whom any stockholder in the voting group transfers any shares of our capital stock must agree to be bound by the terms of the voting agreement, other than as a result of a transfer pursuant to an effective registration statement filed with the Securities and Exchange Commission under the Securities Act or pursuant to Rule 144 under the Securities Act.

Intervac, L.L.C.

Mr. El-Hibri is the general manager of Intervac and in that capacity has the power to vote and dispose of all shares of our capital stock held by Intervac. The board of executive directors of Intervac, consisting of William J. Crowe, Jr., Mr. El-Hibri and Nancy El-Hibri, supervises the management of the company and has the power to remove the general manager. Nancy El-Hibri is the wife of Mr. El-Hibri. A majority of the executive directors of Intervac is required to decide any matter on which the board of executive directors may take action, including the removal of the general manager. Any member of the board of executive directors may be removed by members of Intervac holding more than 50% of the aggregate ownership interests in Intervac. Mr. El-Hibri and his wife, as tenants by the entirety, hold 32.5% of the ownership interests in Intervac. Under a voting agreement with the William J. Crowe, Jr. Revocable Living Trust, Mr. El-Hibri has the power to vote an additional 18.0% of the ownership interests in Intervac on any matter. As a result, Mr. El-Hibri has the power to direct the voting of more than 50% of the aggregate ownership interests in Intervac. The voting agreement between Mr. El-Hibri and the William J. Crowe, Jr. Revocable Living Trust automatically terminates on October 21, 2010.

BioPharm, L.L.C.

Mr. El-Hibri is the holder of more than 50% of the class B ownership units of BioPharm and in that capacity has the power to direct the voting and disposition of all shares of our capital stock held by BioPharm.

Michigan Biologics Products, Inc.

Michigan Biologics Products has agreed, pursuant to a separate voting agreement with BioPharm, to vote all shares of our capital stock owned by it for and against and abstain from voting with respect to any

matter in the same manner and to the same extent as BioPharm. As a result, Mr. El-Hibri has the power to direct the voting of all shares of our capital stock held by Michigan Biologics Products. The voting agreement automatically terminates on June 30, 2014. Under the voting agreement, any person to whom Michigan Biologics Products transfers any shares of our capital stock must agree to be bound by the terms of the voting agreement, other than as a result of a transfer in a brokers' transaction or directly with a market maker, subject to BioPharm's right to purchase at fair market value the shares that Michigan Biologics Products proposes to sell. Robert Myers, the president of Michigan Biologics Products, who also serves as senior science and policy advisor and director of BioPort Corporation, has the power to direct the disposition of all shares of our capital stock held by Michigan Biologics Products.

Biovac, L.L.C.

Mr. El-Hibri and his wife, as tenants by the entirety, hold 89.2% of the ownership interests in Biovac and have the power to vote and dispose of all shares of our capital stock held by Biovac.

Biologika LLC

Biologika has agreed, pursuant to a separate voting agreement with BioPharm, to vote all shares of our capital stock owned by it for and against and abstain from voting with respect to any matter in the same manner and to the same extent as BioPharm. As a result, Mr. El-Hibri has the power to direct the voting of all shares of our capital stock held by Biologika. The voting agreement automatically terminates on June 30, 2014. Under the voting agreement, any person to whom Biologika transfers any shares of our capital stock must agree to be bound by the terms of the voting agreement, other than as a result of a transfer in a brokers' transaction or directly with a market maker, subject to BioPharm's right to purchase at fair market value the shares that Biologika proposes to sell. Mauro Gibellini and Yasmine Gibellini, as tenants by the entirety, hold 100% of the ownership interests in Biologika and have the power to dispose of all shares of our capital stock held by Biologika. Yasmine Gibellini is the sister of Mr. El-Hibri. Mauro Gibellini is the brother-in-law of Mr. El-Hibri.

Intervac Management, L.L.C.

Mr. El-Hibri is the general manager of Intervac Management and in that capacity has the power to vote and dispose of all shares of our capital stock held by Intervac Management. Mr. El-Hibri is appointed as general manager pursuant to the terms of the operating agreement of Intervac Management, which may only be amended with the unanimous consent of the members of Intervac Management. Mr. El-Hibri and his wife, as tenants by the entirety, hold 31.1% of the ownership interests in Intervac Management.

ARPI, L.L.C.

Janice Mugrditchian holds 100% of the ownership interests in ARPI and has the power to vote and dispose of all shares of our capital stock held by ARPI.

Microscience Investments Limited

Microscience Investments has agreed, pursuant to a separate voting agreement with BioPharm, to vote all shares of our common stock owned by it for and against and abstain from voting with respect to any proposal in the same manner and to the same extent as BioPharm. The voting agreement automatically terminates upon the conclusion of our first annual meeting of stockholders following the completion of this offering.

Description of capital stock

The following description of our capital stock and provisions of our restated certificate of incorporation, which we refer to as our certificate of incorporation, and our amended and restated by-laws, which we refer to as our by-laws, are summaries and are qualified by reference to the certificate of incorporation and the by-laws that will be in effect upon completion of this offering. We have filed copies of these documents with the Securities and Exchange Commission as exhibits to our registration statement of which this prospectus forms a part. The descriptions of the common stock and preferred stock reflect changes to our capital structure that will occur prior to and upon completion of this offering.

Upon the completion of this offering, our authorized capital stock will consist of 100,000,000 shares of common stock, $0.001 par value per share, and 15,000,000 shares of preferred stock, $0.001 par value per share.

As of August 31, 2006, we had issued and outstanding 7,752,001 shares of class A common stock and 30,015 shares of class B common stock, held by 32 stockholders of record. As of August 31, 2006, we also had outstanding options to purchase 1,061,679 shares of class B common stock at a weighted average exercise price of $6.38 per share.

Prior to the completion of this offering:

- our class A common stock will be reclassified as common stock and each outstanding share of our class B common stock will be converted into one share of common stock; and
- each outstanding option to purchase shares of our class B common stock will automatically become an option to purchase an equal number of shares of common stock at the same exercise price per share.

Common stock

The holders of our common stock are entitled to one vote per share with respect to each matter presented to our stockholders on which the holders of common stock are entitled to vote and do not have cumulative voting rights. An election of directors by our stockholders shall be determined by a plurality of the votes cast by the stockholders entitled to vote on the election. Holders of common stock are entitled to receive proportionately any dividends as may be declared by our board of directors, subject to any preferential dividend rights of outstanding preferred stock.

In the event of our liquidation or dissolution, the holders of common stock are entitled to receive ratably all assets available for distribution to stockholders after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. The rights, preferences and privileges of holders of common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred stock

Under the terms of our certificate of incorporation, our board of directors is authorized to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

Authorizing our board of directors to issue preferred stock and determine its rights and preferences has the effect of eliminating delays associated with a stockholder vote on specific issuances. The issuance of preferred stock or of rights to purchase preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock. Currently, we have no shares of preferred stock outstanding. Our board of directors has authorized 100,000 shares of series A junior participating preferred stock for issuance under our stockholder rights plan. See "— Stockholder rights plan" below. We have no current plans to issue any preferred stock other than as may be provided for by the stockholder rights plan.

Options

Upon the completion of this offering, based on options outstanding as of August 31, 2006, we will have outstanding options to purchase an aggregate of 1,061,679 shares of our common stock at a weighted average exercise price of $6.38 per share.

Anti-takeover effects of Delaware law and our certificate of incorporation and by-laws

Our certificate of incorporation and by-laws and Delaware law contain provisions that could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors.

Immediately prior to this offering, Fuad El-Hibri, our president, chief executive officer and chairman of our board of directors, was the beneficial owner of 99.6% of our outstanding common stock. Immediately following this offering, Mr. El-Hibri will be the beneficial owner of % of our outstanding common stock, or % of our outstanding common stock if the underwriters exercise their over-allotment option in full. As a result, Mr. El-Hibri will be able to control the election of the members of our board of directors following this offering. In addition, some of the provisions summarized below may further enhance Mr. El-Hibri's control of our corporate affairs for at least the next several years, including control of our board of directors. This control could discourage others from initiating a potential merger, takeover or other change of control transaction that other stockholders may view as beneficial.

Number of directors

Subject to the rights of holders of any series of preferred stock to elect directors, our board of directors will establish the number of directors. Until the fifth anniversary of the completion of this offering, any change in the number of directors will require the affirmative vote of at least 75% of the directors then in office.

Staggered board; removal of directors

Our certificate of incorporation and our by-laws divide our directors into three classes with staggered three-year terms. Our directors may be removed from office only for cause and only by the affirmative vote of holders of our capital stock representing at least 75% of the voting power of all outstanding stock entitled to vote.

Any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by the affirmative vote of a majority of our directors present at a meeting duly held at which a quorum is present.

The classification of our board of directors and the limitations on the removal of directors and filling of vacancies could make it more difficult for a third party to acquire, or discourage a third party from seeking to acquire, control of our company.

Appointment and removal of chairman of the board

Until the fifth anniversary of the completion of this offering, the appointment and removal of the chairman of our board of directors will require the affirmative vote of at least 75% of our directors then in office. Mr. El-Hibri currently serves as the chairman of our board of directors.

Stockholder action by written consent; special meetings

Our certificate of incorporation and our by-laws provide that any action required or permitted to be taken by our stockholders must be effected at a duly called annual or special meeting of such holders and may not be effected by any consent in writing by such holders. Our certificate of incorporation and our by-laws also provide that, except as otherwise required by law, special meetings of our stockholders can only be called by our board of directors, our chairman of the board or our president.

Advance notice requirements

Following the second anniversary of the completion of this offering, our by-laws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of stockholders, including proposed nominations of persons for election to the board of directors. Following the second anniversary of the completion of this offering, stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the board of directors or by a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely written notice in proper form to our secretary of the stockholder's intention to bring such business before the meeting. These provisions could have the effect of delaying until the next stockholder meeting stockholder actions that are favored by the holders of a majority of our outstanding voting securities.

Delaware business combination statute

We are subject to Section 203 of the General Corporation Law of Delaware. Subject to certain exceptions, Section 203 prevents a publicly held Delaware corporation from engaging in a "business combination" with any "interested stockholder" for three years following the date that the person became an interested stockholder, unless the interested stockholder attained such status with the approval of our board of directors or unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger or consolidation involving us and the "interested stockholder" and the sale of more than 10% of our assets. In general, an "interested stockholder" is any entity or person beneficially owning 15% or more of our outstanding voting stock and any entity or person affiliated with or controlling or controlled by such entity or person. The restrictions contained in Section 203 are not applicable to any of our existing stockholders.

Super-majority voting

The General Corporation Law of Delaware provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or by-laws, unless a corporation's certificate of incorporation or by-laws, as the case may be, requires a greater percentage. Until the second anniversary of the completion of this offering, the affirmative vote of holders of our capital stock representing a majority of the voting power of all outstanding stock entitled to vote is required to amend or repeal the provisions of our certificate of incorporation described in this section entitled "Anti-takeover effects of Delaware law and our certificate of incorporation and by-laws." Following the second anniversary of the completion of this offering, the affirmative vote of holders of our capital stock representing at least 75% of the voting power of all outstanding stock entitled to vote is required to amend or repeal these provisions of our certificate of incorporation. Until the second anniversary of the completion of this offering, the affirmative vote of either at least 75% of the directors then in office or holders of our capital stock representing a majority of the voting power of all outstanding stock entitled to vote is required to amend or repeal our by-laws. Following the second anniversary of the completion of this offering, the affirmative vote of either a majority of the directors present at a meeting of our board of directors or holders of our capital stock representing at least 75% of the voting power of all outstanding stock entitled to vote is required to amend or repeal our by-laws.

Stockholder rights plan

In connection with this offering, we will enter into a rights agreement pursuant to which we will issue to our stockholders one preferred stock purchase right for each outstanding share of our common stock. Each right, when exercisable, will entitle the registered holder to purchase from us a unit consisting of one one-thousandth of a share of series A junior participating preferred stock at a purchase price to be determined by our board of directors at the same time the initial public offering price of our common stock is determined. We will enter into the rights agreement with American Stock Transfer & Trust Company, as rights agent.

The following description is a summary of the material terms of our stockholder rights plan. It does not restate these terms in their entirety. We urge you to read our stockholder rights plan because it, and not this description, defines its terms and provisions. We have filed a copy of the rights agreement that establishes our stockholder rights plan as an exhibit to our registration statement of which this prospectus forms a part.

Rights. Each share of common stock will have attached to it one right. Initially, the rights are not exercisable and are attached to all certificates representing outstanding shares of our common stock, and we will not distribute separate rights certificates. The rights will only be exercisable under limited circumstances specified in the rights agreement when there has been a distribution of the rights and the rights are no longer redeemable by us.

The rights will expire at the close of business on the tenth anniversary of the date the rights plan was adopted, unless we redeem or exchange them earlier as described below.

Prior to the rights distribution date. Prior to the rights distribution date:

- the rights are evidenced by our common stock certificates and will be transferred with and only with such common stock certificates; and
- the surrender for transfer of any certificates of our common stock will also constitute the transfer of the rights associated with our common stock represented by such certificate.

Rights distribution date. The rights will separate from our common stock, and a rights distribution date will occur, upon the earlier of the following events:

- 10 business days following the later of (1) a public announcement that a person or group, other than an exempted person, has acquired, or obtained the right to acquire beneficial ownership of 15% or more of the outstanding shares of our common stock or (2) the first date on which one of our executive officers has actual knowledge of such an event; and
- 10 business days following the start of a tender offer or exchange offer that would result in a person or group, other than an exempted person, beneficially owning 15% or more of the outstanding shares of our common stock.

The distribution date may be deferred by our board of directors and some inadvertent actions will not trigger the occurrence of the rights distribution date. In addition, a rights distribution date will not occur as a result of the ownership of our stock by the following exempted persons:

- Fuad El-Hibri and his wife, Nancy El-Hibri, and any entity controlled by Fuad El-Hibri or Nancy El-Hibri;
- Microscience Investments Limited, unless and until such time as Microscience Investments, together with its affiliates and associates, directly or indirectly, becomes the beneficial owner of any additional shares of common stock, except under certain specified circumstances, and disregarding any shares Microscience Investments is or becomes the beneficial owner of solely as a result of the fact that it is a party to any of the voting agreements described under “Principal and selling stockholders — Stockholder arrangements;” and
- each other holder of our common stock immediately prior to this offering to the extent such person’s beneficial ownership exceeds 15% solely as a result of the fact that the person is a party to any of the voting agreements described under “Principal and selling stockholders — Stockholder arrangements.”

As soon as practicable after the rights distribution date, separate rights certificates will be mailed to the holders of record of our common stock as of the close of business on the rights distribution date. From and after the rights distribution date, the separate rights certificates alone will represent the rights. All shares of our common stock issued prior to the rights distribution date, including shares of common stock issued in this offering, will be issued with rights. Shares of our common stock issued after the rights distribution date in connection with specified employee benefit plans or upon conversion of specified securities will be issued with rights. Except as otherwise determined by our board of directors, no other shares of our common stock issued after the rights distribution date will be issued with rights.

Flip-in event. If a person or group, other than an exempted person, becomes the beneficial owner of 15% or more of the outstanding shares of our common stock, except as described below, each holder of a right will thereafter have the right to receive, upon exercise, a number of shares of our common stock, or, in some circumstances, cash, property or other securities of ours, which equals the exercise price of the right divided by one-half of the current market price of our common stock on the date the acquisition occurs. However, following the acquisition:

- rights will not be exercisable until the rights are no longer redeemable by us as set forth below; and
- all rights that are, or were, under the circumstances specified in the rights agreement, beneficially owned by any acquiring person will be null and void.

The event set forth in this paragraph is referred to as a flip-in event. A flip-in event would not occur if there is an offer for all of our outstanding shares of common stock that at least 75% of our board of directors determines is fair to our stockholders and in their best interests.

Flip-over event. If at any time after a person or group, other than an exempted person, has become the beneficial owner of 15% or more of the outstanding shares of our common stock:

- we are acquired in a merger or other business combination transaction in which we are not the surviving corporation;
- we are the surviving entity in a merger of other business combination transaction but our common stock is changed or exchanged for stock or securities of any other person or for cash or any other property; or
- more than 50% of our assets or earning power is sold or transferred,

then each holder of a right, except rights which previously have been voided as set forth above, shall thereafter have the right to receive, upon exercise, that number of shares of common stock of the acquiring company which equals the exercise price of the right divided by one-half of the current market price of that company's common stock at the date of the occurrence of the event. The event described in this paragraph is referred to as a flip-over event. A flip-over event does not arise if the merger or other transaction follows an offer for all of our outstanding shares of common stock that at least 75% of our board of directors determines is fair to our stockholders and in their best interests.

Exchange of rights. At any time after a flip-in event, when no person owns a majority of our common stock, our board of directors may exchange the rights, other than rights owned by the acquiring person that have become void, in whole or in part, at an exchange ratio of one share of our common stock, or one one-thousandth of a share of series A preferred stock, or of a share of a class or series of preferred stock having equivalent rights, preferences and privileges, per right.

Adjustments. The purchase price of the rights, and the number of securities purchasable, are subject to adjustment from time to time to prevent dilution. The number of rights associated with each share of common stock is also subject to adjustment in the event of a stock splits, subdivisions, consolidations or combinations of our common stock that occur prior to the rights distribution date.

Series A junior participating preferred stock. Series A preferred stock purchasable upon exercise of the rights will not be redeemable. Each share of series A preferred stock will be entitled to receive when, as and if declared by our board of directors, a minimum preferential quarterly dividend payment of $10 per share or, if greater, an aggregate dividend of 1,000 times the dividend declared per share of our common stock. In the event of liquidation, the holders of the series A preferred stock will be entitled to a minimum preferential liquidation payment of $1,000 per share, plus accrued and unpaid dividends, and will be entitled to an aggregate payment of 1,000 times the payment made per share of our common stock. Each share of series A preferred stock will have 1,000 votes, voting together with our common stock. In the event of any merger, consolidation or other transaction in which our common stock is changed or exchanged, each share of series A preferred stock will be entitled to receive 1,000 times the amount received per share of our common stock. These rights are protected by customary antidilution provisions.

Because of the nature of the series A preferred stock's dividend, liquidation and voting rights, the value of one one thousandth of a share of series A preferred stock purchasable upon exercise of each right should approximate the value of one share of common stock.

Redemption of rights. At any time until ten business days following the date of a public announcement that a person or group, other than an exempted person, has acquired or obtained the right to acquire beneficial ownership of 15% or more of the outstanding shares of our common stock, or such later date upon which one of our executive officers first has actual knowledge of such event or such later date as

our board of directors may determine, we may redeem the rights in whole, but not in part, at a price of $0.001 per right, payable in cash or stock. Immediately upon the redemption of the rights or such earlier time as established by our board of directors, the rights will terminate and the only right of the holders of rights will be to receive the redemption price.

Status of rights holder and tax affects. Until a right is exercised, the holder of the right, as such, will have no rights as a stockholder of ours, including no right to vote or to receive dividends. Although the distribution of the rights should not be taxable to stockholders or to us, stockholders may, depending upon the circumstances, recognize taxable income in the event that the rights become exercisable for our common stock, or other consideration, or for common stock of the acquiring company as described above.

Board's authority to amend. Our board of directors may amend any provision of the rights agreement, other than the redemption price, prior to the date on which the rights are no longer redeemable. Once the rights are no longer redeemable, our board's authority to amend the rights agreement is limited to correcting ambiguities or defective or inconsistent provisions in a manner that does not adversely affect the interest of holders of rights.

Effects of the rights. The rights are intended to protect our stockholders in the event of an unfair or coercive offer to acquire our company and to provide our board of directors with adequate time to evaluate unsolicited offers. The rights may have anti-takeover effects. The rights will cause substantial dilution to a person or group that attempts to acquire us without conditioning the offer on a substantial number of rights being acquired. The rights, however, should not affect any prospective offeror willing to make an offer at a fair price and otherwise in the best interests of us and our stockholders, as determined by our board of directors. The rights should not interfere with any merger or other business combination approved by our board of directors.

Registration rights

Upon the completion of this offering, holders of 7,752,001 shares of our common stock as of August 31, 2006 will have the right to require us to register these shares of common stock under the Securities Act under specified circumstances, including any additional shares issued or distributed by way of a dividend, stock split or other distribution in respect of these shares.

In connection with our acquisition of Microscience, we granted to Microscience Investments registration rights with respect to the shares of our common stock that we issued to Microscience Investments in the acquisition. We also have granted registration rights with respect to shares of our common stock to the holders of our existing class A common stock, in addition to Microscience Investments.

Registration rights held by Microscience Investments may be transferred to the following parties if they become holders of the shares covered by the registration rights: APAX Funds Nominees Limited, The Merlin BioSciences Funds, The Merlin Fund L.P., Advent Private Equity Funds, JPMorgan Partners LLC, Merlin Equity Limited, or any subsidiary, affiliate, parent or general partner of any of these parties.

Demand registration rights

Subject to specified limitations and to the lock-up agreements with the underwriters for this offering, holders of these registrations rights may, beginning 90 days after this offering, require that we register all or part of our common stock subject to the registration rights for sale under the Securities Act. These holders may demand registration of our common stock so long as the offering price to the public of the shares requested to be registered is at least $25,000,000. We are required to effect only one demand

registration, subject to specified exceptions for each of Microscience and the holders of our existing class A common stock.

Incidental registration rights

If, after the completion of this offering, we propose to register any of our common stock under the Securities Act, subject to specified exceptions, either for our own account or for the account of other security holders, holders of registration rights are entitled to notice of the registration and to include shares of common stock subject to the registration rights in the registered offering.

Limitations and expenses

With specified exceptions, the right to include shares in a registration is subject to the right of underwriters for the offering to limit the number of shares included in the offering. We are required to pay one-half of all fees, costs and expenses of any demand registration, other than underwriting discounts and commissions.

Transfer agent and registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company.

NASDAQ Global Market

We have applied to have our common stock listed on The NASDAQ Global Market under the symbol “EBSI.”

Shares eligible for future sale

Prior to this offering, there has been no market for our common stock, and a liquid trading market for our common stock may not develop or be sustained after this offering. Future sales of substantial amounts of common stock, including shares issued upon exercise of outstanding options or in the public market after this offering, or the anticipation of those sales, could adversely affect market prices prevailing from time to time and could impair our ability to raise capital through sales of our equity securities. We have applied to have our common stock listed on The NASDAQ Global Market under the symbol “EBSI.”

Upon the completion of this offering, we will have outstanding shares of common stock, after giving effect to the issuance of shares of common stock in this offering and assuming no exercise of options outstanding as of August 31, 2006.

Of the shares to be outstanding after the completion of this offering, the shares of common stock sold in this offering will be freely tradable without restriction under the Securities Act unless purchased by our “affiliates,” as that term is defined in Rule 144 under the Securities Act. The remaining shares of our common stock are “restricted securities” under Rule 144. Substantially all of these restricted securities will be subject to the 180-day lock-up period described below.

After the 180-day lock-up period, these restricted securities may be sold in the public market only if registered or if they qualify for an exemption from registration under Rule 144 or 701 under the Securities Act.

Rule 144

In general and subject to the lock-up agreements described below, under Rule 144, beginning 90 days after the date of this prospectus, a person who has beneficially owned shares of our common stock for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell within any three-month period a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering; and
- the average weekly trading volume in our common stock on The NASDAQ Global Market during the four calendar weeks preceding the date of filing of a Notice of Proposed Sale of Securities Pursuant to Rule 144 with respect to the sale.

Sales under Rule 144 are also subject to manner of sale provisions and notice requirements and to the availability of current public information about us. Upon expiration of the 180-day lock-up period described below, 7,782,016 shares of our common stock outstanding as of August 31, 2006 will be eligible for sale under Rule 144, including shares eligible for resale under Rule 144(k) as described below. We cannot estimate the number of shares of common stock that our existing stockholders will elect to sell under Rule 144.

Rule 144(k)

Subject to the lock-up agreements described below, shares of our common stock eligible for sale under Rule 144(k) may be sold immediately upon the completion of this offering. In general, under Rule 144(k),

a person may sell shares of common stock acquired from us immediately upon the completion of this offering, without regard to manner of sale, the availability of public information about us or volume, if:

- the person is not our affiliate and has not been our affiliate at any time during the three months preceding the sale; and
- the person has beneficially owned the shares proposed to be sold for at least two years, including the holding period of any prior owner other than an affiliate.

Upon the expiration of the 180-day lock-up period described below, 30,015 shares of common stock outstanding as of August 31, 2006 will be eligible for sale under Rule 144(k).

Rule 701

In general, under Rule 701 of the Securities Act, any of our employees, consultants or advisors who purchased shares from us in connection with a qualified compensatory stock plan or other written agreement is eligible to resell those shares 90 days after the effective date of this offering in reliance on Rule 144, but without compliance with the various restrictions, including the holding period, contained in Rule 144. Subject to the 180-day lock-up period described below, 30,015 shares of our common stock outstanding as of August 31, 2006 will be eligible for sale in accordance with Rule 701.

Lock-up agreements

We expect that the holders of substantially all of our currently outstanding capital stock will agree that, without the prior written consent of J.P. Morgan Securities Inc., they will not, during the period ending 180 days after the date of this prospectus, subject to exceptions specified in the lock-up agreements, offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock or enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of our common stock. Further, these holders have agreed that, during this period, they will not make any demand for, or exercise any right with respect to, the registration of our common stock or any security convertible into or exercisable or exchangeable for our common stock. The 180-day lock-up period may be extended under specified circumstances. The lock-up restrictions, specified exceptions and the circumstances under which the 180-day lock-up period may be extended are described in more detail under “Underwriting.”

Registration rights

Subject to the lock-up agreements described above, upon the completion of this offering, holders of 7,752,001 shares of our common stock outstanding as of August 31, 2006 will have the right to require us to register these shares of common stock under the Securities Act under specified circumstances. After registration pursuant to these rights, these shares will become freely tradable without restriction under the Securities Act. See “Description of capital stock—Registration rights” for additional information regarding these registration rights.

Stock options

As of August 31, 2006, we had outstanding options to purchase 1,061,679 shares of class B common stock, of which options to purchase 813,747 shares of class B common stock were vested as of August 31, 2006. As of August 31, 2006, options to purchase shares of common stock will be vested and eligible for sale within 180 days after the date of this prospectus, subject to any lock-up agreements applicable to these shares. Immediately prior to the completion of this offering, each of these

options automatically will become an option to purchase an equal number of shares of our common stock. Promptly following this offering, we intend to file a registration statement on Form S-8 under the Securities Act to register all of the shares subject to outstanding options and options and other awards issuable pursuant to our employee stock option plan and 2006 stock incentive plan. See “Management—Stock option and other compensation plans” for additional information regarding these plans. Accordingly, shares of our common stock registered under the registration statements will be available for sale in the open market, subject to Rule 144 volume limitations applicable to affiliates, and subject to any vesting restrictions and lock-up agreements applicable to these shares.

Underwriting

We are offering the shares of common stock described in this prospectus through a number of underwriters. J.P. Morgan Securities Inc., Cowen and Company, LLC and HSBC Securities (USA) Inc. are acting as representatives of the underwriters. We and the selling stockholders have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the initial public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

Name	Number of shares
J.P. Morgan Securities Inc.	
Cowen and Company, LLC	
HSBC Securities (USA) Inc.	
Total	

The underwriters are committed to purchase all the shares of common stock offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the shares of common stock directly to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of $ per share. Any such dealers may resell shares to certain other brokers or dealers at a discount of up to $ per share from the initial public offering price. After the initial public offering of the shares, the offering price and other selling terms may be changed by the underwriters. The representatives have advised us that the underwriters do not intend to confirm discretionary sales in excess of 5% of the shares of common stock offered in this offering.

The underwriters have an option to buy up to additional shares of common stock from the selling stockholders to cover sales of shares by the underwriters that exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus to exercise this over-allotment option. If any shares are purchased with this over-allotment option, the underwriters will purchase shares from the selling stockholders in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the initial public offering price per share of common stock less the amount paid by the underwriters to us and the selling stockholders per share of common stock. The underwriting fee is $ per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

Underwriting discounts and commissions	Without over-allotment exercise	With full over-allotment exercise
Per share	$	$
Total	$	$

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will

be approximately $. Of this total, approximately $ is payable by us and approximately $ is payable by the selling stockholders.

A prospectus in electronic format may be made available on the websites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed, with limited exceptions, that we will not offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, or file with the Securities and Exchange Commission a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, without the prior written consent of J.P. Morgan Securities Inc. for a period of 180 days after the date of this prospectus. Notwithstanding the foregoing, if (1) during the last 17 days of the 180-day restricted period, we issue an earnings release or material news or a material event relating to us occurs; or (2) prior to the expiration of the 180-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 180-day period, the restrictions described above will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

Our directors and executive officers and substantially all of our stockholders have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each of these persons or entities, with limited exceptions, for a period of 180 days after the date of this prospectus, may not, without the prior written consent of J.P. Morgan Securities Inc., (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of our common stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise. Notwithstanding the foregoing, if (1) during the last 17 days of the 180-day restricted period, we issue an earnings release or material news or a material event relating to us occurs; or (2) prior to the expiration of the 180-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 180-day period, the restrictions described above will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

The restrictions imposed by these lock-up agreements will not apply to the transfer or disposition of shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (1) as a bona fide gift, (2) to any trust for the direct or indirect benefit of the stockholder or the immediate family of the stockholder in a transaction not involving a disposition for value, (3) to any corporation, partnership, limited liability company or other entity all of the beneficial ownership interests of which are held by the stockholder or the immediate family of the stockholder in a transaction not involving a disposition for value, (4) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the stockholder, (5) as a distribution to partners, members or stockholders of the stockholder in a transaction not involving a disposition for value or (6) to any affiliate of the stockholder or any investment fund or other entity controlled or managed by the stockholder in a transaction not involving a disposition for value; provided that the transferee, distributee or donee agrees in writing to be bound by the terms of the lock-up agreement to the same extent as if a party thereto; and, provided further that, in the case of (3), (5) and

(6) above, no filing pursuant to Section 16(a) of the Exchange Act, reporting a reduction in the beneficial ownership of common stock shall be required or shall be voluntarily made in connection with such transfer, other than a filing on a Form 5 made after the expiration of the 180-day restricted period or any extension thereof pursuant to the lock-up agreement. In addition, the restrictions imposed by the lock-up agreement do not apply to the sale of common stock by the stockholder pursuant to the underwriting agreement. Furthermore, notwithstanding the restrictions imposed by the lock-up agreement, the stockholder may, without the prior written consent of J.P. Morgan Securities Inc., (1) exercise an option to purchase shares of common stock granted under any stock incentive plan or stock purchase plan, (2) establish a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of common stock, provided that such plan does not provide for any transfers of common stock during the 180-day restricted period or any extension thereof pursuant to the lock-up agreement and (3) transfer shares of common stock acquired in this offering or on the open market following this offering.

We and the selling stockholders have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

We have applied to have our common stock listed on The NASDAQ Global Market under the symbol “EBSI.”

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be “covered” shorts, which are short positions in an amount not greater than the underwriters’ over-allotment option referred to above, or may be “naked” shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their over-allotment option, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the over-allotment option. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on The NASDAQ Stock Market, in the over-the-counter market or otherwise.

Prior to this offering, there has been no public market for our common stock. The initial public offering price will be determined by negotiations between us and the representatives of the underwriters. In

determining the initial public offering price, we and the representatives of the underwriters expect to consider a number of factors, including:

- the information set forth in this prospectus and otherwise available to the representatives;
- our prospects and the history and prospects for the industry in which we compete;
- an assessment of our management;
- our prospects for future earnings;
- the general condition of the securities markets at the time of this offering;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies; and
- other factors deemed relevant by the underwriters and us.

Neither we nor the underwriters can assure investors that an active trading market will develop for our common stock, or that the shares of common stock will trade in the public market at or above the initial public offering price.

J.P. Morgan Partners, LLC, an affiliate of J.P. Morgan Securities Inc., through its ownership of various entities, owns approximately 10.9% of the voting securities of Microscience Investments Limited, which owns 16.2% of our common stock prior to this offering. Because J.P. Morgan Securities Inc. may be deemed an affiliate under the National Association of Securities Dealers, Inc.'s Conduct Rules, or the NASD Rules, as a result of J.P. Morgan Partners, LLC's ownership of more than 10% of the voting securities of Microscience Investments Limited, J.P. Morgan Securities Inc. may be deemed to have a "conflict of interest" with us under Rule 2720 of the NASD Rules. When an NASD member with a conflict of interest participates as an underwriter in a public offering, the NASD Rules require that the initial public offering price can be no higher than that recommended by a "qualified independent underwriter," as defined by the NASD Rules. In accordance with Rule 2720 of the NASD Rules, Cowen and Company, LLC will assume the responsibility of acting as qualified independent underwriter. In this role, Cowen and Company, LLC will perform a due diligence investigation and review and participate in the preparation of the registration statement, of which this prospectus is a part.

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. HSBC Realty Credit Corporation, an affiliate of HSBC Securities (USA) Inc., is the lender under a mortgage loan for $8.5 million that we entered into in April 2006 in connection with the purchase of a building in Frederick, Maryland, a term loan for $10.0 million that we entered into in August 2006 to finance a portion of the costs of our facility expansion in Lansing, Michigan and a revolving line of credit for up to $5.0 million that we entered into in August 2006. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Legal matters

The validity of the common stock offered hereby will be passed upon by Wilmer Cutler Pickering Hale and Dorr LLP, Washington, D.C. Dechert LLP, Philadelphia, Pennsylvania is acting as counsel for the underwriters in connection with this offering.

Experts

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements at December 31, 2005 and 2004, and for each of the three years in the period ended December 31, 2005, as set forth in their report. We have included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

Where you can find more information

We have filed with the Securities and Exchange Commission a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock we are offering to sell. This prospectus, which constitutes part of the registration statement, does not include all of the information contained in the registration statement and the exhibits, schedules and amendments to the registration statement. For further information with respect to us and our common stock, we refer you to the registration statement and to the exhibits and schedules to the registration statement. Statements contained in this prospectus about the contents of any contract or any other document are not necessarily complete, and, and in each instance, we refer you to the copy of the contract or other documents filed as an exhibit to the registration statement. Each of theses statements is qualified in all respects by this reference.

You may read and copy the registration statement of which this prospectus is a part at the Securities and Exchange Commission's public reference room, which is located at 100 F Street, N.E., Room 1580, Washington, DC 20549. You can request copies of the registration statement by writing to the Securities and Exchange Commission and paying a fee for the copying cost. Please call the Securities and Exchange Commission at 1-800-SEC-0330 for more information about the operation of the Securities and Exchange Commission's public reference room. In addition, the Securities and Exchange Commission maintains an Internet website, which is located at http://www.sec.gov, that contains reports, proxy and information statements and other information regarding issuers that file electronically with the Securities and Exchange Commission. You may access the registration statement of which this prospectus is a part at the Securities and Exchange Commission's Internet website. Upon completion of this offering, we will be subject to the information reporting requirements of the Securities Exchange Act of 1934, and we will file reports, proxy statements and other information with the Securities and Exchange Commission.

This prospectus includes statistical data that were obtained from industry publications. These industry publications generally indicate that the authors of these publications have obtained information from sources believed to be reliable but do no guarantee the accuracy and completeness of their information. While we believe these industry publications to be reliable, we have not independently verified their data.

Index to consolidated financial statements

Report of independent registered public accounting firm

The Board of Directors and Stockholders
Emergent BioSolutions Inc. and Subsidiaries

We have audited the accompanying consolidated balance sheets of Emergent BioSolutions Inc. and Subsidiaries as of December 31, 2004 and 2005, and the related consolidated statements of operations, changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2005. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Emergent BioSolutions Inc. and Subsidiaries at December 31, 2004 and 2005, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2005 in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

May 23, 2006
McLean, VA

Emergent BioSolutions Inc. and subsidiaries
Consolidated balance sheets

(in thousands, except share and per share data)	December 31, 2004	December 31, 2005	As of June 30, 2006 (unaudited)
ASSETS			
Current assets:			
Cash and cash equivalents	$ 6,821	$ 36,294	$ 15,737
Accounts receivable	18,637	2,530	1,431
Inventories	13,253	16,441	28,677
Income tax receivable	—	763	6,788
Deferred tax assets	978	1,989	249
Restricted cash	1,250	—	—
Prepaid expenses and other current assets	756	1,099	1,721
Total current assets	41,695	59,116	54,603
Property, plant and equipment, net	27,269	30,645	48,948
Deferred tax assets, net of current	24	9,981	12,556
Other assets	68	590	3,006
Total assets	$ 69,056	$100,332	$ 119,113
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Accounts payable, related party	$ 15	$ 22	$ 2
Accounts payable, operations	5,505	10,403	9,847
Accrued compensation	3,710	6,177	5,250
Long-term indebtedness, current portion	572	902	1,169
Notes payable to employees, current portion	474	506	63
Income taxes payable	3,761	2,134	—
Deferred revenue	18,256	7,340	29,891
Other current liabilities	1,893	2,609	2,386
Total current liabilities	34,186	30,093	48,608
Long-term indebtedness, net of current portion	11,347	10,471	18,364
Notes payable to employees, net of current portion	474	31	—
Other liabilities	100	—	—
Total liabilities	46,107	40,595	66,972
Stockholders' equity:			
Preferred Stock, $0.01 par value; 3,000,000 shares authorized, 0 shares issued and outstanding at December 31, 2004 and 2005 and June 30, 2006	—	—	—
Common Stock, Class A, $0.01 par value; 10,000,000 shares authorized, 6,487,950, 7,752,001 and 7,752,001 shares issued and outstanding at December 31, 2004 and 2005 and June 30, 2006, respectively	65	78	78
Common Stock, Class B, $0.01 par value; 2,000,000 shares authorized, 0, 7,400 and 30,015 shares issued and outstanding at December 31, 2004 and 2005 and June 30, 2006, respectively	—	—	—
Additional paid-in capital	7,564	34,539	34,871
Accumulated other comprehensive loss	—	(276)	(313)
Retained earnings	15,320	25,396	17,505
Total stockholders' equity	22,949	59,737	52,141
Total liabilities and stockholders' equity	$ 69,056	$100,332	$ 119,113

The accompanying notes are an integral part of these consolidated financial statements.

Emergent BioSolutions Inc. and subsidiaries
Consolidated statements of operations

(in thousands, except share and per share data)	Year ended December 31,			Six months ended June 30, (unaudited)	
	2003	2004	2005	2005	2006
Revenues:					
Product sales	$ 55,536	$ 81,014	$ 127,271	$ 58,506	$ 20,408
Milestones and grants	233	2,480	3,417	813	3,261
Total revenues	55,769	83,494	130,688	59,319	23,669
Operating expense (income):					
Cost of product sales	22,342	30,102	31,603	16,490	4,370
Research and development	6,327	10,117	18,381	4,157	14,210
Selling, general and administrative	19,547	30,323	42,793	17,974	20,681
Purchased in-process research and development	1,824	—	26,575	26,575	—
Settlement of State of Michigan obligation	—	(3,819)	—	—	—
Litigation settlement	—	—	(10,000)	(10,000)	—
Income (loss) from operations	5,729	16,771	21,336	4,123	(15,592)
Other income (expense):					
Interest income	100	65	485	103	326
Interest expense	(293)	(241)	(767)	(402)	(232)
Other income (expense), net	168	6	55	(25)	124
Total other income (expense)	(25)	(170)	(227)	(324)	218
Income (loss) before provision for income taxes	5,704	16,601	21,109	3,799	(15,374)
Provision for (benefit from) income taxes	1,250	5,129	5,325	958	(7,684)
Net income (loss)	$ 4,454	$ 11,472	$ 15,784	$ 2,841	$ (7,690)
Earnings (loss) per share — basic	$ 0.68	$ 1.74	$ 2.21	$ 0.44	$ (0.99)
Earnings (loss) per share — diluted	$ 0.63	$ 1.61	$ 2.00	$ 0.39	$ (0.99)
Weighted average number of shares — basic	6,570,856	6,576,019	7,136,866	6,505,085	7,771,830
Weighted average number of shares — diluted	7,061,537	7,104,172	7,908,023	7,200,595	7,771,830
Cash dividends per share — basic	$ —	$ —	$ 0.76	$ —	$ —

The accompanying notes are an integral part of these consolidated financial statements.

Emergent BioSolutions Inc. and subsidiaries
Consolidated statement of changes in stockholders' equity

(in thousands, except share and per share data)	Class A no-par common stock		Class B no-par common stock		Class A $0.01 par value common stock		Class B $0.01 par value common stock		Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total stockholders' equity
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Balance at December 31, 2002	6,262,554	$ 2,940	$ 254,384	$ 69	—	$ —	—	$ —	$ —	$ —	$ 1,146	$ 4,155
Redemption of common stock	—	—	(25,000)	(7)	—	—	—	—	—	—	(193)	(200)
Issuance of common stock	—	—	152,676	39	—	—	—	—	—	—	—	39
Net Income (loss)	—	—	—	—	—	—	—	—	—	—	4,454	4,454
Balance at December 31, 2003	6,262,554	2,940	382,060	101	—	—	—	—	—	—	5,407	8,448
Redemption of common stock	—	—	(199,271)	(53)	—	—	—	—	—	—	(1,559)	(1,612)
Issuance of common stock	—	—	42,607	12	—	—	—	—	—	—	—	12
Conversion of class A no-par common stock to class A $0.01 par value common stock	(6,262,554)	(2,940)	—	—	6,262,554	63	—	—	2,877	—	—	—
Conversion of class B no-par common stock to class A $0.01 par value common stock	—	—	(225,396)	(60)	225,396	2	—	—	58	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	—	—	4,310	—	—	4,310
Tax benefit related to the disqualifying disposition	—	—	—	—	—	—	—	—	319	—	—	319
Net income (loss)	—	—	—	—	—	—	—	—	—	—	11,472	11,472
Balance at December 31, 2004	—	—	—	—	6,487,950	65	—	—	7,564	—	15,320	22,949
Issuance of common stock to acquire Microscience Limited	—	—	—	—	1,264,051	13	—	—	26,988	—	—	27,001
Exercise of stock options	—	—	—	—	—	—	46,384	—	33	—	—	33
Redemption of common stock	—	—	—	—	—	—	(38,984)	—	(29)	—	(308)	(337)
Forfeiture of stock options	—	—	—	—	—	—	—	—	(17)	—	—	(17)
Payment of dividend	—	—	—	—	—	—	—	—	—	—	(5,400)	(5,400)
Net income (loss)	—	—	—	—	—	—	—	—	—	—	15,784	15,784
Foreign currency translation	—	—	—	—	—	—	—	—	—	(276)	—	(276)
Comprehensive income	—	—	—	—	—	—	—	—	—	—	—	15,508
Balance at December 31, 2005	—	—	—	—	7,752,001	78	7,400	—	34,539	(276)	25,396	59,737
Redemption of common stock	—	—	—	—	—	—	—	—	—	—	(201)	(201)
Issuance of common stock	—	—	—	—	—	—	22,615	—	43	—	—	43
Stock-based compensation expense	—	—	—	—	—	—	—	—	289	—	—	289
Net income (loss)	—	—	—	—	—	—	—	—	—	—	(7,690)	(7,690)
Foreign currency translation	—	—	—	—	—	—	—	—	—	(37)	—	(37)
Comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	(7,727)
Balance at June 30, 2006 (unaudited)	—	$ —	—	$ —	7,752,001	$ 78	30,015	$ —	$ 34,871	$ (313)	$ 17,505	$ 52,141

The accompanying notes are an integral part of these consolidated financial statements.

Emergent BioSolutions Inc. and subsidiaries
Consolidated statements of cash flows

(in thousands)	Year ended December 31, 2003	2004	2005	Six months ended June 30, (unaudited) 2005	2006
Cash flows from operating activities:					
Net income (loss)	$ 4,454	$ 11,472	$ 15,784	$ 2,841	$ (7,690)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities (net of effects of acquisitions):					
Stock-based compensation expense (credit)	—	4,310	(17)	—	289
Non-cash gain on settlement	—	(3,819)	—	—	—
Depreciation and amortization	1,214	1,867	3,549	1,492	2,002
Deferred income taxes	(467)	(418)	(10,968)	(10,394)	(835)
Other obligations	—	200	—	—	—
Loss on disposal of property and equipment	13	43	32	—	5
Purchased in-process research and development	1,824	—	26,575	26,575	—
Cash payment on State of Michigan obligation	540	—	—	—	—
Capitalized interest cost	—	—	—	—	(107)
Changes in operating assets and liabilities:					
Accounts receivable	(528)	(15,664)	16,107	(11,570)	1,099
Inventories	(4,656)	(1,609)	(3,189)	(1,267)	(12,236)
Income taxes	(1,713)	5,794	(2,390)	8,732	(8,160)
Prepaid expenses and other assets	(244)	50	(865)	(1,368)	(3,038)
Accounts payable	983	2,472	5,463	24	(575)
Accrued compensation	(583)	585	2,466	(555)	(927)
Other current liabilities	(1,617)	44	619	379	(223)
Deferred revenue	11,852	3,869	(10,916)	(10,916)	22,551
Net cash provided by (used in) operating activities	11,072	9,196	42,250	3,973	(7,845)
Cash flows from investing activities:					
Purchases of property, plant and equipment	(4,123)	(17,072)	(6,532)	(1,367)	(20,203)
Acquisitions, net of cash received	(3,794)	—	(559)	—	—
Restricted cash deposits	—	(1,250)	1,250	(17)	—
Proceeds from investment maturities	—	147	—	—	—
Net cash used in investing activities	(7,917)	(18,175)	(5,841)	(1,384)	(20,203)
Cash flows from financing activities:					
Proceeds from notes payable	172	10,992	31	—	8,500
Proceeds from notes payable to employees	—	947	123	123	—
Repayments on product supply and royalty obligations	(900)	(2,351)	—	—	—
Issuance of Class B common stock	39	12	33	—	43
Redemption of Class B common stock	(200)	(665)	(337)	(193)	(201)
Principal payments on notes payable	(38)	(184)	(1,110)	(461)	(814)
Debt issuance costs	—	(70)	—	—	—
Payment of dividend	—	—	(5,400)	—	—
Net cash provided by (used in) financing activities	(927)	8,681	(6,660)	(531)	7,528
Effect of exchange rate changes on cash and cash equivalents	—	—	(276)	735	(37)
Net increase (decrease) in cash and cash equivalents	2,228	(298)	29,473	2,793	(20,557)
Cash and cash equivalents at beginning of period	4,891	7,119	6,821	6,821	36,294
Cash and cash equivalents at end of period	$ 7,119	$ 6,821	$ 36,294	$ 9,614	$ 15,737
Supplemental disclosure of cash flow information:					
Cash paid during the year for interest	$ 99	$ 170	$ 696	$ 144	$ 148
Cash paid during the year for income taxes	$ 4,280	$ —	$ 17,985	$ 500	$ 1,200
Supplemental information on non cash investing and financing activities:					
Issuance of common stock to acquire Microscience Limited	$ —	$ —	$ 27,001	$ 27,001	$ —

The accompanying notes are an integral part of these consolidated financial statements

Emergent BioSolutions Inc. and subsidiaries
Notes to consolidated financial statements
(dollars in thousands, except per share data)

1. Nature of the business and organization

Emergent Biosolutions Inc. (the Company or Emergent) is a biopharmaceutical company focused on the development, manufacture and commercialization of immunobiotics. The Company operates in two business segments: biodefense and commercial. The Company commenced operations as BioPort Corporation (BioPort) in September 1998 through an acquisition from the Michigan Biologic Products Institute of rights to the marketed product, BioThrax, vaccine manufacturing facilities at a multi-building campus on approximately 12.5 acres in Lansing, Michigan and vaccine development and production know-how. Following this acquisition, the Company completed renovations at the Lansing facilities that had been initiated by the State of Michigan. In December 2001, the U.S. Food and Drug Administration (FDA) approved a supplement to the Company's manufacturing facility license for the manufacture of BioThrax at the renovated facilities. In June 2004, the Company completed a corporate reorganization (Reorganization) in which:

- Emergent issued 6,487,950 shares of Class A Common Stock in exchange for 6,262,554 shares of BioPort class A common stock and 225,396 shares of BioPort class B common stock;
- all other issued and outstanding shares of BioPort class B common stock were repurchased and retired; and
- all outstanding stock options to purchase BioPort class B common stock were assumed by Emergent and option holders were granted replacement stock options to purchase an equal number of shares of Class B Common Stock of Emergent.

As a result of the Reorganization, BioPort became a wholly owned subsidiary of Emergent. The Company acquired its portfolio of commercial vaccine candidates through an acquisition of Microscience Limited (Microscience) in a share exchange in June 2005 and an acquisition of substantially all of the assets of Antex Biologics Inc. (Antex) for cash in May 2003. The Company has renamed Microscience as Emergent Product Development UK Limited.

2. Summary of significant accounting policies

Basis of presentation and consolidation

The accompanying consolidated financial statements include the accounts of Emergent and its wholly owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation.

Unaudited interim financial information

The accompanying interim consolidated balance sheet as of June 30, 2006, the statements of operations and cash flows for the six months ended June 30, 2005 and 2006 and the consolidated statement of changes in stockholders' equity for the six months ended June 30, 2006 are unaudited. These unaudited interim consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States. In the opinion of the Company's management, the unaudited interim consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and include all adjustments necessary for the fair presentation of the Company's statement of financial position, results of operations and its cash flows for the six months ended June 30, 2005 and 2006. The results for the six months ended June 30, 2006 are not necessarily indicative of the results to be expected for the year ending December 31, 2006. All references to June 30,

2006 or to the six months ended June 30, 2005 and 2006 in the notes to the consolidated financial statements are unaudited.

Use of estimates

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

Cash and cash equivalents

Cash equivalents are highly liquid investments with a maturity of 90 days or less at the date of purchase and consist of time deposits and investments in money market funds with commercial banks and financial institutions and high-quality corporate bonds. Also, the Company maintains cash balances with financial institutions in excess of insured limits. The Company does not anticipate any losses with such cash balances. At December 31, 2004 and 2005 and June 30, 2006, the Company maintained all of its cash and cash equivalents in three financial institutions.

Fair value of financial instruments

The carrying amounts of the Company's short-term financial instruments, which include cash and cash equivalents, accounts receivable and accounts payable, approximate their fair values due to their short maturities. The carrying value and fair value of long-term indebtedness were $11,821 and $11,409, respectively, at December 31, 2004 and $10,502 and $10,089, respectively, at December 31, 2005. The carrying value and fair value of long-term indebtedness were $18,364 and $17,664, respectively, at June 30, 2006.

Restricted cash

Restricted cash at December 31, 2004 consists of a certificate of deposit held by a bank as collateral for a letter of credit acting as a security deposit on a loan. This certificate of deposit was redeemed by the Company in October 2005.

Significant customers and accounts receivable

The Company's primary customers are the U.S. Department of Defense (DoD) and U.S. Department of Health and Human Services (HHS). For the years ended December 31, 2003, 2004 and 2005 and the six months ended June 30, 2005 and 2006, sales of BioThrax to the DoD and HHS comprised 100%, 99% and 96% and 98% and 81% of total revenues, respectively. As of December 31, 2004 and 2005 and June 30, 2006, the Company's receivable balances were comprised of 96% and 38% and 23%, respectively, from these customers. Unbilled accounts receivable, included in accounts receivable, totaling $3,772 and $1,418 and $86 as of December 31, 2004 and 2005 and June 30, 2006, respectively, relate to various service contracts for which product has been delivered or work has been performed, though invoicing has not yet occurred. Accounts receivable are stated at invoice amounts and consist primarily of amounts due from the DoD and HHS as well as amounts due under reimbursement contracts with other government entities and non-government and philanthropic organizations. If necessary, the Company records a provision for doubtful receivables to allow for any amounts which may be unrecoverable. This provision is based upon an analysis of the Company's prior collection experience, customer creditworthiness and current economic trends. As of December 31, 2004 and 2005 and June 30, 2006, an allowance for doubtful accounts was not recorded, as the prior collection history from these customers indicates collection is likely.

Concentrations of credit risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable. The Company places its cash and cash equivalents with high quality financial institutions. Management believes that the financial risks associated with its cash and cash equivalents are minimal. Because accounts receivable consist of amounts due from the U.S. federal government for product sales and from government agencies under government grants, management deems there to be minimal credit risk.

Inventories

Inventories are stated at the lower of cost or market, with cost being determined using a standard cost method, which approximates average cost. Average cost consists primarily of material, labor and manufacturing overhead expenses and includes the services and products of third party suppliers. The Company analyzes its inventory levels quarterly and writes down, in the applicable period, inventory that has become obsolete, inventory that has a cost basis in excess of its expected net realizable value and inventory in excess of expected customer demand. The Company also writes off in the applicable period the costs related to expired inventory.

Property, plant and equipment

Property, plant and equipment are stated at cost. Depreciation is computed using the straight-line method over the following estimated useful lives:

Buildings	39 years
Furniture and equipment	3-7 years
Internal-use software	Lesser of 3 years or product life
Leasehold improvements	Lesser of the asset life or life of lease

Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is credited or charged to operations. Repairs and maintenance costs are expensed as incurred.

The Company capitalizes costs associated with purchased software from the time the preliminary project stage is completed until the software is ready for use. Under the provisions of the Statement of Positions (SOP) No. 98-1, *Accounting for the Costs of Computer Software Developed or Obtained for Internal Use*, the Company capitalizes costs associated with software developed or obtained for internal use when the preliminary project stage is completed. Capitalized costs include only: (1) external direct costs of materials and services consumed in developing or obtaining internal use software and (2) payroll and payroll-related costs for employees who are directly associated with and who devote time to the internal use software project during the development stage. Capitalization of such costs ceases before training and other post implantation software activities occur. Computer software maintenance costs related to software development are expensed as incurred.

Income taxes

Income taxes are accounted for using the liability method. Deferred tax assets and liabilities are recognized for future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the year in which those temporary differences are expected to be recovered or settled.

The Company records valuation allowances to reduce deferred tax assets to the amounts that it anticipates will be realized. The Company considers future taxable income and ongoing tax planning

strategies in assessing the need for valuation allowances. In general, if the Company determines that it is able to realize more than the recorded amounts of net deferred tax assets in the future, net income will increase in the period in which the determination is made. Likewise, if the Company determines that it is not able to realize all or part of the net deferred tax asset in the future, net income will decrease in the period in which the determination is made. The Company applies any reversals of valuation allowance related to an acquired deferred tax asset against other intangibles before impacting net income.

Under sections 382 and 383 of the Internal Revenue Code, if an ownership change occurs with respect to a “loss corporation”, as defined, there are annual limitations on the amount of net operating losses and deductions that are available. Due to the acquisition of Microscience in 2005, the Company believes the use of the operating losses will be significantly limited.

The Company’s ability to realize deferred tax assets depends upon future taxable income as well as the limitations discussed above. For financial reporting purposes, a deferred tax asset must be reduced by a valuation allowance if it is more likely than not that some portion or all of the deferred tax assets will not be realized prior to expiration.

Revenue recognition

The Company recognizes revenues from product sales in accordance with Staff Accounting Bulletin No. 104, *Revenue Recognition* (SAB No. 104). SAB No. 104 requires recognition of revenues from product sales that require no continuing performance by the Company if four basic criteria have been met:

- there is persuasive evidence of an arrangement;
- delivery has occurred and title has passed to the Company’s customer;
- the fee is fixed and determinable and no further obligation exists; and
- collectibility is reasonably assured.

All revenues from product sales are recorded net of applicable allowances for sales returns, rebates, special promotional programs, and discounts. For arrangements where the risk of loss has not passed to the customer, the Company defers the recognition of revenue until such time that risk of loss has passed. Also, the cost of revenue associated with amounts recorded as deferred revenue is recorded in inventory until such time as risk of loss has passed.

Under the Company’s contract with the DoD, title to the product passes to the DoD upon submission of the first invoice. The earnings process is complete upon FDA release of the product for sale and distribution. Following FDA release of the product, the product is segregated for later shipment, and all deferred revenue related to the released product is recognized in accordance with the “bill and hold” requirements under SAB 104.

In December 2005, the Securities and Exchange Commission released an interpretation with respect to the accounting for sales of vaccines and bioterror countermeasures to the federal government for placement into the strategic national stockpile. This interpretation provides for revenue recognition for specifically identified products purchased for the strategic national stockpile in the event that all requirements for revenue recognition, as specified in Statement of Financial Accounting Concepts No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*, are not met. This interpretation is applicable to the Company’s contracts with HHS, but because the Company recognizes revenue upon delivery of product, the Company has not applied this guidance.

The Company recognizes revenue from upfront and milestone payments in accordance with Emerging Issues Task Force (EITF) Issue No. 00-21, *Accounting for Revenue Arrangements with Multiple Deliverables* (EITF No. 00-21), which addresses whether, for revenue recognition purposes, there is one or several elements in an arrangement. The Company recognizes revenue from milestone payments upon

achievement of pre-defined scientific events that require substantive effort if achievement of the milestone was not readily assured at the inception of the agreement.

Payments received by the Company for the reimbursement of expenses for research and development activities are recorded in accordance with EITF Issue No. 99-19, *Reporting Revenue Gross as Principal Versus Net as an Agent* (EITF No. 99-19). Pursuant to EITF No. 99-19, for transactions in which the Company acts as principal, with discretion to choose suppliers, bears credit risk and performs a substantive part of the services, revenue is recorded at the gross amount of the reimbursement. Costs associated with these reimbursements are reflected as a component of research and development expenses.

Impairment of long-lived assets

In accordance with Statement of Financial Accounting Standards No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets* (SFAS No. 144), the Company assesses the recoverability of its long-lived assets by determining whether the carrying value of such assets can be recovered through undiscounted future operating cash flows. If impairment is indicated, the Company measures the amount of such impairment by comparing the fair value to the carrying value. The Company has recorded no impairment losses for the years ended December 31, 2003, 2004 and 2005 and the six months ended June 30, 2006.

Research and development

Research and development costs are expensed as incurred. Research and development costs primarily consist of salaries, materials and related expenses for personnel and facility expenses. Other research and development expenses include fees paid to consultants and outside service providers and the costs of materials used in clinical trials and research and development.

Purchased in-process research and development

The Company accounts for purchased in-process research and development in accordance with the Statement of Financial Accounting Standards No. 2, *Accounting for Research and Development Costs* (SFAS No. 2) along with Financial Accounting Standards Board (FASB) Interpretation No. 4, *Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method — an interpretation of FASB Statement No. 2* (FIN 4). Under these standards, the Company is required to determine whether the technology relating to a particular research and development project acquired through an acquisition has an alternative future use. If the determination is that the technology has no alternative future use, the acquisition amount not directly attributed to fixed assets is expensed. Otherwise, the Company capitalizes and amortizes the costs incurred over their estimated useful lives of the technology acquired.

Comprehensive income (loss)

Statement of Financial Accounting Standards No. 130, *Reporting Comprehensive Income* (SFAS No. 130), requires the presentation of the comprehensive income (loss) and its components as part of the financial statements. Comprehensive income is comprised of net income (loss) and other changes in equity that are excluded from net income (loss). The Company includes gains and losses on intercompany transactions with foreign subsidiaries that are considered to be long-term investments and translation gains and losses incurred when converting its subsidiaries' financial statements from their functional currency to the U.S. dollar in accumulated other comprehensive income (loss).

Foreign currencies

The local currency is the functional currency for the Company's foreign subsidiaries and, as such, assets and liabilities are translated into U.S. dollars at year-end exchange rates. Income and expense items are

translated at average exchange rates during the year. Translation adjustments resulting from this process are charged or credited to other comprehensive income (loss).

Certain risks and uncertainties

The Company has derived substantially all of its revenue from sales of BioThrax under contracts with the DoD and HHS. The Company's ongoing U.S. government contracts do not necessarily increase the likelihood that it will secure future comparable contracts with the U.S. government. The Company expects that a significant portion of the business that it will seek in the near future, in particular for BioThrax, will be under government contracts that present a number of risks that are not typically present in the commercial contracting process. U.S. government contracts for BioThrax require annual funding decisions by the government and are subject to unilateral termination or modification by the government. The Company may fail to achieve significant sales of BioThrax to customers in addition to the U.S. government, which would harm its growth opportunities. The Company may not be able to sustain or increase profitability. The Company is spending significant amounts for the expansion of its manufacturing facilities. The Company may not be able to manufacture BioThrax consistently in accordance with FDA specifications. Other than BioThrax, all of the Company's product candidates are undergoing clinical trials or are in early stages of development, and failure is common and can occur at any stage of development. None of the Company's product candidates other than BioThrax has received regulatory approval.

Earnings per share

Basic net income (loss) attributable to common stockholders per share of common stock excludes dilution for potential common stock issuances and is computed by dividing net income (loss) attributable to common stockholders by the weighted average number of shares outstanding for the period. Diluted net income (loss) attributable to common stockholders per share reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock.

The following table presents the calculation of basic and diluted net income per share:

	Year ended December 31,			Six months ended June 30,	
	2003	2004	2005	2005	2006
Numerator:					
Net income (loss)	$ 4,454	$ 11,472	$ 15,784	$ 2,841	$ (7,690)
Denominator:					
Weighted-average number of shares — basic	6,570,856	6,576,019	7,136,866	6,505,085	7,771,830
Dilutive securities — stock options	490,681	528,152	771,157	695,509	—
Weighted-average number of shares — diluted	7,061,537	7,104,172	7,908,023	7,200,595	7,771,830
Earnings (loss) per share — basic	$ 0.68	$ 1.74	$ 2.21	$ 0.44	$ (0.99)
Earnings (loss) per share — diluted	$ 0.63	$ 1.61	$ 2.00	$ 0.39	$ (0.99)

The Company has taken into consideration the disclosure required by the Participating Securities and the Two-Class Method under FASB Statement No. 128 (EITF No. 03-6).

Accounting for stock-based compensation

As of June 30, 2006, the Company has one stock-based employee compensation plan, the Emergent BioSolutions Employee Stock Option Plan (the Emergent Plan), described more fully in Note 10 — Stockholders' Equity. Through December 31, 2005, the Company accounted for grants under the Emergent Plan using the intrinsic value method in accordance with the provisions of Accounting Principles Board (APB), Opinion No. 25, *Accounting for Stock Issued to Employees* (APB No. 25) and has provided the pro forma disclosures of net income (loss) and net income (loss) per share in accordance with SFAS No. 123, *Accounting for Stock-Based Compensation* (SFAS No. 123) using the fair value method. Under APB No. 25, compensation expense is based on the difference, if any, on the date of the grant between the fair value of the Company's stock and the exercise price of the option and is recognized ratably over the vesting period of the option. The Company accounted for equity instruments issued to non-employees in accordance with SFAS No. 123 and EITF Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling Goods or Services* (EITF No. 96-18).

Effective January 1, 2006, the Company adopted the fair value provisions of SFAS No. 123 (revised 2004), *Share Based Payment* (SFAS No. 123(R)), using the modified prospective method. Under the fair value recognition provisions of SFAS No. 123(R), the Company recognizes stock-based compensation net of an estimated forfeiture rate.

Under the modified prospective method, compensation cost recognized in 2006 includes: (1) compensation cost for all share-based payments granted prior to but not yet vested as of December 31, 2005, based on the grant date fair value estimated in accordance with the original provisions of SFAS No. 123, and (2) compensation cost for all share-based payments granted subsequent to December 31, 2005, based on the grant date fair value estimated in accordance with the provisions of SFAS No. 123(R). As a result

of adopting SFAS No. 123(R) on January 1, 2006, the Company's loss before income taxes and net loss for the six months ended June 30, 2006 is approximately $289 higher than if it had continued to account for share-based compensation under APB No. 25. Both basic and diluted losses per share for the six months ended June 30, 2006 are $0.04 lower than if the Company had continued to account for share-based compensation under APB No. 25. Results for prior periods have not been restated. Based on options granted to employees as of June 30, 2006, total compensation expense not yet recognized related to unvested options is approximately $870, after tax. The Company expects to recognize that expense over a weighted average period of 3.5 years.

The Company has utilized the Black-Scholes valuation model for estimating the fair value of all stock options granted. The fair value of each option is estimated on the date of grant. Set forth below are the weighted-average assumptions used in valuing the stock options granted and a discussion of the Company's methodology for developing each of the assumptions used:

	Year ended December 31,			Six months ended June 30,	
	2003	2004	2005	2005	2006
Expected dividend yield	0%	0%	0%	0%	0%
Expected volatility	100%	52%	50%	50%	52%
Risk-free interest rate	3.15%	2.93%	3.68%	3.60%	5.21%
Expected average life of options (years)	2.7	2.5	2.9	2.9	3.0
Forfeiture rate	0%	0%	0%	0%	0%

- *Expected dividend yield* — The Company does not pay regular dividends on its common stock and does not anticipate paying any dividends in the foreseeable future.
- *Expected volatility* — Volatility is a measure of the amount by which a financial variable, such as share price, has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. The Company uses the historical volatility of similar companies over the preceding three-year period to estimate expected volatility. Since 2003, the annual volatility of these similar companies has ranged from 18.4% to 29.4%, with an average of 23.4%.
- *Risk-free interest rate* — This is the average U.S. Treasury rate with a term that most closely resembles the expected life of the option for the quarter in which the option was granted.
- *Expected average life of options* — This is the period of time that the options granted are expected to remain outstanding. This estimate is based primarily on the employee position profile of option holders and the trading lock out periods that result from the employees access to stock price sensitive information.
- *Forfeiture rate* — This is the estimated percentage of options granted that are expected to be forfeited or cancelled on an annual basis before becoming fully vested. The Company estimates the forfeiture rate based on past turnover data with further consideration given to the level of the employees to whom the options were granted.

Prior to the adoption of SFAS No. 123(R), the Company presented all tax benefits of deductions resulting from the exercise of stock options as operating cash flows in the statement of cash flows. SFAS No. 123(R) requires the cash flows resulting from the tax benefits of deductions in excess of the compensation cost recognized for those options (excess tax benefits) to be classified as financing cash flows. There were no excess tax benefits classified as a financing cash inflow in the period ended June 30, 2006.

The following table illustrates the effect on net income (loss) and net income (loss) per share if the Company had applied the fair value recognition provisions of SFAS No. 123 to stock-based employee compensation for the three years ended December 31, 2003, 2004 and 2005 and for the six months ended June 30, 2005 and 2006. The reported and pro forma net income (loss) and net income (loss) per share for the six month period ended June 30, 2006 are the same because stock-based compensation expense is recorded under the provisions of SFAS No. 123(R) for that period.

	Year ended December 31,			Six months ended June 30,	
	2003	2004	2005	2005	2006
Net income, as reported	$4,454	$11,472	$15,784	$2,841	$(7,690)
Add: Stock-based compensation in reported net income, net of taxes	—	2,801	—	—	188
Deduct: Total stock-based compensation expense determined under the fair value based method for all awards, net of taxes	(133)	(3,185)	(258)	(81)	(188)
Pro forma net income	$4,321	$11,088	$15,526	$2,760	$(7,690)
Net income (loss) attributable to common stockholders per common share — basic	$ 0.68	$ 1.74	$ 2.21	$ 0.44	$ (0.99)
Net income (loss) attributable to common stockholders per common share — diluted	$ 0.63	$ 1.61	$ 2.00	$ 0.39	$ (0.99)
Pro forma net income (loss) attributable to common stockholders per common share — basic	$ 0.66	$ 1.69	$ 2.18	$ 0.42	$ (0.99)
Pro forma net income (loss) attributable to common stockholders per common share — diluted	$ 0.61	$ 1.56	$ 1.96	$ 0.38	$ (0.99)

Recent accounting pronouncements

In June 2006, the FASB issued FASB Interpretation 48, *Accounting for Uncertainty in Income Taxes — an interpretation of FASB Statement No. 109, Accounting for Income Taxes* (FIN 48). FIN 48 clarifies the accounting for uncertainty in income taxes. FIN 48 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. FIN 48 requires that the Company recognize in its financial statements, the impact of a tax position, if that position is more likely than not of being sustained on audit, based on the technical merits of the position. FIN 48 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods and disclosure. The provisions of FIN 48 are effective for fiscal years beginning after December 15, 2006, with the cumulative effect of the change in accounting principle recorded as an adjustment to opening retained earnings. The Company is currently evaluating the impact of adopting FIN 48 on the financial statements.

In March 2006, the FASB issued Statement No. 156, *Accounting for Servicing of Financial Assets — an amendment of FASB Statement No. 140* (SFAS No. 156). SFAS No. 156 requires an entity to recognize a servicing asset or servicing liability each time it undertakes an obligation to service a financial asset by entering into a servicing contract based on certain conditions. The provisions of SFAS No. 156 are effective for fiscal years beginning after September 15, 2006. SFAS No. 156 will have no immediate impact on the Company's consolidated financial statements.

In February 2006, the FASB issued Statement No. 155, *Accounting for Certain Hybrid Financial Instruments — an amendment of FASB Statements No. 133 and 140* (SFAS No. 155). SFAS No. 155 permits fair value remeasurement for any hybrid financial instrument that contains an embedded derivative that otherwise would require bifurcation, clarifies which interest-only strips and principal-only strips are not subject to the requirements of Statement No. 133, establishes a requirement to evaluate interests in securitized financial assets to identify interests that are freestanding derivatives or that are hybrid financial instruments that contain an embedded derivative requiring bifurcation, clarifies that concentrations of credit risk in the form of subordination are not embedded derivatives and amends Statement No. 140 to eliminate the prohibition on a qualifying special-purpose entity from holding a derivative financial instrument that pertains to a beneficial interest other than another derivative financial instrument. The provisions of SFAS No. 155 are effective for fiscal years beginning after September 15, 2006. SFAS No. 155 will have no immediate impact on the Company's consolidated financial statements.

Reclassifications

Certain prior period amounts have been reclassified to conform to the current year presentation.

3. Acquisitions

Microscience Limited

On June 23, 2005, Emergent Europe, Inc., (EEI), a wholly-owned subsidiary of the Company incorporated in Delaware, completed the acquisition of Microscience pursuant to the terms and conditions of the Share Exchange Agreement dated June 23, 2005 (Exchange Agreement) by and among EEI and Microscience Holdings plc, a public limited liability company incorporated in England. At the closing date, the Company, through EEI, issued Microscience shareholders 1,264,051 shares of the Company's Class A Common Stock in exchange for all of the outstanding stock of Microscience. Shares of Class A Common Stock of the Company were valued for financial statement purposes at $21.36 per share. The Company's board of directors determined the fair value of the shares issued after taking into account the recommendation of management and the assessments provided by a third party valuation specialist. The results of operations for Microscience from June 23, 2005 are included in the accompanying consolidated statements of operations.

Total purchase consideration consisted of:

Fair value of common stock	$27,001
Direct acquisition costs	1,194
Total purchase consideration	$28,195

The acquisition was accounted for using the purchase method of accounting, as required by SFAS No. 141, *Business Combinations* (SFAS No. 141). All of the acquired assets and assumed liabilities of Microscience were recorded at their estimated fair market values on the acquisition date, which approximated net book value.

The purchase price was allocated as follows:

Current assets	$ 1,441
Property and equipment	863
Current liabilities	(684)
Net assets acquired	1,620
In-process research and development	26,575
Total purchase consideration	$28,195

In connection with the transaction, the Company recorded a charge of $26,575 for acquired research projects associated with products in development for which, at the acquisition date, technological feasibility had not been established and no alternative future use existed. Because Microscience was a development stage company that had not commenced its planned principal operations, the transaction was accounted for as an acquisition of assets rather than as a business combination and, therefore, goodwill was not recorded.

Unaudited pro forma results of operations are as follows. The amounts are shown as if the acquisition had occurred on January 1, 2004 and 2005:

	Year ended December 31,	
	2004	2005
Pro forma revenue	$83,571	$ 130,688
Pro forma net income (loss)	$ (5,243)	$ 10,067
Pro forma earnings (loss) per share — basic	$ (0.80)	$ 1.41
Pro forma earnings (loss) per share — diluted	$ (0.80)	$ 1.27

This information is not necessarily indicative of the operational results that would have occurred if the acquisition had been consummated on the dates indicated nor is it necessarily indicative of future operating results of the combined enterprise. The unaudited proforma combined condensed financial information does not reflect any adjustments to conform accounting practices or to reflect any cost savings or other synergies anticipated as a result of the acquisition.

Antex Biologics Inc.

On May 31, 2003, BioPort completed the acquisition of assets from Antex, a subsidiary of Antex Pharma Inc. (Pharma and, together with Antex, Sellers), pursuant to the terms and conditions of the Asset Purchase Agreement dated April 10, 2003 (the Purchase Agreement) by and among BioPort and Sellers. Pursuant to the Purchase Agreement, BioPort acquired from Sellers all of the assets and assumed certain liabilities for cash of $3,400 and transaction costs of $394. The amount of consideration was determined on the basis of arm's length negotiations between BioPort and Sellers. The results of operations for Antex from May 31, 2003 are included in the accompanying consolidated statements of operations.

Total purchase consideration consisted of:

Purchase price	$ 3,400
Direct acquisition costs	394
Total purchase consideration	$ 3,794

The acquisition was accounted for using the purchase method of accounting, as required by SFAS No. 141. All of the acquired assets and assumed liabilities of Antex were recorded at their estimated fair market value on the acquisition date, which approximated book value.

The purchase price was allocated as follows:

Current assets	$ 279
Property and equipment	1,691
In-process research and development consideration	1,824
Total purchase consideration	$ 3,794

In connection with the transaction, the Company recorded a charge of $1,824 for acquired research projects associated with products in development for which, at the acquisition date, technological feasibility had not been established and no alternative future use existed. Because Antex was a development stage company that had not commenced its planned principal operations, the transaction was accounted for as an acquisition of assets rather than as a business combination and, therefore, goodwill was not recorded.

4. Accounts receivable

Accounts receivable consist of the following:

	December 31,		June 30,
	2004	2005	2006
Billed	$ 14,865	$ 1,112	$ 739
Unbilled	3,772	1,418	692
Total	$ 18,637	$ 2,530	$ 1,431

5. Inventories

Inventories consist of the following:

	December 31,		June 30,
	2004	2005	2006
Raw materials and supplies	$ 1,947	$ 2,229	$ 2,094
Work-in-process	6,674	9,547	26,330
Finished goods	4,632	4,665	253
Inventories	$ 13,253	$ 16,441	$ 28,677

6. Property, plant and equipment

Property, plant and equipment consist of the following:

	December 31, 2004	December 31, 2005	June 30, 2006
Land and improvements	$ 2,963	$ 2,995	$ 5,124
Buildings and leasehold improvements	13,496	14,143	22,220
Furniture and equipment	10,563	12,520	14,015
Internal-use software	3,818	3,937	3,937
Construction in-progress	2,086	6,197	14,787
	32,925	39,792	60,083
Less: Accumulated depreciation and amortization	(5,657)	(9,147)	(11,135)
Property, plant and equipment, net	$27,269	$30,645	$ 48,948

Depreciation and amortization expense was $1,214, $1,867 and $3,549 for the years ended December 31, 2003, 2004 and 2005, respectively, and $1,492 and $2,002 for the six months ended June 30, 2005 and 2006, respectively. For the years ended December 31, 2003, 2004 and 2005, depreciation and amortization expense included approximately $0, $209 and $1,257, respectively, related to internally developed software. For the six months ended June 30, 2005 and 2006, depreciation and amortization expense included approximately $628 and $628, respectively, related to internally developed software.

7. Other assets

In connection with the acquisition of Microscience in 2005 as further described in Note 3 — Acquisitions, the Company acquired a facility lease deposit totaling $454. The deposit remains in effect as of June 30, 2006.

8. Other current liabilities

Other current liabilities consist of the following:

	December 31, 2004	December 31, 2005	June 30, 2006
Contract costs	$ 3	$ 445	$ 647
Professional fees	1,462	1,390	1,134
Interest payable	71	146	155
Property taxes and other	357	628	450
	$ 1,893	$ 2,609	$ 2,386

9. Long-term debt and related party notes payable

The components of long term-debt and related party notes payable are as follows:

	December 31,		June 30,
	2004	2005	2006
Term Loan dated October 2004; 6.625%, due October 2011	$ 7,000	$ 7,000	$ 7,000
Forgivable Loan dated October 2004; 3.0%, due March 2013	2,500	2,500	2,500
ERP Term Loan dated August 2004; prime less 0.375%, due September 2007	2,280	1,760	1,440
Term Loan dated April 2006; LIBOR plus 3%, due April 2011	—	—	8,500
Employee notes payable for stock redemption; 6%, due 2006	947	537	63
Other	140	113	93
Total notes payable	12,867	11,909	19,596
Less current portion of notes payable	(1,046)	(1,408)	(1,232)
Long-term portion of notes payable	$11,821	$10,502	$18,364

In April 2006, the Company completed the acquisition of a 150,000 square foot facility in Frederick, Maryland for $9,750. This facility was previously under a lease which contained an option to purchase the facility. The Company paid $1,250 in cash and financed the remaining balance with a bank loan in the amount of $8,500. This loan requires monthly principal and interest payments from May 2006 through April 2011 of $72 with a balloon payment for the remaining unpaid principal and interest due in April 2011. The interest rate is a floating rate based on the three month LIBOR plus 3% (8.5% as of June 30, 2006). The loan is collateralized by the 150,000 square foot facility. The loan requires the Company to comply with certain non-financial covenants.

In October 2004, the Company entered into a Secured Conditional Loan with the Maryland Economic Development Assistance Fund for $2.5 million. The proceeds of the loan were used to reimburse the Company for eligible costs it incurred to purchase a building in Frederick, Maryland. The loan is secured by a $1,250 letter of credit and a security interest in the building. The Company is required to pay an annual fee of 1% to maintain the letter of credit. The borrowing bears interest at 3% per annum, and the term of the loan ends March 31, 2013. The principal and related accrued interest may be forgiven if specified employment levels are achieved and maintained through December 2012, at least $42,900 in project costs are expended prior to December 2009 and the Company occupies the building through December 2012. The loan requires the Company to employ at least 280 full-time employees at the Company's facilities in Frederick, Maryland as of December 31, 2009 and maintain at least 280 full-time employees through December 31, 2012. If as of December 31, 2009, 2010, 2011 or 2012 the Company employs fewer than 280 and more than 225 full-time employees at the Company's facilities in Frederick, Maryland, then the Company will be required to repay $9 of principal plus accrued interest for each position not filled below the target level of 280 employees. If as of December 31, 2009, 2010, 2011 or 2012 the Company employs fewer than 225 full-time employees at the Company's facilities in Frederick, Maryland, then the Company will be required to repay the entire outstanding principal amount of the loan plus accrued interest. This loan is guaranteed by all of the subsidiaries of the Company.

In connection with the purchase of the building in Frederick, Maryland discussed above, the Company entered into a loan agreement for $7,000 with a bank to finance the remaining portion of the purchase price. The borrowing accrues interest at 6.625% per annum through October 2006. The Company is required to make interest only payments through that date. Beginning in November 2006, the Company

will begin to make monthly payments of $62, based upon a 15 year amortization schedule. In November 2009, the monthly payments will be adjusted based upon a 12 year amortization schedule. All unpaid principal and interest is due in full in October 2011. The Company is required to maintain certain financial and non-financial covenants' including a minimum tangible net worth of not less than $5,000 and a debt coverage ratio of not less than 1.1 to 1. This loan is guaranteed by all of the subsidiaries of the Company.

During 2004, the Company implemented an Enterprise Resource Planning (ERP) system. The Company financed $2,280 of the costs through the issuance of a term loan. The loan bears interest at prime less 0.375% (8.38% as of June 30, 2006) and is due in September 2007. Monthly payments escalate from $40 to $106 over the term. The ERP system provides security for the loan.

In 2004, the Company issued notes as consideration for the repurchase of outstanding class B common stock of BioPort. These notes were issued to various current and past employees who were issued equity as a result of earlier stock option exercises. Amounts are payable in annual installments, through 2006, and bear interest at 6%.

Scheduled principal repayments and maturities on long-term debt as of December 31, 2005 are as follows:

2006	$	1,408
2007		1,302
2008		317
2009		2,838
2010 and thereafter		6,045
	$	11,910

Line of credit

On April 1, 2005, the Company, through BioPort, obtained a line of credit that provides for borrowings of up to $10,000. The line of credit initially expired on May 1, 2006, but has been extended to October 1, 2006. The line of credit is secured by accounts receivable and bears interest at the prime rate less 0.375%. BioPort is subjected to certain covenants, including maintenance of specified equity levels on a quarterly basis. BioPort is currently in compliance with those covenants. There was no outstanding balance for this line of credit as of June 30, 2006.

10. Stockholders' equity

Preferred stock

The Company is authorized to issue up to 3,000,000 shares of preferred stock, $0.01 par value per share (Preferred Stock). Any preferred stock issued may have dividend rates, voting rights, conversion privileges, redemption characteristics, and sinking fund requirements as approved by the Company's board of directors. As of June 30, 2006, no preferred stock has been issued.

Common stock

The Company currently has two classes of common stock authorized and outstanding: class A common stock, $0.01 par value per share (Class A Common Stock), and class B common stock, $0.01 par value per share (Class B Common Stock). The Company is authorized to issue up to 10,000,000 shares of the Class A Common Stock and 2,000,000 shares of the Class B Common Stock. Holders of Class A Common Stock are entitled to one vote for each share of Class A Common Stock held on all matters as

may be provided by law. Holders of Class B Common Stock are not entitled to vote the shares of Class B Common Stock, except as otherwise required by law.

Holders of Class A Common Stock and Class B Common Stock are entitled to receive ratably dividends payable as and when declared by the Company's board of directors. On June 15, 2005, the Company's board of directors declared a special cash dividend to the holders of outstanding shares of Class A Common Stock and Class B Common Stock in an aggregate amount of $5,400. The Company's board of directors declared this special dividend in order to distribute the net proceeds of a payment received as a result of the settlement of litigation initiated in 2002 by BioPort against Elan Pharmaceuticals, Inc., Athena Neurosciences, Inc. and Solstice Neurosciences, Inc. in an effort to clarify intellectual property rights, including the recovery of royalties and other costs and fees, to which BioPort believed it was entitled under a series of agreements regarding the development of botulinum toxin products. The Company paid the special cash dividend on July 13, 2005 to stockholders of record as of June 15, 2005. No regular dividends have been declared or paid.

Each share of Class B Common Stock will automatically convert into one share of Class A Common Stock immediately prior to the closing of the first underwritten sale of the Company's securities pursuant to an effective registration statement under the Securities Act of 1933, as amended. Following conversion, the Class B Common Stock will be eliminated and no further shares may be issued.

Prior to the formation of the Company, BioPort issued class A no-par voting common stock (BioPort Class A Common Stock) and class B no-par non-voting common stock (BioPort Class B Common Stock) to fund operations. BioPort, at its sole discretion, elected to redeem 25,000 shares of BioPort Class B Common Stock for $200 during the year ended December 31, 2003.

In June 2004, in the Reorganization, the Company issued 6,487,950 shares of Class A Common Stock in exchange for 6,262,551 shares of BioPort Class A Common Stock and 225,396 shares of BioPort Class B Common Stock held by BioPharm, L.L.C. The Company repurchased and retired the remaining issued and outstanding shares of BioPort Class B Common Stock from former employees. Approximately 189,000 shares of BioPort were repurchased at $7.89 per share and 9,800 shares of BioPort were repurchased at $11.84 per share. Shares were repurchased for $665 in cash and the issuance of $947 in notes payable. See Note 9 — Long-term debt and related party notes payable, for additional information related to the former employee notes payable.

During the year ended December 31, 2005, the Company repurchased 38,984 shares of Class B Common Stock with an original weighted average cost of $0.76 per share, for $337.

Stock options

As of June 30, 2006, the Company has one stock-based employee compensation plan, the Emergent Plan, under which the Company has granted options to purchase shares of Class B Common Stock.

Prior to the Reorganization, BioPort had a separate stock option plan (BioPort plan) under which options were granted to purchase BioPort Class B Common Stock. The exercise price and vesting schedule for options were determined by BioPort's board of directors, or a committee thereof, which was established to administer the BioPort plan options.

As of June 30, 2004, options to purchase 677,381 shares of BioPort Class B Common Stock were outstanding under the BioPort plan. Pursuant to the Reorganization, all outstanding BioPort plan options were assumed by Emergent and option holders were granted replacement stock options to purchase an equal number of shares of Class B Common Stock of Emergent. The exercise period for the replacement options was extended to June 30, 2007. The BioPort options were scheduled to expire on June 30, 2004.

In connection with the Reorganization, the Company recorded stock-based compensation expense as a result of the issuance of the stock options to purchase Class B Common Stock. Based upon the guidance

in APB No. 25, because the stock options granted for Class B Common Stock provided for an extended term over that of the cancelled BioPort plan options, a new measurement date was created and the Company recorded as stock-based compensation expense the excess of the intrinsic value of the modified options over the intrinsic value of the BioPort plan options when originally issued. This resulted in stock-based compensation expense of $2,801, net of taxes, for the year ended December 31, 2004.

Outside of the reorganization, options to purchase an additional 112,000 shares of Class B common stock of Emergent under the Emergent Plan were granted during the year ended December 31, 2004.

The terms and conditions of stock options (including price, vesting schedule, term and number of shares) under the Emergent plan are determined by the Company's compensation committee, which administers the Emergent Plan.

Each option granted under the Emergent Plan becomes exercisable as specified in the relevant option agreement, and no option can be exercised after ten years from the date of grant, beginning one year after the date of grant.

The Emergent Plan has both incentive and non qualified stock option features. Under the plan, the Company may grant options totaling up to 1,250,000 shares of Class B Common Stock. The exercise price of each incentive option must be not less than 100% of the fair market value of the shares on the date of grant, except in the case of the incentive stock options being granted to a 10% stockholder, in which case the exercise price must be not less than 110% of the fair market value of the shares on the date of grant.

The following is a summary of stock option plan activity:

	BioPort Plan		Emergent Plan		
	Number of shares	Weighted average exercise price	Number of shares	Weighted average exercise price	Aggregate intrinsic value
Outstanding at December 31, 2002	803,242	$ 0.25	—	$ —	—
Granted	103,500	13.05	—	—	—
Exercised	(152,676)	0.26	—	—	—
Forfeited	(77,235)	0.80	—	—	—
Outstanding at December 31, 2003	676,831	2.17	—	—	—
Exercisable at December 31, 2003	458,696	0.58	—	—	—
Granted	47,391	3.11	281,898	7.89	—
Exercised	(42,607)	0.27	—	—	—
Converted from BioPort to Emergent Plan	(677,381)	1.24	677,381	1.24	—
Forfeited	(4,234)	1.36	(57,784)	3.44	—
Outstanding at December 31, 2004	—	—	901,495	$ 3.27	—
Exercisable at December 31, 2004	—	—	860,279	2.95	—
Granted	—	—	280,000	11.19	—
Exercised	—	—	(46,384)	0.91	—
Forfeited	—	—	(43,032)	7.57	—
Outstanding at December 31, 2005	—	—	1,092,079	$ 5.11	—

	BioPort Plan		Emergent Plan		
	Number of shares	Weighted average exercise price	Number of shares	Weighted average exercise price	Aggregate intrinsic value
Exercisable at December 31, 2005	—	—	852,481	$ 3.50	—
Granted (unaudited)	—	—	57,500	29.58	—
Exercised (unaudited)	—	—	(22,615)	1.86	—
Forfeited (unaudited)	—	—	(39,485)	5.52	—
Outstanding at June 30, 2006	—	—	1,087,479	$ 6.46	$ 25,142,514
Exercisable at June 30, 2006	—	—	820,047	$ 3.89	$ 21,067,007

The weighted average remaining contractual term of options outstanding and exercisable as of June 30, 2006 was 2.31 years and 1.52 years, respectively.

The weighted average grant date fair value of options granted during the years ended December 31, 2003, 2004 and 2005 was $7.97, $2.73 and $4.28, respectively, and $10.37 for the six months ended June 30, 2006. The total intrinsic value of options exercised during the years ended December 31, 2003, 2004 and 2005 and during the six months ended June 30, 2006 was $1,165, $325 and $563 and $518, respectively.

At December 31, 2005, stock options outstanding and vested by exercise price were as follows:

	Options outstanding			Options exercisable	
Range of exercise prices	Number outstanding	Weighted average remaining contractual life (years)	Weighted average exercise price	Number exercisable	Weighted average exercise price
$ 0.25	342,879	1.50	$ 0.25	342,879	$ 0.25
0.28	162,500	1.50	0.28	162,500	0.28
4.43	16,100	1.50	4.43	16,100	4.43
7.89	400,600	2.69	7.89	279,002	7.89
10.06	135,000	4.96	10.06	48,000	10.06
24.52	35,000	4.65	24.52	4,000	24.52
	1,092,079	2.46	$ 5.11	852,481	$ 3.50

The Company's board of directors considered the assessments of valuation specialists in determining the fair value of the Class B Common Stock underlying stock options granted during 2005 and as of December 31, 2003, 2004 and 2005. The assessments of these valuation specialists were based upon the application of the income and market approaches consistent with the practice aid issued by the American Institute of Certified Public Accountants entitled *Valuation of Privately Held Company Equity Securities Issued as Compensation.* Under the income approach, the valuation specialists used a discounted cash flow analysis based on projections of future cash flow to determine an estimated value. Under the market approach, the valuation specialists analyzed comparable public companies and developed an estimated value for the Class B Common Stock based on revenues, earnings and enterprise values. The values derived by each of these methods were adjusted for lack of voting rights, minority interest and lack of marketability of the Class B Common Stock.

Options granted from July 1, 2005 through June 30, 2006 are as follows:

Month of grant	Number of options granted	Weighted average exercise price	Weighted average fair value of common stock	Weighted average intrinsic value(1)
July 2005	10,000	24.52	24.52	—
September 2005	5,000	24.52	24.52	—
November 2005	10,000	24.52	24.52	—
June 2006	57,500	29.58	29.58	—

(1) Intrinsic value reflects the amount by which the value of the shares as of the grant date exceeds the exercise price of the options.

11. Income taxes

Significant components of the provision for income taxes attributable to operations consist of the following:

	Year ended December 31,			Six months ended June 30,	
	2003	2004	2005	2005	2006
Current					
Federal	$1,717	$5,547	$ 16,093	$ 9,236	$(6,949)
State	—	—	200	200	100
Total current	1,717	5,547	16,293	9,436	(6,849)
Deferred					
Federal	(416)	(372)	(9,769)	(9,241)	(832)
State	(51)	(46)	(1,199)	(1,153)	(3)
Total deferred	(467)	(418)	(10,968)	(10,394)	(835)
Total provision (benefit) for income taxes	$1,250	$5,129	$ 5,325	$ (958)	$(7,684)

The Company's net deferred tax asset consists of the following:

	December 31,		June 30,
	2004	2005	2006
Net operating loss carryforward	$ 666	$ 2,242	$ 3,259
Purchased in-process research and development	645	721	703
Stock compensation	1,457	1,696	1,670
Foreign deferrals	—	10,114	13,068
Other	883	3,198	2,707
Deferred tax asset	3,651	17,971	21,407
Fixed assets	(1,859)	(1,387)	(1,131)
Other	(124)	(393)	(629)
Deferred tax liability	(1,983)	(1,780)	(1,760)
Valuation allowance	(666)	(4,221)	(6,842)
Net deferred tax asset	$ 1,002	$11,970	$12,805

Net operating loss carryforwards of approximately $84 million will begin to expire in the year 2018 if unused. The use of the Company's net operating loss carryforwards may be restricted due to changes in Company ownership. The Company paid $4,280, $0, and $17,985 in income taxes in 2003, 2004, and 2005, respectively. For the six months ended June 30, 2005 and 2006, the company paid $500 and $1,200 in income taxes, respectively.

The provision for income taxes differs from the amount of taxes determined by applying the U.S. federal statutory rate to loss before provision for income taxes as a result of the following:

	Year ended December 31,			Six months ended June 30,	
	2003	2004	2005	2005	2006
Federal tax at statutory rates	$1,996	$5,863	$ 7,388	$ 1,330	$(5,176)
State taxes, net of federal benefit	(230)	(714)	(2,329)	(1,504)	(390)
Impact of foreign operations	—	—	(2,278)	(191)	(1,846)
Change in valuation allowance	187	479	3,558	691	2,621
Tax credits	(441)	(492)	(474)	(237)	—
Other differences	(255)	11	(214)	864	(3,118)
Permanent differences	(7)	(18)	(326)	5	225
Federal tax at statutory rates	$1,250	$5,129	$ 5,325	$ 958	$(7,684)

The Company is the subject of an ongoing federal income tax audit for the tax year ended December 31, 2004. The potential financial statement impact of the audit cannot be estimated at this time. Accordingly, the Company has not recorded any reserve relating to this audit.

12. 401(k) savings plan

During 1999, the Company established a defined contribution savings plan under Section 401(k) of the Internal Revenue Code. The 401(k) Plan covers substantially all employees. Under the 401(k) Plan, employees may make elective salary deferrals. The Company provides for matching of qualified deferrals up to 50% of the first 6% of the employee's salary. During the years ended December 31, 2003, 2004 and 2005, the Company made matching contributions of approximately $182, $452 and $520, respectively. During the six months ended June 30, 2005 and 2006, the Company made matching contributions of approximately $236 and $282, respectively.

13. Commitments and settlement gains

Leases

The Company leases laboratory and office facilities, office equipment and vehicles under various operating lease agreements. The Company leases office and laboratory space in Gaithersburg, Maryland under a noncancelable operating lease that contains a 3% annual escalation and expires on November 30, 2008. For the years ended December 31, 2003, 2004 and 2005 and the six months ended June 30, 2005 and 2006, total rent expense was $890, $1,334 and $2,526 and $1,074 and $882, respectively.

Future minimum payments under operating lease obligations as of December 31, 2005 are as follows:

2006	$ 1,689
2007	1,249
2008	1,188
2009	56
Total minimum lease payments	$ 4,182

Vendor contracts

In accordance with a recently signed research contract, the Company is committed to spending a minimum of $200 in research and development activities by September 2007. To date, the Company has incurred minimal expenditures under this contract.

Litigation

In June 2002, BioPort initiated a lawsuit against Élan Pharmaceuticals and related entities in an effort to clarify intellectual property rights, including the recovery of royalties and other costs and fees, to which BioPort believed it was entitled under a set of 1991 agreements and to clarify intellectual property rights associated with those agreements. BioPort sought damages, injunctive relief and declaratory relief. On June 27, 2005, the Company obtained a settlement pursuant to which Élan and related entities agreed to pay the Company $10,000. Payment of such settlement was received by the Company in July 2005. The agreement also clarified the parties' intellectual property rights. Upon receipt of the settlement from Élan Pharmaceuticals and related entities, the Company distributed a net settlement amount (total proceeds from the settlement less reserves for applicable federal and state income taxes, legal expenses related to the suit and other miscellaneous expenses) of $5,400 to all Company stockholders of record as of June 15, 2005.

In 1998, the Company recorded obligations related to the initial purchase agreement of Michigan Biologic Products Institute of $10,119. During 2004, the Company settled its entire remaining purchase obligations to the State of Michigan for $6,300, resulting in a gain of $3,819, which is reflected as a component of operations on the accompanying statement of operations.

From time to time, the Company is involved in product liability claims and other litigation considered normal in the nature of its business. The Company does not believe that any such proceedings would have a material, adverse effect on the results of its operations.

14. Related party transactions

Simba LLC, a Maryland based limited liability company 100% owned by the Company's Chief Executive Officer and his wife, provides chartered air transportation. Simba offers its services to the Company on a discount from Simba's normal commercial rate. For the years ended December 31, 2003, 2004 and 2005 and the six months ended June 30, 2005 and 2006, the Company paid approximately $0, $32 and $34 and $28 and $13, respectively, for transportation on an as needed basis for business purposes. As of May 2006, this arrangement has been terminated.

The Company has entered into marketing and sales contracts with family members of the Chief Executive Officer to market and sell BioThrax in certain international territories if certain conditions are met. A consulting arrangement with the Chief Executive Officer's sister requires a payment of 4% of net sales, not to exceed $2.00 per dose, under the agreement. A marketing arrangement with an entity affiliated with the Chief Executive Officer and his family requires a payment of 40% of gross sales in countries in the Middle East and North Africa, except Israel. No royalty payments under these agreements have been triggered for the years ended December 31, 2003, 2004 and 2005 and the six months ended June 30, 2005 and 2006. These arrangements have been terminated.

For the years ended December 31, 2003, 2004 and 2005 and the six months ended June 30, 2005 and 2006, the Company paid approximately $116, $494 and $794, and $378 and $246, respectively, in consulting and lease and transportation arrangements with various persons or entities affiliated with the Chief Executive Officer or two members of the board of directors. Accounts payable for these services as of June 30, 2006 was $2. The Company currently has an agreement with a director to perform corporate strategic issues consultation and directed project support to the marketing and communications group

and an agreement with East West Resources Corporation, a company owned by the Chief Executive Officer, to provide transportation and logistical support.

15. Segment information

The Company operates in two business segments: biodefense and commercial. In the biodefense business, the Company develops and commercializes products for use against biological agents that are potential weapons of bioterrorism. Revenues in this segment relate to the Company's FDA approved product, BioThrax. In the commercial business, the Company develops products for use against infectious diseases with significant unmet or underserved medical needs. Revenues in this segment consist primarily of development and grant revenues received under collaboration and grant arrangements. The all other segment relates to the general operating costs of the business and includes costs of the centralized services departments, which are not allocated to the other segments. The assets in this segment consist of cash and fixed assets.

	Reportable segments			
	Biodefense	Commercial	All other	Total
Year Ended December 31, 2005				
External revenue	$ 128,219	$ 2,469	$ —	$ 130,688
Research and development	10,327	6,962	1,092	18,381
Interest revenue	—	—	485	485
Interest expense	—	—	(767)	(767)
Depreciation and amortization	2,911	411	226	3,548
Net income (loss)	58,632	(40,325)	2,523	15,784
Assets	40,502	5,489	54,341	100,332
Expenditures for long-lived assets	$ 3,286	$ 3,052	$ 194	$ 6,532
Year Ended December 31, 2004				
External revenue	$ 82,585	$ 909	$ —	$ 83,494
Research and development	6,279	1,136	2,702	10,117
Interest revenue	—	—	65	65
Interest expense	—	—	(241)	(241)
Depreciation and amortization	1,685	169	10	1,867
Net income (loss)	21,776	(5,428)	(4,876)	11,472
Assets	51,626	3,491	13,939	69,056
Expenditures for long-lived assets	$ 8,320	$ 668	$ 8,084	$ 17,072

	Reportable segments			
	Biodefense	Commercial	All other	Total
Year Ended December 31, 2003				
External revenue	$ 55,536	$ 233	$ —	$ 55,769
Research and development	4,352	477	1,498	6,327
Interest revenue	—	—	100	100
Interest expense	—	—	(293)	(293)
Depreciation and amortization	1,153	61	—	—
Net income (loss)	6,106	(1,459)	(193)	(4,454)
Asset	28,266	2,462	7,119	37,847
Expenditures for long-lived assets	$ 4,020	$ 103	$ —	$ 4,123

The accounting policies of the segments are the same as those described in the summary of significant accounting policies in Note 2 — Summary of significant accounting policies. There are no inter-segment transactions.

16. Quarterly financial data (unaudited)

Quarterly financial information for the years ended December 31, 2005 and 2004 is presented in the following tables:

	Three months ended			
	March 31	June 30	September 30	December 31
Fiscal year 2005				
Revenues	$ 15,261	$44,058	$ 27,581	$ 43,788
Income (loss) from operations	425	3,699	4,498	12,714
Net income (loss)	225	2,616	3,410	9,533
Net income (loss) per share, basic	0.03	0.40	0.44	1.23
Net income (loss) per share, diluted	0.03	0.37	0.40	1.11
Fiscal year 2004				
Revenues	$ 20,360	$13,044	$ 22,241	$ 27,848
Income (loss) from operations	3,758	(7,632)	8,063	12,582
Net income (loss)	2,582	(5,271)	5,580	8,560
Net income (loss) per share, basic	0.39	(0.79)	0.86	1.32
Net income (loss) per share, diluted	0.37	(0.79)	0.79	1.22

17. Subsequent events

In July 2006, the Company entered into a lease agreement for approximately 23,000 square feet of office space in Rockville, Maryland. Annual rent begins at $600 per year and escalates at approximately 3% per year over the ten year term of the lease. The Company has a five year renewal option at the end of the initial term.

In August 2006, the Company entered into a term loan for $10,000 and a revolving credit loan for up to $5,000. Under the term loan, the Company is required to make monthly principal payments beginning in April 2007. A residual principal payment of approximately $4.0 million is due upon maturity in August 2011. Upon the Company's request, the term loan is subject to an extension term in the sole discretion of the lender for five additional years until August 2016 for an extension fee of 1.00% of the

principal balance of the loan. If the term of the loan were extended, the Company would be required to continue to make monthly principal payments through maturity in August 2016 in lieu of the residual principal payment otherwise due in August 2011. Interest is payable monthly and accrues at an annual rate equal to LIBOR plus 3.75%.

Under the revolving credit loan, the Company is not required to repay outstanding principal until October 2007. In October 2007, the outstanding principal under the revolving credit loan will convert to a term loan with required monthly principal payments through maturity in August 2011. Interest is payable monthly and accrues at an annual rate equal to LIBOR plus 3.75%. The Company also is required to pay a fee on a quarterly basis equal to 0.50% of the average daily difference between $5.0 million and the amount outstanding under the revolving credit loan.

The term loan and revolving credit loan are secured by substantially all of BioPort's assets, other than accounts receivable under BioThrax supply contracts with the DoD and HHS. The Company is required to maintain on an annual basis a minimum tangible net worth of not less than the sum of 85% of tangible net worth for the most recently completed fiscal year plus 25% of current net operating profit after taxes. In addition, the Company is required to maintain on a quarterly basis a ratio of earnings before interest, taxes, depreciation and amortization for the most recent four quarters to the sum of current obligations under capital leases and principal obligations and interest expenses for borrowed money, in each case due and payable for the following four quarters, of not less than 1.25 to 1.00.

shares

Common stock

Prospectus

JPMorgan
Cowen and Company
HSBC

, 2006

Until , 2006 (25 days after the date of this prospectus), all dealers that buy, sell or trade our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table indicates the expenses to be incurred in connection with the offering described in this Registration Statement, other than underwriting discounts and commissions, all of which will be paid by the Registrant. All amounts are estimated except the Securities and Exchange Commission registration fee and the National Association of Securities Dealers Inc. filing fee.

	Amount
Securities and Exchange Commission registration fee	$ 9,229
National Association of Securities Dealers Inc. fee	9,125
Nasdaq Stock Market listing fee	*
Accountants' fees and expenses	*
Legal fees and expenses	*
Blue Sky fees and expenses	*
Transfer Agent's fees and expenses	*
Printing and engraving expenses	*
Miscellaneous	*
Total Expenses	$ *

* To be filed by amendment.

Item 14. Indemnification of Directors and Officers

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. The Registrant's restated certificate of incorporation provides that no director of the Registrant shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as director, notwithstanding any provision of law imposing such liability, except to the extent that the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he is or is threatened to be made a party by reason of such position, if such person 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, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to 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 other adjudicating court determines that, despite the adjudication of liability

but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnify for such expenses which the Court of Chancery or such other court shall deem proper.

The Registrant's restated certificate of incorporation provides that the Registrant will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Registrant) by reason of the fact that he or she is or was, or has agreed to become, a director or officer of the Registrant, or is or was serving, or has agreed to serve, at the Registrant's request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, including any employee benefit plan, (all such persons being referred to hereafter as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if Indemnitee acted in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Registrant, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. The Registrant's restated certificate of incorporation provides that the Registrant will indemnify any Indemnitee who was or is a party to or threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Registrant to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer of the Registrant, or is or was serving, or has agreed to serve, at our request, as a director, officer, partner, employee or trustee of or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, (including any employee benefit plan), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if Indemnitee acted in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Registrant, except that no indemnification shall be made with respect to any claim, issue or matter as to which Indemnitee shall have been adjudged to be liable to the Registrant, unless, and only to the extent, that the Court of Chancery of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of such liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnity for such expense (including attorney's fees) which the Court of Chancery of Delaware or the court in which such action or suit was brought shall deem proper. Notwithstanding the foregoing, to the extent that an Indemnitee has been successful, on the merits or otherwise, in defense of any action, suit or proceeding, Indemnitee shall be indemnified by the Registrant against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

The Registrant has entered into agreements to indemnify the Registrant's directors and executive officers. These agreements, among other things, provide that the Registrant will indemnify the director or executive officer to the fullest extent permitted by law for claims arising in his or her capacity as a director, officer, manager, employee, agent or representative of the Registrant. The indemnification agreements also establish the procedures that will apply in the event a director or officer makes a claim for indemnification.

The Registrant maintains a general liability insurance policy which covers certain liabilities of directors and officers of the Registrant arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement the Registrant enters into in connection with the sale of common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, the Registrant,

the Registrant's directors, the Registrants officers and persons who control the Registrant with the meaning of the Securities Act of 1933, as amended, against certain liabilities.

Item 15. Recent Sales of Unregistered Securities

Set forth below is information regarding shares of class A and class B common stock issued, and options granted, by the Registrant for class B common stock within the past three years. Also included is the consideration, if any, received by the Registrant for such shares, options and information relating to the section of the Securities Act, or rule of the Securities and Exchange Commission, under which exemption from registration was claimed.

(a) Issuance of Securities

(1) On June 30, 2004, the Registrant issued an aggregate of 6,487,950 shares of class A common stock to stockholders of BioPort Corporation in exchange for an equal number of outstanding shares of common stock of BioPort. All other issued and outstanding shares of common stock of BioPort were repurchased and retired. As a result of this exchange, BioPort became a wholly owned subsidiary of the Registrant.

(2) On June 23, 2005, the Registrant issued an aggregate of 1,264,051 shares of class A common stock to Microscience Investments Limited, formerly Microscience Holdings plc, in connection with the acquisition of all the outstanding shares of capital stock of Microscience Limited.

No underwriters were involved in the foregoing issuances of securities. The securities described in this section (a) of Item 15 were issued to investors in reliance upon the exemption from the registration requirements of the Securities Act, as set forth in Section 4(2) under the Securities Act, relative to transactions by an issuer not involving any public offering, to the extent an exemption from such registration was required. All stockholders to whom shares of class A common stock described above were issued represented to the Registrant in connection with such issuances that they were acquiring the shares for their own account, for investment, and not with a view to the sale or distribution, and that they had sufficient knowledge and experience in financial matters so as to be capable of evaluating the merits and risks of purchasing the shares. The stockholders received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration statement or an available exemption from such registration.

(b) Stock Option Grants

Since inception, we have issued options to certain employees and directors to purchase an aggregate of 1,271,229 shares of our class B common stock as of August 31, 2006. As of August 31, 2006, options to purchase 68,999 shares of class B common stock had been exercised, options to purchase 140,551 shares of class B common stock had been forfeited and options to purchase 1,061,679 shares of class B common stock remained outstanding at a weighted average exercise price of $6.38 per share.

The issuance of stock options and the common stock issuable upon the exercise of such options as described in this section (b) of Item 15 were issued pursuant to written compensatory plans or arrangements with our employees, directors and consultants, in reliance on the exemption provided by Section 3(b) of the Securities Act and Rule 701 promulgated thereunder. All recipients either received adequate information about the Registrant or had access, through employment or other relationships, to such information.

All of the foregoing securities are deemed restricted securities for purposes of the Securities Act. All certificates representing the issued shares of common stock described in this Item 15 included appropriate legends setting forth that the securities had not been registered and the applicable restrictions on transfer.

Item 16. Exhibits

The exhibits to the registration statement are listed in the Exhibit Index to this registration statement and are incorporated by reference herein.

Item 17. Undertakings

(a) The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each 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 Securities 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 Securities Act and will be governed by the final adjudication of such issue.

(c) The undersigned registrant hereby undertakes that:

(i) 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 the 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 the registration statement as of the time it was declared effective.

(ii) For purposes of determining any liability under the Securities Act, 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.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this Amendment No. 1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Gaithersburg, State of Maryland on the 25th day of September 2006.

EMERGENT BIOSOLUTIONS INC.

By: /s/ Fuad El-Hibri
Fuad El-Hibri
President, Chief Executive Officer and Chairman of the Board of Directors

Pursuant to the requirements of the Securities Act, this Amendment No. 1 to the Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ FUAD EL-HIBRI Fuad El-Hibri	President, Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)	September 25, 2006
/s/ R. DON ELSEY R. Don Elsey	Vice President Finance, Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	September 25, 2006
* Joe M. Allbaugh	Director	September 25, 2006
* Zsolt Harsanyi, Ph.D	Director	September 25, 2006
* Jerome M. Hauer	Director	September 25, 2006
* Shahzad Malik, M.D.	Director	September 25, 2006
* Ronald B. Richard	Director	September 25, 2006
* Louis Sullivan, M.D.	Director	September 25, 2006

*By: /s/ FUAD EL-HIBRI
Fuad El-Hibri
Attorney-in-fact

EXHIBIT INDEX

Exhibit Number	Description
1.1**	Form of Underwriting Agreement
3.1*	Amended and Restated Certificate of Incorporation of the Registrant
3.2	Form of Restated Certificate of Incorporation of the Registrant to be effective upon completion of the offering
3.3*	Bylaws of the Registrant
3.4	Form of Amended and Restated By-laws of the Registrant to be effective upon the completion of the offering
4.1**	Specimen certificate evidencing shares of common stock
4.2*	Registration Rights Agreement, dated June 23, 2005, between the Registrant and Microscience Investments Limited, formerly Microscience Holdings plc
4.3	Registration Rights Agreement, dated September 22, 2006, among the Registrant and the entities listed on Schedule 1 thereto
4.4**	Rights Agreement, to be entered into between the Registrant and the Rights Agent
5.1	Form of Opinion of Wilmer Cutler Pickering Hale and Dorr LLP to be issued prior to effectiveness
9.1*	Voting and Right of First Refusal Agreement, dated October 21, 2005 between the William J. Crowe, Jr. Revocable Living Trust and Fuad El-Hibri
9.2*	Voting Agreement, dated June 30, 2004, between BioPharm, L.L.C. and Michigan Biologics Products, Inc.
9.3*	Voting Agreement, dated June 30, 2004, between BioPharm, L.L.C. and Biologika, L.L.C.
9.4*	Voting Agreement, dated June 30, 2004, by and among the stockholders named therein
9.5	Voting Agreement, dated August 11, 2006, between BioPharm, L.L.C. and Microscience Investments Limited, formerly Microscience Holdings plc
10.1*	Employee Stock Option Plan, as amended and restated
10.2*	Form of Director Stock Option Agreement
10.3**	2006 Stock Incentive Plan
10.4**	Form of Incentive Stock Option Agreement under 2006 Stock Incentive Plan
10.5**	Form of Nonstatutory Stock Option Agreement under 2006 Stock Incentive Plan
10.6**	Severance Plan and Termination Protection Program
10.7*	Form of Indemnity Agreement
10.8†*	Contract No. W9113M-04-D-0002, dated January 3, 2004, between BioPort Corporation and U.S. Army Space and Missile Defense Command, as amended
10.9†*	Contract No. 200-2005-11811, dated May 5, 2005, between BioPort Corporation and Department of Health and Human Services, Office of Public Health Emergency Preparedness and Office of Research and Development Coordination, as amended
10.10†*	Filling Services Agreement, dated March 18, 2002, between BioPort Corporation and Hollister-Stier Laboratories LLC, as amended
10.11†*	BT Vaccine License Agreement, dated November 23, 2004, between the Registrant and the Health Protection Agency
10.12†*	BT Vaccine Development Agreement, dated November 23, 2004, between the Registrant and the Health Protection Agency
10.13†*	rBot Vaccine License Agreement, dated November 23, 2004, between the Registrant and the Health Protection Agency
10.14†*	rBot Vaccine Development Agreement, dated November 23, 2004, between the Registrant and the Health Protection Agency
10.15†*	Exclusive Distribution Agreement, dated November 23, 2004, between the Registrant and the Health Protection Agency

Exhibit Number	Description
10.16*	Investment Agreement relating to Microscience Holdings plc, dated March 18, 2005, among the Wellcome Trust, Microscience Investments Limited, formerly Microscience Holdings plc, and Emergent Product Development UK Limited, formerly Microscience Limited, as amended
10.17	Standard Employment Contract, dated September 22, 2006, between Emergent Product Development UK Limited, formerly Emergent Europe Limited, and Steven N. Chatfield
10.18*	Letter Agreement, dated July 11, 2006, between the Registrant and Steven N. Chatfield
10.19†*	Consulting Services Agreement, dated March 1, 2006, between the Registrant and The Hauer Group
10.20	Amended and Restated Marketing Agreement, dated January 1, 2000, between BioPort Corporation and Intergen N.V., as amended
10.21*	Lease, dated December 1, 1998, between ARE-QRS, Corp. and Antex Biologics Inc., as amended
10.22*	Lease (540 Eskdale Road, Winnersh Triangle, Wokingham, Berkshire), dated December 13, 1996, between Slough Properties Limited and Azur Environmental Limited, as assigned to Emergent Product Development UK Limited, formerly Microscience Limited
10.23*	Lease (545 Eskdale Road, Winnersh Triangle, Wokingham, Berkshire), dated December 13, 1996, between Slough Properties Limited and Azur Environmental Limited, as assigned to Emergent Product Development UK Limited, formerly Microscience Limited
10.24	Lease Agreement, dated June 27, 2006, between Brandywine Research LLC and the Registrant
10.25*	Amended and Restated Loan Agreement, dated July 29, 2005, between BioPort Corporation and Fifth Third Bank, as amended
10.26*	Loan and Security Agreement, dated October 14, 2004, among the Registrant, Emergent Commercial Operations Frederick Inc., formerly Advanced BioSolutions, Inc., Antex Biologics Inc., BioPort Corporation and Mercantile Potomac Bank
10.27*	Promissory Note, dated October 14, 2004, from Emergent Commercial Operations Frederick Inc., formerly Advanced BioSolutions, Inc., to Mercantile Potomac Bank
10.28*	Loan Agreement, dated October 15, 2004, between Emergent Commercial Operations Frederick Inc., formerly Advanced BioSolutions, Inc., and the Department of Business and Economic Development
10.29*	Deed of Trust Note, dated October 14, 2004, between Emergent Commercial Operations Frederick Inc., formerly Advanced BioSolutions, Inc., and the Department of Business and Economic Development
10.30†*	Term Note, dated August 10, 2004, from BioPort Corporation to Fifth Third Bank
10.31*	Loan Agreement, dated April 25, 2006, among the Registrant, Emergent Frederick LLC and HSBC Realty Credit Corporation (USA)
10.32*	Bond Purchase Agreement, dated March 31, 2005, between the County Commissioners of Frederick County, Emergent Commercial Operations Frederick Inc., formerly Emergent Biologics Inc., and Mercantile Potomac Bank
10.33†*	License and Co-development Agreement, dated May 6, 2006, between Emergent Product Development UK Limited, formerly Emergent Europe Limited, and Sanofi Pasteur, S.A.
10.34**	Product Supply Agreement, dated June 12, 2006, between Emergent Product Development Gaithersburg Inc. and Talecris Biotherapeutics, Inc.
10.35	Election of Fuad El-Hibri to Participate in the Severance Plan and Termination Protection Program
10.36	Services Agreement, dated August 1, 2006, between East West Resources Corporation and the Registrant
10.37	Director Compensation Program
10.38	Revolving Credit Note, dated July 29, 2005, from BioPort Corporation to Fifth Third Bank
10.39	Promissory Note, dated April 25, 2006, from Emergent Frederick LLC to HSBC Realty Credit Corporation (USA)
10.40	Loan Agreement, dated August 25, 2006, among the Registrant, BioPort Corporation and HSBC Realty Credit Corporation (USA)
10.41	Promissory Note (Term Note), dated August 25, 2006, from BioPort Corporation to HSBC Realty Credit Corporation (USA)

Exhibit Number	Description
10.42	Promissory Note (Revolving Credit Loan), dated August 25, 2006, from BioPort Corporation to HSBC Realty Credit Corporation (USA)
21.1**	Subsidiaries of the Registrant
23.1	Consent of Independent Registered Public Accounting Firm
23.2**	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1)
24.1*	Powers of Attorney (included on signature page)

***** Previously filed.

****** To be filed by amendment.

† Confidential treatment requested. Confidential materials omitted and filed separately with the Securities and Exchange Commission.

Exhibit 3.2

RESTATED CERTIFICATE OF INCORPORATION

OF

EMERGENT BIOSOLUTIONS INC.

Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware

(originally incorporated on December 19, 2003)

FIRST: The name of the Corporation is Emergent BioSolutions Inc. (hereinafter referred to as the "Corporation").

SECOND: The address of the Corporation's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is 115,000,000 shares, consisting of (i) 100,000,000 shares of Common Stock, $0.001 par value per share ("Common Stock"), and (ii) 15,000,000 shares of Preferred Stock, $0.001 par value per share ("Preferred Stock").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A COMMON STOCK.

1. Voting. The holders of the Common Stock shall have voting rights at all meetings of stockholders, each such holder being entitled to one vote for each share thereof held by such holder; provided, however, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Certificate of Incorporation (which, as used herein, shall mean the restated certificate of incorporation of the Corporation, as amended from time to time, including the terms of any certificate of designations of any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon pursuant to this Certificate of Incorporation. There shall be no cumulative voting.

The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of capital stock representing a majority of the votes entitled to be cast irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of Delaware.

2. Dividends. Dividends may be declared and paid on the Common Stock from funds lawfully available therefor as and when determined by the Board of Directors and subject to any preferential dividend or other rights of any then outstanding Preferred Stock.

3. Liquidation. Upon the dissolution or liquidation of the Corporation, whether voluntary or involuntary, holders of Common Stock will be entitled to receive ratably all assets of the Corporation available for distribution to its stockholders, subject to any preferential or other rights of any then outstanding Preferred Stock.

B PREFERRED STOCK.

Preferred Stock may be issued from time to time in one or more series, each of such series to have such terms as stated or expressed herein and in the resolution or resolutions providing for the issue of such series adopted by the Board of Directors as hereinafter provided. Any shares of Preferred Stock which may be redeemed, purchased or acquired by the Corporation may be reissued except as otherwise provided by law.

Authority is hereby expressly granted to the Board of Directors from time to time to issue the Preferred Stock in one or more series, and in connection with the creation of any such series, by resolution or resolutions providing for the issuance of the shares thereof, to determine and fix the number of shares of such series and such voting powers, full or limited, or no voting powers, and such designations, preferences and relative participating, optional or other special rights, and qualifications, limitations or restrictions thereof, including without limitation thereof, dividend rights, conversion rights, redemption privileges and liquidation preferences, as shall be stated and expressed in such resolutions, all to the full extent now or hereafter permitted by the General Corporation Law of Delaware. Without limiting the generality of the foregoing, the resolutions providing for issuance of any series of Preferred Stock may provide that such series shall be superior or rank equally or be junior to the Preferred Stock of any other series to the extent permitted by law.

The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares then outstanding) by the affirmative vote of the holders of capital stock representing a majority of the votes entitled to be cast irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of Delaware.

FIFTH: Except as otherwise provided herein, the Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute and this Certificate of Incorporation, and all rights conferred upon stockholders herein are granted subject to this reservation.

SIXTH: In furtherance and not in limitation of the powers conferred upon it by the laws of the State of Delaware, and subject to the terms of any series of Preferred Stock, the Board of Directors shall have the power to adopt, amend, alter or repeal the Corporation’s By-laws. Until

the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the affirmative vote of at least 75% of the directors then in office shall be required to adopt, amend, alter or repeal the Corporation's By-laws. Until the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the Corporation's By-laws also may be adopted, amended, altered or repealed by the affirmative vote of the holders of capital stock representing at least a majority of the voting power of all outstanding stock entitled to vote thereon, in addition to any other vote required by this Certificate of Incorporation. Following the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the affirmative vote of a majority of the directors present at any regular or special meeting of the Board of Directors at which a quorum is present shall be required to adopt, amend, alter or repeal the Corporation's By-laws. Following the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the Corporation's By-laws also may be adopted, amended, altered or repealed by the affirmative vote of the holders of capital stock representing at least seventy-five percent (75%) of the voting power of all outstanding stock entitled to vote thereon, in addition to any other vote required by this Certificate of Incorporation. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, (i) until the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the affirmative vote of the holders of capital stock representing at least a majority of the voting power of all outstanding stock entitled to vote thereon, and (ii) following the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the affirmative vote of the holders of capital stock representing at least seventy-five percent (75%) of the voting power of all outstanding stock entitled to vote thereon, shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article SIXTH.

SEVENTH: Except to the extent that the General Corporation Law of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty, no director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability. No amendment to or repeal of this provision shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal.

EIGHTH: The Corporation shall provide indemnification and advancement of expenses as follows:

1. Actions, Suits and Proceedings Other than by or in the Right of the Corporation. The Corporation shall indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation) by reason of the fact that he or she is or was, or has agreed to become, a director or officer of the Corporation, or is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan) (all such persons being referred to hereafter as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys'

fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if Indemnitee acted in good faith and in a manner which Indemnitee 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 or her 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 Indemnitee did not act in good faith and in a manner which Indemnitee 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 his or her conduct was unlawful.

2. Actions or Suits by or in the Right of the Corporation. The Corporation shall indemnify any Indemnitee who was or is a party to or 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 Indemnitee is or was, or has agreed to become, a director or officer of the Corporation, or is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if Indemnitee acted in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Corporation, except that no indemnification shall be made under this Section 2 in respect of any claim, issue or matter as to which Indemnitee shall have been adjudged to be liable to the Corporation, unless, and only to the extent, that the Court of Chancery of Delaware, or the court in which such action or suit was brought, shall determine upon application that, despite the adjudication of such liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnity for such expenses (including attorneys' fees) which the Court of Chancery of Delaware, or the court in which such action or suit was brought, shall deem proper.

3. Indemnification for Expenses of Successful Party. Notwithstanding any other provisions of this Article, to the extent that an Indemnitee has been successful, on the merits or otherwise, in defense of any action, suit or proceeding referred to in Sections 1 and 2 of this Article EIGHTH, or in defense of any claim, issue or matter therein, or on appeal from any such action, suit or proceeding, Indemnitee shall be indemnified against all expenses (including attorneys' fees) actually and reasonably incurred by or on behalf of Indemnitee in connection therewith. Without limiting the foregoing, if any action, suit or proceeding is disposed of, on the merits or otherwise (including a disposition without prejudice), without (i) the disposition being adverse to Indemnitee, (ii) an adjudication that Indemnitee was liable to the Corporation, (iii) a plea of guilty or nolo contendere by Indemnitee, (iv) an adjudication that Indemnitee did not act in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation, and (v) with respect to any criminal proceeding, an adjudication that Indemnitee had reasonable cause to believe his conduct was unlawful, Indemnitee shall be considered for the purposes hereof to have been wholly successful with respect thereto.

4. Notification and Defense of Claim. As a condition precedent to an Indemnitee's right to be indemnified pursuant to Section 1, 2 or 3 of this Article EIGHTH, or to receive advancement of expenses pursuant to Section 5 of this Article EIGHTH, such Indemnitee must notify the Corporation in writing as soon as practicable of any action, suit, proceeding or investigation involving such Indemnitee for which indemnity or advancement of expenses will or could be sought. With respect to any action, suit, proceeding or investigation of which the Corporation is so notified, the Corporation will be entitled to participate therein at its own expense and/or to assume the defense thereof at its own expense, with legal counsel reasonably acceptable to Indemnitee. After notice from the Corporation to Indemnitee of its election so to assume such defense, the Corporation shall not be liable to Indemnitee for any legal or other expenses subsequently incurred by Indemnitee in connection with such action, suit, proceeding or investigation, other than as provided below in this Section 4. Indemnitee shall have the right to employ his or her own counsel in connection with such action, suit, proceeding or investigation, but the fees and expenses of such counsel incurred after notice from the Corporation of its assumption of the defense thereof shall be at the expense of Indemnitee unless (i) the employment of counsel by Indemnitee has been authorized by the Corporation, (ii) counsel to Indemnitee shall have reasonably concluded that there may be a conflict of interest or position on any significant issue between the Corporation and Indemnitee in the conduct of the defense of such action, suit, proceeding or investigation or (iii) the Corporation shall not in fact have employed counsel to assume the defense of such action, suit, proceeding or investigation, in each of which cases the fees and expenses of counsel for Indemnitee shall be at the expense of the Corporation, except as otherwise expressly provided by this Article. The Corporation shall not be entitled, without the consent of Indemnitee, to assume the defense of any claim brought by or in the right of the Corporation or as to which counsel for Indemnitee shall have reasonably made the conclusion provided for in clause (ii) of the preceding sentence. The Corporation shall not be required to indemnify Indemnitee under this Article EIGHTH for any amounts paid in settlement of any action, suit, proceeding or investigation effected without its written consent. The Corporation shall not settle any action, suit, proceeding or investigation in any manner which would impose any penalty or limitation on Indemnitee without Indemnitee's written consent. Neither the Corporation nor Indemnitee will unreasonably withhold or delay its consent to any proposed settlement.

5. Advance of Expenses. Subject to the provisions of Sections 4 and 6 of this Article EIGHTH, any expenses (including attorneys' fees) incurred by or on behalf of Indemnitee in defending an action, suit, proceeding or investigation or any appeal therefrom shall be paid by the Corporation in advance of the final disposition of such matter; provided, however, that the payment of such expenses incurred by or on behalf of Indemnitee in advance of the final disposition of such matter shall be made only upon receipt of an undertaking by or on behalf of Indemnitee to repay all amounts so advanced in the event that it shall ultimately be determined that Indemnitee is not entitled to be indemnified by the Corporation as authorized in this Article. Such undertaking shall be accepted without reference to the financial ability of Indemnitee to make such repayment.

6. Procedure for Indemnification and Advance of Expenses. In order to obtain indemnification pursuant to Section 1, 2 or 3 of this Article EIGHTH or advancement of expenses pursuant to Section 5 of this Article EIGHTH, an Indemnitee shall submit to the Corporation a written request. Any such advancement of expenses shall be made promptly, and

in any event within 30 days after receipt by the Corporation of the written request of Indemnitee, unless the Corporation has assumed the defense pursuant to Section 4 of this Article EIGHTH (and none of the circumstances described in Section 4 of this Article EIGHTH that would nonetheless entitle the Indemnitee to indemnification or an advancement for the fees and expenses of separate counsel have occurred). Any such indemnification, unless ordered by a court, shall be made with respect to requests under Section 1 or 2 only as authorized in the specific case upon a determination by the Corporation that the indemnification of Indemnitee is proper because Indemnitee has met the applicable standard of conduct set forth in Section 1 or 2, as the case may be. Such determination shall be made in each instance (a) by a majority vote of the directors of the Corporation who are not at that time parties to the action, suit or proceeding in question ("disinterested directors"), whether or not a quorum, (b) by a committee of disinterested directors designated by majority vote of disinterested directors, whether or not a quorum, (c) if there are no disinterested directors, or if the disinterested directors so direct, by independent legal counsel (who may, to the extent permitted by law, be regular legal counsel to the Corporation) in a written opinion, or (d) by the stockholders of the Corporation.

7. Remedies. The right to indemnification or advancement of expenses as granted by this Article shall be enforceable by Indemnitee in any court of competent jurisdiction. Neither the failure of the Corporation to have made a determination prior to the commencement of such action that indemnification is proper in the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Corporation pursuant to Section 6 of this Article EIGHTH that Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that Indemnitee has not met the applicable standard of conduct. Indemnitee's expenses (including attorneys' fees) reasonably incurred in connection with successfully establishing Indemnitee's right to advancement of expenses or indemnification, in whole or in part, in any such proceeding shall also be indemnified by the Corporation.

8. Limitations. Notwithstanding anything to the contrary in this Article, except as set forth in Section 7 of this Article EIGHTH, the Corporation shall not indemnify or advance expenses to an Indemnitee pursuant to this Article EIGHTH in connection with a proceeding (or part thereof) initiated by such Indemnitee unless the initiation thereof was approved by the Board of Directors. Notwithstanding anything to the contrary in this Article, the Corporation shall not indemnify or advance expenses to an Indemnitee to the extent such Indemnitee is reimbursed or paid expenses from the proceeds of insurance, and in the event the Corporation makes any indemnification payments or advancement of expenses to an Indemnitee and such Indemnitee is subsequently reimbursed from the proceeds of insurance, such Indemnitee shall promptly refund indemnification payments or advancement of expenses to the Corporation to the extent of such insurance reimbursement.

9. Subsequent Amendment. No amendment, termination or repeal of this Article or of the relevant provisions of the General Corporation Law of Delaware or any other applicable laws shall affect or diminish in any way the rights of any Indemnitee to indemnification or advancement of expenses under the provisions hereof with respect to any action, suit, proceeding or investigation arising out of or relating to any actions, transactions or facts occurring prior to the final adoption of such amendment, termination or repeal.

10. Other Rights. The indemnification and advancement of expenses provided by this Article shall not be deemed exclusive of any other rights to which an Indemnitee seeking indemnification or advancement of expenses may be entitled under any law (common or statutory), agreement or vote of stockholders or disinterested directors or otherwise, both as to action in Indemnitee's official capacity and as to action in any other capacity while holding office for the Corporation, and shall continue as to an Indemnitee who has ceased to be a director or officer, and shall inure to the benefit of the estate, heirs, executors and administrators of Indemnitee. Nothing contained in this Article shall be deemed to prohibit, and the Corporation is specifically authorized to enter into, agreements with officers and directors providing indemnification and advancement rights and procedures different from those set forth in this Article. In addition, the Corporation may, to the extent authorized from time to time by its Board of Directors, grant indemnification and advancement rights to other employees or agents of the Corporation or other persons serving the Corporation and such rights may be equivalent to, or greater or less than, those set forth in this Article.

11. Partial Indemnification and Advance of Expenses. If an Indemnitee is entitled under any provision of this Article to indemnification or advancement of expenses by the Corporation for some or a portion of the expenses (including attorneys' fees), judgments, fines or amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with any action, suit, proceeding or investigation and any appeal therefrom but not, however, for the total amount thereof, the Corporation shall nevertheless indemnify or advance expenses to Indemnitee for the portion of such expenses (including attorneys' fees), judgments, fines or amounts paid in settlement to which Indemnitee is entitled.

12. Insurance. The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan) against any expense, liability or loss incurred by him 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 expense, liability or loss under the General Corporation Law of Delaware.

13. Savings Clause. If this Article or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify each Indemnitee as to any expenses (including attorneys' fees), judgments, fines and amounts paid in settlement in connection with any action, suit, proceeding or investigation, whether civil, criminal or administrative, including an action by or in the right of the Corporation, to the fullest extent permitted by any applicable portion of this Article that shall not have been invalidated and to the fullest extent permitted by applicable law.

14. Definitions. Terms used herein and defined in Section 145(h) and Section 145(i) of the General Corporation Law of Delaware shall have the respective meanings assigned to such terms in such Section 145(h) and Section 145(i).

NINTH: This Article is inserted for the management of the business and for the conduct of the affairs of the Corporation.

1. General Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

2. Number of Directors; Election of Directors. Subject to the rights of holders of any series of Preferred Stock to elect directors, the number of directors of the Corporation shall be established by the Board of Directors. Until the fifth anniversary of the completion of the initial public offering of Common Stock of the Corporation, any change in the number of directors of the Corporation in any class will require a vote of not less than 75% of the directors then in office. Election of directors need not be by written ballot, except as and to the extent provided in the By-laws of the Corporation.

3. Classes of Directors. Subject to the rights of holders of any series of Preferred Stock to elect directors, the Board of Directors shall be and is divided into three classes: Class I, Class II and Class III. Upon the filing of this Restated Certificate of Incorporation, the Board of Directors shall assign each director then in office to one of the three classes, and, automatically and without any further action, each director shall become a member of the class to which such director is assigned and shall serve for a term of office applicable to such class.

4. Terms of Office. Subject to the rights of holders of any series of Preferred Stock to elect directors, each director shall serve for a term ending on the date of the third annual meeting following the annual meeting at which such director was elected; provided that, with respect to the directors serving in the initial classes of Class I, Class II and Class III, the terms of the directors serving in Class I shall expire at the Corporation's first annual meeting of stockholders held after the initial assignment of directors to classified terms; the terms of the directors serving in Class II shall expire at the Corporation's second annual meeting of stockholders held after the initial assignment of directors to classified terms; and the terms of the directors serving in Class III shall expire at the third annual meeting of stockholders held after the initial assignment of directors to classified terms; provided, further, that the term of each director shall continue until the election and qualification of his successor and be subject to his earlier death, resignation or removal. A decrease in the number of authorized directors shall not shorten the term of any incumbent director.

5. Quorum. The greater of (a) a majority of the directors at any time in office and (b) one-third of the number of directors fixed pursuant to Section 2 of this Article NINTH shall constitute a quorum. If at any meeting of the Board of Directors there shall be less than such a quorum, a majority of the directors present may adjourn the meeting from time to time without further notice other than announcement at the meeting, until a quorum shall be present.

6. Action at Meeting. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the Board of Directors unless a greater number is required by law or by this Certificate of Incorporation.

7. Removal. Subject to the rights of holders of any series of Preferred Stock, directors of the Corporation may be removed only for cause and only by the affirmative vote of the holders of capital stock representing at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast in an election of directors.

8. Vacancies. Subject to the rights of holders of any series of Preferred Stock and except as required by law, any vacancy or newly created directorship in the Board of Directors, however occurring, shall be filled only by the directors then in office, although less than a quorum, or by a sole remaining director and shall not be filled by the stockholders. A director elected to fill a vacancy shall hold office until the next election of the class for which such director shall have been chosen, subject to the election and qualification of a successor and to such director's earlier death, resignation or removal.

9. Appointment and Removal of the Chairman of the Board. Until the fifth anniversary of the completion of the initial public offering of the Common Stock of the Corporation, the appointment and removal of the Chairman of the Board will require a vote of not less than 75% of the directors then in office.

10. Stockholder Nominations and Introduction of Business, Etc. Advance notice of stockholder nominations for election of directors and other business to be brought by stockholders before a meeting of stockholders shall be given in the manner provided by the By-laws of the Corporation; provided, however, that no such advance notice shall be required until the second anniversary of the completion of the initial public offering of Common Stock of the Corporation.

11. Amendments to Article. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, (i) until the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the affirmative vote of the holders of capital stock representing at least a majority of the votes which all the stockholders would be entitled to cast thereon, and (ii) following the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the affirmative vote of the holders of capital stock representing at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast thereon, shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article NINTH.

TENTH: Stockholders of the Corporation may not take any action by written consent in lieu of a meeting. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, (i) until the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the affirmative vote of the holders of capital stock representing at least a majority of the votes which all the stockholders would be entitled to cast thereon, and (ii) following the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the affirmative vote of the holders of capital stock representing at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast thereon, shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article TENTH.

ELEVENTH: Special meetings of stockholders for any purpose or purposes may be called at any time by the Board of Directors, the Chairman of the Board or the President, but such special meetings may not be called by any other person or persons. Business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or

purposes stated in the notice of meeting. Notwithstanding any other provision of law, this Certificate of Incorporation or the By-laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, (i) until the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the affirmative vote of the holders of capital stock representing at least a majority of the votes which all the stockholders would be entitled to cast thereon, and (ii) following the second anniversary of the completion of the initial public offering of Common Stock of the Corporation, the affirmative vote of the holders of capital stock representing at least seventy-five percent (75%) of the votes which all the stockholders would be entitled to cast thereon, shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article ELEVENTH.

IN WITNESS WHEREOF, this Restated Certificate of Incorporation, which restates, integrates and amends the certificate of incorporation of the Corporation, and which has been duly adopted in accordance with Sections 228, 242 and 245 of the Delaware General Corporation Law, has been executed by its duly authorized officer this _____ day of _____ , 2006.

EMERGENT BIOSOLUTIONS INC.

By: _____

Name: Fuad El-Hibri

Title: President and Chief Executive Officer

Exhibit 3.4

AMENDED AND RESTATED BY-LAWS
OF
EMERGENT BIOSOLUTIONS INC.

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ARTICLE I

STOCKHOLDERS

1.1 Place of Meetings. All meetings of stockholders shall be held at such place as may be designated from time to time by the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President or, if not so designated, at the principal office of the corporation.

1.2 Annual Meeting. The annual meeting of stockholders for the election of directors and for the transaction of such other business as may properly be brought before the meeting shall be held on a date and at a time designated by the Board of Directors or the Chairman of the Board (which date shall not be a legal holiday in the place where the meeting is to be held). If no annual meeting is held in accordance with the foregoing provisions, a special meeting may be held in lieu of the annual meeting, and any action taken at that special meeting shall have the same effect as if it had been taken at the annual meeting, and in such case all references in these By-laws to the annual meeting of the stockholders shall be deemed to refer to such special meeting.

1.3 Special Meetings. Special meetings of stockholders for any purpose or purposes may be called at any time by the Board of Directors, the Chairman of the Board or the President, but such special meetings may not be called by any other person or persons. Business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting.

1.4 Notice of Meetings. Except as otherwise provided by law, notice of each meeting of stockholders, whether annual or special, shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting. Without limiting the manner by which notice otherwise may be given to stockholders, any notice shall be effective if given by a form of electronic transmission consented to (in a manner consistent with the General Corporation Law of the State of Delaware) by the stockholder to whom the notice is given. The notices of all meetings shall state the place, date and time of the meeting and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting. The notice of a special meeting shall state, in addition, the purpose or purposes for which the meeting is called. If notice is given by mail, such notice shall be deemed given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. If notice is given by electronic transmission, such notice shall be deemed given at the time specified in Section 232 of the General Corporation Law of the State of Delaware.

1.5 Voting List. The Secretary shall prepare, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least 10 days prior to the meeting: (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with notice of the meeting, or (b) during ordinary

business hours, at the principal place of business of the corporation. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

1.6 Quorum. Except as otherwise provided by law, the Certificate of Incorporation or these By-laws, the holders of capital stock representing a majority in voting power of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at the meeting, present in person, present by means of remote communication in a manner, if any, authorized by the Board of Directors in its sole discretion, or represented by proxy, shall constitute a quorum for the transaction of business. A quorum, once established at a meeting, shall not be broken by the withdrawal of enough votes to leave less than a quorum. Except as otherwise provided by law, the Certificate of Incorporation or these By-laws, where a separate vote by a class or classes or series or series is required, the holders of capital stock representing a majority of the voting power of the shares of such class or classes or series or series, present in person, present by means of remote communication in a manner, if any, authorized by the Board of Directors, in its sole discretion, or represented by proxy, shall constitute a quorum entitled to take action with respect to that vote.

1.7 Adjournments. Any meeting of stockholders may be adjourned from time to time to any other time and to any other place at which a meeting of stockholders may be held under these By-laws by the stockholders present or represented at the meeting and entitled to vote, although less than a quorum, or, if no stockholder is present, by any officer entitled to preside at or to act as secretary of such meeting. It shall not be necessary to notify any stockholder of any adjournment of 30 days or less if the time and place of the adjourned meeting, and the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting, are announced at the meeting at which adjournment is taken, unless after the adjournment a new record date is fixed for the adjourned meeting. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting.

1.8 Voting and Proxies. Each stockholder shall have one vote for each share of stock entitled to vote and held of record by such stockholder and a proportionate vote for each fractional share so held, unless otherwise provided by law or the Certificate of Incorporation. Each stockholder of record entitled to vote at a meeting of stockholders may vote in person (including by means of remote communications, if any, by which stockholders may be deemed to be present in person and vote at such meeting) or may authorize another person or persons to vote for such stockholder by a proxy executed or transmitted in a manner permitted by the General Corporation Law of the State of Delaware by the stockholder or such stockholder's authorized agent and delivered (including by electronic transmission) to the Secretary of the corporation. No such proxy shall be voted upon after three years from the date of its execution, unless the proxy expressly provides for a longer period.

1.9 Action at Meeting. When a quorum is present at any meeting, any matter other than the election of directors to be voted upon by the stockholders at such meeting shall be decided by the affirmative vote of the holders of capital stock representing a majority in voting power of the shares of stock present or represented and voting affirmatively or negatively on such matter (or if a separate vote by a class or classes or series or series is required, then in the

case of each such class or classes or series or series, the holders of capital stock representing a majority in voting power of the shares of stock of such class or classes or series or series present or represented and voting affirmatively or negatively on such matter), except when a different vote is required by law, the Certificate of Incorporation or these By-laws. When a quorum is present at any meeting, any election by stockholders of directors shall be determined by a plurality of the votes cast by the stockholders entitled to vote on the election.

1.10 Nomination of Directors.

(a) Except for (1) any directors entitled to be elected by the holders of preferred stock, (2) any directors elected in accordance with Section 2.8 hereof by the Board of Directors to fill a vacancy or newly-created directorship or (3) as otherwise required by applicable law or stock market regulation, following the second anniversary of the completion of the initial public offering of Common Stock of the corporation, only persons who are nominated in accordance with the procedures in this Section 1.10 shall be eligible for election as directors. Nomination for election to the Board of Directors at a meeting of stockholders may be made (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the corporation who (x) complies with the notice procedures set forth in Section 1.10(b), if required pursuant to Section 1.10(a), and (y) is a stockholder of record on the date of the giving of such notice and on the record date for the determination of stockholders entitled to vote at such meeting.

(b) To be timely, a stockholder's notice must be received in writing by the Secretary at the principal executive offices of the corporation as follows: (i) in the case of an election of directors at an annual meeting of stockholders, not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting; provided, however, that (x) in the case of the first annual meeting of stockholders of the corporation held after the closing of the initial public offering of Common Stock of the corporation or (y) in the event that the date of any other annual meeting is advanced by more than 20 days, or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, a stockholder's notice must be so received not earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs; provided, further, that if the second anniversary of the completion of the initial public offering of Common Stock of the corporation occurs after the tenth day preceding the date that a stockholder's notice must otherwise be so received in accordance with the preceding terms of this clause (i), such notice shall be considered timely if so received on or before the tenth day following public disclosure of the second anniversary of the completion of the initial public offering of Common Stock of the corporation; or (ii) in the case of an election of directors at a special meeting of stockholders, provided that the Board of Directors has determined that directors shall be elected at such meeting, not earlier than the 120th day prior to such special meeting and not later than the close of business on the later of (x) the 90th day prior to such special meeting and (y) the tenth day following the day on which notice of the date of such special meeting was mailed or public disclosure of the date of such special meeting was made, whichever first occurs. In no event shall the adjournment or postponement of an annual meeting (or the public announcement thereof) commence a new time period (or extend any time period) for the giving of a stockholder's notice.

The stockholder's notice to the Secretary shall set forth: (A) as to each proposed nominee (1) such person's name, age, business address and, if known, residence address, (2) such person's principal occupation or employment, (3) the class or series and number of shares of stock of the corporation which are beneficially owned by such person, and (4) any other information concerning such person that must be disclosed as to nominees in proxy solicitations pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Exchange Act"); (B) as to the stockholder giving the notice (1) such stockholder's name and address, as they appear on the corporation's books, (2) the class or series and number of shares of stock of the corporation which are owned, beneficially and of record, by such stockholder, (3) a description of all arrangements or understandings between such stockholder and each proposed nominee and any other person or persons (including their names) pursuant to which the nomination(s) are to be made by such stockholder, (4) a representation that such stockholder intends to appear in person or by proxy at the meeting to nominate the person(s) named in its notice and (5) a representation whether the stockholder intends or is part of a group which intends (x) to deliver a proxy statement and/or form of proxy to holders of capital stock representing at least the percentage of voting power of all of the shares of capital stock of the corporation outstanding as of the record date of the annual meeting reasonably believed by such stockholder to be sufficient to elect the nominee or nominees proposed to be nominated by such stockholder, and/or (y) otherwise to solicit proxies from stockholders in support of such nomination; and (C) as to the beneficial owner, if any, on whose behalf the nomination is being made (1) such beneficial owner's name and address, (2) the class and number of shares of stock of the corporation which are beneficially owned by such beneficial owner, (3) a description of all arrangements or understandings between such beneficial owner and each proposed nominee and any other person or persons (including their names) pursuant to which the nomination(s) are to be made and (4) a representation whether the beneficial owner intends or is part of a group which intends (x) to deliver a proxy statement and/or form of proxy to holders of capital stock representing at least the percentage of voting power of all of the shares of capital stock of the corporation outstanding as of the record date of the annual meeting reasonably believed by such beneficial owner to be sufficient to elect the nominee or nominees proposed to be nominated by such stockholder, and/or (y) otherwise to solicit proxies from stockholders in support of such nomination. In addition, to be effective, the stockholder's notice must be accompanied by the written consent of the proposed nominee to serve as a director if elected. The corporation may require any proposed nominee to furnish such other information as may reasonably be required to determine the eligibility of such proposed nominee to serve as a director of the corporation. A stockholder shall not have complied with this Section 1.10(b) if the stockholder (or beneficial owner, if any, on whose behalf the nomination is made) solicits or does not solicit, as the case may be, proxies in support of such stockholder's nominee in contravention of the representations with respect thereto required by this Section 1.10.

(c) The chairman of any meeting shall have the power and duty to determine whether a nomination was made in accordance with the provisions of this Section 1.10 (including whether the stockholder or beneficial owner, if any, on whose behalf the nomination is made solicited (or is part of a group which solicited) or did not so solicit, as the case may be, proxies in support of such stockholder's nominee in compliance with the representations with respect thereto required by this Section 1.10), and if the chairman should determine that a nomination was not made in accordance with the provisions of this Section 1.10, the chairman shall so declare to the meeting and such nomination shall be disregarded.

(d) Except as otherwise required by law, nothing in this Section 1.10 shall obligate the corporation or the Board of Directors to include in any proxy statement or other stockholder communication distributed on behalf of the corporation or the Board of Directors information with respect to any nominee for director submitted by a stockholder.

(e) Notwithstanding the foregoing provisions of this Section 1.10, if the stockholder (or a qualified representative of the stockholder) does not appear at the annual or special meeting of stockholders of the corporation to present a nomination, such nomination shall be disregarded, notwithstanding that proxies in respect of such vote may have been received by the corporation. For purposes of this Section 1.10, to be considered a qualified representative of the stockholder, a person must be authorized by a written instrument executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such written instrument or electronic transmission, or a reliable reproduction of the written instrument or electronic transmission, at the meeting of stockholders.

(f) For purposes of this Section 1.10, "public disclosure" shall include disclosure in a press release reported by the Dow Jones New Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

1.11 Notice of Business at Annual Meetings.

(a) At any annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be (1) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors, (2) otherwise properly brought before the meeting by or at the direction of the Board of Directors, or (3) properly brought before the meeting by a stockholder. For business to be properly brought before an annual meeting by a stockholder, (i) if such business relates to the nomination of a person for election as a director of the corporation, the procedures in Section 1.10 must be complied with and (ii) if such business relates to any other matter, the business must constitute a proper matter under Delaware law for stockholder action and, if the stockholder meeting at which such business is to be transacted is held after the second anniversary of the completion of the initial public offering of Common Stock of the corporation, the stockholder must (x) have given timely notice thereof in writing to the Secretary in accordance with the procedures set forth in Section 1.11(b) and (y) be a stockholder of record on the date of the giving of such notice and on the record date for the determination of stockholders entitled to vote at such annual meeting.

(b) To be timely, a stockholder's notice must be received in writing by the Secretary at the principal executive offices of the corporation not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting; provided, however, that (x) in the case of the first annual meeting of stockholders of the corporation held after the completion of the initial public offering of Common Stock of the corporation or (y) in the event that the date of any other annual meeting is advanced by more than 20 days, or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, a stockholder's notice must be so received not earlier than the 120th day prior to such annual

meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs; provided, further, that if the second anniversary of the completion of the initial public offering of Common Stock of the corporation occurs after the tenth day preceding the date that a stockholder's notice must otherwise be so received in accordance with the preceding terms of this sentence, such notice shall be considered timely if so received on or before the tenth day following public disclosure of the second anniversary of the completion of the initial public offering of Common Stock of the corporation. In no event shall the adjournment or postponement of an annual meeting (or the public announcement thereof) commence a new time period (or extend any time period) for the giving of a stockholder's notice.

The stockholder's notice to the Secretary shall set forth as to each matter the stockholder proposes to bring before the annual meeting (1) a brief description of the business desired to be brought before the annual meeting, the text relating to the business (including the text of any resolutions proposed for consideration and in the event that such business includes a proposal to amend the By-laws, the language of the proposed amendment), and the reasons for conducting such business at the annual meeting, (2) the name and address, as they appear on the corporation's books, of the stockholder proposing such business, and the name and address of the beneficial owner, if any, on whose behalf the proposal is made, (3) the class and number of shares of stock of the corporation which are owned, of record and beneficially, by the stockholder and beneficial owner, if any, (4) a description of all arrangements or understandings between such stockholder or such beneficial owner, if any, and any other person or persons (including their names) in connection with the proposal of such business by such stockholder and any material interest of the stockholder or such beneficial owner, if any, in such business, (5) a representation that such stockholder intends to appear in person or by proxy at the annual meeting to bring such business before the meeting and (6) a representation whether the stockholder or the beneficial owner, if any, intends or is part of a group which intends (x) to deliver a proxy statement and/or form of proxy to holders of capital stock representing at least the percentage of voting power of all of the corporation's capital stock outstanding as of the record date of the annual meeting required to approve or adopt the proposal and/or (y) otherwise to solicit proxies from stockholders in support of such proposal. Notwithstanding anything in these By-laws to the contrary, no business shall be conducted at any annual meeting of stockholders except in accordance with the procedures set forth in this Section 1.11. A stockholder shall not have complied with this Section 1.11(b) if the stockholder (or beneficial owner, if any, on whose behalf the nomination is made) solicits or does not solicit, as the case may be, proxies in support of such stockholder's proposal in contravention of the representations with respect thereto required by this Section 1.11.

(c) The chairman of any meeting shall have the power and duty to determine whether business was properly brought before the meeting in accordance with the provisions of this Section 1.11 (including whether the stockholder or beneficial owner, if any, on whose behalf the proposal is made solicited (or is part of a group which solicited) or did not so solicit, as the case may be, proxies in support of such stockholder's proposal in compliance with the representation with respect thereto required by this Section 1.11), and if the chairman should determine that business was not properly brought before the meeting in accordance with the

provisions of this Section 1.11, the chairman shall so declare to the meeting and such business shall not be brought before the meeting.

(d) Notwithstanding the foregoing provisions of this Section 1.11, if the stockholder (or a qualified representative of the stockholder) does not appear at the annual meeting of stockholders of the corporation to present business, such business shall not be considered, notwithstanding that proxies in respect of such vote may have been received by the corporation. For purposes of this Section 1.11, to be considered a qualified representative of the stockholder, a person must be authorized by a written instrument executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as a proxy at the meeting of stockholders and such person must produce such written instrument or electronic transmission, or a reliable reproduction of the written instrument or electronic transmission, at the meeting of stockholders.

(e) For purposes of this Section 1.11, "public disclosure" shall include disclosure in a press release reported by the Dow Jones New Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

1.12 Conduct of Meetings.

(a) Meetings of stockholders shall be presided over by the Chairman of the Board, if any, or in the Chairman's absence by the Vice Chairman of the Board, if any, or in the Vice Chairman's absence by the Chief Executive Officer, or in the Chief Executive Officer's absence, by the President, or in the President's absence by a Vice President, or in the absence of all of the foregoing persons by a chairman designated by (i) until the fifth anniversary of the completion of the initial public offering of Common Stock of the corporation, at least 75% of the directors then in office, or (ii) following the fifth anniversary of the completion of the initial public offering of Common Stock of the corporation, the Board of Directors, or in the absence of such designation by a chairman chosen by vote of the stockholders at the meeting. The Secretary shall act as secretary of the meeting, but in the Secretary's absence the chairman of the meeting may appoint any person to act as secretary of the meeting.

(b) The Board of Directors may adopt by resolution such rules, regulations and procedures for the conduct of any meeting of stockholders of the corporation as it shall deem appropriate including, without limitation, such guidelines and procedures as it may deem appropriate regarding the participation by means of remote communication of stockholders and proxyholders not physically present at a meeting. Except to the extent inconsistent with such rules, regulations and procedures as adopted by the Board of Directors, the chairman of any meeting of stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at or participation in the meeting to stockholders of record of the corporation, their duly authorized and constituted proxies or such other persons as shall be

determined; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

(c) The chairman of the meeting shall announce at the meeting when the polls for each matter to be voted upon at the meeting will be opened and closed. If no announcement is made, the polls shall be deemed to have opened when the meeting is convened and closed upon the final adjournment of the meeting. After the polls close, no ballots, proxies or votes or any revocations or changes thereto may be accepted.

(d) In advance of any meeting of stockholders, the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President shall appoint one or more inspectors of election to act at the meeting and make a written report thereof. One or more other persons may be designated as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is present, ready and willing to act at a meeting of stockholders, the chairman of the meeting shall appoint one or more inspectors to act at the meeting. Unless otherwise required by law, inspectors may be officers, employees or agents of the corporation. Each inspector, before entering upon the discharge of such inspector's duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of such inspector's ability. The inspector shall have the duties prescribed by law and shall take charge of the polls and, when the vote in completed, shall make a certificate of the result of the vote taken and of such other facts as may be required by law.

1.13 No Action by Consent in Lieu of a Meeting. Stockholders of the corporation may not take any action by written consent in lieu of a meeting.

ARTICLE II

DIRECTORS

2.1 General Powers. The business and affairs of the corporation shall be managed by or under the direction of a Board of Directors, who may exercise all of the powers of the corporation except as otherwise provided by law or the Certificate of Incorporation.

2.2 Number, Election and Qualification. Subject to the rights of holders of any series of Preferred Stock to elect directors, the number of directors of the corporation shall be established by the Board of Directors. Until the fifth anniversary of the completion of the initial public offering of Common Stock of the corporation, any change in the number of directors of the corporation will require a vote of not less than 75% of the directors then in office. Election of directors need not be by written ballot. Directors need not be stockholders of the corporation.

2.3 Classes of Directors. Subject to the rights of holders of any series of Preferred Stock to elect directors, the Board of Directors shall be and is divided into three classes: Class I, Class II and Class III. The allocation of directors among classes shall be determined by resolution of the Board of Directors.

2.4 Terms of Office. Subject to the rights of holders of any series of Preferred Stock to elect directors, each director shall serve for a term ending on the date of the third annual meeting following the annual meeting at which such director was elected; providedthat, with respect to the directors serving in the initial classes of Class I, Class II and Class III, the terms of the directors serving in Class I shall expire at the corporation's first annual meeting of stockholders held after the initial assignment of directors to classified terms; the terms of the directors serving in Class II shall expire at the corporation's second annual meeting of stockholders held after the initial assignment of directors to classified terms; and the terms of the directors serving in Class III shall expire at the third annual meeting of stockholders held after the initial assignment of directors to classified terms; provided, further, that the term of each director shall continue until the election and qualification of a successor and be subject to such director's earlier death, resignation or removal. A decrease in the number of authorized directors shall not shorten the term of any incumbent director.

2.5 Quorum. The greater of (a) a majority of the directors at any time in office and (b) one-third of the number of directors fixed by the Board of Directors shall constitute a quorum. If at any meeting of the Board of Directors there shall be less than such a quorum, a majority of the directors present may adjourn the meeting from time to time without further notice other than announcement at the meeting, until a quorum shall be present.

2.6 Action at Meeting. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the Board of Directors unless a greater number is required by law or by the Certificate of Incorporation.

2.7 Removal. Subject to the rights of holders of any series of Preferred Stock, directors of the corporation may be removed only for cause and only by the affirmative vote of the holders of capital stock representing at least 75% of the votes which all the stockholders would be entitled to cast in an election of directors.

2.8 Vacancies. Subject to the rights of holder of any series of Preferred Stock, and, except as required by law, any vacancy or newly-created directorships on the Board of Directors, however occurring, shall be filled only by the directors then in office, although less than a quorum, or by a sole remaining director and shall not be filled by the stockholders. A director elected to fill a vacancy shall hold office until the next election of the class for which such director shall have been chosen, subject to the election and qualification of a successor or until such director's earlier death, resignation or removal.

2.9 Resignation. Any director may resign by delivering a resignation in writing or by electronic transmission to the corporation at its principal office or to the Chairman of the Board, the Chief Executive Officer, the President or the Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some later time or upon the happening of some later event.

2.10 Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and place as shall be determined from time to time by the Board of Directors; provided that any director who is absent when such a determination is made shall be

given notice of the determination. A regular meeting of the Board of Directors may be held without notice immediately after and at the same place as the annual meeting of stockholders.

2.11 Special Meetings. Special meetings of the Board of Directors may be held at any time and place designated in a call by the Chairman of the Board, the Chief Executive Officer, the President, two or more directors, or by one director in the event that there is only a single director in office.

2.12 Notice of Special Meetings. Notice of any special meeting of directors shall be given to each director by the Secretary or by the officer or one of the directors calling the meeting. Notice shall be duly given to each director (a) in person or by telephone at least 24 hours in advance of the meeting, (b) by sending written notice via reputable overnight courier, telecopy or electronic mail, or delivering written notice by hand, to such director's last known business, home or electronic mail address at least 48 hours in advance of the meeting, or (c) by sending written notice via first-class mail to such director's last known business or home address at least 72 hours in advance of the meeting. A notice or waiver of notice of a meeting of the Board of Directors need not specify the purposes of the meeting.

2.13 Meetings by Conference Communications Equipment. Directors may participate in meetings of the Board of Directors or any committee thereof by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation by such means shall constitute presence in person at such meeting.

2.14 Action by Consent. Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent to the action in writing or by electronic transmission, and the written consents or electronic transmissions are filed with the minutes of proceedings of the Board of Directors or committee.

2.15 Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the corporation. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members of the committee present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors and subject to the provisions of law, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation and may authorize the seal of the corporation to be affixed to all papers which may require it. Each such committee shall keep minutes and make such reports as the Board of Directors may from time to time request. Except as the Board of Directors may otherwise determine, any committee may make rules for the conduct of its business, but unless otherwise provided by the directors or in such rules, its business shall be conducted as nearly as possible in the same manner as is provided in these By-laws for the Board of Directors. Except as otherwise provided in the Certificate of

Incorporation, these By-laws, or the resolution of the Board of Directors designating the committee, a committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee.

2.16 Compensation of Directors. Directors may be paid such compensation for their services and such reimbursement for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the corporation or any of its parent or subsidiary entities in any other capacity and receiving compensation for such service.

ARTICLE III

OFFICERS

3.1 Titles. The officers of the corporation shall consist of a Chief Executive Officer, a President, a Secretary, a Treasurer and such other officers with such other titles as the Board of Directors shall determine, including a Chairman of the Board, a Vice Chairman of the Board, and one or more Vice Presidents, Assistant Treasurers, and Assistant Secretaries. The Board of Directors may appoint such other officers as it may deem appropriate.

3.2 Election. The Chief Executive Officer, President, Treasurer and Secretary shall be elected annually by the Board of Directors at its first meeting following the annual meeting of stockholders. Other officers may be appointed by the Board of Directors at such meeting or at any other meeting.

3.3 Qualification. No officer need be a stockholder. Any two or more offices may be held by the same person.

3.4 Tenure. Except as otherwise provided by law, by the Certificate of Incorporation or by these By-laws, each officer shall hold office until such officer's successor is elected and qualified, unless a different term is specified in the resolution electing or appointing such officer, or until such officer's earlier death, resignation or removal.

3.5 Resignation and Removal. Any officer may resign by delivering a written resignation to the corporation at its principal office or to the Chief Executive Officer, the President or the Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some later time or upon the happening of some later event.

Any officer may be removed at any time, with or without cause, by vote of a majority of the directors then in office, except as otherwise provided by Section 3.7.

Except as the Board of Directors may otherwise determine, no officer who resigns or is removed shall have any right to any compensation as an officer for any period following such officer's resignation or removal, or any right to damages on account of such removal, whether such officer's compensation be by the month or by the year or otherwise, unless such compensation is expressly provided for in a duly authorized written agreement with the corporation.

3.6 Vacancies. The Board of Directors may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Treasurer and Secretary. Each such successor shall hold office for the unexpired term of such officer's predecessor and until a successor is elected and qualified, or until such officer's earlier death, resignation or removal.

3.7 Chairman of the Board. The Board of Directors may appoint from its members a Chairman of the Board, who need not be an employee or officer of the corporation. Until the fifth anniversary of the completion of the initial public offering of Common Stock of the corporation, the appointment and removal of the Chairman of the Board will require a vote of not less than 75% of the directors then in office. If the Board of Directors appoints a Chairman of the Board, such Chairman shall perform such duties and possess such powers as are assigned by the Board of Directors and, if the Chairman of the Board is also designated as the corporation's Chief Executive Officer, shall have the powers and duties of the Chief Executive Officer prescribed in Section 3.8 of these By-laws. Unless otherwise provided by the Board of Directors, the Chairman of the Board shall preside at all meetings of the Board of Directors and stockholders.

3.8 President; Chief Executive Officer. Unless the Board of Directors has designated the Chairman of the Board or another person as the corporation's Chief Executive Officer, the President shall be the Chief Executive Officer of the corporation. The Chief Executive Officer shall have general charge and supervision of the business of the corporation subject to the direction of the Board of Directors. The President shall perform such other duties and shall have such other powers as the Board of Directors or the Chief Executive Officer (if the President is not the Chief Executive Officer) may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer or the President (if the President is not the Chief Executive Officer), the Vice President (or if there shall be more than one, the Vice Presidents in the order determined by the Board of Directors) shall perform the duties of the Chief Executive Officer and when so performing such duties shall have all the powers of and be subject to all the restrictions upon the Chief Executive Officer.

3.9 Vice Presidents. Any Vice President shall perform such duties and possess such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. The Board of Directors may assign to any Vice President the title of Executive Vice President, Senior Vice President or any other title selected by the Board of Directors.

3.10 Secretary and Assistant Secretaries. The Secretary shall perform such duties and shall have such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. In addition, the Secretary shall perform such duties and have such powers as are incident to the office of the secretary, including without limitation the duty and power to give notices of all meetings of stockholders and special meetings of the Board of Directors, to attend all meetings of stockholders and the Board of Directors and keep a record of the proceedings, to maintain a stock ledger and prepare lists of stockholders and their addresses as required, to be custodian of corporate records and the corporate seal and to affix and attest to the same on documents.

Any Assistant Secretary shall perform such duties and possess such powers as the Board of Directors, the Chief Executive Officer or the Secretary may from time to time prescribe. In the event of the absence, inability or refusal to act of the Secretary, the Assistant Secretary (or if there shall be more than one, the Assistant Secretaries in the order determined by the Board of Directors) shall perform the duties and exercise the powers of the Secretary.

In the absence of the Secretary or any Assistant Secretary at any meeting of stockholders or directors, the chairman of the meeting shall designate a temporary secretary to keep a record of the meeting.

3.11 Treasurer and Assistant Treasurers. The Treasurer shall perform such duties and shall have such powers as may from time to time be assigned by the Board of Directors or the Chief Executive Officer. In addition, the Treasurer shall perform such duties and have such powers as are incident to the office of treasurer, including without limitation the duty and power to keep and be responsible for all funds and securities of the corporation, to deposit funds of the corporation in depositories selected in accordance with these By-laws, to disburse such funds as ordered by the Board of Directors, to make proper accounts of such funds, and to render as required by the Board of Directors statements of all such transactions and of the financial condition of the corporation.

The Assistant Treasurers shall perform such duties and possess such powers as the Board of Directors, the Chief Executive Officer or the Treasurer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Treasurer, the Assistant Treasurer (or if there shall be more than one, the Assistant Treasurers in the order determined by the Board of Directors) shall perform the duties and exercise the powers of the Treasurer.

3.12 Salaries. Officers of the corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board of Directors.

ARTICLE IV

CAPITAL STOCK

4.1 Issuance of Stock. Subject to the provisions of the Certificate of Incorporation, the whole or any part of any unissued balance of the authorized capital stock of the corporation or the whole or any part of any shares of the authorized capital stock of the corporation held in the corporation's treasury may be issued, sold, transferred or otherwise disposed of by vote of the Board of Directors in such manner, for such lawful consideration and on such terms as the Board of Directors may determine.

4.2 Certificates of Stock. Every holder of stock of the corporation shall be entitled to have a certificate, in such form as may be prescribed by law and by the Board of Directors, certifying the number and class of shares owned by such holder in the corporation; provided, however, that to the extent permitted by law, the Board of Directors may provide by resolution or resolutions that some or all of any or all classes or series of stock of the corporation shall be uncertificated shares. Each such certificate shall be signed by, or in the name of the corporation

by, the Chairman or Vice Chairman, if any, of the Board of Directors, or the President or a Vice President, and the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary of the corporation. Any or all of the signatures on the certificate may be a facsimile.

There shall be set forth on the face or back of each certificate representing shares of such class or series of stock of the corporation a statement that the corporation will furnish without charge to each stockholder who so requests a copy of the full text of the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

4.3 Transfers. Except as otherwise established by Section 4.4 of these By-laws or by rules and regulations adopted by the Board of Directors, and subject to applicable law, shares of stock may be transferred on the books of the corporation by the surrender to the corporation or its transfer agent of the certificate representing such shares properly endorsed or accompanied by a written assignment or power of attorney properly executed, and with such proof of authority or the authenticity of signature as the corporation or its transfer agent may reasonably require. Except as may be otherwise required by law, by the Certificate of Incorporation or by these By-laws, the corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect to such stock, regardless of any transfer, pledge or other disposition of such stock until the shares have been transferred on the books of the corporation in accordance with the requirements of these By-laws.

4.4 Lost, Stolen or Destroyed Certificates. The corporation may issue a new certificate of stock in place of any previously issued certificate alleged to have been lost, stolen or destroyed, upon such terms and conditions as the Board of Directors may prescribe, including the presentation of reasonable evidence of such loss, theft or destruction and the giving of such indemnity and posting of such bond as the Board of Directors may require for the protection of the corporation or any transfer agent or registrar.

4.5 Record Date. The Board of Directors may fix in advance a date as a record date for the determination of the stockholders entitled to notice of or to vote at any meeting of stockholders, or entitled to receive payment of any dividend or other distribution or allotment of any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action. Such record date (other than a record date for stockholder action by written consent) shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other action to which such record date relates.

If no record date is fixed, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day before the day on which notice is given, or, if notice is waived, at the close of business on the day before the day on which the meeting is held. If no record date is fixed, the record date for determining stockholders for any other purpose (other than stockholder action by consent) shall be at the close of business on the day on which the Board of Directors adopts the resolution relating to such purpose.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

ARTICLE V

GENERAL PROVISIONS

5.1 Fiscal Year. Except as from time to time otherwise designated by the Board of Directors, the fiscal year of the corporation shall begin on the first day of January of each year and end on the last day of December in each year.

5.2 Corporate Seal. The corporate seal shall be in such form as shall be approved by the Board of Directors.

5.3 Waiver of Notice. Whenever notice is required to be given by law, by the Certificate of Incorporation or by these By-laws, a written waiver signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before, at or after the time stated in such notice, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

5.4 Voting of Securities. Except as the Board of Directors may otherwise designate, the Chief Executive Officer, the President or the Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for this corporation (with or without power of substitution) at any meeting of stockholders or securityholders of any other entity, the securities of which may be held by this corporation.

5.5 Evidence of Authority. A certificate by the Secretary, or an Assistant Secretary, or a temporary Secretary, as to any action taken by the stockholders, directors, a committee or any officer or representative of the corporation shall as to all persons who rely on the certificate in good faith be conclusive evidence of such action.

5.6 Certificate of Incorporation. All references in these By-laws to the Certificate of Incorporation shall be deemed to refer to the Restated Certificate of Incorporation of the corporation, as amended and in effect from time to time, including the terms of any certificate of designation of any series of Preferred Stock.

5.7 Severability. Any determination that any provision of these By-laws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these By-laws.

5.8 Pronouns. All pronouns used in these By-laws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

ARTICLE VI

AMENDMENTS

These By-laws may be altered, amended or repealed, in whole or in part, or new By-laws may be adopted by the Board of Directors or by the stockholders as provided in the Certificate of Incorporation.

Exhibit 4.3

CLASS A STOCKHOLDERS' REGISTRATION RIGHTS AGREEMENT

THIS CLASS A STOCKHOLDERS' REGISTRATION RIGHTS AGREEMENT (this "***Agreement***") is made as of September 22, 2006, by and among Emergent Biosolutions, Inc., a Delaware corporation (together with any successor thereto, the "***Company***") and the holders of the Company's Class A Common Stock, $0.01 par value per share, listed on Exhibit A attached hereto (each, a "***Stockholder***" and together, the "***Stockholders***"). The Company and each of the Stockholders are referred to herein as a "***Party***" and collectively, as the "***Parties***".

WHEREAS, the Stockholders are the owners of issued and outstanding voting capital stock of the Company as more fully set forth on Exhibit A attached hereto; and

WHEREAS, the Company and each of the Stockholders desire to provide for certain arrangements with respect to the registration of shares of capital stock of the Company.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

1. Certain Definitions. Capitalized terms used in this Agreement and not otherwise defined shall have the following respective meanings:

"***Agreement***" shall mean this Class A Stockholders' Registration Rights Agreement, as amended, restated, supplemented or otherwise modified from time to time.

"***Commission***" shall mean the United States Securities and Exchange Commission or any other federal agency at the time administering the Securities Act and the Exchange Act.

"***Common Stock***" shall mean the Company's Class A Common Stock, $0.01 par value per share.

"***Exchange Act***" shall mean the Securities Exchange Act of 1934, as amended, or any similar successor federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time.

"***Holder***" shall mean each Stockholder or other holder of Registrable Securities who was assigned registration rights by a Stockholder hereunder, in accordance with Section 7 hereof.

"***Initial Public Offering***" shall mean the first underwritten public offering of Common Stock for the account of the Company and offered on a "firm commitment" basis pursuant to an offering registered under the Securities Act with the Commission on Form S-1 or its then equivalent.

"***Majority Holders***" has the meaning set forth in Section 2(a)(ii).

"***Other Registrable Securities***" shall mean securities of the Company (other than the Registrable Securities) that holders of securities of the Company are entitled, by contract with the Company, to have included in a registration statement (other than a registration statement on Form S-4 or Form S-8 promulgated under the Securities Act or any successor forms thereto) filed by the Company with the Commission for a public offering and sale of securities by the Company.

"***Person***" shall mean any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, limited liability company, institution, public benefit corporation, other entity or government (whether federal, state, county, city, municipal, local, foreign, or otherwise, including any instrumentality, division, agency, body or department thereof).

"***Registrable Securities***" shall mean (a) the shares of Common Stock issuable or issued to each Stockholder, (b) any Common Stock issued or issuable upon conversion of any capital stock of the Company acquired by the Stockholders after the date hereof and (c) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right or other security which is issued as) a dividend, stock split or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clause (a) and (b) above; provided, however, that notwithstanding anything to the contrary contained herein, "Registrable Securities" shall not at any time include any securities (i) registered and sold pursuant to the Securities Act, (ii) sold pursuant to Rule 144 or (iii) which could then be sold in their entirety pursuant to Rule 144 without limitation or restriction.

"***Registration Date***" shall mean the date upon which the registration statement pursuant to which the Company shall have initially registered shares of Common Stock under the Securities Act for sale to the public shall have been declared effective.

"***Rule 144***" shall mean Rule 144 promulgated under the Securities Act or any successor regulation.

"***Securities Act***" shall mean the Securities Act of 1933, as amended, or any similar successor federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time.

2. Registrations.

(a) **Demand Registration**.

(i) At any time after the expiration of 90 days after the Registration Date, if the Company receives from the Holders of Registrable Securities then outstanding, a written request to file a registration statement for Registrable Securities under the Securities Act (a "***Demand Notice***") in accordance with this Section 2(a), for which the anticipated aggregate offering price to the public is not less than $25,000,000, then the Company shall use commercially reasonable efforts to effect, as soon as practicable, such a registration statement. Upon receipt of a Demand Notice, the Company shall give written notice of such proposed registration to all Holders and shall offer to include in

such proposed registration any Registrable Securities requested to be included in such proposed registration by such Holders who respond in writing to the Company's notice within 30 days after delivery of such notice (which response shall specify the number of Registrable Securities proposed to be included in such registration). The Company shall use commercially reasonable efforts, as soon as practicable, to effect such registration on an appropriate form, including Form S-2 or S-3, if available, under the Securities Act of the Registrable Securities which the Company has been so requested to register; provided, however, that the Company shall not be obligated to effect any registration under the Securities Act except in accordance with the following provisions:

(A) The Company shall not be obligated to file more than one registration statement initiated by the Holders of Registrable Securities pursuant to this Section 2(a);

(B) The Company shall not be obligated to file a registration statement during the period following the Registration Date when any of the Holders is subject to any restrictions on disposition of Registrable Securities pursuant to any agreement described in Section 6(a); and

(C) The Company shall not be obligated to file any registration statement during any period in which any other registration statement (other than on Form S-4 or Form S-8 promulgated under the Securities Act or any successor forms thereto) pursuant to which securities of the Company are to be or were sold has been filed and not withdrawn or has been declared effective within the prior [90] days.

(ii) If the Holders of a majority of the Registrable Securities requested to be included in a registration pursuant to this Section 2(a) (the "***Majority Holders***") so elect, the offering of such Registrable Securities pursuant to such registration shall be in the form of an underwritten offering. In the event of such election, the Majority Holders shall select one or more nationally recognized firms of investment bankers reasonably acceptable to the Company to act as the lead managing underwriter or underwriters in connection with such offering and shall select any additional investment bankers and managers to be used in connection with the offering, which shall also be reasonably acceptable to the Company.

(iii) With respect to any registration pursuant to this Section 2(a), the Company may include in such registration any Common Stock for its own account or on the account of others; provided, however, that if a managing underwriter, if any, advises the Company that the inclusion of all Registrable Securities and Common Stock requested to be included by the Company in such registration would interfere with the successful marketing (including pricing) of all such securities, then the number of Registrable Securities and Common Stock proposed to be included in such registration shall be included in the following order:

(A) first, the Registrable Securities and the Other Registrable Securities shall be included, pro rata based upon the aggregate number of

Registrable Securities and Other Registrable Securities to be included at the time of such registration; and

(B) second, any other Common Stock requested to be included by the Company for its own account or on the account of others.

(iv) At any time before the registration statement covering Registrable Securities becomes effective, the Majority Holders may request the Company to withdraw or not to file the registration statement. In that event, if such request of withdrawal shall have been caused by, or made in response to, a material adverse effect or change in the Company's financial condition, operations, business or prospects, such Holders of Registrable Securities shall not be deemed to have used their demand registration rights under this Section 2(a).

(b) **Piggyback Registration**. If, at any time or times after (but not including) an Initial Public Offering, the Company shall seek to register any shares of its Common Stock under the Securities Act for sale to the public for its own account or on the account of others (except with respect to registration statements on Form S-4, S-8 or another form not available for registering the Registrable Securities for sale to the public), the Company will give written notice thereof to all Holders. If within 15 business days after their receipt of such notice one or more Holders request in writing the inclusion of some or all of the Registrable Securities owned by them in such registration, the Company will use commercially reasonable efforts to effect the registration under the Securities Act of such Registrable Securities. In the case of the registration of shares of capital stock by the Company in connection with any underwritten public offering, if the principal underwriter determines that the number of Registrable Securities to be offered must be limited, the Company shall not be required to register Registrable Securities of the Holders in excess of the amount, if any, of shares of the capital stock which the principal underwriter of such underwritten offering shall reasonably and in good faith agree to include in such offering in addition to any amount to be registered for the account of the Company.

3. Further Obligations of the Company.

(a) Whenever the Company is required hereunder to register any Registrable Securities, it agrees that it shall also do the following:

(i) Prepare and file, and use commercially reasonable efforts to cause to become effective, with the Commission a registration statement and such amendments and supplements to said registration statement and the prospectus used in connection therewith as may be necessary to keep said registration statement effective until the Holder or Holders have completed the distribution described in the registration statement relating thereto (but for no more than 180 days or such lesser period until all such Registrable Securities are sold) and to comply with the provisions of the Securities Act with respect to the sale of securities covered by said registration statement for such period;

(ii) Furnish to each selling Holder a draft copy of the registration statement and such copies of each preliminary and final prospectus as such Holder may

reasonably request to facilitate the public offering of its Registrable Securities;

(iii) Enter into and perform its obligations under any reasonable underwriting agreement required by the proposed underwriter, if any, in such form and containing such terms as are customary;

(iv) Use its commercially reasonable efforts to register or qualify the securities covered by said registration statement under the securities or "blue sky" laws of such jurisdictions as any selling Holder may reasonably request provided the Company shall not be required to qualify to do business or file a general consent to service of process in connection therewith;

(v) Cause upon or immediately after the effectiveness of a registration all such Registrable Securities to be listed on each securities exchange or quotation system on which the Common Stock of the Company is then listed or quoted;

(vi) notify each Holder of Registrable Securities covered by a registration statement, at any time when a prospectus relating thereto is required to be delivered under the Securities Act, of (A) the issuance of any stop order by the Commission in respect of such registration statement, or (B) the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing; and

(vii) provide a transfer agent and registrar for all Registrable Securities registered pursuant hereunder and a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration.

(b) With a view to making available to the Holders the benefits of Rule 144, the Company agrees to:

(i) make and keep public information available, as those terms are understood and defined in Rule 144, at all times after the effective date of the Initial Public Offering;

(ii) file with the Commission in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act, if any; and

(iii) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (A) a written statement by the Company that it has complied with the information and reporting requirements of Rule 144(c) and (B) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company.

(c) From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of a majority of the outstanding Registrable Securities, enter into any agreement with any holder or prospective holder of any securities of the Company that would allow such holder or prospective holder to include such securities in any registration

statement filed under Section 2 hereof, unless under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of such securities will not reduce the amount of the Registrable Securities of the Holders that are included.

4. Payment of Expenses by; Cooperation by, and Obligations of, Prospective Sellers.

(a) Notwithstanding any other provision in this Agreement to the contrary, the Company and the Holders shall each pay one-half of all expenses of any registration effected pursuant to Section 2(a) hereof and the Holders shall pay in full any incremental expenses of including the Holders' Registrable Securities in a Piggyback Registration pursuant to Section 2(b) hereof, including, without limitation, all legal and accounting fees, printing costs, listing fees and miscellaneous expenses, but excluding underwriters' commissions or discounts attributable to the Registrable Securities being offered and sold by the Holders, which shall be borne exclusively by the Holders.

(b) Each prospective seller of Registrable Securities shall furnish to the Company in writing such information as the Company may reasonably request from such seller in connection with any registration statement with respect to such Registrable Securities.

(c) The failure of any prospective seller of Registrable Securities to furnish any information or documents in accordance with any provision contained in this Agreement shall not affect the obligations of the Company under this Agreement to any remaining sellers who furnish such information and documents unless, in the reasonable opinion of counsel to the Company and/or the underwriters, such failure impairs or adversely affects the offering or the legality of the registration statement or causes the request not to meet the requirements of Section 2 of this Agreement.

(d) Upon receipt of a notice (telephonic or written) from the Company or the underwriter of the happening of an event which makes any statement made in a registration statement or related prospectus covering Registrable Securities untrue or which requires the making of any changes in such registration statement or prospectus so that they will not contain any untrue statement of material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein in light of the circumstances under which they were made not misleading, the Holders of Registrable Securities included in such registration statement shall discontinue disposition of such Registrable Securities pursuant to such registration statement until such Holders' receipt of copies of the supplemented or amended prospectus or until advised by the Company or the underwriters that dispositions may be resumed.

(e) Each Holder of Registrable Securities included in any registration statement will effect sales of such securities in accordance with the plan of distribution given to the Company.

(f) At the end of any period during which the Company is obligated to keep any registration statement current and effective as provided in this Agreement, the Holders of

Registrable Securities included in such registration statement shall discontinue sales of shares pursuant to such registration statement, unless they receive notice from the Company of its intention to continue effectiveness of such registration statement with respect to such shares which remain unsold and such Holders shall notify the Company of the number of shares registered which remain unsold promptly upon expiration of the period during which the Company is obligated to maintain the effectiveness of the registration statement.

(g) No Person may participate in any underwritten registration pursuant to this Agreement unless such Person (i) agrees to sell such Person's securities on the basis provided in any underwriting arrangements made with respect to such registration and (ii) completes and executes all questionnaires, powers of attorney, indemnities, underwriting agreements and other documents reasonably required by the terms of such underwriting arrangements.

5. Indemnification; Contribution.

(a) Incident to any registration of any Registrable Securities under the Securities Act pursuant to this Agreement, the Company will indemnify and hold harmless each Holder who offers or sells any such Registrable Securities in connection with such registration statement (including its partners (including partners of partners and stockholders of any such partners), and directors, officers, employees, representatives and agents of any of them, and each person who controls any of them within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act), from and against any and all losses, claims, damages, reasonable expenses and liabilities, joint or several (including any reasonable investigation, legal and other expenses incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted, as the same are incurred), to which they, or any of them, may become subject under the Securities Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, damages or liabilities arise out of or are based on (i) any untrue statement or alleged untrue statement of a material fact contained in such registration statement (including any related preliminary or definitive prospectus, or any amendment or supplement to such registration statement or prospectus) or (ii) any omission or alleged omission to state in such document a material fact required to be stated in it or necessary to make the statements in it not misleading; provided, however, that the Company will not be liable to the extent that (1) such loss, claim, damage, expense or liability arises from and is based on an untrue statement or omission or alleged untrue statement or omission made in reliance on and in conformity with information furnished in writing to the Company by or on behalf of such Holder in accordance with Section 4(b) of this Agreement for use in such registration statement, or (2) in the case of a sale directly by such Holder (including a sale of Registrable Securities through any underwriter retained by such Holder to engage in a distribution solely on behalf of such Holder), such untrue statement or alleged untrue statement or omission or alleged omission was contained in a preliminary prospectus and corrected in a final or amended prospectus, and such Holder failed to deliver a copy of the final or amended prospectus at or prior to the confirmation of the sale of the Registrable Securities to the Person asserting any such loss, claim, damage or liability in any case where such delivery is required by the Securities Act or any state securities laws. With respect to such untrue statement or omission or alleged untrue statement or omission in the information furnished in writing to the Company by or on behalf of such Holder in accordance with Section 4(b) of this Agreement for use in such registration statement, such Holder, on a

several and not joint basis, will indemnify and hold harmless the Company (including its directors, officers, employees, representatives and agents), each other Holder (including its partners (including partners of partners and stockholders of such partners) and directors, officers, employees, representatives and agents of any of them, and each person who controls any of them within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act), from and against any and all losses, claims, damages, reasonable expenses and liabilities, joint or several (including any reasonable investigation, legal and other expenses incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted, as the same are incurred), to which they, or any of them, may become subject under the Securities Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise.

(b) If the indemnification provided for in Section 5(a) above for any reason is held by a court of competent jurisdiction to be unavailable to an indemnified party in respect of any losses, claims, damages, expenses or liabilities referred to therein, then each indemnifying party under this Section 5, in lieu of indemnifying such indemnified party thereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages, expenses or liabilities (i) in such proportion as is appropriate to reflect the relative benefits received by the Company and the other Holders from the offering of the Registrable Securities or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company and the other Holders in connection with the statements or omissions which resulted in such losses, claims, damages, expenses or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company and the Holders shall be deemed to be in the same respective proportions that the net proceeds from the offering received by the Company and the Holders, in each case as set forth in the table on the cover page of the applicable prospectus, bear to the aggregate public offering price of the Registrable Securities. The relative fault of the Company and the Holders shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by or on behalf of the Company or the Holders and the Parties' relative intent, knowledge and access to information.

The Company and the Holders agree that it would not be just and equitable if contribution pursuant to this Section 5(b) were determined by pro rata or per capita allocation or by any other method of allocation which does not take account of the equitable considerations referred to in the immediately preceding paragraph. No person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not found guilty of such fraudulent misrepresentation.

(c) The amount paid by an indemnifying party or payable to an indemnified party as a result of the losses, claims, damages and liabilities referred to in this Section 5 shall be deemed to include, subject to the limitations set forth above, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim, payable as the same are incurred. The indemnification and contribution provided for in this Section 5 will remain in full force and effect regardless of any investigation made by or on behalf of the indemnified parties or any officer, director, employee, agent or

controlling person of the indemnified parties. No indemnifying party, in the defense of any such claim or litigation, shall enter into a consent of entry of any judgment or enter into a settlement without the consent of the indemnified party, which consent will not be unreasonably withheld. Any indemnified party that proposes to assert the right to be indemnified under this Section 5 will, promptly after receipt of notice of commencement or threat of any claim or action against such party in respect of which a claim is to be made against an indemnifying party under this Section 5 notify the indemnifying party in writing (such written notice, an "***Indemnification Notice***") of the commencement or threat of such action, enclosing a copy of all papers served or notices received (if applicable), but the omission so to notify the indemnifying party will not relieve the indemnifying party from any liability that the indemnifying party may have to any indemnified party under the foregoing provisions of this Section 5 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. The indemnified party will have the right to retain its own counsel in any such action if (i) the employment of counsel by the indemnified party has been authorized by the indemnifying party, (ii) the indemnified party's counsel, with the concurrence of indemnifying party's counsel, shall have reasonably concluded that there is a substantial likelihood of a conflict of interest between the indemnifying party and the indemnified party in the conduct of the defense of such action or (iii) the indemnifying party shall not in fact have employed counsel to assume the defense of such action within a reasonable period of time following its receipt of the Indemnification Notice, in each of which cases the fees and expenses of the indemnified party's separate counsel shall be at the expense of the indemnifying party; provided, however, that the indemnified party shall agree to repay any expenses so advanced hereunder if it is ultimately determined by a court of competent jurisdiction that the indemnified party to whom such expenses are advanced is not entitled to be indemnified; and provided, further, that so long as the indemnified party has reasonably concluded that no conflict of interest exists, the indemnifying party may assume the defense of any action hereunder with counsel reasonably satisfactory to the indemnified party.

(d) In the event of an underwritten offering of Registrable Securities under this Agreement, the Company and the Holders shall enter into standard indemnification and underwriting agreements with the underwriter thereof. To the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the provisions of this Section 5, the provisions in the underwriting agreement shall control.

(e) The obligation of the Company and Holders under this Section 5 shall survive the completion of any offering of Registrable Securities in a registration statement under Section 2, and otherwise.

6. Market Standoff Agreement.

(a) In connection with the Initial Public Offering by the Company, each Holder, if requested by the Company and the managing underwriter of the Company's equity securities in such offering, shall agree not to, directly or indirectly, offer, sell, pledge, contract to sell (including any short sale), grant any option to purchase or otherwise dispose of any securities of the Company held by it (except for any securities sold pursuant to such registration statement) for a period of 90 days (or such longer period, not to exceed 180 days, that the managing

underwriter specifies is required for successful completion of the Initial Public Offering) following the effective date of such registration statement. Such agreement shall be in writing and in form and substance reasonably satisfactory to the Holders, the Company and such underwriter and pursuant to customary and prevailing terms and conditions. The foregoing provisions of this Section 6(a) shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement, and shall only be applicable to the Holders if all officers and directors and 5% or greater stockholders of the Company enter into similar or more restrictive agreements with respect to any shares of common stock of the Company that are beneficially held by them and that are not being sold by them in connection with the Company's Initial Public Offering.

(b) Each Holder agrees that in the event the Company proposes to offer for sale to the public any of its equity securities after the Initial Public Offering, and if (i) such Holder holds beneficially or of record 5% or more of the outstanding equity securities of the Company, (ii) requested by the Company and the managing underwriter of Common Stock or other securities of the Company, and (iii) all other such 5% stockholders are requested by the Company and such underwriter to sign, and actually do sign, a similar or more restrictive agreement restricting the sale or other transfer of shares of the Company, then such Holder will not directly or indirectly, offer, sell, pledge, contract to sell (including any short sale), grant any option to purchase or otherwise dispose of any securities of the Company held by it (except for any securities sold pursuant to such registration statement), for a period of 90 days (or such longer period, not to exceed 180 days, that the managing underwriter specifies is required for successful completion of the offering) following the effective date of such registration statement. Such agreement shall be in writing and in form and substance reasonably satisfactory to the Holders, the Company and such underwriter and pursuant to customary and prevailing terms and conditions.

7. Transferability of Registration Rights.

(a) Subject to Section 7(b) below, the rights to cause the Company to register Registrable Securities pursuant to Section 2(a) or Section 2(b) hereof may be assigned (but only with all related obligations) by a Holder to a transferee of such Registrable Securities that is an affiliate, partner, member, limited partner, retired partner, retired member, or stockholder of a Holder; provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such registration rights are being transferred; and (y) such transferee agrees in writing to be bound by and subject to the terms and conditions of this Agreement. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee that is an affiliate, limited partner, retired partner, member, retired member, or stockholder of a Holder shall be aggregated together and with those of the transferring Holder.

(b) Notwithstanding the foregoing, no Holder may, directly or indirectly, sell, assign, transfer, pledge, bequeath, hypothecate, mortgage, grant any proxy with respect to, or in any way encumber or otherwise dispose of any Registrable Securities, except in accordance with Article II of the Class A Stockholders Agreement, dated June 30, 2004, among the Company and the Class A Stockholders of the Company.

8. Miscellaneous.

(a) **Notices.** Except as otherwise expressly provided herein, all notices, requests, demands, claims, and other communications hereunder will be in writing. Any such notice, request, demand, claim, or other communication hereunder shall be deemed duly given (a) upon confirmation of facsimile, (b) one business day following the date sent when sent by overnight delivery and (c) five business days following the date mailed when mailed by registered or certified mail return receipt requested and postage prepaid at the addresses specified on the signature pages hereto (or such other address for a Party as shall be specified by such Party by like notice).

(b) **Entire Agreement.** This Agreement, together with the instruments and other documents hereby contemplated to be executed and delivered in connection herewith, contains the entire agreement and understanding of the parties hereto, and supersedes any prior agreements or understandings between or among them, with respect to the subject matter hereof.

(c) **Successors and Assigns.** The parties intend that this Agreement shall not benefit or create any right or cause of action in or on behalf of any person other than Parties hereto and their respective successors and permitted assigns.

(d) **Amendments and Waivers.** Except as otherwise expressly set forth in this Agreement, any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and the Holders of at least a majority of the Registrable Securities. All Parties hereby acknowledge and agree that significant modifications may be made to this Agreement without the consent of each of the Holders due to the operation of this Section 8(d) which does not require the consent of each Holder for an amendment hereto. No waivers of or exceptions to any term, condition or provision of this Agreement, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

(e) **Counterparts; Facsimile Execution.** This Agreement may be executed in multiple counterparts, each of which shall constitute an original but all of which shall constitute but one and the same instrument. One or more counterparts of this Agreement may be delivered via telecopier, with the intention that they shall have the same effect as an original counterpart hereof. Facsimile execution and delivery of this Agreement is legal, valid and binding for all purposes.

(f) **Captions.** The captions of the sections, subsections and paragraphs of this Agreement have been added for convenience only and shall not be deemed to be a part of this Agreement.

(g) **Severability.** Each provision of this Agreement shall be interpreted in such manner as to validate and give effect thereto to the fullest lawful extent, but if any provision of this Agreement is determined by a court of competent jurisdiction to be invalid or unenforceable under applicable law, such provision shall be ineffective only to the extent so determined and such invalidity or unenforceability shall not affect the remainder of such

provision or the remaining provisions of this Agreement; provided, however, that the Company and a majority of Holders shall negotiate in good faith to attempt to implement an equitable adjustment in the provisions of this Agreement with a view toward effecting the purposes of this Agreement by replacing the provision that is invalid or unenforceable with a valid and enforceable provision the economic effect of which comes as close as possible to that of the provision that has been found to be invalid and unenforceable.

(h) **Governing Law**. This Agreement and the rights and obligations of the Parties hereunder shall be governed by, and construed in accordance with, the laws of the State of Delaware.

(i) **Submission to Jurisdiction**.

(i) The Parties agree that any suit, action or proceeding with respect to any dispute, controversies or claims or any judgment entered by any court in respect thereof may be brought in any state or federal court in the State of Delaware and any appellate court thereof and irrevocably and unconditionally submits to the non-exclusive jurisdiction of such courts for the purpose of any such suit, action, proceeding or judgment. Each of the Parties hereto agrees that final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. Each of the Parties further submits, for the purpose of any such suit, action, proceeding or judgment brought or rendered against it, to the appropriate courts of the jurisdiction of its domicile.

(ii) The Parties agree that any suit, action or proceeding with respect to the Agreement or any judgment entered by any court in respect thereof may be brought in the competent courts of the State of Delaware, and irrevocably submits to the non-exclusive jurisdiction of such courts for the purpose of any such suit, action, proceeding or judgment.

(iii) Nothing herein shall in any way be deemed to limit the ability of any Party to serve any such process of summons, complaint and other legal process in any other manner permitted by applicable law or to obtain jurisdiction over, or bring any suit, action or proceeding against, any other Party in such other jurisdiction, and in such manner, as may be permitted by applicable law.

(iv) The Parties also irrevocably consent, if for any reason any of the Party's authorized agent for service of process of summons, complaint and other legal process in any action, suit or proceeding is not present in Delaware, to the service of such papers being made out of those courts by mailing copies of the papers by registered United States air mail, postage prepaid, to the Party at its address specified in Section 8(a). In such a case, the relevant Party shall also send by facsimile, or have sent by facsimile, a copy of the papers to all Parties.

(v) Service in the manner provided in Section 8(j) in any action, suit or proceeding will be deemed personal service, will be accepted by each of the Parties as such and will be valid and binding upon such Party for all purposes of any such action, suit or proceeding.

(j) **Appointment of Process Agent**. The Parties hereby irrevocably appoint Corporation Service Company (the "***Process Agent***"), with an office on the date hereof at 2711

Centerville Road, Wilmington, Delaware 19808, United States of America as its agent to receive on behalf of each of the Parties service of copies of the summons and complaint and any other process which may be served in any suit, action or proceeding. Each Party agrees that the failure of the Process Agent to give any notice of any such service of process to such Party shall not impair or affect the validity of such service or, to the extent permitted by applicable law, the enforcement of any judgment based thereon. Such appointment shall be irrevocable as long as any amounts payable under this Agreement or the terms and conditions of this Agreement are outstanding, except that if for any reason the Process Agent appointed hereby ceases to be able to act as such, each Party shall, by an instrument reasonably satisfactory to the other Parties, appoint another Person in the State of Delaware as such Process Agent subject to the approval (which approval shall not be unreasonably withheld) of the other Parties. Each of the Holders covenants and agrees that it shall take any and all reasonable action, including the execution and filing of any and all documents, that may be necessary to continue the designation of a Process Agent pursuant to this Section 8(j) in full force and effect and to cause the Process Agent to act as such.

(k) **Other Methods of Service**. Nothing herein shall in any way be deemed to limit the ability of any Party to serve any such process or summonses in any other manner permitted by applicable law or to obtain jurisdiction over, or bring any suit, action or proceeding against, the other Parties in such other jurisdictions, and in such manner, as may be permitted by applicable law.

(l) **Waiver of Inconvenient Forum, Etc.**. Each of the Parties hereby irrevocably waives any objection that it may now or hereafter have to the laying of the venue of any suit, action or proceeding arising out of or relating to this Agreement brought in any state or federal court in the State of Delaware, United States of America, and hereby further irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. A final judgment (in respect of which time for all appeals has elapsed) in any such suit, action or proceeding shall be conclusive and may be enforced in any court to the jurisdiction of which the Parties are or may be subject, by suit upon judgment.

(m) **Waiver of Jury Trial.** EACH PARTY HERETO HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY). EACH PARTY HERETO (i) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (ii) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION.

[*Signature page follows*]

{COMPANY SIGNATURE PAGE}

IN WITNESS WHEREOF, the Parties hereto have caused this Class A Stockholders' Registration Rights Agreement to be duly executed as of the date first set forth above.

COMPANY:

EMERGENT BIOSOLUTIONS INC.

By /s/ Fuad El-Hibri
Name: Fuad El-Hibri
Title: Chief Executive Officer

Address:

EMERGENT BIOSOLUTIONS INC.
300 Professional Drive, Suite 250
Gaithersburg, Maryland 20879
Attention: General Counsel
Telephone No.: (301) 944-0107
Facsimile No.: (301) 944-0173

[Signature Page to Registration Rights Agreement]

{STOCKHOLDER SIGNATURE PAGE}

IN WITNESS WHEREOF, the Parties hereto have caused this Class A Stockholders' Registration Rights Agreement to be duly executed as of the date first set forth above.

INTERVAC, LLC

By: /s/ Fuad El-Hibri
Name: Fuad El-Hibri
Title: General Manager

Address for Notices:

Intervac, LLC
1684 East Gude Drive
Suite 301
Rockville, MD 20850
Attn: Fuad El-Hibri

{STOCKHOLDER SIGNATURE PAGE}

IN WITNESS WHEREOF, the Parties hereto have caused this Class A Stockholders' Registration Rights Agreement to be duly executed as of the date first set forth above.

BIOPHARM, LLC

By: /s/ Robert G. Kramer
Name: Robert G. Kramer
Title: General Manager

Address for Notices:

BioPharm, LLC
3500 N. Martin Luther King, Jr. Blvd.
Building One, 3rd Floor
Lansing, MI 48906
Attn: Robert G. Kramer

{STOCKHOLDER SIGNATURE PAGE}

IN WITNESS WHEREOF, the Parties hereto have caused this Class A Stockholders' Registration Rights Agreement to be duly executed as of the date first set forth above.

MICHIGAN BIOLOGICS PRODUCTS, INC.

By: /s/ Robert C. Myers
Name: Robert C. Myers
Title: President

Address for Notices:

Michigan Biologics Products, Inc.
3500 N. Martin Luther King, Jr. Blvd.
Building One, 3rd Floor
Lansing, MI 48906
Attn: Robert C. Myers

{STOCKHOLDER SIGNATURE PAGE}

IN WITNESS WHEREOF, the Parties hereto have caused this Class A Stockholders' Registration Rights Agreement to be duly executed as of the date first set forth above.

BIOVAC, LLC

By: /s/ Fuad El-Hibri
Name: Fuad El-Hibri
Title: General Manager

Address for Notices:

BioVac, LLC
1684 East Gude Drive
Suite 301
Rockville, MD 20850
Attn: Fuad El-Hibri

{STOCKHOLDER SIGNATURE PAGE}

IN WITNESS WHEREOF, the Parties hereto have caused this Class A Stockholders' Registration Rights Agreement to be duly executed as of the date first set forth above.

BIOLOGIKA, LLC

By: /s/ Mauro Gibellini
Name: Mauro Gibellini
Title: General Manager

Address for Notices:

Biologika, LLC
3500 N. Martin Luther King, Jr. Blvd.
Building One, 3rd Floor
Lansing, MI 48906
Attn: Mauro Gibellini

{STOCKHOLDER SIGNATURE PAGE}

IN WITNESS WHEREOF, the Parties hereto have caused this Class A Stockholders' Registration Rights Agreement to be duly executed as of the date first set forth above.

INTERVAC MANAGEMENT, LLC

By: /s/ Fuad El-Hibri
Name: Fuad El-Hibri
Title: General Manager

Address for Notices:

Intervac Management, LLC
1684 East Gude Drive
Suite 301
Rockville, MD 20850
Attn: Fuad El-Hibri

{STOCKHOLDER SIGNATURE PAGE}

IN WITNESS WHEREOF, the Parties hereto have caused this Class A Stockholders' Registration Rights Agreement to be duly executed as of the date first set forth above.

ARPI, LLC

By: /s/ Janice Mugriditchian
Name: Janice Mugriditchian
Title: General Manager

Address for Notices:

ARPI, LLC
12001 Glen Road
Potomac, MD 20854
Attn: Janice Mugriditchian

EXHIBIT A

CLASS A STOCKHOLDERS

	Class A Shares	Number of Shares
1.	Intervac, LLC	2,890,000
2.	BioPharm, LLC	1,412,896
3.	Michigan Biologics Products, Inc.	672,500
4.	BioVac, LLC	555,822
5.	Biologika, LLC	477,941
6.	Intervac Management, LLC	250,000
7.	ARPI, LLC	228,791

WILMERHALE
+1 617 526 6000 (t)
+1 617 526 5000 (f)
wilmerhale.com

_____ __, 2006

Emergent BioSolutions Inc.
300 Professional Drive, Suite 250
Gaithersburg, MD 20879

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

This opinion is furnished to you in connection with a Registration Statement on Form S-1 (File No. 333-136622) (the "Registration Statement") filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), for the registration of (a) an aggregate of _____shares of Common Stock, $0.001 par value per share (the "Shares"), of Emergent BioSolutions Inc., a Delaware corporation (the "Company"), of which (i) up to _____ Shares will be issued and sold by the Company and (ii) up to _____ Shares may be sold by certain stockholders of the Company (the "Selling Stockholders") upon exercise of an over-allotment option granted by the Selling Stockholders, and (b) the associated Series A Junior Participating Preferred Stock Purchase Rights (the "Rights") to be issued pursuant to a Rights Agreement (the "Rights Agreement") to be entered into by and between the Company and American Stock Transfer & Trust Company, as Rights Agent (the "Rights Agent"), the form of which has been filed as Exhibit 4.1 to the Registration Statement.

The Shares are to be sold by the Company and the Selling Stockholders pursuant to an underwriting agreement (the "Underwriting Agreement") to be entered into by and among the Company, the Selling Stockholders and J.P. Morgan Securities Inc., Cowen and Company, LLC and HSBC Securities (USA) Inc., as representatives of the several underwriters named in the Underwriting Agreement, the form of which has been filed as Exhibit 1.1 to the Registration Statement.

We are acting as counsel for the Company in connection with the sale by the Company and the Selling Stockholders of the Shares. We have examined signed copies of the Registration Statement as filed with the Commission. We have also examined and relied upon the Underwriting Agreement, the form of Rights Agreement, minutes of meetings of the stockholders and the Board of Directors of the Company as provided to us by the Company, stock record books of the Company as provided to us by the Company, the Certificate of Incorporation and By-Laws of the Company, each as restated and/or amended to date, and such other documents as we have deemed necessary for purposes of rendering the opinions hereinafter set forth.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to

original documents of all documents submitted to us as copies, the authenticity of the originals of such latter documents and the legal competence of all signatories to such documents.

Our opinion in clause (ii) below, insofar as it relates to the Selling Stockholders' shares being fully paid, is based solely on a certificate of the Chief Financial Officer of the Company confirming the Company's receipt of the consideration called for by the applicable resolutions authorizing the issuance of such shares. Our opinion in clause (iii) below assumes (a) the due authorization, execution and delivery of the Rights Agreement in substantially the form filed as Exhibit 4.4 to the Registration Statement by the Rights Agent and the Company, (b) that the Rights Agreement is a binding obligation of the Rights Agent, (c) that the members of the board of directors of the Company have acted in a manner consistent with their fiduciary duties as required under applicable law in adopting the Rights Agreement and (d) the filing with the Secretary of State of the State of Delaware of the Certificate of Designations with respect to the Series A Junior Participating Preferred Stock, $0.001 par value per share, of the Company issuable upon exercise of the Rights.

We express no opinion herein as to the laws of any state or jurisdiction other than the state laws of the Commonwealth of Massachusetts, the General Corporation Law of the State of Delaware and the federal laws of the United States of America.

Based upon and subject to the foregoing, we are of the opinion that:

(i) the Shares to be issued and sold by the Company have been duly authorized for issuance and, when such Shares are issued and paid for in accordance with the terms and conditions of the Underwriting Agreement, such Shares will be validly issued, fully paid and nonassessable;

(ii) the Shares to be sold by the Selling Stockholders have been duly authorized and are validly issued, fully paid and nonassessable; and

(iii) the Rights have been duly authorized by the Company and, when the Shares are issued and paid for in accordance with the terms and conditions of the Underwriting Agreement and the Rights are issued by the Company in accordance with the terms and conditions of the Rights Agreement, the Rights attributable to the Shares will be validly issued.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act and to the use of our name therein and in the related Prospectus under

the caption "Validity of Common Stock." In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

WILMER CUTLER PICKERING
HALE AND DORR LLP

By: _____
David E. Redlick, a Partner

Exhibit 9.5

VOTING AGREEMENT

VOTING AGREEMENT, effective as of August 11, 2006 (this "Agreement"), by and between BIOPHARM, LLC, a Delaware limited liability company ("BioPharm") and MICROSCIENCE INVESTMENTS LIMITED, a limited company organized under the laws of England and Wales ("Microscience").

BACKGROUND

BioPharm is the beneficial and record owner of 1,412,896 shares (the "BioPharm Shares") of the voting class A common stock ("Class A Stock") of Emergent BioSolutions Inc., a Delaware corporation (the "Company") and Microscience is the beneficial and record owner of 1,264,051 shares of Class A Stock. The parties desire to enter into this voting agreement in order to codify their mutual understanding regarding the voting of the Class A Stock (and any other voting capital stock of the Company that may hereafter be held by either party).

AGREEMENT

NOW THEREFORE, in consideration of the mutual agreements contained herein and other good and adequate consideration, the parties hereby agree as follows:

1. Representations and Warranties. Each of BioPharm and Microscience hereby represent and warrant to the other that:

(a) it has the requisite power and authority to enter into and perform this Agreement;

(b) its execution, delivery and performance of this Agreement have been duly authorized by all necessary corporate action;

(c) this Agreement has been duly executed by one or more authorized officer(s) of such party; and

(d) the performance of this Agreement by it will not require it to obtain the consent, waiver or approval of any person and will not violate, result in a breach of, or constitute a default under any statute, regulation, agreement, judgment, consent, or decree by which it is bound.

2. Quorum. Microscience shall, at any time it owns any capital stock of the Company and such capital stock has rights to vote at any annual, special or other general meeting of the Company's stockholders, and at any adjournment or adjournments thereof, cause all such capital stock to be present in person or by proxy at such meeting for purposes of determining whether a quorum is present at any such meeting.

3. Voting. Microscience shall, at any time it owns any capital stock of the Company and such capital stock has rights to vote at any annual, special or other general meeting or pursuant to a written resolution of the Company's stockholders, vote such shares for and against and abstain from voting with respect to any proposal in the same manner and to the same extent as BioPharm. Microscience hereby irrevocably grants BioPharm a proxy, coupled with an interest,

with full power of substitution, to vote all shares of the Company's capital stock owned by Microscience in the manner described in the preceding sentence.

4. Transfer Restrictions; Legend.

(a) Transfer Restrictions. Microscience hereby agrees that all transfers of the Company's capital stock made by it shall be made subject to this Agreement and any transferee will agree in writing to be bound by the terms and provisions of this Agreement as a condition precedent to any such transfer.

(b) Exception. This Section 4 shall not apply to any transfer of the Company's capital stock by Microscience or any subsequent transferee that is bound by this Agreement pursuant to Section 4(a) made pursuant to: (i) an effective registration statement filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "1933 Act"); (ii) Rule 144 promulgated under the 1933 Act; or (iii) another exemption from registration under the 1933 Act, so long as such transfer pursuant to this clause (iii) occurs after the termination date of any market standoff agreement entered into by Microscience pursuant to Section 6(a) of that certain Registration Rights Agreement, dated as of June 23, 2005, between the Company and Microscience.

(c) Legend. Each certificate representing any shares of capital stock of the Company held by either party shall be endorsed with a legend in substantially the following form:

> THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN VOTING REQUIREMENTS AND OTHER RESTRICTIONS SET FORTH IN A VOTING AGREEMENT BETWEEN THE HOLDER OF THIS CERTIFICATE AND CERTAIN OTHER PARTIES. TRANSFER OF THE SECURITIES IS SUBJECT TO THE RESTRICTIONS CONTAINED IN SUCH AGREEMENT.

5. Additional Shares. If, after the effective date hereof, either party or any of its affiliates (as defined in Rule 405 under the 1933 Act) acquires beneficial or record ownership of any additional shares of capital stock of the Company (any such shares, "Additional Shares"), including, without limitation, upon exercise of any option, warrant or right to acquire shares of capital stock of the Company or through any stock dividend or stock split, the provisions of this Agreement shall thereafter be applicable to such Additional Shares as if such Additional Shares had been held by such party as of the effective date hereof. The provisions of the immediately preceding sentence shall be effective with respect to Additional Shares without action by any person or entity immediately upon the acquisition by such party or its affiliates of beneficial ownership of such Additional Shares. Such party shall cause any affiliate that acquires Additional Shares to enter into a written joinder to this Agreement in form and substance satisfactory to the other party.

6. Termination. It is the intention of the parties that this Agreement shall survive the initial public offering of the Company and continue in force at any time when the Company is a public reporting company; provided, however, that this Agreement shall automatically terminate upon the conclusion of the first annual meeting of stockholders following the closing of an initial

public offering of the Company. Upon the termination of this Agreement, except as otherwise set forth herein, the restrictions and obligations set forth herein shall terminate and be of no further effect, except that such termination shall not affect rights perfected or obligations incurred under this Agreement prior to such termination, and the parties and any other person or entity bound by the terms hereof shall each be entitled to receive certificate(s) representing such holder's shares without the legend required by Section 4 herein upon the surrender of the certificate(s) representing such shares to the Company.

7. Miscellaneous.

(a) Binding Effect. This Agreement and all the provisions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns. Neither this Agreement nor any of the rights, interests or obligations hereunder shall be assigned by any of the parties hereto without the prior written consent of the other parties. The parties hereto agree to cause their affiliates to agree in writing to be bound by the terms of this Agreement prior to, or immediately upon, the acquisition of shares by such affiliates.

(b) Amendments. This Agreement may not be modified, amended, altered or supplemented except upon the execution and delivery of a written agreement executed by each of the parties hereto. However, any party may waive any condition to the obligations of any other party hereunder.

(c) Equitable Relief. The parties agree that it is impossible to determine the monetary damages which would accrue to any party by reason of the failure of any party to perform any of its obligations under this Agreement requiring the performance of an act other than the payment of money only. Each party shall be entitled to enforce its rights under this Agreement specifically and to exercise all other rights existing in its favor. The parties hereto agree and acknowledge that money damages may not be an adequate remedy for any breach of the provisions of this Agreement and that each party may in its sole discretion apply to any court of law or equity of competent jurisdiction for specific performance and/or injunctive relief (without posting a bond or other security) in order to enforce or prevent any violation of the provisions of this Agreement. In the event of a breach or threatened breach by a party of any of the provisions of this Agreement, the other parties hereto shall be entitled to an injunction restraining such party from any such breach, and each party hereto waives any claim or defense that there is an adequate remedy at law for such breach or threatened breach. The availability of such remedies shall not prohibit any party from pursuing any other remedies for such breach or threatened breach, including the recovery of damages from a breaching party.

(d) Notices. All notices, requests, demands and other communications required or permitted hereunder shall be in writing and shall be deemed to have been duly given if delivered by hand, facsimile or mail, certified or registered mail (return receipt requested) with postage prepaid:

(i) If to BioPharm, to:

BioPharm, LLC
3500 N. Martin Luther King, Jr. Blvd.
Building One, 3rd Floor

Lansing, MI 48906
Attn: Robert G. Kramer, Sr.

(ii) If to Microscience, to:

Microscience Investments Limited
c/o Advent Venture Partners
25 Buckingham Gate
London SW1E 6LD
United Kingdom
Fax: 44 20 7828 1474
Attention: Shahzad Malik

or to such other address as any party may have furnished to the others in writing in accordance herewith.

(e) Arbitration.

Any controversy or claim arising out of or relating to this Agreement will be settled by arbitration in accordance with the following provisions:

(i) Disputes Covered. The agreement of the parties to arbitrate covers all disputes of every kind relating to or arising out of this Agreement, except disputes determined not to be arbitratable by the arbitrator. Disputes include actions for breach of contract with respect to this Agreement or the related agreement. In addition, the arbitrator selected according to procedures set forth below will determine the arbitrability of any matter brought to them, including their authority to impose equitable remedies that may be requested in good faith by a party, and their decision will be final and binding on the parties.

(ii) Venue. The venue for the arbitration will be in Washington, D.C.

(iii) Law. The governing law for the arbitration will be the law of the State of Delaware without reference to its conflicts of laws provisions.

(iv) Selection. There will be a single arbitrator appointed by the American Arbitration Association.

(v) Administration. The arbitration will be administered by the American Arbitration Association.

(vi) Rules. The rules of arbitration will be the Commercial Arbitration Rules of the American Arbitration Association, as modified by any other instructions that the parties may agree upon at the time. If there is any conflict between the Commercial Arbitration Rules and the provisions of this section, the provisions of this section will prevail.

(vii) Substantive Law. The arbitrator will be bound by and shall strictly enforce the terms of this Agreement and may not limit, expand or otherwise modify its terms. The arbitrator will make a good faith effort to apply substantive applicable law, but an arbitration decision shall not be subject to review because of errors of law.

(viii) Decision. The arbitrator's decision will provide a reasoned basis for the resolution of each dispute and for any award. The arbitrator will not have power to award damages in connection with any dispute in excess of actual compensatory damages.

(ix) Fees; Expenses. Unless the arbitrator's decision otherwise directs each party will bear its own fees and expenses with respect to the arbitration and any proceeding related thereto and the parties will share equally the fees and expenses of the American Arbitration Association and the arbitrator.

(x) Remedies; Award. The arbitrator will have power and authority to award any remedy or judgment that could be awarded by a court of law in the District of Columbia, subject to the limitations set forth in this Agreement. The award rendered by arbitrator will be final and binding upon the parties, and judgment upon the award may be entered in any court of competent jurisdiction.

(f) Applicable Law. This Agreement and the legal relations among the parties hereto arising from this Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without reference to or application of any conflicts of law principles.

(g) Counterparts; Facsimile Execution. This Agreement may be executed simultaneously in two or more counterparts, each of which shall be deemed original but all of which shall constitute one and the same instrument. Facsimile execution and delivery of this Agreement is legal, valid and binding for all purposes.

(h) Entire Agreement. This Agreement constitutes the entire agreement and understanding of the parties hereto in respect of the subject matter contained herein. There are no restrictions, promises, warranties, covenants or undertakings, other than those expressly set forth or referred to herein. This Agreement supersedes all prior agreements and understandings among the parties with respect to such subject matter.

(i) Severability of Provisions. The provisions of this Agreement shall be enforced to the fullest extent permissible under the law and public policies applied in each jurisdiction in which enforcement is sought. Accordingly, if any provision of this Agreement would be held to be invalid, prohibited or unenforceable for any reason, such provision, as to such jurisdiction, shall be ineffective, without invalidating the remaining provisions of this Agreement or affecting the validity or enforceability of such provision. Notwithstanding the foregoing, if such provision could be more narrowly drawn so as to be invalid, prohibited or unenforceable, it shall be so narrowly drawn, without invalidating the remaining provisions of this Agreement or affecting the validity or enforceability of such provision.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and made and entered into effective as of the date first set forth above.

BIOPHARM, LLC

By: /s/ Robert G. Kramer
Name: Robert G. Kramer
Title: General Manager

MICROSCIENCE INVESTMENTS LIMITED

By: /s/ Shahzad Malik
Name: Shahzad Malik
Title: Director

STANDARD EMPLOYMENT CONTRACT

This statement sets out the Terms & Conditions of employment between Emergent Product Development UK Ltd (formerly Emergent Europe Limited) of 540~545 Eskdale Road, Winnersh Triangle, Wokingham, Berkshire RG41 5TU, UK.

And Steven N. Chatfield residing at 31 Kenwood Drive, Beckenham, Kent, England BR3 6QX ('the Employee').

1. **Position**

1.1 President of Emergent Product Development UK Ltd. reporting to the Chief Executive Officer of Emergent BioSolutions Inc., a Delaware corporation (EBSI) with its offices located at 300 Professional Drive, Gaithersburg, MD, USA, or to such other person as the Chief Executive Officer of EBSI may from time to time appoint.

2. **Preconditions**

2.1 Your employment with the Company is conditional on (a) your producing at least two references to the Company which the Company considers satisfactory, which has been satisfied, and (b) such documentation as the Company may require to establish your right to work lawfully in the United Kingdom and (c) the company receiving a medical report from its Occupational Health Advisers which the Company considers satisfactory. (Please complete the enclosed pre-employment health questionnaire and return to the Occupational Health Department in the pre-paid envelope provided, your answers will be treated as strictly confidential and you may be required to attend a health interview/ examination) Should you fail to produce to the Company the required documentation, or should the medical report not prove satisfactory to the Company, then any offer of employment by the Company may be withdrawn and if already accepted, the Company may terminate your employment without notice or a payment in lieu of notice (or on statutory minimum notice if applicable).

3. **Responsibilities**

3.1 Your normal responsibilities are set out in your written job description but you may be required to perform other reasonable tasks from time to time. (The job description does not have contractual force, but is intended as a guide to your main duties). You may be required to carry out your duties for the benefit of associated companies of the Company, without payment of additional remuneration.

3.2 You are required to devote the whole of your time, attention and ability to the Company (or any associated companies for whom you are required to work) and to use your best endeavours to promote, develop and expand the business of the Company and its interests generally. You agree not to have any outside business or other interests which conflict or

may conflict with the interests of the Company or any associated Company or which may otherwise interfere with or impede your ability to carry out your responsibilities for the Company, without specific written approval of the Company given in advance.

3.3 You must not act in any way that may be harmful to the Company's interests and/or damages the reputation of the Company.

3.4 You are expected to comply with the Company's policies and procedures (as issued and/or amended from time to time), even though these do not form part of your contract of employment. The policies and procedures are available electronically on the Company's systems or from the Administration Office. Failure to comply, may lead to disciplinary action. In the event of a conflict between the terms of this contract and any Company policy, the terms of this contract will apply

3.5 You shall not at any time, (including during any period spent on garden leave), make any disparaging, untrue or misleading oral or written statements concerning the business and affairs of the Company or any associated company.

4. **Duration**

4.1 Your employment with the Company commenced as of June 24, 2005 in accordance with the letter agreement between you and EBSI dated September 16, 2005. Your prior period of employment with EBSI counts towards your period of continuous employment.

4.2 Subject to clause 19 below, the period of notice required by either party to terminate your employment is six (6) months. Notice under this sub-clause must be given in writing

4.3 Subject to any contrary provision of law, your employment will end automatically without the need for notice of termination to be served, at the end of the month in which you reach the age of 65, which is the Company's normal retirement age.

5. **Salary**

5.1 Your gross salary ("Salary") will be One Hundred Forty Nine Thousand Nine Hundred Fourteen Pounds (£149,914) per annum payable by equal monthly instalments directly to your bank or building society account. It is our normal practice to pay Salary on approximately the 24th day of each calendar month. Salary through December 31, 2005 has been paid through EBSI in U.S. dollars. The above payment schedule for Salary will commence on January 1, 2006. Salary will be accrued on a daily basis. The Company's policy is to calculate daily pay on the basis of a 260 working day year (or in a leap year a 261 working day year).

5.2 Salaries are generally reviewed annually each year in the Company's discretion commencing in 2007. Any changes will be notified to you in writing.

5.3 The Company reserves the right to deduct from your Salary or from any severance pay due to you on the termination of your employment, any sums owing from you to the Company or any associated company, including but not limited to loans, debts and sums paid to you by mistake or through misrepresentation and you agree to the making of these deductions.

5.4 The Company shall make such Income Tax and National Insurance deductions from your remuneration (including from any payments to which you may become entitled under Section 19 hereof) as shall be required by law

6. **Expenses**

6.1 You will be reimbursed all out-of-pocket expenses necessarily and properly incurred by you on the business of the Company or any associated company provided you produce to the Company such evidence of actual payment of the expenses concerned as the Company reasonably requires.

7. **Hours of Work**

7.1 Your normal hours of work are 09.00 — 17.00 (exclusive of lunch intervals and other breaks) Monday to Friday inclusive, making a total of 35 hours per week. Times of attendance will be agreed with your Manager. You will however be expected to work such extra hours as may be reasonably required for the purpose of completing your tasks efficiently and on time. You agree that the limits on average weekly working time set out in paragraph 4(1) of the Working Time Regulations 1998 will not apply to you. However you may withdraw your consent on giving the Company not less than 3 months' prior written notice. Overtime is only paid in exceptional circumstances and with the written agreement of your Line Manager.

8. **Mobility and Travel**

8.1 While the Company's offices in Winnersh, (wherever located there), will be your normal place of work, the Company reserves the right to relocate its operations or open additional sites elsewhere in the UK. If so requested by the Company on not less than one month's notice, you agree to move to a new place of work or the place of work of an associated company, within a radius of 30 miles from Winnersh.

8.2 You will undertake any travel either in the UK or overseas as may be necessary to carry out your responsibilities.

9. **Holiday**

9.1 Our holiday year runs from 1st January to 31st December. In addition to the normal English Public and Bank Holidays you are entitled to 25 days paid holiday in each holiday year, which accrues at the rate of *25/52* days for each complete calendar week of

employment. The Company reserves the right to require you to take up to 3 days of your annual entitlement during the Christmas period.

9.2 Your holiday entitlement for the year in which you start or end your employment will be calculated on a pro-rata basis.

9.3 Where you have not taken your full accrued holiday entitlement on leaving you will be paid in lieu for your untaken entitlement calculated on a pro-rata basis up to the date of termination of your employment. If you have taken more holiday than your accrued holiday entitlement for that year, you agree that the Company is authorised to deduct the value of the excess days from your Salary or from any severance pay due to you on the termination of your employment. The Company reserves the right to require you to take any outstanding holiday leave during a period of notice.

9.4 You are entitled to carry forward into the next holiday year a maximum of 5 days holiday which have accrued but which have not been taken before the end of the holiday year. These 5 days must be taken by 31st March of the next holiday year. Any carried forward holiday remaining at this date will lapse. You may not take more than 30 days holiday in any one year.

10. **Notification of Absence**

10.1 If you cannot attend for work you should telephone the Company or arrange for someone to telephone or otherwise deliver a message on your behalf as soon as possible on your first day of absence and indicate when you expect to return to work. If your return to work is delayed you should contact the Company again in the same way on each following day of absence.

10.2 If you are prevented by illness or accident from working for seven or more consecutive days you must provide a medical practitioner's statement on the eighth day and weekly thereafter. A self-certification form must be completed and produced to the Company immediately following your return to work for shorter periods of absence.

11. **Sick Pay**

11.1 If you are entitled to Statutory Sick Pay ("SSP") the Company will pay it to you.

11.2 During absence due to sickness or injury, Company Sick Pay equivalent to your normal Salary, may be paid at the Company's discretion. Statutory Sick Pay will be paid in accordance with the then prevailing rules of the Statutory Sick Pay Scheme.

11.3 Full details of the Company Sickness/Absence Policy and Procedure are available electronically on the Company's systems and from the Administration Office.

11.4 The Company provides permanent health insurance cover. Full details of this cover (including conditions of eligibility, the rules and benefits to which cover is subject) are

available from the Administration Office. The Company reserves the right to arrange equivalent cover through an alternative insurer.

12. **Pension Scheme**

12.1 The Company agrees to contribute 10% of your Salary in equal monthly installments to an appropriate and qualified personal pension plan nominated by you. This contribution is conditional upon your making monthly contributions equal to 2.5% of your Salary to the said plan. You agree that your contributions to the plan may be made by the Company making the relevant deductions from your Salary and paying the required amount into the plan on your behalf. The said contributions are subject to the rules of the plan as amended from time to time and will be capped at Inland Revenue limits. No Contracting Out certificate is in force in respect of employment with the Company.

13. **Bonus Scheme**

13.1 You will be eligible to participate in any bonus scheme the Company establishes from time to time (if at all), for employees of your level, subject to the rules of the scheme. For 2005 you shall be eligible for a bonus (hereinafter, the “Bonus”), which shall be capped at thirty percent (30%) of the portion your salary earned by you during that year, inclusive any salary paid by EBSI. Notwithstanding anything to the contrary contained herein, the determination as to whether any Bonus shall be awarded, and the amount of the Bonus, if any, shall be made in the sole and absolute discretion of the Board of Directors of the Company or EBSI, or such other person or committees as may be delegated that responsibility. The Committee’s criteria for awarding any Bonus shall be based on its assessment your job performance and the Company’s financial performance during the applicable Period. The relative weight to be given to each such factor shall also be within the Company’s sole and absolute discretion. The Company reserves the right to amend, replace or withdraw any such bonus scheme from time to time. Further details are available from the Administration Office. The fact that a bonus is paid in one or more years is no guarantee that bonuses will be paid in subsequent years. As the bonus is also intended to incentivise employees to remain in the employment of the Company, payment of any bonus is conditional on your remaining in the employment of the Company and not being under, or having given, notice to terminate your employment at the date bonus is payable.

14. **Life Assurance**

14.1 You will become a member of the Company’s Life Assurance Scheme when you commence permanent employment subject to meeting any conditions of eligibility and the rules of the Scheme from time to time. (These may require you to pass a medical examination to the satisfaction of the benefit providers as a condition of cover). In the event of death during your employment the sum of four times Salary, subject to the Inland Revenue Earnings Cap from time to time, will be payable.

15. **Private Medical Cover**

15.1 You may join the Company's Private Medical Insurance Scheme at the Company's expense and you may pay for dependants (as defined in the scheme) to be included. The Company reserves the right at any time to arrange equivalent cover through an alternative insurer. The provision of cover (including alternative cover) is conditional on your satisfying any conditions (such as passing a medical examination) and accepting any restriction imposed by the insurer. Details of the scheme in operation are available from the Administration office.

16. **Medical Examination**

16.1 The Company may reasonably require you to be examined by a Company appointed doctor at its own expense. The doctor may report to the Company and its professional advisers, on your fitness to do your job or other appropriate work. The Company may also require verification from your own GP that you are fit to return to work after a period of absence or sickness incapacity.

17. **Grievance and Disciplinary Procedures**

17.1 The Company's Grievance and Disciplinary procedures can be viewed electronically on the Company's systems and are also available from the Administration Office. It is the Company's policy to deal fairly with disciplinary issues and grievances, which arise, in accordance with these procedures. The Grievance and Disciplinary Procedures do not form part of your contract or otherwise have contractual effect As can be seen if you have a grievance relating to your employment or wish to appeal against disciplinary action or decisions, you should, in the first instance, notify your line manager in writing making it clear that you are raising it formally. If the grievance is against your line manager personally, you should notify your grievance or appeal in writing to a member of the Executive Committee.

18 Company Systems

18.1 The Company's e-mail and Internet system must be used for Company and only essential personal use in accordance with the Office Systems Policy which is available electronically on the Company's system and from the Administration office.

19 Termination

19.1 The Company can dismiss you without prior notice or pay in lieu (and you will not be entitled to damages) for conduct amounting to gross misconduct or any other conduct or performance issues of equivalent seriousness. A non-exhaustive list of the grounds for summary dismissal is contained in the Company's Disciplinary Procedure.

19.2 The Company reserves the right to pay you your base Salary in lieu of any unexpired period of notice less income tax and employee NI contributions.

19.3 Once notice of termination has been given by either party.

(a) the Company may send you on paid leave of absence, suspend you from performing your job and/or exclude you from entering our premises ("garden leave"). During your suspension you will continue to receive your Salary and contractual benefits. During your employment or any notice period, the Company may, in its absolute discretion, assign you to different tasks consistent with your position or require you to perform no tasks at all. This may include requiring you to stay at home and to have no contact with the Company's clients, suppliers or employees for part or all of your suspension period. You will continue to receive your Salary and all your contractual benefits during the suspension period Your implied duties of loyalty and good faith will continue to apply whether or not you are actually working and you may not be engaged or employed by or take up any office or partnership in any other company, firm or business, or trade on your own account without the Company's written permission.

(b) you must not make any public statements in relation to the Company or your employment or its termination .

19.4 At the end of your employment, or earlier if the Company requests, for whatever reason you must return all Company property, including all equipment, documents, computer disks or tapes and all other tangible items in your possession or control belonging to, or containing any confidential information of, the Company or an associated employer.

19.5 In the event that as a result of incapacity you became eligible to receive benefits under the Company's permanent health insurance scheme, the Company may, in its discretion, a) continue your employment only to the extent necessary and solely to ensure that you continue to be treated as an employee for the purposes of the permanent health insurance scheme or b) terminate your employment. During such time, you will not be entitled to any remuneration or other benefit from the Company and the Company will have no obligation to continue your employment or provide any work or payment to you, if you recover from the incapacity

19.6 (a) If during the term of this Agreement your employment with the Company is terminated by the Company without Cause, other than under the circumstances described in Section 19.7(a) below, then you shall become entitled to:

(i) any unpaid Base Salary and accrued holiday entitlement through the date of termination;

(ii) pro rata target annual bonus in respect of the year of termination;

(iii) any bonus earned but unpaid as of the date of termination for any previously completed year;

(iv) reimbursement for any unreimbursed expenses incurred by you prior to the date of termination;

(v) an amount equal to 75% of your Base Salary;

(vi) employee and fringe benefits and perquisites, if any, to which you may be entitled as of the date of termination under the relevant plans, policies and programs of the Company;

(vii) continued eligibility for you and your eligible dependants (where such dependents are then participants) to receive Employee Benefits (to the extent permitted thereunder), for a period of 9 months following your date of termination, except where the provision of such Employee Benefits would result in a duplication of benefits provided by any subsequent employer; and

(viii) any rights you may have under any Company stock option agreement held by you that is outstanding on the date of termination of employment shall be governed by the terms and conditions set forth in such stock option agreement.

(b) Any payments payable under this Section 19 shall be paid, in the Company's sole and absolute discretion, either as a single, lump sum payment within thirty days following the termination of employment or payable in equal monthly installments over a term of 9 months.

(c) If your employment with the Company is terminated by the Company with Cause (including without limitation pursuant to Section 19.1, above), then you shall not be entitled to receive any compensation, benefits or rights set forth in this Section 19.6 or in Sections 19.7 or 19.8 below (other than Salary and Employee Benefits including accrued but untaken holidays, up to the date of termination of employment, less tax and any other deduction required by law), and any stock options or other equity participation benefits vested on or prior to the date of such termination, but not yet exercised, shall immediately terminate and lapse. If circumstances arise which constitute Cause, but do not justify summary termination of your employment by the Company under Section 19.1 or under English law, then your employment under this Agreement may be terminated by the Company giving you the statutory minimum period of notice required under English law, or a payment of Salary in lieu thereof, net of tax, employee national insurance contributions and any other deductions required by law.

(d) If your employment with the Company is terminated by the Company pursuant under Section 19.1 or for Cause, you shall be obligated to comply with the obligations set forth in subsections (i) through (iii), below. If your employment with the Company is terminated by the Company, as a condition to payment of any of the amounts under Section 19.6(a), you shall be obligated to comply with the obligations set forth in subsections (i) through (iv), below:

(i) you shall not, for a period of nine (9) consecutive months after the termination of your employment, less any period that you are required to spend on "garden leave" in accordance with Section 19.3(a) of this Agreement, directly or indirectly, either alone or in association with others: (A) induce, counsel, advise, solicit or encourage, or attempt to

induce, counsel, advise, solicit or encourage any person employed or engaged by the Company or any of its associated companies, who is carrying out the functions of a director, associate director, vice-president, senior vice-president, officer or other post that is higher in seniority than persons with the job title of director, and with whom in each case you have had dealings during the Relevant Period, to terminate his/her employment or engagement with the Company, or any of its associated companies, or accept employment with any other person or entity, (B) in connection with any business which competes with the business of the Company or any of its associated companies with which you are involved during the Relevant Period, solicit, interfere with, or endeavor to cause any customer, client or business partner of the Company or any of its associated companies, with whom you have had business dealings on behalf of the Company or any of its associated companies during the Relevant Period, to cease or reduce its relationship with the Company, or any of its associated companies, or induce or attempt to induce any such customer, or business partner to breach any agreement that such customer, or business partner may have with the Company, or any of its associated companies;

(ii) you shall not, for a period of six (6) consecutive months after the termination of your employment, less any period you are required to spend on "garden leave" in accordance with Section 19.3(a) of this Agreement, directly or indirectly, whether or not for compensation, and whether or not as an employee, be employed or engaged or otherwise involved in any company, firm or business, competing in the Territory with any part of the business of the Company or of any of its associated companies with which you were involved during the Relevant Period. The Territory shall mean England and any other part of the UK and any other country, state, region or locality in which the Company or such associated company is then doing business or marketing products at the date on which your employment with the Company terminates, with which business you were concerned or involved during the Relevant Period. Nothing in this subsection shall prevent you from owning up to 3% of the issued shares or securities of any publicly traded company. With respect to this sub-section, but without prejudice to the generality of the foregoing, it is understood and agreed that a business is not competing with the business of the Company or any associated company if: (A) your duties with respect to such business relate solely to discrete business units which do not compete with the business of the Company or any associated company; or (B) the competitive activity is limited to geographical markets or products in which the Company or any associated company was not engaged (whether by manufacture, distribution, sale, or development for manufacture, distribution, or sale) during the period of

two (2) years immediately preceding the termination of your employment with the Company.

(iii) you shall, upon reasonable notice and at the Company's expense, cooperate fully with any reasonable request that may be made by the Company (giving due consideration for your obligations with respect to any new employment or business activity) in connection with any investigation, litigation, or other similar activity to which the Company or any associated company is or may be a party or otherwise involved and for which you may have relevant information.

(iv) you shall sign and deliver a waiver and release and/or, at the Company's option, a compromise agreement in a form acceptable to the Company under which you shall release and discharge the Company and all associated companies, officers, directors, employees, agents and affiliates, among others, from and on account of any and all claims that relate to or arise out of the employment relationship between the you and Company.

(e) Should you breach any obligation set forth in Section 19.6(d), above, (which breach remains uncured for a period of 10 days following written notice) the Company shall be relieved of any obligation to make further payments to you under this Section 19.6 and

(f) Should you breach any obligation set forth in Section 19.6(d), above, (which breach remains uncured for a period of 10 days following written notice) the Company shall be entitled to receive full repayment and restitution of all amounts theretofore paid to you under this Section 19.6.

19.7 If during the term of this Agreement

(a) your employment with the Company is terminated by the Company without Cause, or your resign for Good Reason, in each case within eighteen (18) months following a Change of Control, or

(b) your employment with the Company is terminated prior to a Change of Control (which subsequently occurs) at the request of a party involved in such Change of Control, or otherwise in connection with or in anticipation of a Change of Control,

then in the case of each of clauses (a) and (b) you shall become entitled to the compensation, benefits and rights set forth in Section 19.8 (a) through (g), inclusive.

19.8 In the event of a termination of your employment under the circumstances prescribed in Section 19.7 (a) or (b), you shall be entitled to:

(a) A cash lump sum, payable within thirty (30) days following the date of termination, of employment equal to the sum of:

(i) your pro rata target annual bonus in respect of the year of termination through the date of termination;

(ii) any unpaid Base Salary and accrued holiday entitlement through the date of termination;

(iii) any bonus earned but unpaid as of the date of termination for any previously completed year;

(iv) reimbursement for any unreimbursed expenses incurred by you prior to the date of termination;

(v) an amount equal to 100% of your Compensation

(b) Such Employee Benefits, if any, to which you may be entitled as of the date of termination of employment under the relevant plans, policies and programs of the Company.

(c) Any unvested Company stock options held by you that are outstanding on the date of termination of employment shall become fully vested as of such date, and the period during which any Company stock option held by you that is outstanding on such date may be exercised shall be extended to a date that is the later of the fifteenth day of the third month following the date, or December 31 of the calendar year in which, such Company stock option would otherwise have expired if the exercise period had not been extended, but not beyond the final date such Company stock option could have been exercised if your employment had not terminated, in each case based on the terms of such option at the original grant date.

(d) Continued eligibility for you and your eligible dependents (where such dependents are then participants) to receive Employee Benefits (to the extent permitted thereunder), for a period of 12 months following the date of termination of your employment, except where the provision of such Employee Benefits would result in a duplication of benefits provided by any subsequent employer.

(e) All rights you have to indemnification from the Company immediately prior to the Change of Control shall be retained for the maximum period permitted by applicable law, and any director's and officer's liability insurance covering you immediately prior to the Change of Control shall be continued throughout the period of any applicable statute of limitations and subject to the terms of the said insurance policy as amended from time to time.

(g) The Company shall advance to you all costs and expenses, including all attorneys' fees and disbursements, incurred by you in connection with any legal proceedings (including arbitration), which relate to the termination of employment or the interpretation or enforcement of any provision of Section 19.7, and you shall have no

obligation to reimburse the Company for any amounts advanced hereunder where you prevails in such proceeding with respect to at least one material issue, it being acknowledged that settlement of any such proceeding shall relieve you from any reimbursement obligation.

19.9 Notwithstanding anything herein to the contrary, in the event that your employment is terminated or you resign under circumstances that give rise to payment and/or benefits being made or provided to you under Section 19.6 or Section 19.8 (the "Severance Payments"), you agree that the Company may deduct the total amount of any and all "Notice Payments" paid or payable to you by the Company from the total amount of the Severance Payments which would otherwise be due to you. In this Agreement, "Notice Payments" shall mean: (a) all payments and/or benefits paid and/or provided to you during any period of notice of termination of employment (whether notice is served by you or by the Company); and (b) all payments in lieu of notice of termination of employment paid to you by the Company. Any Severance Payments which are paid to you under this Agreement shall offset, be credited towards and reduce the amount of any Notice Payments that may be due to you under this Agreement or under English law.

19.10 The following terms as used in Sections 19.6 through 19.8 shall have the meanings set forth below:

"Applicable Bonus" shall mean the greater of the annual bonus that was paid to you in respect of the most recently completed full calendar year or the maximum annual bonus that could have been paid to you under an established bonus plan for such calendar year.

"Base Salary" shall mean your annual base salary in effect on the date of the Change of Control or the date of termination, whichever is applicable.

"Cause" shall mean each of the following that results in demonstrable harm to the Company's financial condition or business reputation: (1) your conviction of or plea of guilty or no contest to any felony, crime of moral turpitude or any crime under the laws of the United Kingdom which is punishable by a term of imprisonment other than a driving offence; (2) your dishonesty or disloyalty in performance of duties; (3) conduct by you that jeopardizes the Company's right or ability to operate its business; (4) your violation of any of the Company's policies or procedures, (including without limitation employee workplace policies, anti-bribery policies, insider trading policy, communications policy, etc) if uncured within two weeks of written notice by the Company; or (5) your willful malfeasance, misconduct, or gross neglect of duty.

"Change of Control" shall have the meaning set forth in EBSI's Severance Plan and Termination Protection Program ("SPTPP"), as it may be amended from time to time. Any terms defined in such definition shall have the meaning set forth in the SPTPP.

"Compensation" shall mean the sum of your Applicable Bonus and Base Salary.

"Employee Benefits" shall mean the employee and fringe benefits and perquisites (including without limitation all medical, dental, life insurance, disability and pension benefits) made available to you (and your eligible dependents) immediately prior to a Change of Control or a termination of employment, as the case may be, (or the economic equivalent thereof where applicable laws prohibit or restrict such benefits).

"Good Reason" shall mean (i) a material decrease in your base salary or bonus opportunity, (ii) a material diminution in the aggregate employee benefits and perquisites provided to you, (iii) a material adverse change in your title, reporting relationship, duties or responsibilities at the Company (it being agreed that any change in your title with EBSI shall not qualify), or (iv) relocation of the primary office of the Company more than 60 kilometers from its current location.

"Relevant Period" shall means the period of 12 months prior to the termination of your employment with the Company.

20 Confidentiality/Inventions

20.1 You will, in fulfilling your responsibilities, have access to confidential information relating to the Company or any associated employers and develop knowledge and influence over the Company's suppliers and/or customers and/or be involved in making inventions or creating copyright material. You acknowledge that you have signed a separate Non-Disclosure and Invention Assignment Agreement ("NDIAA") in favor of EBSI the ultimate parent company of the Company, which seeks to protect EBSI's interests both during and after the termination of your service in your capacity as Chief Scientific Officer of EBSI. Nothing in this Agreement shall be construed to limit or alter your obligations under the NDIAA. Further, you agree that none of your obligations under this Agreement shall limit or alter your obligations under the NDIAA and that none of your obligations under the NDIAA shall limit or alter your obligations under this Agreement. You further agree that you will not assert any differences with respect to your obligations under this Agreement from those under the NDIAA as a defense to any obligations under the NDIAA, or this Agreement, respectively.

20.2 You undertake that you not, save in the proper performance of your duties for the Company, either during your employment or after its termination for whatever reason, use (whether for your own benefit or for the benefit of any other person, firm, company, corporation or organisation), divulge or communicate to any person firm, company, corporation or organisation, except authorised members of the Company, any trade secrets or Confidential Information of or relating to the Company, any associated company, the business of the Company or any associated company, any customer of the Company or any associated company or any other person, firm, company or organisation with whom or which the Company or any associated company is involved in any kind of business dealings, joint venture or partnership, which in each case has been disclosed to you by the Company, which may be created by you for the Company or which may otherwise have come to your attention as a result of your employment with the Company.

20.3 This restriction shall cease to apply to information or knowledge which comes into the public domain, otherwise than by reason of your default, or which is required to be disclosed by law or by a court or tribunal of competent jurisdiction. Nothing in this Agreement will prevent you making a "protected disclosure" within the meaning of Section 43A-L Employment Rights Act 1996, provided that you have first followed and exhausted any reasonable Company procedure in relation to the reporting of any alleged wrongdoing or malfeasance on the part of the Company or any associated company or any of its/their officers, directors, employees or advisers.

20.4 'Confidential Information' shall, subject to clause 20.3 above, include, but shall not be limited to, business and marketing plans, customer and price lists, the requirements of customers and potential customers for products and services of the Company or any associated company, management accounts, budgets and other sales or financial data, the terms on which the Company or any associated Companies do business with customers or other third parties, details of any pending or threatened litigation, details of confidential and proprietary computer technology (including source and object codes and algorithms), any confidential information relating to scientific data, formulae or processes, (including unpublished research and development reports, details of products and services in the course of development) and any other information which is the subject of an obligation of confidence owed to a third party.

20.5 In the case of inventions employees must sign a separate claim to inventorship in a form acceptable to the Company.

20.6 You agree that it is part of your normal duties at all times to consider in what manner and by what new methods or devices the products, services, processes, equipment or systems of the Company and each Group Company might be improved and to further the intellectual property interests of the Company.

20.7 You will promptly and fully disclose to the Company full details of any Inventions and any works embodying IPR, which you make or originate either by yourself or jointly with other persons during the course of your employment whether or not during working hours or using Company premises or resources and whether or not as a general or specific assignment, which relate or are reasonably capable of being used in the business of the Company and/or any associated company. You acknowledge that all IPR subsisting (or which may in the future subsist) in all such works and Inventions shall automatically, on creation, vest in the Company to the fullest extent permitted by law. To the extent that they do not vest in the Company automatically, you hold them on trust for the Company. The obligations of this Clause will apply both during and after your employment.

20.8 To the extent that any Inventions and any works embodying IPRs created by you prior to the date of this Agreement are not otherwise vested in the Company, you hereby assign and transfer them to the Company, its successors and assigns, with full title guarantee.

September 21, 2006

20.9 For the avoidance of doubt, Clauses 20.7 and 20.8 shall not apply to any IPR or ownership of Inventions listed in Exhibit A which relate to the subject matter of your employment by the Company and which have been made or conceived by you, alone or jointly with others, prior to your employment with the Company.

20.10 At any time during your employment or thereafter, (despite the termination of this Agreement) and at the Company's expense, you will do all such acts and things (including execute such documents, take such actions and make such applications) as may be necessary (or as the Company may reasonably request) in order to substantiate, confirm or vest effectually any IPRs owned wholly or partially by the Company under English, Irish or foreign laws or pursuant to this Agreement, and any other protection as to ownership or use of the same (in any part of the world) in the Company, or as the Company may direct, (jointly if necessary with any joint inventor or maker/author thereof). You hereby irrevocably appoint the Company for these purposes to be your attorney in your name and on your behalf to execute and do such acts and things and execute any such documents as set out above.

20.11 You agree that you will not at any time make use of or exploit the Company's Inventions, IPRs or other property for any purpose other than the proper performance of your duties or for any purposes which has not been agreed by the Company in advance in writing by an authorised person.

20.12 To the full extent permitted by applicable law, you irrevocably and unconditionally waive all of your moral rights in relation to any Inventions and IPRs in all territories of the world.

21 Statutory Particulars

21.1 This contract includes your statutory particulars of employment.

21.2 No collective agreements affect your terms and conditions of employment.

22 Health & Safety

22.1 You have a legal duty to take reasonable care for the health and safety of yourself and of other persons who may be affected by your acts or omissions at work. You must also cooperate with the Company so that the Company can discharge its statutory obligations. No employee or other person shall intentionally or recklessly interfere with, or misuse, anything that is provided in the interests of health, safety or welfare.

23 Miscellaneous

23.1 Any notice to be given pursuant to these terms and conditions must be given in writing and delivered either by courier, by hand, by first class post or by facsimile. Any notice to you will be sent to your last known address or facsimile number or given to you at your place of work and any notice to the Company should be sent to its registered office from

time to time. A notice will be deemed to have been served at the time of delivery if sent by courier or by hand, on completion of transmission by the sender if sent by facsimile and 2 clear days after the date of posting if sent by first class post.

24 Employee Data

24.1 You consent to the Company holding and processing both personal data and sensitive personal data (the latter includes your religious beliefs, your ethnic or racial origin, information relating to your physical or mental health and any unspent criminal convictions), for all purposes relating to your employment. In particular you agree that the Company can hold and process personal and sensitive personal data to: (a) pay and review your remuneration and other benefits; (b) provide and administer any such benefits; (c) determine your fitness to work for the Company or your entitlement to sick pay or maternity or other leave of absence; (d) provide information to the Inland Revenue (or other taxation authorities), the police, other regulatory bodies, the Company's legal advisers and potential purchasers of the Company or any business area in which you work and to any investors or potential investors in the Company; (e) administer and maintain personnel records (including sickness and other absence records); (f) carry out performance reviews, disciplinary or grievance procedures; (g) give references to future employers; and (h) transfer personal and sensitive personal data concerning you to a country outside the EEA (and, in particular, to the HR department of any associated employer based overseas including in the US, particularly for the purposes of HR administration) and you understand that such countries outside the EEA may not have laws to protect your personal information.

25 Choice of Law

25.1 The terms and conditions of your employment are governed and will be construed in accordance with English law and all claims, disputes and proceedings are subject to the exclusive jurisdiction of the English courts

26 Definitions

"associated company" or "associated employer" means any company which from time to time is a subsidiary or a holding company of the Company or a subsidiary of such holding company and "subsidiary" and "holding company" have the meanings attributed to them by section 736 of the Companies Act 1985.

any Act or delegated legislation includes any statutory modification or re-enactment of it or the provision referred to.

"Inventions" means any invention, idea, discovery, development, improvement or innovation, whether or not patentable and whether or not recorded in any medium;

"IPRs" (Intellectual Property Rights) means patents, rights to Inventions, copyright and related rights, trade marks, trade names and domain names, rights in get-up, rights in

goodwill, rights in designs, rights in computer software, database rights, rights in confidential information (including know-how and trade secrets) and any other intellectual property rights, in each case whether registered or unregistered and including all applications (or rights to apply) for, and renewals or extensions of, such rights and all similar or equivalent rights or forms of protection which may now or in the future subsist in any part of the world.

27 Additional Provisions

You acknowledge and agree that the Employment Agreement dated December 22, 2005 between you and Emergent Europe Limited be and it hereby is terminated and superseded by this agreement.

You acknowledge and agree that the Employment Agreement dated January 3, 2005 between you and EBSI be and it hereby is terminated and superseded by this agreement; provided however, that the obligations, rights and agreements contained in Section 8 (Protection of the Company), Section 9 (Inventions, Improvements and Copyrightable Materials) and Section 12 (Additional Obligations) shall survive and inure to the benefit of EBSI and the Company.

The letter agreement between you and EBSI dated September 16, 2005 shall be null and void and the letter agreement between you and EBSI dated July 11, 2006 shall continue to apply as it relates to the rights, obligations and agreements to serve as Chief Scientific Officer of EBSI.

You acknowledge and agree that effective November 12, 2005 you resigned as Chief Executive Officer of Emergent ImmunoSolutions Inc.

Please confirm that you accept this appointment on the above Terms and Conditions, by signing the duplicate of this letter and returning it to me as soon as possible

IN WITNESS WHEREOF this Deed has been executed and delivered as a deed on September 22, 2006.

EXECUTED as a DEED
of the Company acting by:

By: /s/ Fuad El-Hibri

Title: CEO

By: _____

Title: _____

SIGNED as a DEED
by the Employee: /s/ S.N. Chatfield

In the presence of:-

Signature of Witness /s/ Carol Lindsay

Name of Witness Carol Lindsay

Address of Witness 15 Winnersh. Gate
Wokingham RG41 5PL UK

Occupation Exec. PA

Date: September 22, 2006

September 21, 2006

Exhibit 10.20

AMENDED AND RESTATED MARKETING AGREEMENT

THIS AMENDED AND RESTATED MARKETING AGREEMENT (the "Agreement") is made effective this 1st day of January 2000 (the "Effective Date"), by and between BioPort Corporation, a Michigan corporation having its principal office at 3500 N. Martin Luther King, Jr., Blvd., Lansing Michigan 48906 ("BIOPORT") and INTERGEN N.V., a corporation of the Netherlands Antilles, its address being c/o Tarma Trust Management, Castorweg 22-24, Curacao, Netherlands Antilles ("INTERGEN") (BIOPORT and INTERGEN being sometimes referred to in the singular as "Party" and collectively as "Parties").

RECITALS

WHEREAS, INTERGEN and Michigan Biologic Products, Inc. ("MBP") entered into a Marketing Agreement, effective November 28, 1997 (the "Marketing Agreement"), whereby INTERGEN agreed to serve as the sole and exclusive marketing agent for certain products in defined territories;

WHEREAS, INTERGEN paid $60,000 to MBP in consideration of its appointment as an exclusive representative pursuant to the Marketing Agreement;

WHEREAS, INTERGEN and MBP entered into a Consulting Agreement, effective November 28, 1997 (the "Consulting Agreement"), whereby INTERGEN agreed to serve as a consultant to MBP for the sale and promotion of certain products in defined territories;

WHEREAS, INTERGEN paid $40,000 to MBP in consideration of its appointment as an exclusive representative pursuant to the Consulting Agreement;

WHEREAS, BIOPORT acquired certain assets from the State of Michigan pursuant to Public Act 522 of 1996;

WHEREAS, INTERGEN, MBP and BIOPORT agreed to assign the benefits and obligations of MBP under the Marketing Agreement and the Consulting Agreement to BIOPORT, and INTERGEN received notice of the assignment, and gave consent thereto;

WHEREAS, the Parties deem it desirable and in their mutual interest to restructure their contractual relationships, to terminate the Consulting Agreement, and to amend and restate the Marketing Agreement in its entirety; and

WHEREAS, the Parties have entered into a Termination and Settlement Agreement on even date herewith.

THEREFORE, in consideration of the mutual covenants herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby amend and restate the Marketing Agreement in its entirety as follows:

AGREEMENT

1. For purposes of this Agreement, the terms listed below shall have the meaning ascribed to them in this Section.

"Affiliates" when used with respect to any Person shall mean any Person which, directly or indirectly, controls or is controlled by or is under common control with another Person. For purposes of this definition, "control" (including the correlative meanings of the terms "controlled by" and "under common control with"), with respect to any Person, shall mean possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of another Person, whether through the ownership of voting securities or by contract or otherwise.

"AVA" shall mean anthrax vaccine adsorbed.

"Availabilty Date" shall mean the date on which BIOPORT has 100,000 doses of AVA or PBT Vaccine that have (i) been released for distribution by the Food and Drug Administration and the Quality Assurance Department of BIOPORT and (ii) been made available by the U.S. Department of Defense for sale.

"BIOPORT" shall mean, for purpose of this Agreement, BIOPORT and any Affiliate or joint venture in which BIOPORT is a participant.

"Confidential Information" shall mean information relating to the buss ness, prospective business, technical processes, finances, price lists or lists of customers and suppliers of a Party which is provided to the other Party in connection with this Agreement and is designated as "confidential" or "proprietary" by such Party. Notwithstanding the above, "Confidential Information" shall not include information which (i) was known to the Party receiving the information prior to the date of this Agreement, (ii) has been generally known to others in the trade or business of the Parties, (iii) has been part of public knowledge or the literature otherwise than as a result of any breach of confidence by the Party receiving the information, (iv) has become available to the Party receiving the information from a third party not representing either of the Parties, or (v) has been independently acquired by the Party receiving the information as a result of work carried out by an employee of such Party to whom no disclosure of such information shall have been made.

"Dollars" and $" shall mean dollars in the legal tender of the United States of America.

"PBT Vaccine" shall mean the pentavalent botulinum toxoids vaccine.

"Person" shall mean and includes natural persons, corporations, limited liability companies, limited partnerships, general partnerships, joint stock companies, joint ventures, associations, companies, trusts, lenders, trust companies, -land trusts, business trusts, or other organizations, irrespective of whether they are legal entities, and governments and agencies and political subdivisions thereof

"Products" shall mean AVA, the PBT Vaccine, and such other vaccines against any biological warfare threat agent for which BIOPORT may be duly licensed to manufacture or sell, currently or in the future.

"Territory" shall mean all countries of the Middle East and North Africa, except Israel and those countries to which export of AVA or PBT vaccine is prohibited by the U.S. government; provided, however, if such prohibition is subsequently eliminated, then any such country for which the prohibition has been eliminated shall be deemed to be included within the definition of Territory.

"Total Contract Value" shall mean the gross amount promised to be paid to BIOPORT from any Person in the Territory for the purchase of the Products.

2. APPOINTMENT

2.1 BIOPORT appoints INTERGEN to be its sole and exclusive marketing representative with regard to the sale and promotion of the Products in the Territory. The Parties agree that BIOPORT has the right to retain other representatives for the sale and promotion of the Products in the Territory; provided, however, that such retention shall not limit or relieve the obligation of BIOPORT to pay fees to INTERGEN that may otherwise be due under this Agreement. INTERGEN shall provide services to BIOPORT in accordance with the terms and conditions set out in this Agreement.

2.2 The Parties acknowledge and agree that INTERGEN shall have the right to, in its sole discretion, hire such employees, engage such consultants and appoint such agents as it deems appropriate to perform its obligations hereunder. INTERGEN further agrees that such consultants, employees or agents shall be bound by the restrictions of Paragraphs 3.2 and 12 herein.

3. DUTIES OF INTERGEN

3.1 Throughout the term of this Agreement, INTERGEN shall perform a variety of marketing and other activities as follows:

3.1.1 Assist BIOPORT with the promotion and sale of the Products throughout the Territory and assist with inquiries or orders received for Products;

3.1.2 Advise BIOPORT on advantageous pricing structures for the Products, from time to time;

3.1.3 Safeguard the property, rights, and interests of BIOPORT and assist BIOPORT in taking all steps to defend the rights of BIOPORT;

3.1.4 Assist BioPort with promptly obtaining and maintaining all licenses, permits and authorizations as may be required from time to time in connection with the supply of the Products to the Territory;

3.1.5 Supply customers and potential customers with (i) such literature as may be commercially prudent for the purpose of promoting sales of the Products within the Territory and (ii) catalogs and such other information that are necessary for proper presentation and solicitation of Product sales;

3.1.6 Promptly forward to BIOPORT a duplicate copy of every invoice, communication, letter or opportunity relating to the supply of the Products (directly or indirectly) to Persons in the Territory;

3.1.7 Keep BIOPORT informed from time to time as to the market for the Products in the Territory, the prices at which customers and potential customers are prepared to buy the Products, and use its best efforts to give BIOPORT notice of any change in the market price structure for the Products;

3.1.8 Take, particularly in light of the preferred customer status to be granted to the U.S. Government in terms of pricing and the Products supplied, all reasonable and necessary steps to ensure that sales of Products to Persons in the Territory will be used for the internal requirements of the Persons acquiring the Products from BIOPORT and such Products are not acquired for purposes of resale or other transfer into the private or foreign public sectors;

3.1.9 Take all reasonable and necessary steps to ensure that its sales of Products to Persons inside of the Territory are under terms and conditions that do not undermine other existing or potential sales of Products outside the Territory; and

3.1.10 Use its best efforts to sell, at a minimum, 100,000 doses of AVA, in the aggregate, to Persons in the Territory per year, pursuant to orders received by BIOPORT.

3.2. INTERGEN shall perform the above-described in accordance with the highest business standards and with its best efforts, and will not perform any acts which will or may reflect adversely upon the business, integrity, or goodwill of BIOPORT. INTERGEN shall not, and shall ensure that its officers, employees and agents do not, make any representation or give any warranty in relation to the Products other than those which are contained in BIOPORT's current printed literature or packaging or which have been specifically previously authorized in writing by BIOPORT. It is understood by the Parties that INTERGEN shall not accept orders or make contracts on behalf of BIOPORT other than subject to confirmation and acceptance in writing by BIOPORT, nor shall INTERGEN incur any liability of whatever nature on behalf of BIOPORT or pledge BIOPORT's credit.

4. DUTIES OF BIOPORT

BIOPORT shall:

4.1 Use its best efforts to promptly obtain and maintain all licenses, permits and authorizations as may be required from time to time in connection with the supply of the Products to the Territory;

4.2 Supply INTERGEN, at the expense of BIOPORT, with (i) such literature as INTERGEN shall reasonably request from time to time for the purpose of promoting sales of the Products within the Territory and (ii) catalogs and such other information as, in BIOPORT's opinion, are necessary for proper presentation and solicitation of Product sales;

4.3 Promptly forward to INTERGEN a duplicate copy of every invoice, communication, letter or opportunity relating to the supply of the Products (directly or indirectly) to Persons in the Territory;

4.4 Keep INTERGEN informed as to the Products it has available for sale in the Territory, the prices at which it is prepared to sell the Products, and use its best efforts to give INTERGEN at least three (3) months' advance notice of any proposed change in its price structure;

4.5 Permit INTERGEN by nameplate at its office and/or in its letter heading to indicate that INTERGEN is the marketing representative of BIOPORT for the Products in the Territory subject to such indication having been previously approved in writing by BIOPORT (such approval not to be unreasonably withheld or delayed) and provided that such indication shall cease on the expiration or earlier termination of the Agreement (for any cause);

4.6 Allow INTERGEN to have access to the relevant books and accounts and records of BIOPORT at all reasonable times so as to ensure that all invoices relating to the supply of the Products to the Territory have been properly recorded;

4.7 Take, particularly in light of the preferred customer status to be granted to the U. S. Government in terms of pricing and the Products supplied, all reasonable and necessary steps to ensure that sales of Products to Persons in the Territory will be used for the internal requirements of the Persons acquiring the Products from BIOPORT and such Products are not acquired for purposes of resale or other transfer into the private or foreign public sectors;

4.8 Take all reasonable and necessary steps to ensure that its sales of Products to Persons outside of the Territory are under terms and conditions that do not undermine other existing or potential sales of Products within the Territory.

4.9 Use its best efforts to supply, at a minimum, 100,000 doses of Anthrax, in the aggregate, to Persons in the Territory per year, pursuant to orders received by BIOPORT; and

4.10 Advise INTERGEN, in writing, of all established policies and procedures of BIOPORT by which INTERGEN shall be expected to abide and shall promptly notify INTERGEN, in writing, of any changes to such policies and procedures.

5. INDEMNIFICATION

BIOPORT shall unconditionally and irrevocably indemnify and hold harmless INTERGEN, its officers, employees and representatives from all losses (except indirect, incidental or consequential losses), liabilities, claims, demands, expenses, and costs which INTERGEN, its officers, and/or employees may suffer or incur as a direct result of any claim or demand by any third party relating to the Products or any of them-, provided, however, that the indemnity contained in this Subparagraph shall not apply to the extent that any losses, liabilities, claims, demands, expenses, and costs should arise from the gross negligence or willful misconduct of

INTERGEN its officers, employees or representatives, and provided, further, that INTERGEN shall:

5.1 At the expense of BIOPORT, render such reasonable assistance to BIOPORT as BIOPORT may require in respect of such claim or demand;

5.2 Not make any admissions in respect of such claim or demand or otherwise prejudice the position of BIOPORT in respect of such claim or demand; and

5.3 The provisions of this Section shall survive the expiration or earlier termination of this Agreement;

6. COMPENSATION

6.1 In compensation for the marketing services provided by INTERGEN and any and all of its subagents under this Agreement, BIOPORT shall pay to INTERGEN a fee for sales of the Products supplied by or on behalf of BIOPORT to any Person in the Territory, regardless of whether the sale was instigated by INTERGEN at forty percent (40%) of Total Contract Value.

6.2 The fee herein in respect of any Products shall be paid to INTERGEN in Dollars. Upon the payment of any fee, INTERGEN shall deliver to BIOPORT an acknowledgement of receipt therefor.

6.3 The fee due hereunder shall be paid to INTERGEN within seven (7) banking days (excluding Saturdays and Sundays and days in which banks in Michigan are authorized or obligated by law to be closed) after payment for the Products has been received by or on behalf of BIOPORT. In the case of BIOPORT's receipt of any partial payment hereunder, BIOPORT's shall pay INTERGEN the fee on a pro rata basis.

6.4 As regards orders for the supply of the Products to Persons within the Territory which are received by BIOPORT during the term of this Agreement but in respect of which payment has not been made to BIOPORT at the expiration or earlier termination of this Agreement, BIOPORT shall pay to INTERGEN (or as INTERGEN shall reasonably direct in writing) fees in accordance herewith in respect of each such order as and when payment has been received by BIOPORT for the Products that are the subject of such order. For any sale of the Products for which contracts are concluded for the benefit of BIOPORT with Persons in the Territory resulting from standing orders, follow-on orders, extensions, or renewals of orders generated by INTERGEN during the term of this Agreement, such sales shall be deemed sales under this Agreement for which INTERGEN shall be paid fees in accordance with the provisions of this Agreement.

6.5 In the event that BIOPORT fails to make any payment due under this Agreement to INTERGEN by the due date for such payment, interest shall accrue and be payable on the unpaid amount at the annual rate of five percent (5%) above the prime rate published by The Wall Street Journal (New York edition) as of the date on which INTERGEN should have received such payment until payment, in full, is received by INTERGEN.

6.6 INTERGEN shall be responsible for all out-of-pocket expenses incurred by it in the performance of its duties hereunder.

6.7 The Parties agree that INTERGEN may present additional sales opportunities to BIOPORT outside of the Territory on a non-exclusive basis. The Parties, in such an instance, shall negotiate in good faith the compensation due INTERGEN, if any.

7. DURATION AND TERMINATION

7.1 The term of this Agreement shall commence on the Effective Date and unless previously terminated in accordance with its provisions, this Agreement shall terminate at midnight on the last day of the third (3rd) year from the Availability Date.

7.2 This Agreement shall be automatically extended for an additional five (5) year term upon the same terms and conditions if BIOPORT achieves $5,000,000 of sales in the Territory during the initial three (3) year term of the Agreement. As used in this Section, “sales” means the Total Contract Value of completed orders, orders received but not completed and sales contracts entered into but not fully performed as of the expiration of the three (3) year initial term of this Agreement.

7.3 Either Party may terminate this Agreement at any time by notice in writing to the other Party if the other Party commits a material breach of any of the material provisions of this Agreement and falls to remedy the breach within a reasonable time and in any event not less than sixty (60) days from the date of the notice requiring it to do so. If a non-financial breach cannot reasonably be cured, the Parties shall negotiate in good faith for an additional sixty (60) days to attempt to agree upon an alternative performance by the breaching Party or the payment of damages to the non-breaching Party that will constitute a cure and will be deemed to terminate the breach, it being acknowledged that if no such agreement is reached within the additional sixty (60) days. The breach at issue shall be deemed a default and the non-breaching Party may thereafter terminate this Agreement by written notice to the other Party with immediate effect.

7.4 In the event that BIOPORT shall not have at least 100,000 doses reasonably available for sale by INTERGEN, the Parties shall negotiate an extension of the term of this Agreement as provided in paragraphs 7.1 and 7.2. The Parties shall not unreasonably withhold consent to such extension.

7.5 The termination of this Agreement shall not affect any accrued rights or liabilities of either Party nor shall it affect the coming into force or continuance in force of, any provision of this Agreement which is expressly or impliedly intended to come into or remain in force on or after such termination.

8. DISPUTE RESOLUTION AND GOVERNING LAW

All disputes arising between the Parties shall be finally settled by binding arbitration before a single arbitrator in Lansing, Michigan, in accordance with the Commercial Arbitration Rules of the American Arbitration Association. Any award rendered by the arbitrator shall be final and may be enforced by any court of competent jurisdiction. This Agreement shall be governed by

and construed in accordance with laws of the State of Michigan, excluding any conflicts of law rules that would refer the choice of law to another jurisdiction.

9. NON-SOLICITATION

INTERGEN agrees that during the term of this Agreement, and for a period of twelve (12) consecutive months after termination of such Agreement INTERGEN will not i) directly or indirectly induce or attempt to induce or otherwise counsel, advise, solicit or encourage any employee to leave the employ of BIOPORT or accept employment with any other person or entity, ii) directly or indirectly induce or attempt to induce or otherwise counsel, advise, solicit or encourage any person who at the time of such inducement, counseling, advice, solicitation or encouragement had left the employ of BIOPORT within the previous six (6) months to accept employment with any person or entity besides BIOPORT; and iii) solicit, interfere with, or endeavor to cause any customer, client, or business partner of BIOPORT to cease or reduce its relationship with BIOPORT or induce or attempt to induce any such customer, client, or business partner to breach any agreement that such customer, client, or business partner may have with BIOPORT.

10. BIOPORT REPRESENTATIVE

INTERGEN shall take direction and guidance in performing its services hereunder from Robert Bidlingmeyer, Vice President, Marketing of BIOPORT, or such other persons as may be designated from time to time in writing.

11. INDEPENDENT CONTRACTORS

With respect to the subject matter of this Agreement, the Parties are and remain independent contractors. This Agreement shall not be deemed to create a joint venture, partnership, association, or agency between the Parties. INTERGEN is not authorized to incur or create any obligation express or implied on behalf of BIOPORT or to bind BIOPORT in any manner whatsoever. The Parties understand and agree that this Agreement is not a contract of employment, or an offer to enter into a contract of employment. The Parties further agree that INTERGEN shall have sole control of the manner and means of performing the services. BIOPORT shall not have the right to require that INTERGEN or its employees do anything that would jeopardize the relationship of independent contractor between the Parties. INTERGEN shall have the right to appoint and shall be solely responsible for its own workforce, who shall be its own employees.

12. COMPLIANCE WITH FOREIGN CORRUPT PRACTICES ACT

INTERGEN, on its own behalf and on behalf of its owners, managers, affiliates, agents and related entities, warrants, represents, and agrees that (i) neither it nor its owners, managers, affiliates, agents or related entities are officials or candidates of any government, governmental agency or instrumentality, or political party, (ii) it is aware of the requirements of applicable law including the U.S. Foreign Corrupt Practices Act (“FCPA”) and the legal prohibitions on direct or indirect improper payments or gifts to foreign officials or candidates, (iii) it will comply with all applicable laws including the FCPA, and use no part of the above commissions to make any improper or illegal payments, (iv) it will, upon the Company’s request, annually certify such

compliance to the Company, and notify the Company of any relevant change in the status of its owners, managers, affiliates, agents or related entities, (v) it will indemnify the Company and its officers, directors, employees, agents and affiliates for any violation of such laws, (vi) in the event of any such violation, this Agreement will immediately terminate without the need for notice, and (vii) in such event INTERGEN will forfeit any right to any accrued and unpaid commissions and compensation under this Agreement.

13. CONFIDENTIALITY

13.1. During the term of this Agreement and for a period of two (2) years following its termination (for whatever cause) or expiration, each Party will keep confidential the terms and conditions of this Agreement (but may acknowledge the existence of the relationship between the Parties) and all Confidential Information received from the other Party and will not use the same but, to the extent necessary to implement the provisions of this Agreement, each Party may disclose the Confidential Information to such of its customers, officers, or employees as may be reasonably necessary or desirable provided that before any such disclosures each Party shall make such persons aware of its obligations of confidentiality under this Agreement and shall at all times use its best efforts to procure compliance by such persons therewith.

13.2. Notwithstanding the provisions of Section 11.1, the Parties agree that the terms and conditions of this Agreement may be disclosed to the U.S. Government, including any division of the military, in connection with the negotiation or sale of any of the Products to such entity. In such cases, the Parties shall agree as to the best means of disclosure in order to assure the continued protection of Confidential Information.

13.3. Either Party may demand the return of the Confidential Information at any time by notice in writing given to the other Party. On the giving of such notice, the Party served with such notice shall deliver or procure the delivery to the other Party or to its order of each and every original and copy document and thing reproducing, containing, or embodying any Confidential Information.

14. FORCE MAJEURE

14.1. The obligations of a Party under this Agreement shall be suspended during the period and to the extent that such Party is prevented or hindered from complying therewith by any cause beyond its reasonable control including (insofar as beyond such control but without prejudice to the generality of the foregoing expression) strikes, lock-outs, labor disputes, act of God, war, riot, civil commotion, malicious damage, compliance with any law or governmental order, rule, regulation or direction, accident, breakdown of plant or machinery, fire, flood or storm.

14.2. In the event of either Party being so hindered or prevented such Party shall give notice of suspension as soon as reasonably practicable to the other Party stating the date and extent of such suspension and the cause thereof and the omission to give such notice shall forfeit the rights of such Party to claim such suspension. Any Party whose obligations have been suspended as aforesaid shall resume the performance of such obligations as soon as reasonably practicable after the removal of the cause and shall so notify the other Party. In the event that such cause continues for more than six (6) months, either Party

may terminate this Agreement upon giving to the other Party not less than sixty (60) days' notice.

15. ENTIRE AGREEMENT

This Agreement constitutes the entire understanding between the Parties with respect to the subject matter of this Agreement and supersedes all prior agreements, negotiations and discussions between the Parties relating thereto, with the exception of the Termination and Settlement Agreement entered into of even date herewith.

16. AMENDMENTS

No amendment or variation of this Agreement shall be effective unless in writing and signed by a duly authorized representative of each of the Parties.

17. HEADINGS

Section headings shall not form part of this Agreement for the purposes of its interpretation.

18. ASSIGNMENT

Neither Party shall without the prior written consent of the other Party, which shall not be unreasonably withheld or delayed, assign, transfer, sub-contract, charge, delegate or deal in any other manner with this Agreement or its rights or duties hereunder or part thereof, or purport to do any of the same, except, however, it is agreed that INTERGEN may assign, in whole or in part, its rights and obligations under this Agreement to an Affiliate without obtaining the consent of the Company. In the event that INTERGEN assigns any of its rights and interests to an Affiliate in accordance with this provision, it shall provide the Company with notice of such assignment within a reasonable period of time of such assignment

19. WAIVER

The failure of a Party to exercise or enforce any rights under this Agreement shall not be deemed to be a waiver thereof nor operate so as to bar the exercise or enforcement thereof at any time or times thereafter.

20. COUNTERPARTS

This Agreement may be signed in two counterparts, both of which taken together shall constitute one and the same Agreement. Either Party may enter into the Agreement by signing either such counterpart.

21. NOTICES

Any notice given under this Agreement shall be in writing and shall be given by delivering the same by hand at, or by sending the same by prepaid first class post (airmail if to an address outside the country of posting) or confirmed facsimile to the address of the relevant Party set out in this Agreement or such other address as either Party may notify to the other from time to time. Notices delivered in accordance with this provision shall be deemed delivered on the day delivered by hand or confirmed facsimile and three (3) days after delivery by prepaid first-class post.

22. REMEDIES NOT EXCLUSIVE

No remedy conferred by any of the provisions of this Agreement is intended to be exclusive of any other remedy and each and every remedy shall be cumulative and shall be in addition to every other remedy given under this Agreement or now or hereafter existing in law or in equity or by statute or otherwise.

23. SEVERABILITY

If any court of competent jurisdiction finds any provision of this Agreement to be unenforceable or invalid, then such provision shall be ineffective to the extent of the court's finding without affecting the enforceability or validity of the remaining provisions of this Agreement.

WHEREFORE, the Parties have executed and delivered this Agreement in two identical copies, each of which is deemed to be an original, effective as of the date first written above.

BIOPORT CORPORATION	INTERGEN N.V.
By /s/ Robert G. Kramer	By /s/ Ibrahim El Hibri Ibrahim El Hibri
Its Chief Financial Officer	Its Chairman

SUPPLEMENT No. 1 TO MARKETING AGREEMENT

This Supplement No. 1 to Marketing Agreement ("Supplement") is made effective as of the 15th day of September, 2006 ("Effective Date"), by and between Intergen N.V., a Netherlands Antilles corporation, having a place of business at c/o Tarma Trust Management, Castorweg 22-24, Curacao, Netherlands Antilles ("Intergen") and BioPort Corporation, a Michigan corporation having a place of business at 3500 North Martin Luther King Jr. Boulevard, Lansing, Michigan 48906 ("BioPort" and together with Intergen the "Parties" and each a "Party").

RECITALS

WHEREAS, Intergen and BioPort Corporation ("Bioport") entered into an Amended and Restated Marketing Agreement, effective January 1, 2000 (the "Marketing Agreement"), whereby Intergen agreed to serve as the sole and exclusive marketing representative with regard to the sale and promotion in all the countries of the Middle East and North Africa, including Saudi Arabia, of AVA and such other vaccines against any biological warfare threat agent for which Bioport may be duly licensed to manufacture or sell, currently or in the future; and

WHEREAS, Section 7.1 of the Marketing Agreement provides that the term of the Marketing Agreement would expire at "midnight on the last day of the third (3rd) year from the Availability Date"; and

WHEREAS, the Availability Date was defined as "the date on which BioPort had 100,000 doses of AVA or PBT Vaccine that have (i) been released for distribution by the Food and Drug Administration and the Quality Assurance Department of BioPort and (ii) been made available by the U.S. Department of Defense for sale"; and

WHEREAS, the Parties wish to enter into this Supplement to agree on the Availability Date and termination date for purposes of the Marketing Agreement; and

WHEREAS, all capitalized terms used herein but not defined herein shall have the meanings assigned to them in the Marketing Agreement.

NOW THEREFORE, in consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, the Parties agree as follows:

1. The Parties agree that the Availability Date occurred on November 5, 2004 and that at least 100,000 doses of AVA have remained reasonably available for sale by Intergen in the Territory since that date. BioPort shall promptly notify Intergen in writing in the unforeseen circumstance that less than 100,000 doses of AVA are reasonably available for sale by Intergen in the Territory.

2. For purposes of Section 7.1 of the Marketing Agreement, the Parties agree that the termination date of the Marketing Agreement shall be midnight on November 5, 2007, subject to

the extension, or early termination pursuant to the provisions of Sections 7 and 14 of the Marketing Agreement.

3. Except as expressly provided herein, this Supplement shall not be interepreted as amending or otherwise modifying the terms of the Marketing Agreement.

In witness hereof, the Parties have caused this Supplement to be executed in duplicate by their duly authorized representatives.

Intergen	N.V.	BioPort	Corporation
By:	/s/ Yasmine Gibellini	By:	/s/ Robert Kramer
Name:	Yasmine Gibellini	Name:	Robert Kramer
Title:	Chairwoman	Title:	President
Date:	September 15th, 2006	Date:	September 21, 2006

Exhibit 10.24

LEASE AGREEMENT

BRANDYWINE RESEARCH LLC

Landlord

and

EMERGENT BIOSOLUTIONS INC.

Tenant

2273 Research Boulevard
Rockville, Maryland 20850

Dated: June 27, 2006

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EXHIBITS

LEASE AGREEMENT

THIS LEASE AGREEMENT (this "**Lease**") is entered into as of June 27, 2006, between **BRANDYWINE RESEARCH LLC**, a Delaware limited liability company ("**Landlord**"), and **EMERGENT BIOSOLUTIONS INC.**, a Delaware corporation, having a place of business at 300 Professional Drive, Suite 250, Gaithersburg, Maryland 20879 ("**Tenant**").

WITNESSETH

In consideration of the mutual covenants herein set forth, and intending to be legally bound, the parties hereto covenant and agree as follows:

1. Summary of Defined Terms.

The following defined terms, as used in this Lease, shall have the meanings and shall be construed as set forth below:

(a) "**Building**": The Building located at 2273 Research Boulevard, Rockville, Maryland 20850.

(b) "**Project**": The Building, the land on which the Building is located ("**Land**"), and any common areas, parking facilities and all other improvements located thereon.

(c) "**Premises**": Suite 400, consisting of 22,872 square feet of Rentable Area comprising a portion of the fourth (4th) floor of the Building shown on the space plan attached hereto as Exhibit A.

(d) "**Term**": From the Commencement Date for a period of 120 months, ending on the last calendar day of the 120th month following the Commencement Date. Reference is hereby made to Tenant's renewal right in Section 33, and termination right in Section 35.

(e) "**Fixed Rent**":

LEASE YEAR	PER R.S.F.	MONTHLY INSTALLMENTS	ANNUAL FIXED RENT
1	$ 26.25	$ 50,032.50	$ 600,390.00
2	$ 26.97	$ 51,404.82	$ 616,857.84
3	$ 27.71	$ 52,815.26	$ 633,783.12
4	$ 28.48	$ 54,282.88	$ 651,394.56
5	$ 29.26	$ 55,769.56	$ 669,234.72
6	$ 30.06	$ 57,294.36	$ 687,532.32
7	$ 30.89	$ 58,876.34	$ 706,516.08
8	$ 31.74	$ 60,496.44	$ 725,957.28
9	$ 32.61	$ 62,154.66	$ 745,855.92
10	$ 33.51	$ 63,870.06	$ 766,440.72

(f) "**Rental Payment Address**": Brandywine Realty Trust
P.O. Box 75592
Baltimore, MD 21275-5592

(g) "**Security Deposit**": $49,000.

(h) "**Estimated Occupancy Date**": October 1, 2006.

(i) "**Tenant's Allocated Share**": 15.32%;

(j) "**Base Year**": 2007.

(k) "**Rentable Area**":

Premises	-	22,872 square feet
Building	-	149,283 square feet
Office Park	-	432,002 square feet

(l) "**Permitted Uses**": Tenant's use of the Premises shall be limited to general office use and storage ancillary thereto.

(m) "**Broker**": A Landlord affiliate, together with Studley, Inc.

(n) "**Notice Address/Contact**"

Tenant: Prior to the Commencement Date:

Emergent BioSolutions Inc.
300 Professional Drive, Suite 250
Gaithersburg, Maryland 20879
Attn: Vice President Legal,
Corporate and Transactions
Fax No: 301-944-0173

After the Commencement Date:

Emergent BioSolutions Inc.
2273 Research Boulevard, Suite 400
Rockville, Maryland 20850
Attn: Vice President Legal,
Corporate and Transactions
Fax. No._____
[to be supplied when available]

Landlord:	Brandywine Research, LLC 3141 Fairview Park Drive, Suite 200 Falls Church, Virginia 22042 Attention: Asset Manager
a copy to:	Brandywine Realty Trust 401 Plymouth Road, Suite 500 Plymouth Meeting, PA 19462 Attn: Brad A. Molotsky, General Counsel Phone No. 610-325-5600 Fax No.: 610-325-5622 E-Mail: brad.molotsky@bdnreit.com

(o) "**Tenant's North American Industry Classification Number**": 2834

(p) "**Additional Rent**": All sums of money or charges required to be paid by Tenant under this Lease other than Fixed Rent, whether or not such sums or charges are designated as "Additional Rent."

(q) "**Rent**": All Fixed Rent and Additional Rent payable by Tenant to Landlord under this Lease.

(r) "**Office Park**": The complex of office buildings presently known as Research Office Center, Rockville, Maryland

2. Premises. Landlord does hereby lease, demise and let unto Tenant and Tenant does hereby hire and lease from Landlord the Premises for the Term, upon the provisions, conditions and limitations set forth herein.

3. Term.

(a) The Term of this Lease shall commence (the "**Commencement Date**") on the date which is the earlier of (i) when Tenant, with Landlord's prior consent, assumes possession of the Premises and commences to use the Premises for its Permitted Uses, or (ii) upon Substantial Completion of Landlord's Work (as both such terms are defined in Exhibit E — Work Letter). The Commencement Date shall be confirmed by Landlord and Tenant by the execution of a Confirmation of Lease Term in the form attached hereto as Exhibit B. If Tenant fails to object to the Confirmation of Lease Term within ten (10) business days of its delivery, Landlord's determination of such dates shall be deemed accepted.

(b) Upon notification by Landlord, Landlord and Tenant shall schedule a pre-occupancy inspection of the Premises at which time a list of Punchlist Items, if any, shall be completed. Landlord shall use commercially reasonable efforts to complete the Punchlist Items within thirty (30) days after such inspection.

(c) In the event that the Premises are not ready for Tenant's occupancy at the time herein fixed for the beginning of the Term of this Lease, because of any alterations or construction now or hereafter being carried on either to the Premises or the Building (unless such alterations are being done by Tenant or Tenant's contractor, in which case there shall be no suspension or proration of rental or other sums), or because of any restrictions, limitations or delays caused by government regulations or governmental agencies, this Lease and the Term hereof shall not be affected thereby, nor shall Tenant be entitled to make any claim for or receive any damages whatsoever from Landlord; provided, however, no rent or other sums herein provided to be paid by Tenant shall become due until the Premises are substantially completed and deemed by Landlord to be ready for Tenant's occupancy, and until that time, the rent and other sums due hereunder shall be suspended.

Any provision of this Section to the contrary notwithstanding, if Landlord has not Substantially Completed Landlord's Work on or before February 15, 2007 (the "**Outside Date**"), Tenant shall have the right to elect, as its sole remedy, to terminate this Lease by giving Landlord written notice of such exercise at any time after the Outside Date, which notice shall be effective on the fifteenth (15th) day after Landlord's receipt of Tenant's notice (the "**Effective Termination Date**"). If Tenant elects to terminate this Lease as aforesaid and Landlord Substantially Completes Landlord's Work before the Effective Termination Date, Tenant's election to terminate this Lease shall be null and void and this Lease shall continue in full force and effect. The Outside Date shall be extended by one (1) day for each day, if any, that Landlord is delayed in Substantially Completing Landlord's Work due to any Tenant Delay and/or force majeure event. If Tenant properly exercises its right to terminate this Lease and Landlord has not Substantially Completed Landlord's Work on or before the Effective Termination Date, this Lease shall thereafter be null and void, except as otherwise expressly provided in this Lease to the contrary.

4. Construction by Landlord. Subject to Landlord's maintenance and repair obligations set forth in this Lease and except as otherwise expressly set forth in Exhibit E to this Lease to the contrary, Tenant accepts the Premises in "**AS IS**" condition as of the date of delivery of possession to Tenant, without any warranty or representation, express or implied, by or on behalf of Landlord as to the condition or usability thereof, and without any obligation on the part of Landlord to make, have made, pay for, or contribute to the payment for any demolition, alteration, addition, repair, replacement or improvement in or to the Premises, including, without limitation, to perform any Landlord work to make the Premises ready for occupancy or to provide any free rent allowance, painting allowance, rent holiday, free rent, build-out allowance, contribution or other inducement therefor. In addition, Landlord shall have no obligation to provide Tenant with any leasehold improvement allowance or other allowance except as expressly set forth in Exhibit E to this Lease. The foregoing notwithstanding, Tenant shall not be deemed to have waived latent defects in the Premises which defects Tenant reports to Landlord in writing within six (6) months after the Commencement Date. Notwithstanding the foregoing, Tenant shall be entitled to occupy the Premises during the thirty (30) days prior to the Commencement Date for the limited purposes of installing Tenant's office equipment and fixtures and communication lines. Such occupancy by Tenant shall be subject to all of the terms and conditions of this Lease, except for the obligation to pay Fixed Rent or regular installments of Additional Rent.

5. Fixed Rent; Security Deposit.

(a) (i) Tenant shall pay to Landlord without notice or demand and except as otherwise expressly provided herein, without set-off, the annual Fixed Rent in equal monthly installments as set forth in Article 1, in advance on the first day of each calendar month during the Term by (i) check sent to Landlord, to the Rental Payment address set forth in Section 1(f), or (ii) wire transfer of immediately available funds to the account at First Union National Bank, Salem NJ account no. 2030000359075 ABA #031201467; such transfer to be confirmed by Landlord's accounting department upon written request by Tenant. All payments must include the following information: Building No. ___and Lease No. ___. The Building number and the Lease number will be provided to Tenant in the Confirmation of Lease Term. Notwithstanding the immediately preceding sentence, the first (1st) full month's installment of Fixed Rent and the Security Deposit shall be paid upon the execution of this Lease by Tenant.

(ii) Any provision of this Lease to the contrary notwithstanding, provided that no Event of Default has occurred, Tenant shall be entitled to an abatement of, and Landlord hereby waives Tenant's obligation to pay, the first four (4) monthly installments of Fixed Rent payable after the Commencement Date. Nothing herein contained shall be deemed to diminish or relieve Tenant of its obligation to pay in accordance with the terms of this Lease all other sums owed by Tenant to Landlord under this Lease. Commencing with the fifth (5th) full month of the Term, regular installments of Fixed Rent shall then and thereafter be payable in full by Tenant in accordance with the terms of this Lease. The abatement under this Section 5(a)(ii) shall commence immediately after any abatement Tenant is entitled to under Section 5(a)(iii).

(iii) Any provision of this Lease to the contrary notwithstanding, if Landlord has not Substantially Completed Landlord's Work on or before December 31, 2006 (such date shall be extended on a day-for-day basis for each day, if any, that Landlord is delayed in Substantially Completing Landlord's Work due to any Tenant Delay and/or force majeure event), Tenant shall be entitled to a day-for-day abatement of Fixed Rent for each day after such date until Landlord has Substantially Completed Landlord's Work.

(b) If any Fixed Rent or Additional Rent, charge, fee or other amount due from Tenant under the terms of this Lease are not paid to Landlord when due, Tenant shall also pay as Additional Rent a service and handling charge equal to five percent (5%) of the total payment then due. The late charge shall accrue and be payable on the day immediately following the date when the payment was due, irrespective of any grace period granted hereunder. This provision shall not prevent Landlord from exercising any other remedy herein provided or otherwise available at law or in equity in the event of any default by Tenant. Notwithstanding the foregoing, Tenant shall not be liable for such late fee and interest for the first such failure in any twelve (12)-month period.

(c) Tenant shall deliver to Landlord a letter of credit in the form attached as Exhibit G for the Security Deposit, as security for the prompt, full and faithful performance by Tenant of each and every provision of this Lease and of all obligations of Tenant hereunder. With respect to any portion of the Security Deposit held as cash, no interest shall be paid to Tenant on the Security Deposit, and Landlord may commingle the Security Deposit with other security deposits held by Landlord. If Tenant fails to perform any of its obligations hereunder, Landlord may use, apply or retain the whole or any part of the Security Deposit for the payment of (i) any rent or other sums of money which Tenant may not have paid when due, (ii) any sum expended by Landlord on Tenant's behalf in accordance with the provisions of this Lease, and/or (iii) any sum which Landlord may expend or be required to expend by reason of Tenant's default, including, without limitation, any damage or deficiency in or from the reletting of the Premises as provided in this Lease. The use, application or retention of the Security Deposit, or any portion thereof, by Landlord shall not prevent Landlord from exercising any other right or remedy provided by this Lease or by law (it being intended that Landlord shall not first be required to proceed against the Security Deposit) and shall not operate as either liquidated damages or as a limitation on any recovery to which Landlord may otherwise be entitled. If any portion of the Security Deposit is used, applied or retained by Landlord for the purposes set forth above, Tenant shall, within ten (10) days after the written demand therefor is made by Landlord, deposit cash with the Landlord in an amount sufficient to restore the Security Deposit to its original amount.

(d) If no Event of Default by Tenant then exists, the Security Deposit, or any balance thereof, shall be returned to Tenant without interest within thirty (30) days after the expiration of the Term or upon any later date after which Tenant has vacated the Premises. In the absence of evidence satisfactory to Landlord of any permitted assignment of the right to receive the Security Deposit, Landlord may return the same to the original Tenant, regardless of one or more assignments of Tenant's interest in this Lease or the Security Deposit. Upon the return of the Security Deposit, or the remaining balance thereof, to the original Tenant or any successor to the original Tenant, Landlord shall be completely relieved of liability with respect to the Security Deposit.

(e) If the Project or the Building is transferred, Landlord may transfer the Security Deposit to the vendee or lessee and Landlord shall thereupon be released by Tenant from all liability for the return of such Security Deposit. Upon the assumption of such Security Deposit by the transferee, Tenant shall look solely to the new landlord for the return of said Security Deposit, and the provisions hereof apply to every transfer or assignment made of the Security Deposit to a new landlord. Tenant further covenants that it will not assign or encumber or attempt to assign or encumber the Security Deposit and that neither Landlord nor its successors or assigns shall be bound by any such assignment, encumbrance, attempted assignment or attempted encumbrance. The Security Deposit shall not be mortgaged, assigned or encumbered in any manner whatsoever by Tenant without Landlord's prior written consent.

6. Additional Rent.

(a) Commencing on January 1, 2008, and in each calendar year thereafter during the Term (as same may be extended), Tenant shall pay to Landlord without deduction or set off except as otherwise expressly provided in this Lease to the contrary, Tenant's Allocated Share of the amount by which Operating Expenses (hereinafter defined) exceed the Operating Expenses in the Base Year. As used herein, "**Operating Expenses**" means:

(i) Operating Expenses. All costs and expenses related to the Project incurred by Landlord, including, but not limited to:

(A) All costs and expenses related to the operation of the Building and Project, including, but not limited to, lighting, cleaning the Building exterior and common areas of the Building interior, trash removal and recycling, repairs and maintenance of the roof and storm water management system, fire suppression and alarm systems, concierge services for the Project, utilities, removing snow, ice and debris and maintaining all landscape areas, (including replacing and replanting flowers, shrubbery and trees), maintaining and repairing all other exterior improvements on the Project, all repairs and compliance costs necessitated by laws enacted or which become effective after the date hereof (including, without limitation, any additional regulations or requirements enacted after the date hereof regarding the ADA (hereinafter defined) (as such applies to the Project or common areas but not to any individual tenant's space), if applicable) required of Landlord under applicable laws and rules and regulations;

(B) All costs and expenses incurred by Landlord for environmental testing, sampling or monitoring required by statute, regulation or order of governmental authority, except any costs or expenses incurred in conjunction with the spilling or depositing of any hazardous substance caused by Landlord, its officers, employees, agents or contractors or for which any person or other tenant is legally liable and (in the case of another person) Landlord is reimbursed for by such other person.;

(C) Any other expense or charge (including reasonably allocated general and administrative charges) which would typically be considered an expense of maintaining, operating or repairing the Project under generally accepted accounting principles, consistently applied;

(D) Management fee not to exceed three percent (3%) of the gross Rents from the Building. It is expressly understood that legal fees incurred in an action against an individual tenant shall not be deemed includable as an Operating Expense pursuant to this provision;

(E) Capital expenditures and capital repairs and replacements (i) which are reasonably anticipated to reduce or control the operating expenses of the Building, or (ii) are required by laws enacted or which become effective after the date hereof as provided in subsection 6(a)(i)(A) hereof shall be included as operating expenses solely to the extent of the amortized costs of same amortized on a straight-line basis using a commercially reasonable

interest rate over the useful life of the improvement in accordance with generally accepted accounting principles, consistently applied;

(F) All insurance premiums paid or payable by Landlord for insurance with respect to the Project as follows: (a) fire and extended coverage insurance (including demolition and debris removal); (b) insurance against Tenant defaults, Landlord's rental loss or abatement (but not including business interruption coverage on behalf of Tenant), from damage or destruction from environmental hazards, fire or other casualty; (c) Landlord's commercial general liability insurance (including bodily injury and property damage) and boiler insurance; and (d) such other insurance as Landlord may reasonably require or any reputable mortgage lending institution holding a mortgage on the Premises may require. If the coverage period of any of such insurance obtained by Landlord commences before or extends beyond the Term, the premium therefore shall be prorated to the Term. If any such insurance is provided by blanket coverage, the part of the premium allocated to the Project shall be equitably determined by Landlord but shall not exceed the amount of premium due if insurance was provided by a policy only insuring the Project. Should Tenant's occupancy or use of the Premises at any time change and thereby cause an increase in such insurance premiums on the Premises, Building and/or Project, Tenant shall pay to Landlord the entire amount of such reasonably documented increase;

(G) property management office rent or rental value for an office not in excess of 2,000 square feet; and

(H) costs and fees incurred in implementing and operating any transportation management program, ride sharing or similar program required by applicable authorities or otherwise incurred in connection with any mass transit, energy conservation, transportation or similar program required by applicable authorities.

Other office buildings have been or may be developed in the Office Park that includes the Project and the Tax bill(s) for the Project might be included in the Tax bill(s) with such other buildings. In such case, Landlord shall reasonably allocate the Tax bill(s) (and any Operating Expenses pertaining to one or more buildings in the Office Park) amongst the Project and such other buildings.

(ii) Notwithstanding the foregoing, the term "**Operating Expenses**" shall not include any of the following:

(A) Repairs or other work occasioned by fire, windstorm or other insured casualty or by the exercise of the right of eminent domain to the extent of insurance proceeds or condemnation awards received therefor;

(B) Leasing commissions, accountants', consultants', auditors or attorneys' fees, costs and disbursements and other expenses incurred in connection with negotiations or disputes with employees, consultants, other tenants or prospective tenants or other occupants, or associated with the enforcement of any other leases or the defense of Landlord's title to or interest in the real property or any part thereof;

(C) Costs incurred by Landlord in connection with construction of the Building and related facilities, the correction of latent defects in construction of the Building or the discharge of Landlord's Work;

(D) Costs (including permit, licenses and inspection fees) incurred in renovating or otherwise improving or decorating, painting, or redecorating the Building or space for other tenants or other occupants or vacant space;

(E) Depreciation and amortization except as provided in subsection 6(a)(i)(E) hereof;

(F) Costs incurred due to a breach by Landlord or any other tenant of the terms and conditions of any lease;

(G) Overhead and profit increment paid to subsidiaries or affiliates of Landlord for management or other services on or to the Building or for supplies, utilities or other materials, to the extent that the costs of such services, supplies, utilities or materials exceed the reasonable costs that would have been paid had the services, supplies or materials been provided by unaffiliated parties on a reasonable basis without taking into effect volume discounts or rebates offered to Landlord as a portfolio purchaser;

(H) Interest on debt or amortization payments on any mortgage or deeds of trust or any other borrowings and any ground rent;

(I) Ground rents or rentals payable by Landlord pursuant to any over-lease;

(J) Any compensation paid to clerks, attendants or other persons in commercial concessions operated by Landlord;

(K) Costs incurred in managing or operating any "pay for" parking facilities within the Project;

(L) expenses resulting from the gross negligence or willful misconduct of Landlord;

(M) Any fines or fees for Landlord's failure to comply with governmental, quasi-governmental, or regulatory agencies' rules and regulations;

(N) Legal, accounting and other expenses related to Landlord's financing, re-financing, mortgaging or selling the Building or the Project;

(O) Taxes;

(P) Costs for sculpture, decorations, painting or other objects of art in excess of amounts typically spent for such items in office buildings of comparable quality in the competitive area of the Building;

(Q) Cost of any political, charitable or civic contribution or donation;

(R) Costs that are capital in nature except as provided in Subsection 6(a)(i)(E) hereof;

(S) Salaries, wages, or other compensation paid to officers or executives of Landlord above the level of building manager;

(T) Costs of advertising and public relations and promotional costs associated with the leasing of the Building;

(U) Any expenses for which Landlord actually receives reimbursement from insurance, condemnation awards, other tenants or any other source;

(V) Costs incurred for any items to the extent covered by a manufacturer's, materialman's, vendor's or contractor's warranty;

(W) Costs incurred by Landlord which are associated with the operation of the business of the legal entity which constitutes Landlord as the same is separate and apart from the costs of the operation of the Building, including legal entity formation and maintenance charges, legal entity accounting (excluding the incremental accounting fees relating to the operation of the Building) and legal fees (other than with respect to Building operations);

(iii) Taxes. Commencing on January 1, 2008, and in each calendar year thereafter during the Term (as same may be extended), Tenant shall pay to Landlord, without deduction or set off, Tenant's Allocated Share of the amount by which Taxes for such calendar year exceed the amount of Taxes during the Base Year. Taxes for the Base Year shall be deemed to be the Taxes for the Project for calendar year 2007, as reflected on the bills for such period rendered by the taxing authority for the Project (*i.e.*, one-half (1/2) of the July, 2006 bill for Taxes for the Project, and one-half (1/2) of the July, 2007 bill for Taxes for the Project). Taxes shall be defined as all taxes, assessments and other governmental charges ("**Taxes**"), including special assessments for public improvements or traffic districts which are levied or assessed against the Project during the Term or, if levied or assessed prior to the Term, which have heretofore been disclosed in writing to Tenant and which properly are allocable to the Term, and real estate tax appeal expenditures incurred by Landlord to the extent of any reduction resulting thereby. Nothing herein contained shall be construed to include as Taxes: (A) any inheritance, estate, succession, transfer, gift, franchise, corporation, net income or profit tax or capital levy that is or may be imposed upon Landlord or (B) any transfer tax or recording charge resulting from a transfer of the Building or the Project; provided, however, that if at any time during the Term the method of taxation prevailing at the commencement of the Term shall be altered so that in lieu of or as a substitute for the whole or any part of the taxes now levied, assessed or imposed on real estate as such there shall be levied, assessed or imposed (i) a tax on the rents received from such real estate, (ii) a license fee measured by the rents receivable by Landlord from the Premises or any portion thereof, or (iii) a tax or license fee imposed upon Premises or any portion thereof, then the same shall be included in the computation of Taxes hereunder.

(b) Commencing on January 1, 2008, Tenant shall pay, in monthly installments in advance, on account of Tenant's Allocated Share of increases in Operating Expenses and Taxes, the estimated amount of such Operating Expenses and Taxes for such year in excess of the Base Year amount thereof as determined by Landlord in its reasonable discretion and as set forth in a notice to Tenant, such notice to include the basis for such calculation. Prior to the end of the calendar year in which the Lease commences and thereafter for each successive calendar year (each, a "**Lease Year**") or part thereof, Landlord shall send to Tenant a statement of the amount of Operating Expenses and Taxes in excess of the Base Year amount thereof and shall indicate what Tenant's Allocated Share of increases in Operating Expenses and Taxes shall be. Said amount shall be paid in equal monthly installments in advance by Tenant as Additional Rent commencing January 1 of the applicable Lease Year.

(c) If during the course of any Lease Year, Landlord shall have reason to believe that the Operating Expenses shall be different than that upon which the aforesaid projections were originally based, then Landlord, one time in any calendar year, shall be entitled to adjust the amount by reallocating the remaining payments for such year, for the months of the Lease Year which remain for the revised projections, and to advise Tenant of an adjustment in future monthly amounts to the end result that the increases in Operating Expenses shall be collected on a reasonably current basis each Lease Year.

(d) In calculating the Operating Expenses as hereinbefore described, if during the Base Year or any subsequent Lease Year less than ninety-five (95%) percent of the rentable area of the Building shall have been occupied by tenants, then the Operating Expenses attributable to the Property shall be deemed for such Lease Year to be amounts equal to the Operating Expenses which would normally be expected to be incurred had such occupancy of the Building been at least ninety-five (95%) percent throughout such year, as reasonably determined by Landlord (i.e., taking into account that certain expenses depend on occupancy (e.g., janitorial) and certain expenses do not (e.g., landscaping)). Furthermore, if Landlord shall not furnish any item or items of Operating Expenses to any portions of the Building because such portions are not occupied or because such item is not required by the tenant of such portion of the Building, for the purposes of computing Operating Expenses, an equitable adjustment shall be made so that the item of Operating Expense in question shall be shared only by tenants actually receiving the benefits thereof.

(e) By May 30th of each Lease Year, Landlord shall send to Tenant a statement of actual expenses incurred for Operating Expenses and Taxes for the prior Lease Year showing the Allocated Share of increases thereof due from Tenant. If the amount prepaid by Tenant exceeds the amount that was actually due, then Landlord shall refund to Tenant at the time of delivery of such statement the amount of the over-charge. If Landlord has undercharged Tenant, then Landlord shall send Tenant an invoice with the additional amount due, which amount shall be paid in full by Tenant within twenty (20) days of receipt.

(f) Each of the Operating Expenses and Tax amounts, whether requiring lump sum payment or constituting projected monthly amounts added to the Fixed Rent, shall for all purposes be treated and considered as Additional Rent and Tenant's failure to pay the same as and when due in advance and without demand shall have the same effect as failure to pay any

installment of the Fixed Rent and shall afford Landlord all the remedies in the Lease therefor as well as at law or in equity.

(g) If this Lease terminates other than at the end of a calendar year, Landlord's annual estimate of Operating Expenses shall be accepted by the parties as the actual Operating Expenses for the year the Lease ends until Landlord provides Tenant with actual statements in accordance with subsection 6(e) above.

(h) Tenant may audit Landlord's records of Operating Expenses and Taxes provided that any such audit may not occur more frequently than once each calendar year nor apply to any year prior to the year of the statement being reviewed. Tenant shall exercise such right by written notice to Landlord given not later than ninety (90) days from receipt of Landlord's statement of Operating Expenses. If Tenant's audit discloses any discrepancy, for a period of seven (7) business days, Landlord and Tenant shall negotiate in good faith to resolve the dispute and make an appropriate adjustment, failing which, they shall submit any such dispute to arbitration pursuant to the rules and under the jurisdiction of the American Arbitration Association in Rockville, Maryland. The decision rendered in such arbitration shall be final, binding and non-appealable. Arbitration expenses shall be divided equally between the parties, provided that individual legal and accounting expenses shall be the respective parties' responsibility. If, by agreement or arbitration decision, it is determined that there is a six percent (6%) variance in Tenant's favor, Landlord shall reimburse the actual, reasonable hourly costs to Tenant of Tenant's audit (including legal and accounting costs). If Tenant's auditor charges a contingent fee and Landlord is responsible for the payment of such fee, Landlord shall only pay the reasonable hourly fee of such auditor.

(i) Any provision of this Section to the contrary notwithstanding, in no event shall Controllable Expenses exceed Controllable Expenses from the prior year by more than seven (7%) percent. "**Controllable Expenses**" mean all Operating Expenses that are within Landlord's reasonable control. Controllable expenses do not include, without limitation, the following: (i) insurance premiums; (ii) utility costs; (iii) costs incurred for ice and snow removal; (iv) Taxes; and (v) property management fees (which shall be subject to the limitations set forth in Section 6(a)(i)(d)).

7. Utilities. Landlord shall not be liable for any interruption or delay in electric or any other utility service for any reason unless caused by the gross negligence or willful misconduct of Landlord or its agents. Landlord may change the electric and other utility provider to the Project or Building at any time. Landlord, during the hours of 8:00 A.M. to 6:00 P.M. on weekdays and on Saturdays from 8:00 A.M. to 1:00 P.M. ("**Working Hours**"), excluding legal holidays (as of the date of this Lease, New Year's Day; Good Friday, Memorial Day; the Fourth of July; Labor Day; Thanksgiving Day; and Christmas Day), shall furnish the Premises with heat and air-conditioning in the respective seasons, and at all times (other than emergencies) will provide the Premises with electricity for lighting and usual office equipment. At any hours other than the aforementioned, HVAC service (which is currently charged at $45.00 per hour) will be provided at Tenant's expense. Notwithstanding anything herein to the contrary, if Landlord reasonably determines that Tenant's use of electricity is excessive, Tenant shall pay for the installation of a separate electric meter to measure electrical usage in excess of normal office use and to pay Landlord for all such excess electricity registered in such submeter.

If any of the services provided for in this Lease by Landlord are interrupted or stopped or if there is a defect in supply, character of, adequacy or quality of any of such services (collectively, a "**Failure**"), Landlord will use reasonable diligence to resume the service and correct the Failure; provided, however, no Failure of any of these services will create any liability for Landlord (including, without limitation, any liability for damages to Tenant's personal property caused by any such Failure), constitute an actual or constructive eviction or, except as expressly provided below, cause any abatement of the Rent payable under this Lease or in any manner or for any purpose relieve Tenant from any of its obligations under this Lease. If, due to reasons within Landlord's reasonable control, any of the services required to be provided by Landlord under the express terms of this Lease should become subject to a Failure and should remain subject to a Failure for a period in excess of 72 hours after notice of such Failure from Tenant to Landlord, and if such Failure should render all or any portion of the Premises untenantable so that Tenant is actually unable to use any or all of the Premises for the normal conduct of its business ("**Untenantable**"), then commencing upon the expiration of such 72 hour period, Tenant's Rent will equitably abate in proportion to the portion of the Premises so rendered Untenantable for so long as such services remain subject to the Failure for such reasons. Without limiting those reasons for a Failure that may be beyond Landlord's reasonable control, any such Failure due to the following will be deemed caused by a reason beyond Landlord's control: (i) that is required in order to comply with any laws, ordinances or requests from governmental authorities; (ii) any casualty; (iii) an accident; (iv) an emergency; (v) shortages of labor or materials; or (vi) any other causes of any kind whatsoever that are beyond the control of Landlord, including, but not limited to: (A) lack of access to the Building or the Premises (which shall include, but not be limited to, the lack of access to the Building or the Premises when it or they are structurally sound but inaccessible due to evacuation of the surrounding area or damage to nearby structures or public areas); (B) any cause outside the Building; (C) reduced air quality or other contaminants within the Building that would adversely affect the Building or its occupants (including, but not limited to, the presence of biological or other airborne agents within the Building or the Premises); (D) disruption of mail and deliveries to the Building or the Premises resulting from a casualty; (E) disruptions of telephone and telecommunications services to the Building or the Premises resulting from a casualty; or (F) blockages of any windows, doors, or walkways to the Building or the Premises resulting from a casualty.

8. Signs; Use of Premises and Common Areas.

(a) Landlord shall, at no direct cost to Tenant, provide Tenant with standard identification signage on all Building directories and at the entrance to the Premises. No other signs shall be placed, erected or maintained by Tenant at any place upon the exterior of the Premises, Building or Project. Reference is hereby made to Exhibit H.

(b) Tenant may use and occupy the Premises for the Permitted Uses and for no other purpose; provided that Tenant's right to so use and occupy the Premises shall remain expressly subject to the provisions of this Lease including, without limitation, the provisions of Article 26-Governmental Regulations. No machinery or equipment shall be permitted that shall cause vibration, noise or disturbance beyond the Premises. Tenant shall not abandon the Premises at any time during the Term.

(c) Tenant shall not overload any floor or part thereof in the Premises or the Building, including any public corridors or elevators therein, bringing in, placing, storing, installing or removing any large or heavy articles, and Landlord may prohibit, or may direct and control the location and size of, safes and all other heavy articles, and may require, at Tenant's sole cost and expense, supplementary supports of such material and dimensions as Landlord may deem necessary to properly distribute the weight.

(d) Tenant shall not install in or for the Premises, without Landlord's prior written approval, not to be unreasonably withheld, conditioned or delayed, any equipment which requires more electric current than Landlord is required to provide under this Lease, (i.e., at least five (5) watts per rentable square foot of the Premises) and Tenant shall ascertain from Landlord the maximum amount of load or demand for or use of electrical current which can safely be permitted in and for the Premises, taking into account the capacity of electric wiring in the Building and the Premises and the needs of Building common areas (interior and exterior) and the requirements of other tenants of the Building, and Tenant and shall not in any event connect a greater load than such safe capacity.

(e) Tenant shall not commit or suffer any waste upon the Premises, Building or Project or any nuisance, or do any other act or thing which may unreasonably disturb any other tenant in the Building or Project.

(f) Tenant shall have the right, non-exclusive and in common with others, to use the exterior paved driveways and walkways of the Building for vehicular and pedestrian access to the Building twenty-four (24) hours a day, seven (7) days a week. Tenant shall also have the right, in common with other tenants of the Building and Landlord, to use the designated parking areas of the Project for the parking of automobiles of Tenant and its employees and business visitors, incident to Tenant's permitted use of the Premises.

9. Environmental Matters.

(a) Hazardous Substances.

(i) Tenant shall not, except as provided in subparagraph (ii) below, bring or otherwise cause to be brought or permit any of its agents, employees, contractors or invitees to bring in, on or about any part of the Premises, Building or Project, any hazardous substance or hazardous waste in violation of law, as such terms are or may be defined in (x) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq., as the same may from time to time be amended, and the regulations promulgated pursuant thereto ("**CERCLA**"); the United States Department of Transportation Hazardous Materials Table (49 CFR 172.102); by the Environmental Protection Agency as hazardous substances (40 CFR Part 302); the Clean Air Act; and the Clean Water Act, and all amendments, modifications or supplements thereto; and/or (y) any other rule, regulation, ordinance, statute or requirements of any governmental or administrative agency regarding the environment (collectively, (x) and (y) shall be referred to as an "**Applicable Environmental Law**").

(ii) Tenant may bring to and use at the Premises hazardous substances incidental to its normal business operations under the NAI Code referenced in subsection 1(o) above in the quantities reasonably required for Tenant's normal business and in accordance with Applicable Environmental Laws. Tenant shall store and handle such substances in strict accordance with Applicable Environmental Laws. From time to time promptly following Landlord's written request, Tenant shall provide Landlord with documents identifying the hazardous substances stored or used by Tenant on the Premises and describing the chemical properties of such substances and such other information reasonably requested by Landlord or Tenant. Prior to the expiration or sooner termination of this Lease, Tenant shall remove all hazardous substances from the Premises.

(iii) Tenant shall defend, indemnify and hold harmless Landlord and Brandywine Realty Trust and their respective employees and agents from and against any and all third-party claims, actions, damages, liability and expense (including all reasonable attorneys', consultant's and expert's fees, expenses and liabilities incurred in defense of any such claim or any action or proceeding brought thereon) arising from Tenant's storage and use of hazardous substances on the Premises including, without limitation, any and all costs incurred by Landlord because of any investigation of the Project or any cleanup, removal or restoration of the Project to remove or remediate hazardous or hazardous wastes deposited by Tenant. Without limitation of the foregoing, if Tenant, its officers, employees, agents, contractors, licensees or invitees cause contamination of the Premises by any hazardous substances, Tenant shall promptly at its sole expense, take any and all necessary actions to return the Premises to the condition existing prior to such contamination, or in the alternative take such other remedial steps as may be required by law or reasonably recommended by Landlord's environmental consultant.

(b) NAI Numbers.

(i) Tenant represents and warrants that Tenant's NAI number as designated in the North American Industry Classification System Manual prepared by the Office of Management and Budget, and as set forth in Article 1(o) hereof, is correct. Tenant represents that the specific activities intended to be carried on in the Premises are in accordance with Article 1(l).

(ii) Except as provided in Article 9(a)(ii), Tenant shall not engage in operations at the Premises which involve the generation, manufacture, refining, transportation, treatment, storage, handling or disposal of "hazardous substances" or "hazardous waste" as such terms are defined under any Applicable Environmental Law. Tenant further covenants that it will not cause or permit to exist any "release" or "discharge" (as such term is defined under Applicable Environmental Laws) on or about the Premises.

(iii) Tenant shall, at its expense, comply with all requirements of Applicable Environmental Laws pertaining thereto.

(iv) In addition, upon Landlord's written notice, Tenant shall cooperate with Landlord in obtaining Applicable Environmental Laws approval of any transfer of the Building. Tenant shall (1) execute and deliver all affidavits, reports, responses to questions, applications or other filings required by Landlord and related to Tenant's activities at the

Premises, (2) allow inspections and testing of the Premises during normal business hours, and (3) as respects the Premises, perform any requirement reasonably required by Landlord necessary for the receipt of approvals under Applicable Environmental Laws, provided the foregoing shall be at no out-of-pocket cost or expense to Tenant except for clean-up and remediation costs arising from Tenant's violation of this Article 9.

(c) Additional Terms. If Tenant fails to comply with this Article, Landlord may, after written notice to Tenant and Tenant's failure to cure within thirty (30) days of its receipt of such notice, at Landlord's option, perform any and all of Tenant's obligations as aforesaid and all costs and expenses incurred by Landlord in the exercise of this right all be deemed to be Additional Rent payable on demand and with interest at the Default Rate. Any provision of this Section to the contrary notwithstanding, Tenant shall not be held responsible for any environmental issue at the Premises unless such issue was caused by an action or omission of Tenant or its agents, employees, consultants or invitees.

(d) Landlord has not used, generated, manufactured, produced, stored, released, discharged or disposed of on, under or about the Premises or transported to or from the Premises, any Hazardous Substances or allowed any other entity or person to do so to its knowledge. Landlord has no knowledge that any Hazardous Substances has been produced, stored, released, discharged or disposed of on, under or about the Building by any entity or person.

(e) Survival. This Article shall survive the expiration or sooner termination of this Lease.

10. Alterations. Tenant will not cut or drill into or secure any fixture, apparatus or equipment or make alterations, improvements or physical additions (collectively, "**Alterations**") of any kind to any part of the Premises without first obtaining Landlord's written consent, such consent not to be unreasonably withheld. Landlord's consent shall not be required for (i) the installation of any office equipment or fixtures including internal partitions which do not require disturbance of any structural elements or systems (other than attachment thereto) within the Building or (ii) minor work, including decorations, which does not require disturbance of any structural elements or systems (other than attachment thereto) within the Building and which costs in the aggregate less than $50,000. If no approval is required or if Landlord approves Tenant's Alterations and Tenant's contractors which are to do the work, Tenant, prior to the commencement of labor or supply of any materials, must furnish to Landlord (i) a duplicate or original policy or certificates of insurance evidencing (a) commercial general liability insurance for personal injury and property damage in the minimum amount of $1,000,000.00 combined single limit, (b) statutory workman's compensation insurance, and (c) employer's liability insurance from each contractor to be employed (all such policies shall be non-cancelable without thirty (30) days prior written notice to Landlord and shall be in amounts and with companies satisfactory to Landlord); (ii) construction documents prepared and sealed by a registered Maryland architect if such alteration causes the aggregate of all Alterations to be in excess of $50,000; (iii) all applicable building permits required by law; and (iv) an executed, effective Waiver of Mechanics Liens from such contractors and all major trade sub-contractors in states allowing for such waivers or the cost of such alteration must be bonded by Tenant. In connection with all Alterations involving Landlord's approval, Landlord shall be entitled to

collect a construction management fee equal to one percent (1%) of the cost of the Alterations in connection with Landlord's services in supervising and review of such Alterations. Any approval by Landlord permitting Tenant to do any or cause any work to be done in or about the Premises shall be and hereby is conditioned upon Tenant's work being performed by workmen and mechanics working in harmony and not interfering with labor employed by Landlord, Landlord's mechanics or their contractors or other tenants and their contractors. If at any time any of the workmen or mechanics performing any of Tenant's work shall be unable to work in harmony or shall interfere with any labor employed by Landlord, other tenants or their respective mechanics and contractors, then the permission granted by Landlord to Tenant permitting Tenant to do or cause any work to be done in or about the Premises, may be withdrawn by Landlord upon forty-eight (48) hours written notice to Tenant.

All Alterations (whether temporary or permanent in character) made in or upon the Premises, either by Landlord or Tenant, shall be Landlord's property upon installation and shall remain on the Premises without compensation to Tenant unless Landlord provides written notice to Tenant to remove same at the time of consenting thereto, in which event Tenant shall, following the expiration or earlier termination of this Lease, promptly remove such Alterations and restore the Premises to good order and condition. Additionally, at Lease termination, Tenant shall remove all furniture, movable trade fixtures and equipment (including telephone, security and communication equipment system wiring and cabling). All such installations, removals and restoration shall be accomplished in a good and workmanlike manner so as not to damage the Premises or Building and in such manner so as not to unreasonably disturb other tenants in the Building. If Tenant fails to remove any items required to be removed pursuant to this Article, Landlord may do so and the reasonable costs and expenses thereof shall be deemed Additional Rent hereunder and shall be reimbursed by Tenant to Landlord within fifteen (15) business days of Tenant's receipt of an invoice therefor from Landlord.

11. Construction Liens. Tenant will not suffer or permit any contractor's, subcontractor's or supplier's lien (a "**Construction Lien**") to be filed against the Premises or any part thereof by reason of work, labor services or materials supplied or claimed to have been supplied to Tenant; and if any Construction Lien shall at any time be filed against the Premises or any part thereof, Tenant, within ten (10) business days after notice of the filing thereof, shall cause it to be discharged of record by payment, deposit, bond, order of a court of competent jurisdiction or otherwise. If Tenant shall fail to cause such Construction Lien to be discharged within the period aforesaid, then in addition to any other right or remedy, Landlord may, but shall not be obligated to, discharge it either by paying the amount claimed to be due or by procuring the discharge of such lien by deposit or by bonding proceedings. Any amount so paid by Landlord, plus all of Landlord's costs and expenses associated therewith (including, without limitation, reasonable legal fees), shall constitute Additional Rent payable by Tenant under this Lease and shall be paid by Tenant to Landlord on demand with interest from the date of advance by Landlord at the Default Rate.

12. Assignment and Subletting.

(a) Subject to the remaining subsections of Article 12, except as expressly permitted pursuant to this section, Tenant shall not, without Landlord's prior written consent, such consent not to be unreasonably withheld, conditioned or delayed, assign, transfer or hypothecate this Lease or any interest herein or sublet the Premises or any part thereof. Any of the foregoing acts without such consent shall be void. Subject to subsection 12(i) below, this Lease shall not, nor shall any interest herein, be assignable as to the interest of Tenant by operation of law or by merger, consolidation or asset sale, without the Landlord's written consent.

(b) If Tenant desires to assign this Lease or sublet all or any part of the Premises, Tenant shall give notice to Landlord of such desire, including the name, address and contact party for the proposed assignee or subtenant, a description of such party's business history, the effective date of the proposed assignment or sublease (including the proposed occupancy date by the proposed assignee or sublessee), and in the instance of a proposed sublease, the square footage to be subleased, a floor plan depicting the proposed sublease area, and a statement of the duration of the proposed sublease (which shall in any and all events expire by its terms prior to the scheduled expiration of this Lease, and immediately upon the sooner termination hereof). With respect to proposed assignments, and proposed subleases where the proposed sublease term would expire within the last twelve (12) months of the then current Term, Landlord may, at its option, and in its sole and absolute discretion, exercisable by notice given to Tenant within sixty (60) days next following Landlord's receipt of Tenant's notice (which notice from Tenant shall, as a condition of its effectiveness, include all of the above-enumerated information), elect to recapture the Premises if Tenant is proposing to sublet or assign the Premises or such portion as is proposed by Tenant to be sublet (and in each case, the designated and non-designated parking spaces included in this demise, or a pro-rata portion thereof in the instance of the recapture of less than all of the Premises), and terminate this Lease with respect to the space being recaptured. Tenant may void the Landlord's recapture right by delivering written notice withdrawing Tenant's proposed sublease or assignment request, such notice being given to Landlord not later than five (5) days after receipt of Landlord's recapture notice.

(c) If Landlord elects to recapture the Premises or a portion thereof as aforesaid, then from and after the effective date thereof as approved by Landlord, after Tenant shall have fully performed such obligations as are enumerated herein to be performed by Tenant in connection with such recapture, and except as to obligations and liabilities accrued and unperformed (and any other obligations expressly stated in this Lease to survive the expiration or sooner termination of this Lease), Tenant shall be released of and from all lease obligations thereafter otherwise accruing with respect to the Premises (or such lesser portion as shall have been recaptured by Landlord). The Premises, or such portion thereof as Landlord shall have elected to recapture, shall be delivered by Tenant to Landlord free and clear of all furniture, furnishings, personal property and removable fixtures, with Tenant repairing and restoring any and all damage to the Premises resulting from the installation, handling or removal thereof, and otherwise in the same condition as Tenant is, by the terms of this Lease, required to redeliver the Premises to Landlord upon the expiration or sooner termination of this Lease. In the event of a sublease of less than all of the Premises, the cost of erecting any required demising walls,

entrances and entrance corridors, and any other or further improvements required in connection therewith, including without limitation, modifications to HVAC, electrical, plumbing, fire, life safety and security systems (if any), painting, wallpapering and other finish items as may be acceptable to or specified by Landlord, all of which improvements shall be made in accordance with applicable legal requirements and Landlord's then-standard base building specifications, shall be performed by Landlord's contractors, and shall be divided evenly by Tenant and Landlord. If Landlord recaptures the Premises (or any portion thereof), Tenant's Fixed Rent, Operating Expenses and other monetary obligations hereunder shall be adjusted pro-rated based upon the reduced rentable square footage then comprising the Premises.

(d) If Landlord provides written notification to Tenant electing not to recapture the Premises (or so much thereof as Tenant had proposed to sublease), then Tenant may proceed to market the designated space and may complete such transaction and execute an assignment of this Lease or a sublease agreement (in each case in form acceptable to Landlord) within a period of five (5) months next following Landlord's notice to Tenant that it declines to recapture such space, provided that Tenant shall have first obtained in any such case Landlord's prior written consent to such transaction, which consent shall not be unreasonably withheld. If, however, Tenant shall not have assigned this Lease or sublet the Premises with Landlord's prior written consent as aforesaid within five (5) months next following Landlord's notice to Tenant that Landlord declines to recapture the Premises (or such portion thereof as Tenant initially sought to sublease), then in such event, Tenant shall again be required to request Landlord's consent to the proposed transaction, whereupon Landlord's right to recapture the Premises (or such portion as Tenant shall desire to sublease) shall be renewed upon the same terms and as otherwise provided in subsection (b) above.

(e) For purposes of this Article 12, and without limiting the basis upon which Landlord may withhold its consent to any proposed assignment or sublease, it shall not be unreasonable for Landlord to withhold its consent to such assignment or sublease if: (i) the proposed assignee or sublessee shall have a net worth less than the net worth of Tenant as of the date hereof; (ii) the proposed assignee or sublessee shall have no reliable credit history or an unfavorable credit history, or other reasonable evidence exists that the proposed assignee or sublessee will experience difficulty in satisfying its financial or other obligations under this Lease; (iii) the proposed assignee or sublessee, in Landlord's reasonable opinion, consistent with other tenancies in the Building, is not reputable and of good character; (iv) the proposed subleased portion is a reasonably demisable portion of the Premises; Tenant is proposing to assign or sublease to an existing tenant of the Building, or to another prospect with whom Landlord or its partners, or their affiliates are then negotiating and there is other suitable space in the Building available for lease; (v) the nature of such party's business shall reasonably require more than 3.4 parking spaces per 1,000 rentable square feet of floor space, or (vi) the nature of such party's proposed business operation would or might reasonably permit or require the use of the Premises in a manner inconsistent with the "Permitted Uses" specified herein or would violate the terms of any other lease for space in the Building.

(f) Any sums or other economic consideration received by Tenant as a result of any subletting, assignment or license (except rental or other payments received which are attributable to the amortization of the cost of leasehold improvements made to the sublet or assigned portion of the premises by Tenant for subtenant or assignee, and other reasonable

expenses incident to the subletting or assignment, including standard leasing commissions) whether denominated rentals under the sublease or otherwise, which exceed, in the aggregate, the total sums which Tenant is obligated to pay Landlord under this Lease (prorated to reflect obligations allocable to that portion of the premises subject to such sublease or assignment) shall be divided evenly between Landlord and Tenant, with Landlord's portion being payable to Landlord as Additional Rental under this Lease without affecting or reducing any other obligation of Tenant hereunder.

(g) Regardless of Landlord's consent, no subletting or assignment shall release Tenant of Tenant's obligation or alter the primary liability of Tenant to pay the Rent and to perform all other obligations to be performed by Tenant hereunder. The acceptance of rental by Landlord from any other person shall not be deemed to be a waiver by Landlord of any provision hereof. Consent to one assignment or subletting shall not be deemed consent to any subsequent assignment or subletting. If any assignee or successor of Tenant defaults in the performance of any of the terms hereof, Landlord may proceed directly against Tenant without the necessity of exhausting remedies against such assignee or successor.

(h) If (i) the Premises or any part thereof are sublet and Tenant is in default under this Lease, or (ii) this Lease is assigned by Tenant, then, Landlord may collect Rent from the assignee or subtenant and apply the net amount collected to the rent herein reserved; but no such collection shall be deemed a waiver of the provisions of this Article with respect to assignment and subletting, or the acceptance of such assignee or subtenant as Tenant hereunder, or a release of Tenant from further performance of the covenants herein contained.

(i) In connection with each proposed assignment or subletting of the Premises by Tenant, Tenant shall pay to Landlord (i) an administrative fee of $250 per request (including requests for non-disturbance agreements and Landlord's or its lender's waivers) in order to defer Landlord's administrative expenses arising from such request, plus (ii) Landlord's reasonable attorneys' fees.

(j) Tenant may, after notice to, but without the consent of Landlord, assign or this Lease or sublet the Premises to an affiliate (*i.e.*, a corporation 50% or more of whose capital stock is owned by the same stockholders owning 50% or more of Tenant's capital stock), parent or subsidiary corporation of Tenant or assign this Lease to a corporation to which it sells or assigns all of substantially all of its assets or stock or with which it may be consolidated or merged ("**Affiliate**"), provided such purchasing, consolidated, merged, affiliated or subsidiary corporation shall, in writing, assume and agree to perform all of the obligations of Tenant under this Lease, shall have a net worth at least equal to the net worth of Tenant as of the date hereof, and it shall deliver such assumption with a copy of such assignment to Landlord within ten (10) days thereafter, and provided further that Tenant shall not be released or discharged from any liability under this Lease by reason of such assignment.

(k) Anything in this Article to the contrary notwithstanding, no assignment or sublease shall be permitted under this Lease if Tenant is in default at the time of such assignment or subletting.

(l) Anything in this Article to the contrary notwithstanding, no subtenant shall assign such subtenant's sublease nor sub-sublet such subtenant's premises without Landlord's prior written consent, which consent may be withheld in Landlord's sole discretion.

13. Landlord's Right of Entry. Landlord and persons authorized by Landlord may enter the Premises at all reasonable times upon reasonable advance notice (except in the case of an emergency in which case no prior notice is necessary) for the purpose of inspections, repairs, alterations to adjoining space, appraisals, or other reasonable purposes; including enforcement of Landlord's rights under this Lease. Landlord shall not be liable for inconvenience to or disturbance of Tenant by reason of any such entry; provided, however, that in the case of repairs or work, such shall be done, so far as practicable, so as to not unreasonably interfere with Tenant's use of the Premises. Provided, however, that such efforts shall not require Landlord to use overtime labor unless Tenant shall pay for the increased costs to be incurred by Landlord for such overtime labor. Landlord also may enter the Premises at all reasonable times after giving prior oral notice to Tenant, to exhibit the Premises to any prospective purchaser and/or mortgagee. Landlord also may enter the Premises at all reasonable times only during the last ten (10) months of the Term, after giving prior oral notice to Tenant, to exhibit the Premises to any prospective tenants.

14. Repairs and Maintenance.

(a) Except as specifically otherwise provided in subparagraphs (b) and (c) of this Article, Tenant, at its sole cost and expense and throughout the Term of this Lease, shall keep and maintain the Premises in good order and condition, free of accumulation of dirt and rubbish, and shall promptly make all non-structural repairs necessary to keep and maintain such good order and condition. Landlord shall, at Landlord's sole cost, replace, as required, Building Standard lights, ballasts, tubes and ceiling tiles in the Premises. Tenant shall have the option of replacing outlets and similar equipment itself or it shall have the ability to advise Landlord of Tenant's desire to have Landlord make such repairs. If requested by Tenant, Landlord shall make such repairs to the Premises within a reasonable time of notice to Landlord and shall charge Tenant for such services at Landlord's standard rate (such rate to be competitive with the market rate for such services). When used in this Article, the term "repairs" shall include replacements and renewals when necessary. All repairs made by Tenant shall utilize materials and equipment which are at least equal in quality and usefulness to those originally used in constructing the Building and the Premises.

(b) Landlord, throughout the Term of this Lease and at Landlord's sole cost and expense, shall make all necessary repairs to the footings and foundations and the structural steel columns and girders forming a part of the Premises.

(c) Landlord shall maintain all HVAC systems, plumbing and electric systems serving the Building and the Premises. Landlord's cost for HVAC, electric and plumbing service, maintenance and repairs, as limited under Article 6 with respect to capital expenditures, shall be included as a portion of Operating Expenses as provided in Article 6.

(d) Landlord, throughout the Term of this Lease, shall make all necessary repairs to the Building outside of the Premises and to the common areas, including the roof, walls, floors, exterior portions of the Premises and the Building, utility lines, equipment and other utility facilities in the Building, which serve more than one tenant of the Building, and to any driveways, sidewalks, curbs, loading, parking and landscaped areas, and other exterior improvements for the Building; provided, however, that Landlord shall have no responsibility to make any repairs unless and until Landlord receives written notice of the need for such repair or Landlord has actual knowledge of the need to make such repair. The cost of all repairs, as limited under Article 6 with respect to capital repairs, to be performed by Landlord pursuant to this Subsection shall be included in Operating Expenses as provided in Article 6 hereof.

(e) Landlord shall keep and maintain all common areas appurtenant to the Building and any sidewalks, parking areas, curbs and access ways adjoining the Property in a clean and orderly condition, free of accumulation of dirt, rubbish, snow and ice, and shall keep and maintain all landscaped areas in a neat and orderly condition. The cost of all work to be performed by Landlord pursuant to this Subsection shall be included in Operating Expenses as provided in Article 6 hereof. Landlord's obligation to provide snow removal services shall be limited to the parking areas and driveways in the Project and the sidewalk entrances to the Building.

(f) Notwithstanding anything herein to the contrary, repairs to the Premises, Building or Project and its appurtenant common areas made necessary by a negligent or willful act or omission of Tenant or any employee, agent, contractor, or invitee of Tenant shall be made at the sole cost and expense of Tenant, except to the extent of insurance proceeds received by Landlord.

(g) Landlord shall provide Tenant with janitorial services for the Premises Monday through Friday of each week in accordance with the guidelines set forth in Exhibit D attached hereto and the cost thereof shall be included in Operating Expenses as provided in Article 6 hereof.

(h) Landlord reserves the right at any time and from time to time to make or permit changes to or revisions in the Building common areas and/or the Project, including, but not limited to, additions, subtractions, rearrangements or other modifications thereto (including, but not limited to, rearranging or modifying any entrances and or exits), provided such changes and/or revisions do not materially adversely affect Tenant's access to the Premises and the Building's elevators.

15. Insurance.

(a) Tenant shall obtain and keep in force at all times during the term hereof, at its own expense, commercial general liability insurance including contractual liability and personal injury liability and all similar coverage, with combined single limits of at least $3,000,000.00 on account of bodily injury to or death of one or more persons as the result of any one accident or disaster and on account of damage to property. Tenant shall also require its movers to procure and deliver to Landlord a certificate of insurance naming Landlord as an additional insured.

(b) Tenant shall, at its sole cost and expense, maintain in full force and effect on all Tenant's trade fixtures, equipment and personal property on the Premises, a policy of "special form" property insurance covering the full replacement value of such property.

(c) All liability insurance required hereunder shall not be subject to cancellation without at least thirty (30) days prior notice to all insureds, and shall name Landlord, Brandywine Realty Trust and the Building's property manager as additional insureds, as their interests may appear, and, if requested by Landlord, shall also name as an additional insured any mortgagee or holder of any mortgage which may be or become a lien upon any part of the Premises. Prior to the commencement of the Term, Tenant shall provide Landlord with certificates which evidence that the coverages required have been obtained for the policy periods. Tenant shall also furnish to Landlord throughout the term hereof replacement certificates at least thirty (30) days prior to the expiration dates of the then current policy or policies. All the insurance required under this Lease shall be issued by insurance companies authorized to do business in the State of Maryland with a financial rating of at least an A-VIII as rated in the most recent edition of Best's Insurance Reports and in business for the past five years. The limit of any such insurance shall not limit the liability of Tenant hereunder. If Tenant fails to procure and maintain such insurance, Landlord may, but shall not be required to, procure and maintain the same, at Tenant's expense to be reimbursed by Tenant as Additional Rent within ten (10) days of written demand. Any deductible under such insurance policy or self-insured retention under such insurance policy in excess of Fifty Thousand Dollars ($50,000) must be approved by Landlord in writing prior to issuance of such policy. Tenant shall not self-insure without Landlord's prior written consent. The policy limits set forth herein shall be subject to periodic review, and Landlord reserves the right to require that Tenant increase the liability coverage limits if, in the reasonable opinion of Landlord, the coverage becomes inadequate or is less than commonly maintained by tenants of similar buildings in the area making similar uses.

(d) Landlord shall obtain and maintain the following insurance during the Term of this Lease: (i) replacement cost insurance including "special form" property insurance on the Building and on the Project covering the full replacement cost of the Project (exclusive of the cost of excavations, foundations, footings and value of land) (ii) builder's risk insurance for the Landlord's Work to be constructed by Landlord in the Project, and (iii) commercial general liability insurance (including personal injury and contractual liability coverage) covering Landlord's operations at the Project with combined single limits of at least $2,000,000.00.

(e) Each party hereto, and anyone claiming through or under them by way of subrogation, waives and releases any cause of action it might have against the other party and Brandywine Realty Trust and their respective employees, officers, members, partners, trustees and agents, on account of any loss or damage that is insurable against under any insurance policy required to be obtained hereunder, whether or not such policies are actually obtained. Each party hereto shall cause its insurance carrier to endorse all applicable policies waiving the carrier's right of recovery under subrogation or otherwise against the other party. During any period while such waiver of right of recovery is in effect, each party shall look solely to any proceeds of any such policies for compensation for loss.

16. Indemnification.

(a) Tenant shall defend, indemnify and hold harmless Landlord, Brandywine Realty Services Corp. and Brandywine Realty Trust and their respective employees and agents from and against any and all third-party claims, actions, damages, liability and expense (including all reasonable attorneys' fees, expenses and liabilities incurred in defense of any such claim or any action or proceeding brought thereon) arising from (i) Tenant's improper use of the Premises, (ii) the improper conduct of Tenant's business, (iii) any activity, work or things done, permitted or suffered by Tenant or its agents, licensees or invitees in or about the Premises or elsewhere contrary to the requirements of the Lease, (iv) any breach or default in the performance of any obligation of Tenant's part to be performed under the terms of this Lease, and (v) any negligence or willful act of Tenant or any of Tenant's agents, contractors, employees or invitees. Without limiting the generality of the foregoing, Tenant's obligations shall include any case in which Landlord, Brandywine Realty Services Corp. or Brandywine Realty Trust shall be made a party to any litigation commenced by or against Tenant, its agents, subtenants, licensees, concessionaires, contractors, customers or employees, in which event Tenant shall defend, indemnify and hold harmless Landlord, Brandywine Realty Services Corp. and Brandywine Realty Trust and upon notice from Landlord shall defend the same at Tenant's expense by counsel reasonably satisfactory to Landlord and shall pay all costs, expenses and reasonable attorneys' fees incurred or paid by Landlord, Brandywine Realty Services Corp. and Brandywine Realty Trust in connection with such litigation, after notice to Tenant and Tenant's refusal to defend such litigation.

(b) Landlord shall defend, indemnify and hold harmless Tenant and its respective employees and agents from and against any and all third-party claims, actions, damages, liability and expense (including all attorneys' fees, expenses and liabilities incurred in defense of any such claim or any action or proceeding brought thereon) arising from (i) Landlord's improper use of the Premises, the Building or the Project, (ii) the improper conduct of Landlord's business, (iii) any activity, work or things done, permitted or suffered by Landlord in or about the Premises or elsewhere in the Project contrary to the requirements of this Lease, (iv) any breach or default in the performance of any obligation of Landlord's part to be performed under the terms of this Lease, and (v) any negligence or willful act of Landlord or any of Landlord's agents, contractors, employees or invitees. Without limiting the generality of the foregoing, Landlord's obligations shall include any case in which Tenant shall be made a party to any litigation commenced by or against Landlord, its agents, subtenants, licensees, concessionaires, contractors, customers or employees, in which event Landlord shall indemnify and hold harmless Tenant and upon notice from Tenant shall defend the same at Landlord's expense by counsel reasonably satisfactory to Tenant and shall pay all costs, expenses and reasonable attorneys' fees incurred or paid by Tenant in connection with such litigation, after notice to Landlord and Landlord's refusal to defend such litigation.

17. Quiet Enjoyment. Provided no Event of Default by Tenant exists, Tenant shall peaceably and quietly hold and enjoy the Premises for the Term, without hindrance from Landlord, or anyone claiming by through or under Landlord under and subject to the terms and conditions of this Lease and of any mortgages now or hereafter affecting all of or any portion of the Premises, subject to Article 19.

18. Casualty.

(a) Except as provided below, in case of damage to the Premises by fire or other insured casualty, Landlord shall repair the damage. Such repair work shall be commenced promptly following notice of the damage and completed with due diligence, taking into account the time required for Landlord to effect a settlement with and procure insurance proceeds from the insurer, except for delays due to governmental regulation, scarcity of or inability to obtain labor or materials, intervening acts of God or other causes beyond Landlord's reasonable control.

(b) Notwithstanding the foregoing, if (i) the damage is of a nature or extent that, in Landlord's reasonable judgment (to be communicated to Tenant within sixty (60) days from the date of the casualty), the repair and restoration work would require more than 210 consecutive days to complete after the casualty (assuming normal work crews not engaged in overtime), or (ii) if more than thirty (30%) percent of the total area of the Building is extensively damaged, or (iii) the casualty occurs in the last Lease Year of the Term and Tenant has not exercised a renewal right, either party may terminate this Lease and all the unaccrued obligations of the parties hereto, by sending written notice of such termination to the other within ten (10) days of Tenant's receipt of the notice from Landlord described above. Such notice is to specify a termination date no less than fifteen (15) days after its transmission.

(c) If the insurance proceeds received by Landlord as dictated by the terms and conditions of any financing then existing on the Building, (excluding any rent insurance proceeds) are required to be applied on account of any mortgage which encumbers any part of the Premises or Building, or if the nature of loss is not, or would not be, covered by Landlord's property insurance coverage required under Article 15 of this Lease, Landlord may elect either to (i) repair the damage as above provided notwithstanding such fact or (ii) terminate this Lease by giving Tenant notice of Landlord's election within thirty (30) days from the date of the casualty.

(d) If Landlord has not completed restoration of the Premises within 210 days from the date of casualty (subject to delay due to weather conditions, shortages of labor or materials or other reasons beyond Landlord's control), Tenant may terminate this Lease by written notice to Landlord within thirty (30) business days following the expiration of such 210 day period (as extended for reasons beyond Landlord's control as provided above) unless, within thirty (30) business days following receipt of such notice, Landlord has substantially completed such restoration and delivered the Premises to Tenant for occupancy. Notwithstanding the foregoing, if the aforesaid casualty results from the gross negligence or willful misconduct of Tenant, Tenant shall not have the right to terminate this Lease if Landlord is willing to rebuild and restore the Premises.

(e) In the event of damage or destruction to the Premises or any part thereof, Tenant's obligation to pay Fixed Rent and Additional Rent shall be equitably adjusted or abated.

19. Subordination; Mortgagee Rights.

(a) This Lease shall be subject and subordinate at all times to the lien of any existing mortgages encumbering the Premises, Building and/or Project and land of which they are a part without the necessity of any further instrument or act on Tenant's part to effectuate such subordination. This Lease shall also be subject and subordinate at all times to the lien of any mortgages hereafter placed upon the Premises, Building and/or Project and land of which they are a part, provided the holder of each such mortgage executes and delivers to Tenant a subordination, attornment and nondisturbance agreement ("**Nondisturbance Agreement**") from Landlord's Mortgagee, on each such mortgagee's standard form, which provides, inter alia, that the leasehold estate granted to Tenant under this Lease will not be terminated or disturbed by reason of the foreclosure of the mortgage held by Landlord's Mortgagee, so long as Tenant shall not be in default under this Lease and shall pay all sums due under this Lease without offsets or defenses thereto and shall fully perform and comply with all of the terms, covenants and conditions of this Lease on the part of Tenant to be performed and/or complied with, and if a mortgagee or its respective successor or assigns shall enter into and lawfully become possessed of the Premises covered by this Lease and shall succeed to the rights and prospective obligations of Landlord hereunder and shall recognize Tenant's tenancy hereunder, Tenant will attorn to the successor as its landlord under this Lease and, upon the request of such successor landlord, Tenant will execute and deliver an attornment agreement in favor of the successor landlord. Tenant shall execute and deliver upon demand such further instrument or instruments evidencing any such subordination of this Lease to the lien of any such mortgage and any such further instrument or instruments of attornment as shall be desired by any mortgagee or proposed mortgagee or by any other person. Notwithstanding the foregoing, any mortgagee may at any time subordinate its mortgage to this Lease, without Tenant's consent, by notice in writing to Tenant, and thereupon this Lease shall be deemed prior to such mortgage without regard to their respective dates of execution and delivery and in that event such mortgagee shall have the same rights with respect to this Lease as though it had been executed prior to the execution and delivery of the mortgage.

(b) If Landlord shall be or is alleged to be in default of any of its obligations owing to Tenant under this Lease, Tenant shall give the holder of any mortgage (collectively the "**Mortgagee**") now or hereafter placed upon the Premises, Building and/or Project, notice by overnight mail of any such default which Tenant shall have served upon Landlord, provided that prior thereto Tenant has been notified in writing (by way of Notice of Assignment of Rents and/or Leases or otherwise in writing to Tenant) of the name and addresses of any such Mortgagee. Tenant shall not be entitled to exercise any right or remedy as there may be because of any default by Landlord without having given such notice to the Mortgagee. If Landlord shall fail to cure such default the Mortgagee shall have thirty (30) additional days (measured from the date of the Mortgagee's receipt of such notice from Tenant) within which to cure such default, provided that if such default be such that the same could not be cured within such period and Mortgagee promptly commenced and is diligently pursuing the remedies necessary to effectuate the cure (including but not limited to foreclosure proceedings if necessary to effectuate the cure), then Tenant shall not exercise any right or remedy as there may be arising because of Landlord's default, including but not limited to, termination of this Lease as may be expressly provided for herein or available to Tenant as a matter of law, if the Mortgagee either has cured the default

within such time periods, or as the case may be, has initiated the cure of same within such period and is diligently pursuing the cure of same as aforesaid.

(c) Any provision of this Section to the contrary notwithstanding, Landlord will obtain a Nondisturbance Agreement for Tenant from Landlord's current lender in the form of Exhibit F, and will use commercially reasonable efforts to obtain a subordination, non-disturbance and attornment agreement from all future mortgagees in the standard form customarily employed by such mortgagee but subject to any Lease-specific revisions that such mortgagee might require. Landlord's obligation to use commercially reasonable efforts shall not include, among other things, any obligation of Landlord to pay any amount to any current or future lender for such lender's execution and delivery of a subordination, non-disturbance agreement (unless Tenant so agrees to reimburse Landlord for any such expense) nor shall such obligation include any obligation of Landlord to agree to any change in the terms of the mortgage or deed of trust or other loan documents.

20. Condemnation.

(a) If (i) more than twenty (20%) percent of the floor area of the Premises is taken or condemned for a public or quasi-public use (a sale in lieu of condemnation to be deemed a taking or condemnation for purposes of this Lease), or (ii) as a result of such taking Tenant does not have elevator access to the Premises, and if, in Landlord's reasonable opinion, elevator access to the Premises cannot be restored within 210 consecutive days after the date of such taking, this Lease shall, at either party's option, terminate as of the date title to the condemned real estate vests in the condemnor, and the Fixed Rent and Additional Rent herein reserved shall be apportioned and paid in full by Tenant to Landlord to that date and all rent prepaid for period beyond that date shall forthwith be repaid by Landlord to Tenant and neither party shall thereafter have any liability hereunder.

(b) If less than twenty (20%) percent of the floor area of the Premises is taken or if neither Landlord nor Tenant have elected to terminate this Lease pursuant to the preceding sentence, Landlord shall do such work as may be reasonably necessary to restore the portion of the Premises not taken to tenantable condition for Tenant's uses, but shall not be required to expend more than the net award Landlord reasonably expects to be available for restoration of the Premises. If Landlord determines that the damages available for restoration of the Building and/or Project will not be sufficient to pay the cost of restoration, or if the condemnation damage award is required to be applied on account of any mortgage which encumbers any part of the Premises, Building and/or Project, Landlord may terminate this Lease by giving Tenant thirty (30) days prior notice specifying the termination date.

(c) If this Lease is not terminated after any such taking or condemnation, the Fixed Rent and the Additional Rent shall be equitably reduced in proportion to the area of the Premises which has been taken for the balance of the Term.

(d) If a part or all of the Premises shall be taken or condemned, all compensation awarded upon such condemnation or taking shall go to Landlord and Tenant shall have no claim thereto other than Tenant's damages associated with moving, storage and relocation; and Tenant hereby expressly waives, relinquishes and releases to Landlord any claim

for damages or other compensation to which Tenant might otherwise be entitled because of any such taking or limitation of the leasehold estate hereby created, and irrevocably assigns and transfers to Landlord any right to compensation of all or a part of the Premises or the leasehold estate. Notwithstanding the foregoing, Tenant may file for a separate award for the unamortized cost of any leasehold improvements purchased at Tenant's sole expense provided the same does not diminish Landlord's award.

21. Estoppel. Each party shall, within ten (10) business days after the other party's written request, execute, acknowledge and deliver to the other party a written instrument in recordable form certifying all information reasonably requested, including but not limited to, the following: that this Lease is unmodified and in full force and effect (or if there have been modifications, that it is in full force and effect as modified and stating the modifications), the Commencement Date, the expiration date of this Lease, the square footage of the Premises, the rental rates applicable to the Premises, the dates to which Rent, Additional Rent, and other charges have been paid in advance, if any, and stating whether or not to the best knowledge of the party signing such certificate, the requesting party is in default in the performance of any covenant, agreement or condition contained in this Lease and, if so, specifying each such default of which the signer may have knowledge. It is intended that any such certification and statement delivered pursuant to this Article may be relied upon by any prospective purchaser of the Project or any mortgagee thereof or any assignee of Landlord's interest in this Lease or of any mortgage upon the fee of the Premises or any part thereof.

22. Default.

(a) Event of Default. An "**Event of Default**" shall be deemed to have occurred if:

(i) Tenant fails to pay any installment of Fixed Rent or any amount of Additional Rent when due; provided, however, Landlord shall provide written notice of the failure to pay such Rent and Tenant shall have a five (5) business day grace period from its receipt of such Landlord's notice (facsimile receipt being deemed to be notice hereunder) within which to pay such Rent without creating a default hereunder. Except as otherwise expressly provided therein, the late fee set forth in Article 5 hereof shall be due on the first day after such payment is due irrespective of the foregoing notice and grace period. **No additional notice shall be required thereafter and Landlord shall be entitled to immediately exercise its remedies hereunder if payment is not received during the grace period,**

(ii) Tenant abandons the Premises,

(iii) Tenant fails to bond over a construction or mechanics lien within the time period set forth in Article 11,

(iv) Tenant fails to observe or perform any of Tenant's other non-monetary agreements or obligations herein contained within thirty (30) days after written notice specifying the default, or the expiration of such additional time period as is reasonably necessary to cure such default, provided Tenant immediately commences and thereafter proceeds with all due diligence and in good faith to cure such default,

(v) Tenant makes any assignment for the benefit of creditors,

(vi) a petition is filed or any proceeding is commenced against Tenant or by Tenant under any federal or state bankruptcy or insolvency law and such petition or proceeding is not dismissed within sixty (60) days,

(vii) a receiver or other official is appointed for Tenant or for a substantial part of Tenant's assets or for Tenant's interests in this Lease,

(viii) any attachment or execution against a substantial part of Tenant's assets or of Tenant's interests in this Lease remains unstayed or undismissed for a period of more than twenty (20) days, or

(ix) a substantial part of Tenant's assets or of Tenant's interest in this Lease is taken by legal process in any action against Tenant.

(b) Remedies. Following the occurrence of an Event of Default, in addition to all other rights and remedies available at law or in equity, Landlord shall have the following rights and remedies:

(i) Acceleration of Rent. By notice to Tenant, Landlord may accelerate all Fixed Rent and all expense installments due hereunder and otherwise payable in installments over the remainder of the Term, and, at Landlord's option, any other Additional Rent to the extent that such Additional Rent can be determined and calculated to a fixed sum; and the amount of accelerated rent to the termination date, plus all costs incurred by Landlord relating to Tenant's breach of the Lease, without further notice or demand for payment, shall be due and payable by Tenant within five (5) days after Landlord has so notified Tenant, such amount collected from Tenant shall be discounted to present value using an interest rate of six percent (6%) per annum, minus the fair market rental value for the balance of the Term, determined as of the time of such default, discounted to present value at a rate of six percent (6%) per annum. Additional Rent which has not been included, in whole or in part, in accelerated rent, shall be due and payable by Tenant during the remainder of the Term, in the amounts and at the times otherwise provided for in this Lease.

Notwithstanding the foregoing or the application of any rule of law based on election of remedies or otherwise, if Tenant fails to pay the accelerated rent in full when due, Landlord thereafter shall have the right by notice to Tenant, (i) to terminate Tenant's further right to possession of the Premises and (ii) to terminate this Lease under subparagraph (b) below; and if Tenant shall have paid part but not all of the accelerated rent, the portion thereof attributable to the period equivalent to the part of the Term remaining after Landlord's termination of possession or termination of this Lease shall be applied by Landlord against Tenant's obligations owing to Landlord, as determined by the applicable provisions of subparagraphs (c) and (d) below.

(ii) Termination of Lease. By notice to Tenant, Landlord may terminate this Lease as of a date specified in the notice of termination and in such case, Tenant's rights, including any based on any option to renew, to the possession and use of the Premises shall end absolutely as of the termination date; and this Lease shall also terminate in all respects

except for the provisions hereof regarding Landlord's damages and Tenant's liabilities arising prior to, out of and following the Event of Default and the ensuing termination.

Following such termination and the notice of same provided above (as well as upon any other termination of this Lease by expiration of the Term or otherwise) Landlord immediately may recover possession of the Premises; and to that end, Landlord may enter the Premises and take possession, without the necessity of giving Tenant any notice to quit or any other further notice, with legal process, and in so doing Landlord may remove Tenant's property (including any improvements or additions to the Premises which Tenant made, unless made with Landlord's consent which expressly permitted Tenant to not remove the same upon expiration of the Term), as well as the property of others as may be in the Premises, and make disposition thereof in such manner as Landlord may deem to be commercially reasonable and necessary under the circumstances.

(c) Tenant's Continuing Obligations/Landlord's Reletting Rights.

(i) Unless and until Landlord shall have terminated this Lease under subparagraph (b) above, Tenant shall remain fully liable and responsible to perform all of the covenants and to observe all the conditions of this Lease throughout the remainder of the Term to the early termination date; and, in addition, Tenant shall pay to Landlord, upon demand and as Additional Rent, the total sum of all costs, losses, damages and expenses, including reasonable attorneys' fees, as Landlord incurs because of any Event of Default having occurred.

(ii) If Landlord either terminates Tenant's right to possession without terminating this Lease or terminates this Lease and Tenant's leasehold estate as above provided, then, subject to the provisions below, Landlord shall have the unrestricted right to relet the Premises or any part(s) thereof to such tenant(s) on such provisions and for such period(s) as Landlord may deem appropriate. If Landlord relets the Premises after an Event of Default, the costs recovered from Tenant shall be reallocated to take into consideration any additional rent which Landlord receives from the new tenant which is in excess to that which was owed by Tenant.

(d) Landlord's Damages.

(i) The damages which Landlord shall be entitled to recover from Tenant upon an Event of Default shall be the sum of:

(A) all Fixed Rent and Additional Rent accrued and unpaid as of the termination date; and

(B) (i) all costs and expenses incurred by Landlord in recovering possession of the Premises, including removal and storage of Tenant's property, (ii) the costs and expenses of restoring the Premises to the condition in which the same were to have been surrendered by Tenant as of the expiration of the Term, and (iii) the costs of reletting commissions; and

(C) all Fixed Rent and Additional Rent (to the extent that the amount(s) of Additional Rent has been then determined) otherwise payable by Tenant over the remainder of the Term as reduced to present value.

Less deducting from the total determined under subparagraphs (A), (B) and (C) all Fixed Rent and all other Additional Rent to the extent determinable as aforesaid (to the extent that like charges would have been payable by Tenant) which Landlord receives from other tenant(s) by reason of the leasing of the Premises or part during or attributable to any period falling within the otherwise remainder of the Term.

(ii) The damage sums payable by Tenant under the preceding provisions of this subparagraph (d) shall be payable on demand from time to time as the amounts are determined; and if from Landlord's subsequent receipt of rent as aforesaid from reletting, there be any excess payment(s) by Tenant by reason of the crediting of such rent thereafter received, the excess payment(s) shall be refunded by Landlord to Tenant, without interest.

(iii) Landlord may enforce and protect the rights of Landlord hereunder by a suit or suits in equity or at law for the specific performance of any covenant or agreement contained herein, and for the enforcement of any other appropriate legal or equitable remedy, including, without limitation, injunctive relief, and for recovery of consequential damages and all moneys due or to become due from Tenant under any of the provisions of this Lease.

(e) Landlord's Right to Cure. Without limiting the generality of the foregoing, if Tenant shall be in default beyond any applicable notice and cure period in the performance of any of its obligations hereunder, Landlord, without being required to give Tenant any notice or opportunity to cure, may (but shall not be obligated to do so), in addition to any other rights it may have in law or in equity, cure such default on behalf of Tenant, and Tenant shall reimburse Landlord upon demand for any sums paid or costs incurred by Landlord in curing such default, including reasonable attorneys' fees and other legal expenses, together with interest at the Default Rate from the dates of Landlord's incurring of costs or expenses.

Tenant hereby waives any right of redemption of the Premises or the Lease following any Event of Default, and any right to a notice to quit whether or not the Term of this Lease has expired.

(f) Interest on Damage Amounts. Any sums payable by Tenant hereunder, which are not paid after the same shall be due, shall bear interest from that day until paid at the rate of two (2%) percent over the then Prime Rate as published daily under the heading "Money Rates" in The Wall Street Journal, unless such rate be usurious as applied to Tenant, in which case the highest permitted legal rate shall apply (the "**Default Rate**").

(g) Landlord's Statutory Rights. Landlord shall have all rights and remedies now or hereafter existing at law or in equity with respect to the enforcement of Tenant's obligations hereunder and the recovery of the Premises. No right or remedy herein conferred upon or reserved to Landlord shall be exclusive of any other right or remedy, but shall be cumulative and in addition to all other rights and remedies given hereunder or now or hereafter existing at law. Landlord shall be entitled to injunctive relief in case of the violation, or

attempted or threatened violation, of any covenant, agreement, condition or provision of this Lease, or to a decree compelling performance of any covenant, agreement, condition or provision of this Lease.

(h) Remedies Not Limited. Nothing herein contained shall limit or prejudice the right of Landlord to exercise any or all rights and remedies available to Landlord by reason of default or to prove for and obtain in proceedings under any bankruptcy or insolvency laws, an amount equal to the maximum allowed by any law in effect at the time when, and governing the proceedings in which, the damages are to be proved, whether or not the amount be greater, equal to, or less than the amount of the loss or damage referred to above.

(i) No Waiver by Landlord. No delay or forbearance by Landlord in exercising any right or remedy hereunder, or Landlord's undertaking or performing any act or matter which is not expressly required to be undertaken by Landlord shall be construed, respectively, to be a waiver of Landlord's rights or to represent any agreement by Landlord to undertake or perform such act or matter thereafter. Waiver by Landlord of any breach by Tenant of any covenant or condition herein contained (which waiver shall be effective only if so expressed in writing by Landlord) or failure by Landlord to exercise any right or remedy in respect of any such breach shall not constitute a waiver or relinquishment for the future of Landlord's right to have any such covenant or condition duly performed or observed by Tenant, or of Landlord's rights arising because of any subsequent breach of any such covenant or condition nor bar any right or remedy of Landlord in respect of such breach or any subsequent breach. Landlord's receipt and acceptance of any payment from Tenant which is tendered not in conformity with the provisions of this Lease or following an Event of Default (regardless of any endorsement or notation on any check or any statement in any letter accompanying any payment) shall not operate as an accord and satisfaction or a waiver of the right of Landlord to recover any payments then owing by Tenant which are not paid in full, or act as a bar to the termination of this Lease and the recovery of the Premises because of Tenant's previous default.

(j) Landlord Default. If Landlord shall be in default in the performance of any of its obligations under this Lease which default continues for a period of more than thirty (30) business days after receipt of written notice from Tenant specifying such default, or if such default is of a nature to require more than thirty (30) business days for remedy and continues beyond the time reasonably necessary to cure (and Landlord has not undertaken procedures to cure the default within such thirty (30) business day period and diligently pursued such efforts to complete such cure), Tenant may, in addition to any other remedy available at law or in equity, upon at least five (5) business days prior written notice, incur any reasonably necessary expense to perform the obligation of Landlord specified in such notice and deduct such expense from the Fixed Rent.

23. Landlord's Lien. [Intentionally Omitted]

24. Surrender. Tenant shall, at the expiration of the Term, promptly quit and surrender the Premises in good order and condition and in conformity with the applicable provisions of this Lease, excepting only reasonable wear and tear and damage by fire or other insurable casualty and damage by condemnation. Tenant shall have no right to hold over beyond the expiration of the Term and if Tenant shall fail to deliver possession of the Premises as herein provided, such occupancy shall constitute a tenancy at sufferance. During any period of occupancy beyond the expiration of the Term the amount of rent owed to Landlord by Tenant shall automatically become one hundred fifty percent (150%) the sum of the Rent as those sums are at that time calculated under the provisions of the Lease. The acceptance of rent by Landlord or the failure or delay of Landlord in notifying or evicting Tenant following the expiration or sooner termination of the Term shall not create any tenancy rights in Tenant and any such payments by Tenant may be applied by Landlord against its costs and expenses, including reasonable attorneys' fees, incurred by Landlord as a result of such holdover.

25. Rules and Regulations. During the Term, Tenant and its employees, agents, invitees and licenses shall comply with all rules and regulations specified on Exhibit C attached hereto, together with all reasonable Rules and Regulations as Landlord may from time to time promulgate provided they do not conflict with the provisions of this Lease. In case of any conflict or inconsistency between the provisions of this Lease and any Rules and Regulations, the provisions of this Lease shall control. Landlord shall have no duty or obligation to enforce any Rule and Regulation, or any term, covenant or condition of any other lease, against any other tenant, and Landlord's failure or refusal to enforce any Rule or Regulation or any term, covenant of condition of any other lease against any other tenant shall be without liability of Landlord to Tenant. However, if Landlord does enforce Rules or Regulations, Landlord shall endeavor to enforce same equally in a non-discriminatory manner.

26. Governmental Regulations.

(a) Tenant shall, in the use and occupancy of the Premises and the conduct of Tenant's business or profession therein, at all times comply with all applicable laws, ordinances, orders, notices, rules and regulations of the federal, state and municipal governments, or any of their departments and the regulations of the insurers of the Premises, Building and/or Project.

(b) Without limiting the generality of the foregoing, Tenant shall (i) obtain, at Tenant's expense, before engaging in Tenant's business or profession within the Premises, all necessary licenses and permits including (but not limited to) state and local business licenses or permits, and (ii) remain in compliance with and keep in full force and effect at all times all licenses, consents and permits necessary for the lawful conduct of Tenant's business or profession at the Premises. Tenant shall pay all personal property taxes, income taxes and other taxes, assessments, duties, impositions and similar charges which are or may be assessed, levied or imposed upon Tenant and which, if not paid, could be liened against the Premises or against Tenant's property therein or against Tenant's leasehold estate.

(c) Landlord shall be responsible for compliance with Title III of the Americans with Disabilities Act of l990, 42 U.S.C. Sec. 12181 et seq. and its regulations (collectively, the "**ADA**") (i) as to the design and construction of all common areas, and (ii) with respect to the initial design and construction by Landlord of Landlord's Work (as defined in

Article 4 hereof). Except as set forth above in the initial sentence hereto, Tenant shall be responsible for compliance with the ADA in all other respects concerning the use and occupancy of the Premises, which compliance shall include, without limitation (i) provision for full and equal enjoyment of the goods, services, facilities, privileges, advantages or accommodations of the Premises as contemplated by and to the extent required by the ADA, (ii) compliance relating to requirements under the ADA or amendments thereto arising after the date of this Lease and (iii) compliance relating to the design, layout, renovation, redecorating, refurbishment, alteration, or improvement to the Premises made or requested by Tenant at any time following completion of the Landlord's Work.

To the extent that Tenant is not required under the terms of this Lease to comply therewith, Landlord shall indemnify Tenant against any claim or liability arising from the failure of the Project (other than areas of the Project leased to tenants) to comply with all applicable laws, rules, regulations and codes including, without limitation, Title III of The Americans with Disabilities Act of 1990, as amended from time to time. The foregoing notwithstanding, to the extent that Landlord incurs any costs in causing the Project or any portion thereof to comply with any applicable laws, rules, regulations or codes and such costs qualify as Operating Expenses, such costs shall be included as Operating Expenses under Article 6.

27. Notices. Wherever in this Lease it shall be required or permitted that notice or demand be given or served by either party to this Lease to or on the other party, such notice or demand shall be deemed to have been duly given or served if in writing and either: (i) personally served; (ii) delivered by pre-paid nationally recognized overnight courier service (e.g. Federal Express) with evidence of receipt required for delivery; (iii) forwarded by Registered or Certified mail, return receipt requested, postage prepaid; (iv) facsimile with a copy mailed by first class United States mail or (v) e-mailed with evidence of receipt and delivery of a copy of the notice by first class mail; in all such cases addressed to the parties at the addresses set forth in Article 1(n) hereof. Each such notice shall be deemed to have been given to or served upon the party to which addressed on the date the same is delivered or delivery is refused. Either party hereto may change its address to which said notice shall be delivered or mailed by giving written notice of such change to the other party hereto, as herein provided.

28. Broker. Landlord and Tenant each represents and warrants to the other that such party has had no dealings, negotiations or consultations with respect to the Premises or this transaction with any broker or finder other than the Broker; and that otherwise no broker or finder called the Premises to Tenant's attention for lease or took any part in any dealings, negotiations or consultations with respect to the Premises or this Lease. Each party shall indemnify and hold the other harmless from and against all liability, cost and expense, including attorneys' fees and court costs, arising out of any misrepresentation or breach of warranty under this Article. Landlord shall pay Broker's commission pursuant to the terms of a separate agreement between Landlord and Broker.

29. Change of Building/Project Name. Landlord reserves the right at any time and from time to time to change the name and/or address by which the Building and/or Project is designated (provided that Landlord shall reimburse Tenant for any reasonable costs to Tenant associated therewith, including the cost of new stationery and business materials not in excess of $1,500 in the aggregate).

30. Landlord's Liability. Landlord's obligations hereunder shall be binding upon Landlord only for the period of time that Landlord is in ownership of the Building; and, upon termination of that ownership, Tenant, except as to any obligations which are then due and owing, shall look solely to Landlord's successor in interest in the Building for the satisfaction of each and every obligation of Landlord hereunder. Landlord shall have no personal liability under any of the terms, conditions or covenants of this Lease and Tenant shall look solely to the equity of Landlord in the Building of which the Premises form a part for the satisfaction of any claim, remedy or cause of action accruing to Tenant as a result of the breach of any section of this Lease by Landlord. In addition to the foregoing, no recourse shall be had for an obligation of Landlord hereunder, or for any claim based thereon or otherwise in respect thereof, against any past, present or future trustee, member, partner, shareholder, officer, director, partner, agent or employee of Landlord, whether by virtue of any statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such other liability being expressly waived and released by Tenant with respect to the above-named individuals and entities.

31. Authority. Tenant represents and warrants to Landlord that (a) Tenant is duly organized, validly existing and legally authorized to do business in the State of Maryland, and (b) the persons executing this Lease are duly authorized to execute and deliver this Lease on behalf of Tenant. Landlord represents and warrants to Tenant that: (a) Landlord is the fee simple owner of the Building and the Project; (b) Landlord has the authority to enter into this Lease and (c) the person executing this Lease is duly authorized to execute and deliver this Lease on behalf of Landlord.

32. No Offer. Landlord's submission of the Lease does not constitute a reservation of or option for the Premises or of any other space within the Building or in other buildings owned or managed by Landlord or its affiliates. This Lease shall become effective as a Lease only upon the execution and legal delivery thereof by both parties hereto.

33. Renewal. Provided Tenant is not in default at the time of exercise, Tenant has not assigned this Lease or then has under sublease more than thirty percent (30%) of the Premises and the Lease is in full force and effect, Tenant may renew this Lease for one (1) term of five (5) years beyond the end of the initial Term (the "**Renewal Term**"). Tenant shall furnish written notice of intent to renew no more than eighteen (18) months and no less than twelve (12) months prior to the expiration of the initial Term, failing which, such renewal right shall be deemed waived; time being of the essence. The terms and conditions of this Lease during the Renewal Term shall remain unchanged except that the annual Fixed Rent for the Renewal Term shall be the Fair Market Rent (as such term is hereinafter defined). All factors regarding Additional Rent shall remain unchanged, and no Tenant Allowance shall be included in the absence of further agreement by the parties. Anything herein contained to the contrary notwithstanding, Tenant shall have no right to renew the term hereof other than or beyond the one (1) consecutive five (5) year term hereinabove described. It shall be a condition of such Renewal Term that Landlord and Tenant shall have negotiated in good faith and executed, not less than nine (9) months prior to the expiration of the then expiring term hereof, an appropriate amendment to this Lease, in form and content satisfactory to each of them, memorializing the extension of the term hereof for the next ensuing Renewal Term.

For purposes of this Lease, "**Fair Market Rent**" shall mean the base rent, for comparable space, net of all free or reduced rent periods, work letters, cash allowances, fit-out periods and other tenant inducement concessions however denominated except as hereinafter provided. In determining the Fair Market Rent, Landlord, Tenant and any appraiser or broker shall take into account differences in applicable measurement and the loss factors, applicable lengths of lease term, differences in size of the space demised, the location of the Building and comparable buildings, amenities in the Building and comparable buildings, the ages of the Building and comparable buildings, differences in base years or stop amounts for operating expenses and tax escalations and other factors normally taken into account in determining Fair Market Rent. The Fair Market Rent shall reflect the level of improvement made or to be made by Landlord to the space and the Operating Expenses and Taxes under this Lease. Additionally, tenant improvement allowances, free rent periods and other economic concessions then being provided to similar extending tenants by landlords of comparable buildings in the competitive market area of the Building will, at Landlord's option, either be provided directly to Tenant or the value of such concessions will not be provided directly to Tenant but the Fair Market Rate will be reduced by the economic equivalent thereof to reflect the fact that such concessions were not provided directly to Tenant. If Landlord and Tenant cannot agree on the Fair Market Rent, the Fair Market Rent shall be established by the following procedure: (1) Tenant and Landlord shall agree on a single MAI certified appraiser or broker who shall have a minimum of ten (10) years experience in real estate leasing in the market in which the Premises is located, (2) Landlord and Tenant shall each notify the other (but not the appraiser or broker), of its determination of such Fair Market Rent and the reasons therefor, (3) during the next seven (7) days both Landlord and Tenant shall prepare a written critique of the other's determination and shall deliver it to the other party, (4) on the tenth (10th) day following delivery of the critiques to each other, Landlord's and Tenant's determinations and critiques (as originally submitted to the other party, with no modifications whatsoever) shall be submitted to the appraiser or broker, who shall decide whether Landlord's or Tenant's determination of Fair Market Rent is more correct. The determinations so chosen shall be the Fair Market Rent. The appraiser or broker shall not be empowered to choose any number other than the Landlord's or Tenant's. The fees of the appraiser or broker shall be paid by the non-prevailing party.

34. Right of Notification. If, at any time beginning on the Commencement Date, office space on the third (3rd) floor of the Building contiguous with the Premises becomes or is reasonably anticipated by Landlord to become available for lease prior to the last eighteen (18) months of the Term (the "**Available Space**"), Landlord shall provide Tenant with a written courtesy notice with together with the Fixed Rent and any leasing concessions Landlord chooses to propose (the "**Courtesy Notice**") setting forth the anticipated availability date of the Available Space. The Courtesy Notice shall be delivered to Tenant not more than twelve (12) months in advance of the anticipated availability date of the Available Space. Upon Tenant's receipt of the Courtesy Notice, Tenant may contact Landlord to discuss the possibility of leasing the Available Space; provided, however, that this provision shall in no way provided Tenant with any legal right to lease the Available Space. Any provision of this Section to the contrary notwithstanding, Landlord shall have no obligation to provide tenant with a Courtesy Notice until the lease of such the Available Space in existence on the date of this Lease has expired (including, without limitation, the expiration of any lease term extension period(s), regardless of whether the extension right or agreement is contained in such lease or is agreed to at any time by Landlord and the tenant under such lease or otherwise) or been terminated.

35. Termination. Tenant shall have a one-time right to terminate this Lease, at the end of the eighty-fourth (84th) month of the Term, provided Tenant (i) is not then in default beyond any applicable notice and cure period under this Lease, (ii) gives Landlord not less than nine (9) months prior written notice, and (iii) pays to Landlord, at the time of said notice, an amount equal to the unamortized cost of the transaction, amortized over the initial Term of the Lease on a straight-line basis at eight percent (8%) per annum interest ("**Termination Payment**"). The unamortized cost will be calculated for the following specific costs, brokerage fees and contractor's invoices to complete Landlord's Work. Failure to provide written notice and payment within the prescribed time frame will be considered by Landlord, without the necessity of additional notice, as a waiver of this right to terminate. Tenant acknowledges and agrees that the Termination Payment is not a penalty and is fair and reasonable compensation to Landlord for the loss of expected rentals from Tenant over the remainder of the scheduled term.

36. Parking. Tenant shall be entitled to parking permits for the Building's parking facilities at a ratio of 3.4 per 1,000 rentable square feet of the Premises (including three (3) reserved garage spaces), at no fee during the initial Term. Landlord shall not be obligated to provide Tenant with any additional parking permits. If Tenant fails to observe the Rules and Regulations with respect to the Building's parking facilities, then Landlord, at its option, after providing Tenant with an appropriate notice and time period within which to cure any such violation (which notice and time period shall be reasonably determined by Landlord), shall have the right to terminate Tenant's parking permit(s) for the violating parking space(s), without legal process, and to remove Tenant, Tenant's vehicles and those of its employees, licensees or invitees and all of Tenant's personal property from the Building's parking facilities. Landlord reserves the right to require that all or a portion of Tenant's parking permits (except for the reserved parking spaces) be for valet, structured, surface and/or such other parking arrangements as Landlord shall from time to time determine.

37. Financial Information. Any time during the Term (but not more than once during any twelve (12) month period unless a default has occurred under this Lease or Landlord has a reasonable basis to suspect that Tenant has suffered a material adverse change in its financial position) upon not less than thirty (30) days prior written request from Landlord, Tenant shall deliver to Landlord: (i) a current, accurate, complete and detailed balance sheet of Tenant (dated no more than thirty (30) days prior to such delivery), a profit and loss statement, a cash flow summary and all relevant accounting footnotes, all prepared in accordance with generally accepted accounting principles consistently applied and certified by the Chief Financial Officer of Tenant to be a fair and true presentation of Tenant's current financial position; (ii) a current, accurate, complete and detailed financial statements of Tenant audited by an independent certified public accountant for the last applicable calendar year; and (iii) current bank references for Tenant. Tenant's failure to strictly comply with this Article shall constitute a material Default by Tenant under this Lease. Landlord shall keep all information provided hereunder strictly confidential.

38. Roof Rights. So long as it (i) does not impact Landlord's roof warranty and (ii) complies with all applicable laws, rules and regulations, Tenant, at Tenant's sole cost and expense, shall have access to the roof of the Building in designated areas mutually agreed upon to install up to four (4) antennae, each with a diameter not in excess of twenty-four (24") inches and equipment related thereto (the "**Roof Equipment**"). Notwithstanding the foregoing, all such Roof Equipment shall be for the sole benefit of Tenant and Landlord, shall relate specifically to Tenant's use of the Premises, and shall not be used as a switching station, amplification station or by other tenants or third parties. Tenant shall make a request for approval of the Roof Equipment hereunder by submission of specific plans and specifications for the work to be performed by Tenant. Landlord shall respond in writing within fifteen (15) business days from receipt of the same, advising Tenant of approved contractors and those portions of the work that are acceptable and disapproving those portions of the work that are, in Landlord's judgment, reasonably exercised, unacceptable and with respect to the plans, specifying in detail the nature of Landlord's objection. Tenant shall be solely responsible for all damages caused by its Roof Equipment, for the removal of all Roof Equipment and the restoration of the roof upon the expiration or early termination of this Lease unless directed in writing by Landlord otherwise. Landlord shall be named as an additional insured on all Tenant insurance relating to the Roof Equipment. All installation, repair, replacement and modification of the Roof Equipment shall be coordinated with Landlord, shall only use those approved contractors and shall be in accordance with the Rules and Regulations set forth herein.

39. Miscellaneous Provisions.

(a) Successors. The respective rights and obligations provided in this Lease shall bind and inure to the benefit of the parties hereto, their successors and assigns; provided, however, that no rights shall inure to the benefit of any successors or assigns of Tenant unless Landlord's written consent for the transfer to such successor and/or assignee has first been obtained as provided in, Article 12 hereof (to the extent required thereunder).

(b) Governing Law. This Lease shall be construed, governed and enforced in accordance with the laws of the State of Maryland, without regard to principles relating to conflicts of law.

(c) Severability. If any provisions of this Lease shall be held to be invalid, void or unenforceable, the remaining provisions hereof shall in no way be affected or impaired and such remaining provisions shall remain in full force and effect.

(d) Captions. Marginal captions, titles or exhibits and riders and the table of contents in this Lease are for convenience and reference only, and are in no way to be construed as defining, limiting or modifying the scope or intent of the various provisions of this Lease.

(e) Gender. As used in this Lease, the word "person" shall mean and include, where appropriate, an individual, corporation, partnership or other entity; the plural shall be substituted for the singular, and the singular for the plural, where appropriate; and the words of any gender shall mean to include any other gender.

(f) Entire Agreement. This Lease, including the Exhibits and any Riders hereto (which are hereby incorporated by this reference, except that in the event of any conflict between the printed portions of this Lease and any Exhibits or Riders, the term of such Exhibits or Riders shall control), supersedes any prior discussions, proposals, negotiations and discussions between the parties and the Lease contains all the agreements, conditions, understandings, representations and warranties made between the parties hereto with respect to the subject matter hereof, and may not be modified orally or in any manner other than by an agreement in writing signed by both parties hereto or their respective successors in interest. No negotiations, correspondence by Landlord or offers to extend the term shall be deemed an extension of the termination date for any period whatsoever.

(g) Counterparts. This Lease may be executed in any number of counterparts, each of which when taken together shall be deemed to be one and the same instrument.

(h) Telefax Signatures. A telefaxed signature of either party whether upon this Lease or any related document shall be deemed valid and binding and admissible by either party against the other as if same were an original ink signature.

(i) Calculation of Time. In computing any period of time prescribed or allowed by any provision of this Lease, the day of the act, event or default from which the designated period of time begins to run shall not be included. The last day of the period so computed shall be included, unless it is a Saturday, Sunday or a legal holiday, in which event the period runs until the end of the next day which is not a Saturday, Sunday, or legal holiday. Unless otherwise provided herein, all Notices and other periods expire as of 5:00 p.m. (local time in Washington, D.C.) on the last day of the Notice or other period.

(j) No Merger. There shall be no merger of this Lease or of the leasehold estate hereby created with the fee estate in the Premises or any part thereof by reason of the fact that the same person, firm, corporation, or other legal entity may acquire or hold, directly or indirectly, this Lease of the leasehold estate and the fee estate in the Premises or any interest in such fee estate, without the prior written consent of Landlord’s mortgagee.

(k) Time of the Essence. **TIME IS OF THE ESSENCE IN ALL PROVISIONS OF THIS LEASE, INCLUDING ALL NOTICE PROVISIONS.**

(l) Recordation of Lease. Tenant shall not record this Lease.

(m) Accord and Satisfaction. No payment by Tenant or receipt by Landlord of a lesser amount than any payment of Fixed Rent or Additional Rent herein stipulated shall be deemed to be other than on account of the earliest stipulated Fixed Rent or Additional Rent due and payable hereunder, nor shall any endorsement or statement or any check or any letter accompanying any check or payment as Rent be deemed an accord and satisfaction. Landlord may accept such check or payment without prejudice to Landlord’s right to recover the balance of such Rent or pursue any other right or remedy provided for in this Lease, at law or in equity.

(n) No Partnership. Landlord does not, in any way or for any purpose, become a partner of Tenant in the conduct of its business, or otherwise, or joint venturer or a member of a joint enterprise with Tenant. This Lease establishes a relationship solely of that of a landlord and tenant.

(o) Guaranty. Intentionally Omitted.

(p) No Presumption Against Drafter. This Lease has been freely negotiated by both parties; and in the event of any controversy, dispute, or contest over the meaning, interpretation, validity, or enforceability of this Lease, or any of its terms or conditions, there shall be no inference, presumption, or conclusion drawn whatsoever against either party by virtue of that party having drafted this Lease or any portion thereof.

(q) Force Majeure. If by reason of strikes or other labor disputes, fire or other casualty (or reasonable delays in adjustment of insurance), accidents, orders or regulations of any Federal, State, County or Municipal authority, or any other cause beyond Landlord's reasonable control, Landlord is unable to furnish or is delayed in furnishing any utility or service required to be furnished by Landlord under the provisions of this Lease or is unable to perform or make or is delayed in performing or making any installations, decorations, repairs, alterations, additions or improvements, or is unable to fulfill or is delayed in fulfilling any of Landlord's other obligations under this Lease, no such inability or delay shall constitute an actual or constructive eviction, in whole or in part, or except as expressly provided in this Lease, entitle Tenant to any abatement or diminution of Fixed Rent, or relieve Tenant from any of its obligations under this Lease, or impose any liability upon Landlord or its agents, by reason of inconvenience or annoyance to Tenant, or injury to or interruption of Tenant's business, or otherwise.

40. Waiver of Jury Trial. LANDLORD AND TENANT WAIVE THE RIGHT TO A TRIAL BY JURY IN ANY ACTION OR PROCEEDING BASED UPON, OR RELATED TO, THE SUBJECT MATTER OF THIS LEASE. THIS WAIVER IS KNOWINGLY, INTENTIONALLY, AND VOLUNTARILY MADE BY TENANT. NEITHER LANDLORD NOR ANY PERSON ACTING ON BEHALF OF LANDLORD HAS MADE ANY REPRESENTATIONS OF FACT TO INDUCE THIS WAIVER OF TRIAL BY JURY OR IN ANY WAY TO MODIFY OR NULLIFY ITS EFFECT. TENANT HAS BEEN REPRESENTED (OR HAS HAD THE OPPORTUNITY TO BE REPRESENTED) IN THE SIGNING OF THIS LEASE AND IN THE MAKING OF THIS WAIVER BY INDEPENDENT LEGAL COUNSEL, SELECTED OF ITS OWN FREE WILL, AND TENANT HAS HAD THE OPPORTUNITY TO DISCUSS THIS WAIVER WITH COUNSEL. TENANT HAS READ AND UNDERSTANDS THE MEANING AND RAMIFICATIONS OF THIS WAIVER PROVISION AND AS EVIDENCE OF SAME HAS EXECUTED THIS LEASE.

41. Consent to Jurisdiction. If the Project is located in the State of Maryland, Tenant hereby consents to the exclusive jurisdiction of the state courts located in the county in which the Project is located and to the federal courts located in Greenbelt, Maryland.

42. OFAC. Tenant represents, warrants and covenants that Tenant and its principals are not (i) acting, and will not act, directly or indirectly, for or on behalf of any person, group, entity or nation named by any Executive Order or the United States Treasury Department as a terrorist, "Specially Designated and Blocked Person," or other banned or blocked person, entity, nation or transaction pursuant to any law, order, rule or regulation that is enforced or administered by the Office of Foreign Assets Control; and (ii) engaged, and will not engage, in this transaction, directly or indirectly, on behalf of, or instigating or facilitating, and will not instigate or facilitate, this transaction, directly or indirectly, on behalf of, any such person, group, entity or nation. A breach of any Tenant representation, warranty and covenant contained in this Section shall be an immediate Event of Default under this Lease without notice or cure rights. Tenant hereby agrees to defend, indemnify and hold harmless Landlord from and against any and all claims, damages, losses, risks, liabilities and expenses (including reasonable attorneys' fees and costs) arising from or related to Tenant's breach of any of the foregoing representations, warranties and/or covenants.

[SIGNATURES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Lease the day and year first above written.

LANDLORD:

BRANDYWINE RESEARCH LLC,
a Delaware limited liability company

By: BRANDYWINE ACQUISITION PARTNERS, L.P.,
a Delaware limited partnership
Member

By: BDN PROPERTIES I, INC.,
a Delaware corporation
General Partner

By: /s/ Robert K. Wiberg [SEAL]
Robert K. Wiberg
Executive Vice President and
Managing Director-Southeast Region

By: /s/ Michael S. Cooper [SEAL]
Name: Michael S. Cooper
Title: Senior Vice President

TENANT:
EMERGENT BIOSOLUTIONS INC.,
a Delaware corporation
By: /s/ Fuad El-Hibri [SEAL]
Name: Fuad El-Hibri
Title: CEO

EXHIBIT A

SPACE PLAN

EXHIBIT B

CONFIRMATION OF LEASE TERM

THIS MEMORANDUM is made as of _____, 2006, between **BRANDYWINE RESEARCH LLC**, a Delaware limited liability company ("**Landlord**"), and **EMERGENT BIOSOLUTIONS INC.**, a Delaware corporation ("**Tenant**"), who entered into a lease dated for reference purposes as of _____, 2006, covering certain premises located at 2273 Research Boulevard, Rockville, Maryland 20850. All capitalized terms, if not defined herein, shall be defined as they are defined in the Lease.

1. The parties to this Memorandum hereby agree that the date of _____, 200___is the "Commencement Date" of the Term and the date of _____ is the expiration date of the Lease.

2. Tenant hereby confirms the following:

(a) That it has accepted possession of the Premises pursuant to the terms of the Lease;

(b) That the improvements, including the Landlord Work, required to be furnished according to the Lease by Landlord have been Substantially Completed;

(c) That Landlord has fulfilled all of its duties of an inducement nature or are otherwise set forth in the Lease;

(d) That there are no offsets or credits against rentals, and the $_____ Security Deposit has been paid as provided in the Lease;

(e) To the best of each party's knowledge, without investigation, that there is no default by Landlord or Tenant under the Lease and the Lease is in full force and effect.

3. Landlord hereby confirms to Tenant that its Building Number is _____ and its Lease Number is _____. This information must accompany each Rent check or wire payment.

4. This Memorandum, each and all of the provisions hereof, shall inure to the benefit, or bind, as the case may require, the parties hereto, and their respective successors and assigns, subject to the restrictions upon assignment and subletting contained in the Lease.

[SIGNATURES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Memorandum the day and year first above written.

LANDLORD:

BRANDYWINE RESEARCH LLC,
a Delaware limited liability company

By: BRANDYWINE ACQUISITION PARTNERS, L.P.,
a Delaware limited partnership
Member

By: BDN PROPERTIES I, INC.,
a Delaware corporation
General Partner

By: _____ [SEAL]
Robert K. Wiberg
Executive Vice President and
Managing Director-Southeast Region

By: _____ [SEAL]
Name:
Title:

TENANT:
EMERGENT BIOSOLUTIONS INC.,
a Delaware corporation
By: _____ [SEAL]
Name:
Title:

EXHIBIT C

BUILDING RULES AND REGULATIONS
LAST REVISION: MARCH 14, 2002

Landlord reserves the right to rescind any of these rules and make such other and further rules and regulations which do not conflict with the provisions of the Lease to which this Exhibit C is an exhibit, as in the judgment of Landlord shall from time to time be needed for the safety, protection, care and cleanliness of the Project, the operations thereof, the preservation of good order therein and the protection and comfort of its tenants, their agents, employees and invitees, which rules when made and notice thereof given to Tenant shall be binding upon him, her or it in a like manner as if originally prescribed.

1. Sidewalks, entrances, passages, elevators, vestibules, stairways, corridors, halls, lobby and any other part of the Building shall not be obstructed or encumbered by any Tenant or used for any purpose other than ingress or egress to and from each tenant's premises. Landlord shall have the right to control and operate the common portions of the Building and exterior facilities furnished for common use of the tenants (such as the eating, smoking, and parking areas) in such a manner as Landlord deems appropriate.

2. No awnings or other projections shall be attached to the outside walls of the Building without Landlord's prior written consent. All drapes, or window blinds, must be of a quality, type and design, color and attached in a manner approved by Landlord.

3. No showcases or other articles shall be put in front of or affixed to any part of the exterior of the Building, or placed in hallways or vestibules without prior Landlord's written consent.

4. Rest rooms and other plumbing fixtures shall not be used for any purposes other than those for which they were constructed and no debris, rubbish, rags or other substances shall be thrown therein. Only standard toilet tissue may be flushed in commodes. All damage resulting from any misuse of these fixtures shall be the responsibility of the tenant who, or whose employees, agents, visitors, clients, or licensees shall have caused same.

5. No tenant, without Landlord's prior consent, shall mark, paint, drill into, bore, cut or string wires or in any way deface any part of the Premises or the Building of which they form a part except for the reasonable hanging of decorative or instructional materials on the walls of the Premises.

6. Tenants shall not construct or maintain, use or operate in any part of the project any electrical device, wiring or other apparatus in connection with a loud speaker system or other sound/communication system which may be heard outside the Premises. Any such communication system to be installed within the Premises shall require prior written approval of Landlord.

7. No mopeds, skateboards, scooters or other vehicles and no animals (other than guide dogs), birds or other pets of any kind shall be brought into or kept in or about the Building.

8. No tenant shall cause or permit any unusual or objectionable odors to be produced upon or permeate from its premises.

9. No space in the Building shall be used for the manufacture of goods for sale in the ordinary course of business, or for sale at auction of merchandise, goods or property of any kind.

10. No tenant, or employees of tenant, shall make any unseemly or disturbing noises or disturb or interfere with the occupants of this or neighboring buildings or residences by voice, musical instrument, radio, talking machines, whistling, singing, or in any way. All passage through the Building's hallways, elevators, and main lobby shall be conducted in a quiet, business-like manner. Rollerblading and rollerskating shall not be permitted in the Building or in the common areas of the Project.

11. No tenant shall throw anything out of the doors, windows, or down corridors or stairs of the Building.

12. Tenant shall not place, install or operate on the Premises or in any part of the Project, any engine, stove or machinery or conduct mechanical operations or cook thereon or therein (except for coffee machine, microwave oven, toasters and/or vending machine), or place or use in or about the Premises or Project any explosives, gasoline, kerosene oil, acids, caustics or any other flammable, explosive, or hazardous material without Landlord's prior written consent.

13. No smoking is permitted in the Building, including but not limited to the rest rooms, hallways, elevators, stairs, lobby, exit and entrances vestibules, sidewalks, parking lot area except for the designated exterior smoking area. All cigarette ashes and butts are to be deposited in the containers provided for same, and not disposed of on sidewalks, parking lot areas, or toilets within the Building rest rooms.

14. Tenants are not to install any additional locks or bolts of any kind upon any door or window of the Building without Landlord's prior written consent. Each tenant must, upon the termination of tenancy, return to the Landlord all keys for the Premises, either furnished to or otherwise procured by such tenant, and all security access cards to the Building.

15. All doors to hallways and corridors shall be kept closed during business hours except as they may be used for ingress or egress.

16. Tenant shall not use the name of the Building, Landlord or Landlord's Agent in any way in connection with his business except as the address thereof. Landlord shall also have the right to prohibit any advertising by tenant, which, in its sole opinion, tends to impair the reputation of the Building or its desirability as a building for offices, and upon written notice from Landlord, tenant shall refrain from or discontinue such advertising.

17. Landlord shall provide Tenant with five (5) Security Access Cards per 1,000 rentable square feet of floor space, at Landlord's sole cost. Tenants must be responsible for all Security Access cards issued to them, and to secure the return of same from any employee terminating employment with them. Lost cards shall cost Tenant $35.00 per

card to replace. No person/company other than Building tenants and/or their employees may have Security Access cards unless Landlord grants prior written approval.

18. All deliveries by vendors, couriers, clients, employees or visitors to the Building which involve the use of a hand cart, hand truck, or other heavy equipment or device must be made via the Freight Elevator. Tenant shall be responsible to Landlord for any loss or damage resulting from any deliveries made by or for tenant to the Building. Tenant shall procure and deliver a certificate of insurance from tenant's movers which certificate shall name Landlord as an additional insured.

19. Landlord reserves the right to inspect all freight to be brought into the Building, and to exclude from the Building all freight or other material which violates any of these rules and regulations.

20. Tenant will refer all contractors, contractor's representatives and installation technicians, rendering any service on or to the premises for tenant, to Landlord for Landlord's approval and supervision before performance of any contractual service or access to Building. This provision shall apply to all work performed in the Building including installation of telephones, telegraph equipment, electrical devices and attachments and installations of any nature affecting floors, walls, woodwork, trim, windows, ceilings, equipment or any other physical portion of the Building. Landlord reserves right to require that all agents of contractors/vendors sign in and out of the Building.

21. Landlord reserves the right to exclude from the Building at all times any person who is not known or does not properly identify himself to Landlord's management or security personnel.

22. Landlord may require, at its sole option, all persons entering the Building after 6 PM or before 7 AM, Monday through Friday and at any time on Holidays, Saturdays and Sundays, to register at the time they enter and at the time they leave the Building.

23. No space within the Building, or in the common areas such as the parking lot, may be used at any time for the purpose of lodging, sleeping, or for any immoral or illegal purposes.

24. No employees or invitees of tenant shall use the hallways, stairs, lobby, or other common areas of the Building as lounging areas during "breaks" or during lunch periods.

25. No canvassing, soliciting or peddling is permitted in the Building or its common areas by tenants, their employees, or other persons.

26. No mats, trash, or other objects shall be placed in the public corridors, hallways, stairs, or other common areas of the Building.

27. If recycling is done at the Project, Tenant must place all recyclable items of cans, bottles, plastic and office recyclable paper in appropriate containers provided by Landlord in each tenant's space. Removal of these recyclable items will be by Landlord's janitorial personnel.

28. Landlord does not maintain suite finishes which are non-standard, such as kitchens, bathrooms, wallpaper, special lights, etc. However, should the need arise for repair of items not maintained by Landlord, Landlord at its sole option, may arrange for the work to be done at tenant's expense.

29. Drapes installed by tenant, which are visible from the exterior of the Building, must be cleaned by Tenant, at its own expense, at least once a year.

30. No pictures, signage, advertising, decals, banners, etc. are permitted to be placed in or on windows in such a manner as they are visible from the exterior, without Landlord's prior written consent.

31. Tenant or tenant's employees are prohibited at any time from eating or drinking in hallways, elevators, rest rooms, lobby or lobby vestibules.

32. Tenant shall be responsible to Landlord for any acts of vandalism performed in the Building by its employees, agents, invitees or visitors.

33. No tenant shall permit the visit to its Premises of persons in such numbers or under such conditions as to interfere with the use and enjoyment of the entrances, hallways, elevators, lobby or other public portions or facilities of the Building and exterior common areas by other tenants.

34. Landlord's employees shall not perform any work or do anything outside of their regular duties unless under special instructions from Landlord. Requests for such requirements must be submitted in writing to Landlord.

35. Tenant agrees that neither tenant nor its agents, employees, licensees or invitees will interfere in any manner with the installation and/or maintenance of the heating, air conditioning and ventilation facilities and equipment.

36. Landlord will not be responsible for lost or stolen personal property, equipment, money or jewelry from tenant's area or common areas of the Project regardless of whether such loss occurs when area is locked against entry or not.

37. Landlord will not permit entrance to tenant's Premises by use of pass key controlled by Landlord, to any person at any time without written permission of tenant, except employees, contractors or service personnel supervised or employed by Landlord.

38. Tenant and its agents, employees and invitees shall observe and comply with the driving and parking signs and markers on the Building grounds and surrounding areas.

39. Tenant and its employees, invitees, agents, etc. shall not enter other separate tenants' hallways, restrooms or premises unless they have received prior approval from Landlord's management.

EXHIBIT D

CLEANING SPECIFICATIONS

DAILY : BUILDING AND TENANT AREAS

1. All desks and other furniture will be dusted with specially treated dust clothes.
2. All windowsills, chair rails, baseboards, moldings, partitions and picture frames that are less than six feet in height will be hand dusted and wiped clean.
3. All non-carpeted floors will be dust mopped with specially treated dust mops.
4. All bright metal work will be maintained and kept in a clean and polished condition.
5. All drinking fountains will be thoroughly cleaned and sanitized.
6. All stairways will be swept and wet mopped. Stairways shall be policed daily to remove all debris. Walls, handrails and fixtures are to be spot cleaned and dusted. Lights, pipes and signage are to be dusted as necessary.
7. All elevators will be vacuumed and the interior of all cabs will be wiped clean and all metal hardware will be polished. This includes damp wipe, dust and/or thoroughly cleaning all exterior doors, cab walls, doorframes, indicator panels, tracts, plates and grooves.
8. Empty, clean and dust all wastepaper baskets, ashtrays, receptacles, etc. After emptying waste baskets, reline with an approved liner as needed.
9. Remove all trash and wastepaper to areas designated by Management.
10. Vacuum all carpeted areas. This shall include all walk-off mats. In addition, the carpets are to be spot cleaned when necessary.
11. All tile floors will maintain a satin finish. Hard surface floor areas shall be maintained in a manner which consistently presents the appearance desired without visible evidence of traffic patterns. Particular attention shall be paid to edges to ensure a proper and dust free appearance. Any damage to hard surface floors resulting from improper care shall be the full responsibility of Contractor. Contractor shall provide the details of a program to maintain tile floors to insure consistent luster and remove all marks.
12. All glass surfaces, windows, doors and directory boards shall be spot-cleaned, using an approved glass cleaner, and all glass shall be left in a bright condition which is free of streaks and dust.
13. Wipe and clean all counters, tables, chairs and appliances in kitchen areas.
14. Clean all glass at the building and tenant entrances.
15. Spot clean all horizontal and vertical surfaces removing fingerprints, smudges and stains.

LAVATORIES

1. Floors are to be swept and washed using an approved antiseptic liquid detergent. Floors are to be machine scrubbed as needed but not less frequently than every quarter.
2. Refill all dispensers, empty trash, clean and sanitize all restroom fixtures. Wipe all counters, clean mirrors, wipe chrome and spot wipe partitions and ceramic tile walls.
3. Weekly wash all restroom partitions on both sides.
4. Remove all wastepaper and refuse.
5. No less frequently than quarterly, wash all ceramic tile walls.

WEEKLY

1. Remove fingerprints, smudges and scuff marks from all vertical and horizontal surfaces such as doors, walls and sills.
2. Wash and refinish resilient floors in public areas. Strip, wax and polish the floors as needed.
3. Polish and buff all no wax resilient floors in tenant areas.
4. Dust and damp wipe all louvers and ceiling grills.
5. Spot clean all interior partition glass windows and clean all interior glass entrance doors.

QUARTERLY

1. Dust and clean all vertical surfaces such as walls, partitions, doors, etc. that are not cleaned during the nightly cleaning process.
2. Dust and wipe clean all blinds.
3. Dust the inside of elevator telephone cabinets.
4. Shampoo all elevator carpets.

EXHIBIT E

WORK LETTER

This Exhibit ("**Exhibit**") is a part of the Lease to which this Exhibit is attached. Capitalized terms not defined in this Exhibit shall have the meanings set forth in the Lease.

1. Definitions.

1.1 "**Architect**" means the licensed architect or space planner, if any, engaged by Landlord to prepare and/or review the Plans.

1.2 "**Building Standard**" means the quality and quantity of materials, finishes and workmanship specified from time to time by Landlord as being standard for leasehold improvements at the Building or for other areas at the Building, as applicable.

1.3 "**Contractor**" means the firm from time to time selected by Landlord to construct, install or alter the Leasehold Improvements.

1.4 "**Leasehold Improvements**" means the improvements, alterations and other physical additions to be made or provided to; constructed, delivered or installed at; or otherwise acquired for the Premises in accordance with the Plans or otherwise approved in writing by Landlord or paid for in whole or in part from the Improvement Allowance. The Leasehold Improvements to be made, constructed or installed by Landlord in connection with Tenant's initial occupancy of the Premises are or will be shown on the Plans. Any provision of this Exhibit to the contrary notwithstanding, the Leasehold Improvements shall not include Tenant's Equipment.

1.5 "**Plans**" has the meaning set forth in Section 2.

1.6 "**Punchlist Items**" means items which do not materially affect Tenant's ability to use the Premises for the Permitted Uses.

1.7 "**Substantial Completion**" or "**Substantially Completed**" means the date on which the Leasehold Improvements have been completed except for Punchlist Items as determined by Landlord's architect or space planner, and Landlord has obtained a certificate permitting the lawful occupancy of the Premises issued by the appropriate governmental authority.

1.8 "**Tenant Delay**" means that Landlord is actually delayed in Substantially Completing any Leasehold Improvements that Landlord is required to design, construct, install or otherwise provide or in obtaining any permit(s) or certificate(s) that Landlord is required to obtain under the Lease or this Exhibit as a result of any of the following:

a. Tenant fails to timely submit any plans, specifications, materials, comments, approvals or information as required under this Exhibit;

b. Tenant changes (notwithstanding Landlord's approval of such changes) any drawings, plans or specifications for the Premises or the Plans after Landlord and Tenant have approved such drawings, plans or specifications or the Plans, as applicable;

c. Tenant changes the instructions or information given to the Architect in connection with the Architect's preparation of the Plans;

d. Tenant requests non-Building Standard improvements, materials, finishes or installations;

e. delays caused by any governmental or quasi-governmental authorities arising from the Leasehold Improvements being designed to include items or improvements not typically found in the office space of other first-class office buildings in the Washington, D.C. area;

f. Tenant interferes with the work of Landlord or Contractor including, without limitation, during any pre-commencement entry period; or

g. Tenant fails to fully and timely comply with the terms of this Exhibit.

1.9 "**Tenant's Equipment**" means any telephone, telephone switching, telephone and data cabling, furniture, computers, servers, Tenant's trade fixtures and other personal property to be installed by or on behalf of Tenant in the Premises.

1.10 "**Tenant's Expenditure Authorization**" means an authorization by Tenant to Landlord to expend funds on behalf of Tenant for the Work.

1.11 "**Work**" or "**Landlord's Work**" means the labor and materials required for any demolition, construction, acquisition, installation and finishing of the Leasehold Improvements.

2. Plans. As soon as practicable after the execution of the Lease, but in any event not more than ten (10) business days from the date of full execution of the Lease, Tenant shall provide the Architect with sufficient instructions and information to enable the Architect to prepare and complete the space plan and the architectural construction plan including specifications and finish schedules for the Leasehold Improvements (collectively, the "**Plans**"). The Plans shall be prepared by the Architect and submitted to Landlord for approval. To the extent that any improvements at the Project are required by any governmental authority in connection with the Work (as opposed to the fact that the floor is occupied by more than one tenant), Landlord will notify Tenant in writing advising Tenant of the work required by such governmental authority (such notice shall be in advance of Landlord performing any such work).

Landlord shall make such improvements at Tenant's expense and Tenant will pay Landlord for the cost thereof within thirty (30) days after receipt of an invoice therefor. Once approved by Landlord, the Plans and the Tenant Expenditure Authorization, shall be submitted to Tenant for approval. Within five (5) business days after Tenant's receipt of the Plans and the Tenant Expenditure Authorization, Tenant shall notify Landlord in writing as to whether Tenant approves or disapproves the Plans and the Tenant Expenditure Authorization. If Tenant fails to timely deliver to Landlord Tenant's written disapproval of the Plans and/or the Tenant Expenditure Authorization within the aforementioned period, Tenant shall be deemed to have approved the Plans and the Tenant Expenditure Authorization and Landlord shall be authorized (but not required) to proceed thereon. Each change in the Plans must receive Landlord's prior written approval. Landlord's approval of the Plans and any changes thereto shall impose no

responsibility or liability on Landlord for their completeness, design sufficiency, or compliance with all applicable laws, rules and regulations of governmental agencies or authorities.

3. Completion of Leasehold Improvements.

3.1 Except to the extent that this Exhibit provides that Tenant will perform any of the Work, Landlord will cause the Leasehold Improvements to be made, constructed or installed in a good and workmanlike manner without material variance from the Plans except for such variances as may have been approved by Tenant in writing. Except to the extent that the Plans expressly provide for the construction or installation of improvements, items, materials, fixtures, finishes, quantities, specifications, etc. that are non-Building Standard, Landlord will cause the Leasehold Improvements to be constructed or installed to Building Standards. Any provision of this Exhibit to the contrary notwithstanding, Tenant shall be solely responsible for the ordering, delivery and installation of Tenant's Equipment.

3.2 Except as set forth in this Exhibit to the contrary, all Work shall be carried out by the Contractor under the sole direction of Landlord. Any Leasehold Improvements relating to the Building fire and life safety systems shall be performed by Landlord's fire and life safety subcontractor, at Tenant's expense. Tenant, at Tenant's expense and under Landlord's supervision and in coordination with Contractor's performance of the Work, shall be responsible for contracting for and performing the installation of any cabling necessary for Tenant's use of the Premises. Neither Tenant nor any of its agents or contractors shall alter, modify or in any manner disturb any of the Building's central systems.

3.3 Landlord will competitively bid the general conditions and fee proposal for the construction of the Leasehold Improvements with three (3) general contractors preapproved by Landlord and Tenant, which bids shall be based upon the Net Rentable Area of the Premises, a schematic design of the Leasehold Improvements and Tenant's preliminary budget. Each general contractor shall be required to identify all long-lead items in its proposal. Landlord shall select the successful bidder (who shall then become the Contractor) within five (5) days after Landlord notifies Tenant of the receipt of the proposals and delivers a copy of such proposals to Tenant. In evaluating the bids, Landlord shall consider, among other factors, the cost, licensing of the bidder, bonding requirements, timing of substantial completion and the reputation of the bidder. Landlord shall have the right to exclude any proposal not timely submitted to Landlord.

3.4 Tenant shall cooperate with Landlord, Architect and the Contractor to promote the efficient and expeditious completion of the Work. Landlord will diligently pursue completion of any Punchlist Items and Landlord will make reasonable efforts to complete all such Punchlist Items within thirty (30) days after inspection.

3.5 Upon the occurrence of any Tenant Delay, Landlord shall have the right to take such Tenant Delay into account and to reasonably accelerate the date of Substantial Completion or to establish the date of Substantial Completion in the case of a Tenant Delay that effectively prevents Substantial Completion from occurring. If there occurs any concurrent Tenant Delay and either a Landlord delay or a force majeure delay (or both), fifty percent (50%) of such delay shall be deemed to be a Tenant Delay. Landlord shall have no obligation to expend any funds, employ any additional labor, contract for overtime work or otherwise take any action to compensate for any Tenant Delay.

4. Improvement Allowance and Payment of Costs.

4.1 Tenant shall be responsible for the full and timely payment of all Improvement Costs. "Improvement Costs" means (i) all costs related to the design of the Leasehold Improvements including, without limitation, the professional fees of the Architect and other professionals preparing and/or reviewing the Plans (collectively, the "**Planning Costs**"); (ii) all costs in the permitting, demolition, construction, acquisition and installation of the Leasehold Improvements, including, without limitation, the cost of all labor and materials supplied by Contractor, suppliers, independent contractors and subcontractors arising in connection with the Leasehold Improvements (collectively, the "**Construction Costs**"); and (iii) Landlord's Fee.

4.2 Landlord hereby grants to Tenant an allowance (the "**Improvement Allowance**") in an amount equal to Thirty-Five Dollars ($35.00) multiplied by the Rentable Area of the Premises. Except as may be expressly provided to the contrary in this Exhibit, the Improvement Allowance shall be applied solely towards payment of the Improvement Costs. Landlord shall have no obligation to make a disbursement from the Improvement Allowance if, at the time such disbursement is to be made, there exists an Event of Default or a condition which with notice and/or the passage of time would constitute an Event of Default.

In addition to the Improvement Allowance, Landlord hereby grants to Tenant an architectural test-fit allowance in an amount equal to Ten Cents ($.010) per square foot of Rentable Area of the Premises.

Notwithstanding the foregoing, Tenant may apply a portion of the Improvement Allowance, which portion shall not exceed Seven Dollars ($7.00) per square foot of Rentable Area of the Premises (the "**Moving Allocation**"), towards the payment of Moving Expenses. "Moving Expenses" means out-of-pocket costs and expenses incurred by Tenant in moving Tenant's business to the Premises including, without limitation, costs and expenses incurred by Tenant to (i) relocate telephone equipment and install new telephone lines; (ii) relocate existing data communication circuit(s); (iii) purchase, rent or lease materials used in the relocation of Tenant's and its employees' belongings, furniture or equipment; and (iv) move (labor, material, vehicle usage, supervisor, etc) Tenant's and its employees' belongings, furniture or equipment to the Premises.

4.3 Tenant shall pay Landlord a fee ("**Landlord's Fee**") equal to one percent (1%) of the sum of the Planning Costs and the Construction Costs as compensation for Landlord's construction management services under this Exhibit. Tenant shall pay the Landlord's Fee to Landlord within thirty (30) days after Landlord sends an invoice therefor to Tenant; provided, however, at any time on or after the date Landlord approves the Plans, Landlord shall have the right to deduct all or a portion of Landlord's Fee from the Improvement Allowance.

4.4 If Tenant fails to make any payment when due under this Exhibit, such failure shall be deemed a failure to make a Rent payment under the Lease. To the extent that the Improvement Costs exceed the Improvement Allowance, Tenant shall be solely responsible for payment of such excess amount (the "**Excess Costs**"). Landlord shall only be obligated to make Improvement Allowance disbursements for Improvement Costs then being paid in the ratio that the Improvement Allowance bears to the total Improvement Costs (as reasonably determined by Landlord).

EXHIBIT F

SNDA

THIS SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT (this "**Agreement**") is made by and between TEACHERS INSURANCE AND ANNUITY ASSOCIATION OF AMERICA, a New York corporation with offices at 730 Third Avenue, New York, New York 10017 ("**Lender**") and _____, a [an] [individual] name/of/state [corporation] [limited liability company] [general partnership] [limited partnership] [d/b/a/] with its principal place of business at ("**Tenant**").

RECITALS:

A. Lender has made or is about to make a loan (together with all advances and increases, the "**Loan**") to _____, a [an] [individual] [corporation] [limited company] [general partnership] [limited partnership] ("**Borrower**").

B. Borrower, as landlord, and Tenant have entered into a lease dated as amended by amendments dated (the "**Lease**") which leased to Tenant [Suite No.] [Floor] [Store No.] (the "**Premises**") located in the Property (defined below).

C. The Loan is or will be secured by the [Open-End] Mortgage, Assignment of Leases and Rents, Fixture Filing Statement and Security Agreement recorded or to be recorded in the official records of the County of ___, State or Commonwealth of ___(together with all advances, increases, amendments or consolidations, the "**Mortgage**") and the Assignment of Leases and Rents recorded or to be recorded in such official records (together with all amendments or consolidations, the "**Assignment**"), assigning to Lender the Lease and all rent, additional rent and other sums payable by Tenant under the Lease (the "**Rent**").

D. The Mortgage encumbers the real property, improvements and fixtures located at in the City of Rockville, Montgomery County, Maryland commonly known as _____, and described on Exhibit A (the "**Property**").

IN CONSIDERATION of the mutual agreements contained in this Agreement, Lender and Tenant agree as follows:

1. The Lease and all of Tenant's rights under the Lease are and will remain subject and subordinate to the lien of the Mortgage and all of Lender's rights under the Mortgage and Tenant will not subordinate the Lease to any other lien against the Property without Lender's prior consent.

2. This Agreement constitutes notice to Tenant of the Mortgage and the Assignment and, upon receipt of notice from Lender, Tenant will pay the Rent as and when due under the Lease to Lender and the payments will be credited against the Rent due under the Lease.

3. Tenant does not have and will not acquire any right or option to purchase any portion of or interest in the Property.

4. Tenant and Lender agree that if Lender exercises its remedies under the Mortgage or the Assignment and if Tenant is not then in default under this Agreement and if Tenant is not then in default beyond any applicable grace and cure periods under the Lease:

(a) Lender will not name Tenant as a party to any judicial or non-judicial foreclosure or other proceeding to enforce the Mortgage unless joinder is required under applicable law but in such case Lender will not seek affirmative relief against Tenant, the Lease will not be terminated and Tenant's possession of the Premises will not be disturbed;

(b) If Lender or any other entity (a "**Successor Landlord**") acquires the Property through foreclosure, by other proceeding to enforce the Mortgage or by deed-in-lieu of foreclosure (a "**Foreclosure**"), Tenant's possession of the Premises will not be disturbed and the Lease will continue in full force and effect between Successor Landlord and Tenant; and

(c) If, notwithstanding the foregoing, the Lease is terminated as a result of a Foreclosure, a lease between Successor Landlord and Tenant will be deemed created, with no further instrument required, on the same terms as the Lease except that the term of the replacement lease will be the then unexpired term of the Lease. Successor Landlord and Tenant will execute a replacement lease containing substantially the same terms as the Lease at the request of either.

5. Upon Foreclosure, Tenant will recognize and attorn to Successor Landlord as the landlord under the Lease for the balance of the term. Tenant's attornment will be self-operative with no further instrument required to effectuate the attornment except that at Successor Landlord's request, Tenant will execute instruments reasonably satisfactory to Successor Landlord and Tenant confirming the attornment.

6. Successor Landlord will not be:

(a) liable for any act or omission of any prior landlord under the Lease occurring before the date of the Foreclosure except for repair and maintenance obligations of a continuing nature imposed on the landlord under the Lease;

(b) required to credit Tenant with any Rent paid more than one month in advance or for any security deposit unless such Rent or security deposit has been received by Successor Landlord;

(c) bound by any amendment, renewal or extension of the Lease made after the date of this Agreement that is inconsistent with the terms of this Agreement or is not in writing and signed both by Tenant and landlord;

(d) bound by any reduction of the Rent unless the reduction is in connection with an extension or renewal of the Lease at prevailing market terms or casualty damage or condemnation or any other event permitted by the Lease, or was made with Lender's prior consent;

(e) bound by any reduction of the term1 of the Lease or any termination, cancellation or surrender of the Lease unless the reduction, termination, cancellation or surrender

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1 For purposes of this subparagraph "the term of the Lease" includes any renewal term after the right to renew has been exercised.

occurred during the last 6 months of the term or in connection with casualty damage or condemnation or any other event permitted by the Lease, or was made with Lender's prior consent;

(f) bound by any amendment, renewal or extension of the Lease (except for amendments, renewals and extensions expressly provided for in the Lease) entered into without Lender's prior consent if the Premises represents 50% or more of the net rentable area of the building in which the Premises is located;

(g) subject to any credits, offsets, claims, counterclaims or defenses that Tenant may have that arose prior to the date of the Foreclosure or liable for any damages Tenant may suffer as a result of any misrepresentation, breach of warranty or any act of or failure to act by any party other than Successor Landlord;

(h) bound by any obligation to make improvements to the Property, including the Premises, to make any payment or give any credit or allowance to Tenant provided for in the Lease or to pay any leasing commissions arising out of the Lease, except that Successor Landlord will be:

(i) bound by any such obligations provided for in the Lender-approved form lease;

(ii) bound by any such obligations if the overall economic terms of the Lease (including the economic terms of any renewal options) represented market terms for similar space in properties comparable to the Property when the Lease was executed; and

(iii) bound to comply with the casualty and condemnation restoration provisions included in the Lease provided that Successor Landlord receives the insurance or condemnation proceeds;

or

(i) liable for obligations under the Lease with respect to any off-site property or facilities for the use of Tenant (such as off-site Premises or parking) unless Successor Landlord acquires in the Foreclosure the right, title or interest to the off-site property.

7. Lender will have the right, but not the obligation, to cure any default by Borrower, as landlord, under the Lease. Tenant will notify Lender of any default that would entitle Tenant to terminate the Lease or abate the Rent and any notice of termination or abatement will not be effective unless Tenant has so notified Lender of the default and Lender has had a 30-day cure period (or such longer period as may be necessary if the default is not susceptible to cure within 30 days) commencing on the latest to occur of the date on which (i) the cure period under the Lease expires; (ii) Lender receives the notice required by this paragraph; and (iii) Successor Landlord obtains possession of the Property if the default is not susceptible to cure without possession.

8. All notices, requests or consents required or permitted to be given under this Agreement must be in writing and sent by certified mail, return receipt requested or by nationally recognized overnight delivery service providing evidence of the date of delivery, with all charges prepaid, addressed to the appropriate party at the address set forth above.

9. Any claim by Tenant against Successor Landlord under the Lease or this Agreement will be satisfied solely out of Successor Landlord's interest in the Property and Tenant will not seek recovery against or out of any other assets of Successor Landlord. Successor Landlord will have no liability or responsibility for any obligations under the Lease that arise subsequent to any transfer of the Property by Successor Landlord.

10. This Agreement is governed by and will be construed in accordance with the laws of the state or commonwealth in which the Property is located.

11. Lender and Tenant waive trial by jury in any proceeding brought by, or counterclaim asserted by, Lender or Tenant relating to this Agreement.

12. If there is a conflict between the terms of the Lease and this Agreement, the terms of the Lease will prevail as between Successor Landlord and Tenant.

13. This Agreement binds and inures to the benefit of Lender and Tenant and their respective successors, assigns, heirs, administrators, executors, agents and representatives.

14. This Agreement contains the entire agreement between Lender and Tenant with respect to the subject matter of this Agreement, may be executed in counterparts that together constitute a single document and may be amended only by a writing signed by Lender and Tenant.

15. Tenant certifies that: the Lease represents the entire agreement between the landlord under the Lease and Tenant regarding the Premises; the Lease is in full force and effect; neither party is in default under the Lease beyond any applicable grace and cure periods and no event has occurred which with the giving of notice or passage of time would constitute a default under the Lease; Tenant has entered into occupancy and is open and conducting business in the Premises; and all conditions to be performed to date by the landlord under the Lease have been satisfied.

[SIGNATURE BLOCKS, NOTARY BLOCKS
AND EXHIBITS FOLLOW ON ORIGINAL]

EXHIBIT G

LETTER OF CREDIT

ISSUING BANK: _____

ISSUE DATE: _____ EXPIRY DATE:
LETTER OF CREDIT NUMBER: _____

AMOUNT: $_____

BENEFICIARY:
Brandywine Research LLC
c\o Brandywine Realty Trust
401 Plymouth Road, Suite 500
Plymouth Meeting, PA 19462

APPLICANT:

RE: _____
ACCOUNT # _____

WE HEREBY ISSUE THIS IRREVOCABLE STANDBY LETTER OF CREDIT IN BENEFICIARY'S FAVOR WHICH IS AVAILABLE BY PAYMENT AGAINST DRAFTS DRAWN AT _____ BEARING THE CLAUSE: "DRAWN UNDER IRREVOCABLE STANDBY LETTER OF CREDIT NO. _____".

SPECIAL CONDITIONS: — This Letter of Credit shall automatically renew on an annual basis absent 30 days prior written notice to the contrary to Beneficiary.

Beneficiary may draw on this Letter of Credit upon presentation of an affidavit from an authorized representative of Beneficiary advising that (1) "there has been a default under the Lease which has not been entirely cured by Tenant" or (2) "This Letter of Credit is set to expire, has not been renewed and Tenant has failed to present Landlord with a replacement Letter of Credit in accordance with the Lease."

PRESENT DOCUMENTS TO: _____
_____
_____
ATTN: _____

Notwithstanding anything to the contrary contained in Article 48 of the UCP 500 hereinafter referred to, this Letter of Credit No. ___may be transferred one or more times in its entirety without our consent and without cost upon presentation to us of (i) written transfer instruction signed by you and naming the transferee and (ii) the original of this Letter of Credit. Upon such presentation, we shall issue a replacement Letter of Credit in favor of the transferee in the form of this Letter of Credit. No other documents or presentations will be required by us in connection with any such transfer.

UNLESS OTHERWISE SPECIFICALLY STATED, THIS CREDIT IS SUBJECT TO THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS 1993 REVISION. THE INTERNAL CHAMBER OF COMMERCE PUBLICATION NO. 500.

_____
AUTHORIZED SIGNATURE

EXHIBIT H

MONUMENT SIGNAGE

1. Monument Sign. If after the date hereof, Landlord installs a monument sign for the Project that features tenant names, as opposed to a sign only referring to the Building or Project (a "**Shared Monument Sign**"), subject to the rights of an existing Office Park tenant, MultiPlan, Tenant shall be entitled to have a panel with Tenant's trade name (or a reasonable variation thereof) placed on the Shared Monument Sign. Subject to MultiPlan's rights, the tenant panels on the Shared Monument Sign shall be divided equally amongst the tenants on the Shared Monument Sign without regard to the square footage of each tenant's premises.

2. Installation. Upon Landlord's written approval of the plans and specifications for Tenant's panel for the Shared Monument Sign, shall be installed by Landlord at Tenant's expense.

3. Specifications. Prior to installing Tenant's panel on the Shared Monument Sign, Tenant shall furnish detailed plans and specifications (including the size, color, material, letter style, type of sign and all other relevant specifications) for Tenant's panel (or any modification) to Landlord. The size, color, material, lettering style, type of sign, location and all other aspects of Tenant's panel shall be subject to Landlord's reasonable approval. Landlord shall have the right to prohibit any aspect of the Shared Monument Sign that Landlord reasonably determines not to be aesthetically acceptable.

4. Rights Not Assignable. Tenant's rights under this Rider shall not be assignable by Tenant.

5. Costs. All costs of the Shared Monument Sign including, without limitation, costs of design, manufacture, installation, operation, permitting, utilization, insurance, replacement and maintenance of the Shared Monument Sign, shall be divided equally amongst the tenants on the Shared Monument Sign without regard to the square footage of each tenant's premises.

6. Permits and Approvals. Tenant shall be responsible for procuring all licenses and permits may be required for the installation, use or operation of Tenant's panel on the Shared Monument Sign, and Landlord makes no warranties or representations as to the permissibility or the permitability of the Shared Monument Sign under applicable laws, rules or regulations. Upon Landlord's request, Tenant will deliver to Landlord reasonable evidence of Tenant's having obtained all necessary governmental approvals for the installation of Tenant's panel on the Shared Monument Sign.

Tenant acknowledges that Landlord has no present intent to have a Shared Monument Sign, Landlord has no knowledge if a Shared Monument Sign or any similar sign is permitted to be installed, and Landlord is under no obligation to install a Shared Monument Sign (or any other such exterior Building signage). Landlord's failure install a Shared Monument Sign, or pursue installation thereof, shall in no way relieve Tenant's obligations under this Lease.

7. Removal. Tenant's rights under this Rider shall cease upon the occurrence of any of the following:

a. the expiration or earlier termination of the Lease; or

b. the occurrence of an Event of Default under the Lease; or

c. Tenant's assignment of the Lease or Tenant's rights thereunder; or

d. Tenant subleases (which, for purposes of this Section shall not include any subleases to a Related Entity), in the aggregate, more than fifty percent (50%) of the rentable area contained in the original Premises; or

e. Tenant fails to occupy, in the aggregate, more than fifty percent (50%) of the rentable area contained in the original Premises.

Exhibit 10.35

Fuad El-Hibri

August 9, 2006

Dear Fuad:

After careful consideration, Emergent BioSolutions Inc. (the “Company”) has decided to implement a Severance and Termination Protection Program (the “Program”) to recognize the valuable services that certain employees have provided, and will continue to provide, to the Company and its affiliates. You are eligible to participate in the Program, provided that you make the agreements and acknowledgements set forth below, including that (1) all offer letters and employment agreements between you and the Company (and/or its affiliates), including any amendments, are terminated and (2) you will comply with the terms and conditions set forth in Exhibit I hereto, as amended. Any indemnification agreement, stock option agreement, shareholder agreement, confidentiality obligations, and invention assignment agreements that you may have with the Company or its affiliates are not affected by this letter or by your participation in the Program and remain in full force and effect.

You have received a summary of the Program and a full copy of the Program itself. Please review the Program details carefully. If you elect to become a participant in the Program, please sign below and return the signed copy to Paula Lazarich, Vice President, Human Resources, no later than Friday, August 11, 2006. Please contact Paula at 301-944-0180 or me at 301-944-0107 if you have any questions.

Sincerely,

/s/ Daniel Abdun-Nabi

Daniel Abdun-Nabi
Senior Vice President, Corporate Affairs
General Counsel

As of the date set forth below, I acknowledge and agree that:

(1) I am electing to become a participant in, and to be subject to the terms and conditions of, the Program; and

(2) All offer letters and employment agreements between the Company and/or its affiliates and me are hereby terminated, and, as a result:

   a. I have no employment contract (oral or written) with the Company or its affiliates governing the terms and conditions of my employment;

   b. I am an at-will employee, and my employer or I may terminate my employment at any time for any reason or for no reason;

   c. My compensation is not governed by an employment agreement with the Company or its affiliates but, instead, is governed by my employer’s general benefit plans, as they may be amended from time to time, unless the Company notifies me otherwise in writing;

   d. the Company and its affiliates have no liability or obligations to me under my terminated employment agreement(s); and

(3) I will comply with the terms and conditions of Exhibit I hereto, as amended, including the non-compete and non-solicitation provisions.

/s/ Fuad El-Hibri	8/9/06
Fuad El-Hibri	Dated

EXHIBIT I

(1) Nonsolicitation; Noncompete. I agree that, during my employment by the Company or any Affiliate (each as defined in the Program) and for a period of eighteen (18) consecutive months after my employment ceases for any reason, I shall not, directly or indirectly,

(i) either alone or in association with others, (A) induce, counsel, advise, solicit or encourage, or attempt to induce, counsel, advise, solicit or encourage any employee to leave the employ of the Company, or any of its Affiliates, or accept employment with any other person or entity, (B) induce counsel, advise, solicit or encourage, or attempt to induce, counsel, advise, solicit or encourage any person who at the time of such inducement, counseling, advice, solicitation or encouragement had left the employ of the Company, or any of its Affiliates, within the previous six (6) months to accept employment with any person or entity besides the Company, or any of its Affiliates, or hire or engage such person as an independent contractor, or (C) solicit, interfere with, or endeavor to cause any customer, client, or business partner of the Company, or any of its Affiliates, to cease or reduce its relationship with the Company, or any of its Affiliates, or induce or attempt to induce any such customer, client, or business partner to breach any agreement that such customer, client, or business partner may have with the Company, or any of its Affiliates; and

(ii) whether or not for compensation, and whether or not as an employee, be engaged in or have a financial interest in any business, competing with the business of the Company or of any Affiliate within any state, region or locality in which the Company or such Affiliate is then doing business or marketing products, as the business of the Company or such Affiliates may then be constituted. With respect to this sub-section, however, it is understood and agreed that a business is not competing with the business of the Company or any Affiliate if (A) my duties with respect to such business relate solely to discrete business units that do not compete with the business of the Company or any Affiliate; or (B) the competitive activity is limited to geographical markets or products in which the Company or Affiliate was not engaged (whether by manufacture, distribution, sale, or development for manufacture, distribution, or sale) during the two (2) years immediately preceding my ceasing to be employed by the Company.

(2) Miscellaneous. (i) If any restriction in this Exhibit is found by a court of competent jurisdiction to be unenforceable because it extends for too long a period or covers too great a range of activities or in too broad a geographic area, it shall be interpreted to be effective to the extent it is enforceable. The invalidity or unenforceability of any provision shall not affect the validity or enforceability of any other provision of this Exhibit.

(ii) I acknowledge the restrictions contained in this Exhibit are reasonable and necessary for the protection of the business and goodwill of the Company. I agree that any breach or threatened breach of this Exhibit will cause the Company substantial and irrevocable damage that is difficult to measure and that a remedy at law is not adequate. In the event of breach or threatened breach, I agree that the Company, in addition to other available remedies, shall have the right to seek specific performance and injunctive relief without posting a bond.

(iii) This Exhibit supersedes all prior agreements, written or oral, between the Company and me relating to the subject matter of Section 1, including any provisions in the Program, and shall apply irrespective of the reason my employment ends.

(v) No delay or omission by the Company in exercising any right under this Exhibit will operate as a waiver of that or any other right. A waiver or consent given by the Company on any one occasion is effective only in that instance and will not be construed as a bar to or waiver of any right on any other occasion.

(vi) This Exhibit shall be binding upon and inure to the benefit of both parties and their respective successors and assigns, including any corporation or entity with which or into which the Company may be merged or that may succeed to all or substantially all of its assets or business.

(vii) This Exhibit may not be modified, changed or discharged in whole or in part, except by an agreement in writing signed by the Company and me. This Exhibit shall be governed by and construed as a sealed instrument under and in accordance with the laws of the State of Delaware without regard to conflicts of law provisions.

Amendment to Exhibit I

Notwithstanding anything to the contrary in Exhibit I to the August 9, 2006 Letter from Emergent BioSolutions Inc. (the "Company") to Fuad El-Hibri, Mr. El-Hibri and the Company hereby acknowledge and agree as follows:

1. The Company acknowledges that Mr. El-Hibri is a member of the board of trustees of American University, a member of the board of directors of the International BioMedical Research Alliance, and director and treasurer of the El-Hibri Charitable Foundation; that Mr. El-Hibri also serves as a director and/or officer of Digicel Holdings, Ltd., Telectronics, Inc., East West Resources Corporation, Intervac LLC, and Intervac Management LLC; and that Mr. El-Hibri manages certain of his own personal investments, including real estate holding companies. The Company agrees that Mr. El-Hibri's service in such capacities has not interfered with his ability to perform his duties to the Company and, assuming continued service in such capacities at levels of time and attention comparable to those that Mr. El-Hibri has provided to such entities within the preceding twelve months, would not violate Exhibit I or interfere with Mr. El-Hibri's ability to perform his duties to the Company.
2. It shall not be a violation of Exhibit I for Mr. El-Hibri to pursue any business transaction or opportunity where such transaction or opportunity was first presented (i) to Mr. El-Hibri in his capacity as an officer or director of the entities identified in Paragraph 1, above or (ii) to the Company, and the Board of Directors of the Company declined to pursue such transaction or opportunity.
3. With respect to Mauro Gibellini, Jose Ochoa, and Kerry Kisling, three employees who, at Mr. El-Hibri's invitation, left their employment with East West Resources Corporation (EWR) to accept employment with the Company, it shall not be a violation of Exhibit I for Mr. El-Hibri to induce, counsel, advise, solicit or encourage, or attempt to induce, counsel, advise, solicit or encourage those employees to return to employment with EWR.

/s/ Fuad El-Hibri — 8/9/06
Fuad El-Hibri — Date

Acknowledged and Agreed:

Emergent BioSolutions Inc.

By: /s/ Daniel Abdun-Nabi — 8/9/06
Name: Daniel Abdun-Nabi — Date
Title: Senior Vice President, Corporate Affairs
General Counsel

Exhibit 10.36

SERVICES AGREEMENT

Services Agreement ("**Agreement**"), effective as of August 1, 2006, is entered into by and between East West Resources Corporation, a corporation organized under the laws of the District of Columbia ("**EWR**"), and Emergent BioSolutions Inc., a corporation organized under the laws of the state of Delaware ("**Emergent**" and together with EWR, a "**Party**" or the "**Parties**").

WHEREAS, Emergent desires to retain EWR to undertake and perform for Emergent or any current or future subsidiary or affiliate of Emergent (collectively referred to as "**Emergent**"), the services described herein (hereinafter referred to as the "**Services**") in accordance with the terms and conditions of this Agreement; and

WHEREAS, EWR desires to perform the Services for Emergent in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants set out herein and other good and valuable consideration, the adequacy and receipt of which are hereby acknowledged, the Parties, intending to be bound, agree as follows:

1. Engagement. Emergent hereby retains EWR to provide the Services as set forth in Article 4, below.

2. Affiliates. For the purposes of this Agreement, the word "**Affiliate**" shall mean any subsidiary, of Emergent including, without limitation, all entities in which Emergent maintains a direct or indirect investment interest.

3. Compensation and Reimbursement of Expenses.

   (a) Fee. During the Term of this Agreement (as defined below), Emergent shall pay to EWR a fee of $2,450 per month (subject to a 3% increase on each anniversary date of this Agreement) payable within fifteen (15) days following the last day of the month in which Services are rendered. The fee is sole remuneration provided to EWR under this Agreement, and EWR shall be responsible for any taxes, charges, costs, insurance or other payments resulting from this Agreement.

   (b) Expenses. Emergent shall also reimburse all parking fees, tolls, and other similar expenses directly associated with provision of Services to Emergent, provided that such expenses are documented by a valid receipt if greater than US $20 and that the total expenses for any calendar month do not exceed US $200 without prior written approval by Emergent.

4. Services. EWR agrees to provide the following Services: provision of an automobile (properly maintained and insured, and with fuel, licenses and fees fully paid by EWR), driver, and associated logistics support to Emergent as requested for an average of twenty (20) hours per week. Requests for the Services may be made by the Chief Executive Officer of Emergent or his designee. In providing the Services, EWR agrees that:

   (a) All EWR employees assigned to perform the Services are either citizens or permanent residents of the United States or are authorized to work in the United States through a valid work authorization issued by the US Department of Homeland Security, United States Citizenship and Immigration Services and possess (and agree to maintain) all licenses and certifications necessary to provide the Services.

   (b) All EWR employees assigned to perform the Services shall conduct themselves in a professional manner and shall be properly attired at all times.

   (c) All vehicles provided under this Agreement shall be clean, well kept, and properly maintained at all times.

(d) EWR represents and warrants that EWR's performance hereunder shall not conflict with any other agreements to which EWR is or hereafter becomes a party. EWR agrees not to enter into any agreement, written or oral, which may conflict with this Agreement.

5. Independent Contractor Status.

(a) The parties agree that EWR will act as an independent contractor in the performance of the Services under this Agreement. Accordingly, EWR shall be responsible for payment of all taxes including those arising out of EWR's activities in accordance with this Agreement, including by way of illustration but not limitation, income tax, social security tax, unemployment taxes, and any other taxes or business license fees as required.

(b) Nothing under the terms of this Agreement authorizes EWR to be an agent or legal representative of Emergent for any purpose whatsoever, and EWR is not granted hereunder any right or authority to make any representation, or to assume or create any obligation or responsibility, express or implied, on behalf of or in the name of Emergent in any manner whatsoever. Under no circumstances will EWR have the right or authority to obligate Emergent in a financial capacity for any amounts of money.

(c) This Agreement shall not be deemed to create an employment agreement, joint venture, partnership, association or agency between the parties. The parties understand and agree that this Agreement is not a contract of employment, or an offer to enter into a contract of employment. EWR acknowledges that Emergent provides no benefits to EWR and waives any rights to any benefits that Emergent may provide to any of its employees including, without limitation, workman's compensation; medical, health, life, dental or other forms of insurance; bonuses; vacation, holiday or sick leave; or any equity interests (i.e. stock options). The use of Emergent's facilities and equipment and the facilities and equipment of any Affiliate of Emergent shall be done at Emergent's sole discretion and solely as an accommodation to EWR in the performance of EWR's duties under this Agreement.

6. Confidentiality. Both Parties acknowledge that during the term of this Agreement, both Parties will have close contact with confidential and proprietary information of the other Party. Each Party agrees that it will keep secret all such confidential and proprietary information and will not intentionally disclose such information to anyone except as may be reasonably necessary for the performance of each Party's duties under this Agreement. This obligation survives the termination or expiration of this Agreement. If confidential information is sought by any source, including any governmental organization, the disclosing party must immediately notify the non-disclosing party of such request and refuse to divulge any such information at least until a representative of the non-disclosing party is permitted to address the situation and either consents to the disclosure or has the opportunity to engage legal means to protect the disclosure of such information.

7. Term and Termination.

(a) This Agreement is for a one year term ("Term") and shall automatically renew for an additional one year term upon the expiration of the then current Term, unless terminated by either Party with at least sixty (60) days notice prior to the end of the then current term.

(b) This Agreement may be terminated immediately by either Party in the event of any default by the other Party in the performance of any of obligations under this Agreement or any breach of any representation or warranty contained herein which is not remedied to the reasonable satisfaction of the non-breaching Party within ten (10) days following delivery of notice of such breach.

(c) This Agreement may be terminated without cause by either Party with no less than ninety (90) days notice to the other Party.

(d) Upon termination of this Agreement, each Party shall return all property of the other Party in its possession or control.

8. Compliance with Laws; Indemnification.

(a) EWR shall observe and abide by all applicable international, federal, state, and local laws and rules and regulations with respect to the performance of the Services hereunder.

(b) Each Party shall indemnify and hold harmless the other Party from and against any and all claims, losses, damage, liabilities, penalties, punitive damages, expenses and/or costs of any kind or amount whatsoever (including reasonable attorneys' fees and expenses) incurred or paid after the date of this Agreement which result from or arise out of the indemnifying Party's acts or omissions under or in connection with this Agreement. This indemnity shall survive the termination of this Agreement.

9. Miscellaneous Provisions.

(a) Non-Waiver. Failure by either Party at any time to require the performance of the other Party of any of the terms hereof shall in no way affect such Party's right thereafter to enforce the same, nor shall the waiver by either Party of the breach of any provision hereof be taken or held to be a waiver of any succeeding breach.

(b) Severability. In the event that any provision of this Agreement conflicts with the law under which this Agreement is to be construed, or if any provision is held invalid or unenforceable by a court of competent jurisdiction or an arbitrator, such provision shall be deleted from this Agreement and the Agreement shall be construed to give full effect to the remaining provisions thereof.

(c) Governing Law. This Agreement shall be interpreted, construed, and governed according to the laws of the State of Maryland, U.S.A.

(d) Headings and Captions. The paragraph headings and captions contained in this Agreement are for convenience only and shall not be construed to define, limit, or affect the scope or meaning of the provisions hereof.

(e) Entire Agreement. This Agreement contains and represents the entire agreement of the parties and supercedes all prior agreements, representations, or understandings, oral or written, express or implied with respect to the subject matter hereof. This Agreement may not be modified or amended in any way unless in writing signed by duly authorized representatives of both Parties. No representation, promise, or inducement has been made by either party hereto that is not embodied in this Agreement, and neither party shall be bound or liable for any alleged representation, promise, or inducement not specifically set forth herein.

(f) Assignability. This Agreement shall be binding upon and inure to the benefit of each Party and its respective successors and assigns. Neither this Agreement nor any rights or obligations hereunder may be assigned by either Party without the prior written consent of the other, which consent shall not be unreasonably withheld.

(g) Arbitration. Any dispute arising out of or in connection with this Agreement shall be settled finally and exclusively by arbitration conducted in the English language in the Washington, D.C. metropolitan area. The arbitration shall be conducted in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("AAA") then in effect by a single arbiter appointed by the AAA. Notwithstanding any provision to the contrary in this sub-section (g), Emergent shall have the right to seek injunctive relief or other limited, provisional or equitable remedies in any court of competent jurisdiction.

(h) Notices. All notices required or permitted hereunder shall be in writing and shall be deemed properly given if delivered personally or sent by certified or registered mail, postage prepaid, return receipt requested, or sent by telegram, telefax, or similar form of telecommunication, and shall be deemed to have been given when received. Any notice of default shall be valid only if sent by two of the aforementioned means. Unless otherwise specified by the parties in writing, any such notice or communication shall be addressed to:

EWR: East West Resources Corporation
Attn: Robert L. Smith, Jr.
1684 East Gude Drive, Rockville, MD 20850
Tel: (301) 217-9929
Fax. (301) 217-9935
Email: rsmith@ewrcorp.com

Emergent: Emergent BioSolutions Inc.
Attn: Legal Department
300 Professional Drive
Gaithersburg, MD 20879
Tel: (301) 590-0129
Fax: (301) 590-1252

(i) In no event shall either Party be liable for any consequential, special, punitive, exemplary, indirect or incidental damages arising from this agreement or performance under this agreement (including loss of anticipated profits, loss of use, or loss of product). This waiver applies regardless of whether or not the damages were foreseeable, and regardless of the theory or cause of action upon which the damages might be based.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement, to be effective as of the date and year first above written.

EAST WEST RESOURCES CORPORATION:

/s/ Robert L. Smith, Jr.
By: Robert L. Smith, Jr.
Title: Vice President, Finance & Administration

EMERGENT BIOSOLUTIONS INC.:

/s/ Daniel J. Abdun-Nabi
By: Daniel J. Abdun-Nabi
Title: Sr. Vice President Corporate Affairs, General Counsel

Exhibit 10.37

Amended and Restated Board Compensation Program

For purposes of this Program:

1. **Outside Director** shall mean any individual that is not an Inside Director or Independent Directors and meets the definition of "outside director" as it may be amended from time to time under Section 162(m) of the Internal Revenue Code of 1986, as amended, and the rules and regulation thereunder.

2. **Inside Director** shall mean any individual who is also an officer or employee of the Corporation or any of its affiliates.

3. **Independent Director** shall mean any individual who qualifies as an "independent director" under any rule or regulation of any exchange upon which the Corporation's securities may be listed (or in the absence of such listing the determination shall be made by the Board of Directors in the exercise of good faith in its sole and absolute discretion).

The determination of whether or not an individual is an **Outside Director, Inside Director** or **Independent Director** shall be made by the Board of Directors in its sole and absolute discretion at any time prior or subsequent to the date on which the individual is appointed or elected to the Board of Directors.

	Compensation for Members of			
	Board of Directors	**Audit Committee**	**Compensation Committee**	**Nominating & Corporate Governance Committee**
Annual Cash Retainer for ***Outside Directors*** (paid quarterly)	$ 20,000	$ 5,000	$ 3,000	$ 3,000
Meeting Fees for **Outside Directors** (paid quarterly)	$ 1,500 per meeting	$ 1,500 per meeting	$ 1,000 per meeting	$ 1,000 per meeting
Telephonic Meeting Fees for ***Outside Directors*** (paid quarterly)	$ 500 per meeting	$ 500 per meeting	$ 300 per meeting	$ 300 per meeting
Annual retainer and meeting fees for **Inside Directors**	$ 0	N/A	N/A	N/A
Other	Reimburse out of pocket expenses	Reimburse out of pocket expenses	Reimburse out of pocket expenses	Reimburse out of pocket expenses
Equity Compensation	As set forth in the Company's 2006 Stock Incentive Plan			

Exhibit 10.38

Schedule 3.3

REVOLVING CREDIT NOTE

East Lansing, Michigan
July 29th, 2005

$ 10,000,000

FOR VALUE RECEIVED, the undersigned **BIOPORT CORPORATION,** a Michigan corporation, of Lansing, Michigan, promises to pay to the order of **FIFTH THIRD BANK**, a Michigan banking corporation ("**Lender**"), at its office in East Lansing, Michigan, or at any other place that the holder of this Note designates in writing, the sum of Ten Million Dollars ($10,000,000), or any lesser amount that Lender shall have loaned to the undersigned under *Section* 3 of a certain Amended and Restated Loan Agreement dated July 29th, 2005, between the undersigned and Lender, as amended ("**Loan Agreement**"), together with interest (computed on the basis of a three hundred sixty (360) day year for the actual number of days elapsed) on the unpaid balance at an annual rate equal to three-eights of one percent (37.5 basis points) below the Index Rate until maturity and after maturity at an annual rate equal to one and five eighths percent (162.5 basis points) above the Index Rate. Any change in the interest rate on this Note that is occasioned by a change in the Index Rate shall be effective on the day of the change in the Index Rate.

"**Index Rate**" means the interest rate that Lender announces from time to time as its "prime" interest rate. Borrower acknowledges that the rate that Lender announces as its "prime" interest rate at any given time is not the lowest rate of interest that is available to Lender's commercial customers at that time.

The interest on this Note shall be payable monthly beginning July 29th, 2005, and continuing on the first day of each succeeding month until the principal is paid in full. The principal of this Note shall be payable as provided in *Section 3* of the Loan Agreement.

If Borrower does not make a payment of interest within ten days after it is due, then Borrower shall immediately pay to Lender a late charge in an amount equal to the greater of Fifty Dollars ($50) or 10% of the amount of the late payment. This is in addition to Lender's other rights and remedies for default in payment of interest when due.

This Note evidences Borrower's indebtedness to Lender by reason of loans made and to be made from time to time under *Section 3* of the Loan Agreement ("**Loans**"). Lender's records shall be prima facie evidence of all Loans and prepayments and of the indebtedness outstanding under this Note at any time. Borrower and the holder of this Note shall have all of the rights and powers set forth in the Loan Agreement as though they were fully set forth in this Note.

Reference is made to the Loan Agreement for a statement of the conditions under which the principal of this Note and accrued interest may become immediately due and payable.

In this Note, **"maturity"** means the time when the entire remaining unpaid principal balance of this Note is or becomes immediately due and payable without demand.

Except as otherwise provided in the Loan Agreement, the undersigned waives protest, presentment, demand and notice of nonpayment.

BIOPORT CORPORATION

By /s/ Robert G. Kramer

Its President & CEO

And by /s/ [Illegible]

Its Associate Director of Finance

Exhibit 10.39

PROMISSORY NOTE

$8,500,000.00 April 25th, 2006

FOR VALUE RECEIVED, **EMERGENT FREDERICK LLC,** a Maryland limited liability company (the "**Borrower**") promises to pay to the order of **HSBC REALTY CREDIT CORPORATION (USA)**, a Delaware corporation (hereinafter referred to as the "**Bank**") at its office at 1130 Connecticut Avenue, N.W., 12th Floor, Washington, D, C. 20036, or at such other place as the Bank may from time to time direct, the sum of EIGHT MILLION FIVE HUNDRED THOUSAND and No/100 Dollars ($8,500,000.00), with interest computed daily on the unpaid principal balance at the Interest Rate (as such term is hereinafter defined), and payable according to the repayment schedule set forth herein (the "**Loan**"). The Loan is made pursuant to a Loan Agreement of even date herewith (the "**Loan Agreement**"**)** among the Borrower, the Bank and Emergent BioSolutions Inc. (the "**Guarantor**"). The Loan is guaranteed by a Guaranty of even date herewith from the Guarantor to the Bank (the "**Guaranty**"). The Loan is secured by, among other things, a Purchase Money Deed of Trust, Assignment of Rents and Leases and Security Agreement of even date herewith! from the Borrower to certain trustees for the benefit of the Bank (the "**Deed of Trust**"). This Note, the Loan Agreement, the Guaranty, the Deed of Trust and any other documents entered into in connection with the Loan are referred to as the "**Loan Documents**").

Interest Rate and Payment Terms

This Note shall bear interest at a rate per annum (the "**Interest Rate**") equal to LIBOR plus three percent (3%). "**LIBOR**" means the daily fluctuating rate of interest (rounded upwards, if necessary to the nearest 1/100 of 1%) appearing on Telerate Page 3750 (or any successor page) as the 3-month London interbank offered rate for deposits in United States Dollars at approximately 11:00 a.m. (London time) on the second preceding Business Day, as adjusted from time to time in the Bank's sole discretion for then-applicable reserve requirements, deposit insurance assessment rates and other regulatory costs (the "**Index**"). If for any reason such rate is not available, the term "LIBOR" shall mean the fluctuating rate of interest equal to the rate of interest (rounded upwards, if necessary to the nearest 1/100 of 1%) appearing on Reuters Screen LIBO Page as the 3-month London interbank offered rate for deposits in United States Dollars at approximately 11:00 a.m. (London time) on the second preceding day, as adjusted from time to time in the Bank's sole discretion for then-applicable reserve requirements, deposit insurance assessment rates and other regulatory costs; provided, however, if more than one rate is specified on Reuters Screen LIBO page, the applicable rate shall be the arithmetic mean of all such rates. Any change in the rate will take effect on the date of such change in the Index as indicated on Telerate Page 3750. Interest will accrue on any non-banking day at the rate in effect on the immediately preceding banking day.

This Note shall be payable in monthly installments of principal and interest in the amount required to amortize this Note over twenty (20) years, payable on the 1st day of each month beginning May 1, 2006, and in one final balloon payment of all accrued interest and outstanding principal on April ___, 2011 (the **"Maturity Date").** Upon the Borrower's request, the Bank in its sole discretion may agree to extend the Maturity Date for five (5) additional years.

The Interest Rate on this Note: (a) will not exceed applicable legal limits, and in the event a payment is made by the Borrower or received by the Bank in excess of the applicable legal limits, such excess payment shall be credited as a payment of principal; and (b) shall be computed on the basis of 360-day year and charged for the actual number of days elapsed in each interest calculation period.

In the event that the Bank shall determine that by reason of circumstances affecting the interbank Eurodollar market, adequate and reasonable means do not exist for determining LIBOR, or Eurodollar deposits in the relevant amount and for the relevant maturity are not available to the Bank in the interbank Eurodollar market, the Bank shall give the Borrower prompt notice of such determination. If such notice is given, and until such notice is withdrawn, the Interest Rate on this Noje shall be a rate per annum equal to the Prime Rate plus 0.25%. **"Prime Rate"** means the rate per annum from time to time established by the Bank as the Prime Rate and made available by the Bank at its main office or, in the discretion of the Bank, the base, reference or other rate then designated by the Bank for general commercial loan reference purposes, it being understood that such rate is a reference rate, not necessarily the lowest, established from time to time, whiph serves as the basis upon which effective interest rates are calculated for loans making reference thereto. If, after the date of this Note, any applicable law, treaty, regulation or directive, or any change therein or in the interpretation or application thereof, shall make it unlawful for the Bank to make or maintain any LIBOR loan, the Interest Rate on this Note shall be a rate per annum equal to the Prime Rate plus 0.25%, for so long as such illegality exists.

Prepayment

Upon five (5) business days' written notice from the Borrower to the Bank, the Borrower may prepay the outstanding principal balance of this Note, in whole or in part, subject to the following terms and conditions:

(a) any prepayment must include payment of all interest accrued and unpaid on the amount so prepaid as of the date of such prepayment;

(b) partial prepayment shall not postpone the due date of any subsequent payment, nor shall it change the amount of any monthly payment otherwise required to be made under this Note, unless the Bank otherwise agrees in writing and in advance of receipt of such partial prepayment;

(c) if the Interest Rate at the time of prepayment has been converted to a fixed rate pursuant to an ISDA Master Agreement or other interest rate protection agreement ("**Master Agreement**"), the Borrower shall pay a prepayment fee equal to the aggregate of any breakage fees related to such Master Agreement.

Late Charge

In the event the Borrower fails to make a payment of principal and/or interest in fully collected funds within fifteen (15) days after such payment is due, the Borrower shall pay a late charge to the Bank in an amount equal to five percent (5%) of the overdue installment.

Default Interest

Upon an Event of Default (as such term is hereinafter defined) and until such Event of Default is cured or this Note is paid in full, this Note shall bear interest at a rate equal to three percent (3%) per annum above the Interest Rate in effect on the date of such Event of Default.

Events of Default and Remedies

Subject to any applicable notice and cure periods contained in the Loan Documents, each of the following shall constitute a default **("Event of Default")** under this Note:

(a) A failure to make a payment of any sum within ten (10) days of when due under this Note.

(b) A failure to perform or observe any of the covenants, conditions or terms of this Note or any other Loan Document.

(c) Upon the occurrence of an Event of Default or failure to pay the balance hereof when otherwise due, and notwithstanding the payment of any late charges: (i) all remaining payments under this Note shall become due and payable together with interest accrued to the date of payment without notice, at the option of the Bank; (ii) the Borrower shall reimburse the Bank for any reasonable expenses, costs and attorneys' fees which the Bank may incur in connection with the collection of any monies due under this Note or in connection with the enforcement of any right under this Note or under any of the Loan Documents; and (iii) the Bank may exercise any or all of the other rights, powers and remedies provided for in any of the Loan Documents, or now or hereafter existing at law or in equity or by statute or otherwise.

Miscellaneous

The Borrower hereby waives demand, presentment for payment, protest, and notice of dishonor, and agrees that at any time and from time to time and with or without consideration, the Bank may, without notice to or further consent of the Borrower and without in any manner releasing, lessening or affecting the obligations of the Borrower: (a) release, surrender, waive, substitute, settle, exchange, compromise, modify, extend or grant indulgences with respect to: (i) this Note; and (ii) all or any part of any collateral or security for this Note; or (b) grant any extension or other postponements of the time of payment hereof.

Each right, power and remedy of the Bank as provided for in this Note, or now or hereafter existing at law or in equity or by statute or otherwise, shall be cumulative and concurrent and shall be in addition to every other right, power or remedy, and the exercise or beginning of the exercise by the Bank of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by the Bank of any or all of such other rights, powers or remedies.

No failure or delay by the Bank to insist upon the strict performance of any term, condition or covenant of this Note, or to exercise any right, power or remedy upon a breach hereof, shall constitute a waiver of any such term, condition or covenant or of any such breach, nor shall it preclude the Bank from exercising any such right, power or remedy at any later time

or times, unless such waiver is in writing signed by an authorized representative of the Bank. If the Bank accepts any payment after its due date, this does not constitute a waiver of the Bank's right to receive timely payment of all other subsequent amounts or to declare a default for the failure to make any other subsequent payment when due.

Any payment on this Note coming due on a day on which the Bank is not open to conduct foil banking business shall be due on the next succeeding business day. Each payment hereunder may be applied to pay interest, principal, late fees or costs as the Bank, in its sole discretion, may determine.

All notices under this Note shall be given as provided in the Loan Agreement.

The Borrower authorizes the Bank to disburse funds represented by this Note to the Borrower and agrees that such disbursement shall be deemed to be full and absolute consideration for the undertaking to make payment hereunder. The Borrower hereby authorizes the Bank to disclose to any subsidiary or affiliate of the Bank, to any fiduciary institution (as "fiduciary institution" is defined in Subtitle 3 of Title 1 of the Financial Institutions Article of the Annotated Code of Maryland, or any successor legislation) or to any banking institution, credit union or savings and loan association organized under the laws of any State, and hereby authorizes all subsidiaries and affiliates of the Bank, to disclose to the Bank, the financial record of the Borrower (as "financial record" is defined in Subtitle 3 of Title 1 of the Financial Institutions Article of the Annotated Code of Maryland, or any successor legislation).

THE BORROWER AND THE BANK HEREBY VOLUNTARILY AND KNOWINGLY WAIVE ANY RIGHT THEY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY ACTION, PROCEEDING, OR COUNTERCLAIM BROUGHT BY EITHER PARTY AGAINST THE OTHER ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS NOTE AND THE TRANSACTIONS CONTEMPLATED HEREIN. THE BORROWER ACKNOWLEDGES THAT IT HAS BEEN INFORMED BY THE BANK THAT THE PROVISIONS OF THIS PARAGRAPH CONSTITUTE A MATERIAL INDUCEMENT UPON WHICH THE BANK HAS RELIED, IS RELYING AND WILL RELY IN MAKING THE LOAN. THE BORROWER HEREBY CERTIFIES THAT NO REPRESENTATIVE OR AGENT OF THE BANK (INCLUDING ITS COUNSEL) HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT THE BANK WOULD NOT, IN THE EVENT OF LITIGATION, ENFORCE THIS WAIVER OF RIGHT TO JURY TRIAL. THE BORROWER ACKNOWLEDGES THAT IT HAS CONSULTED WITH AN ATTORNEY AND FULLY UNDERSTANDS THE LEGAL EFFECT OF THE PROVISIONS OF THIS PARAGRAPH.

This Note shall be governed by and construed under and in accordance with the laws of the State of Maryland (but not including the choice of law rules thereof). The Borrower hereby submits to the non-exclusive jurisdiction of any State of Maryland court or Federal court sitting in the State of Maryland in any action or proceeding arising out of or relating to this Note, and hereby waives any objection it may have to the laying of venue of any such action or proceeding in any of said courts and any claim that it may have that any such action or proceeding has been brought in an inconvenient forum. A final judgment in any such action or proceeding shall be

conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

Whenever used herein, the word “Borrower” or “Bank” shall be deemed to include, as appropriate, its/his/her respective heirs, personal representatives, successors and assigns. All words used herein shall be deemed to refer to the singular, plural, masculine, feminine or neuter as the identity of the person or entity or the context may require.

(Signature Page Follows)

IN WITNESS WHEREOF, the Borrower has duly executed this Note under seal as of the date and year first hereinabove set forth. This instrument may be signed in multiple counterparts.

EMERGENT FREDERICK LLC,
a Maryland limited liability company

By: /s/ Edward J. Arcuri (SEAL)
Name: Edward J. Arcuri
Title: Executive Manager

CONSENT OF THE GUARANTOR

The undersigned Guarantor hereby consents to the terms of this Note and acknowledges it has guaranteed this Note pursuant to the terms of that certain Guaranty executed by the undersigned of even date herewith.

EMERGENT BIOSOLUTIONS INC., a
Delaware corporation

By: /s/ Edward J. Arcuri (SEAL)
Name: Edward J. Arcuri
Title: EVP & COO

Exhibit 10.40

LOAN AGREEMENT

THIS LOAN AGREEMENT (this "**Agreement**") is dated as of August 25, 2006, by and among **BIOPORT CORPORATION**, a Michigan corporation, which maintains its chief executive office at 3500 N. Martin Luther King, Jr. Blvd., Building One, Third Floor, Lansing, Michigan 48906 (the "**Borrower**"), and **EMERGENT BIOSOLUTIONS INC.**, a Delaware corporation (the "**Guarantor**") and **HSBC REALTY CREDIT CORPORATION (USA)**, a Delaware corporation (the "**Bank**").

WHEREAS, the Borrower has applied to the Bank for a Term Loan of Ten Million and No/100 Dollars ($10,000,000.00) (the "**Term Loan**"); and

WHEREAS, the Borrower has also applied to the Bank for a revolving credit loan of Five Million and No/100 Dollars ($5,000,000.00) (the "**Revolving Credit Loan**", together with the Term Loan, the "**Loans**"); and

WHEREAS, the Loans will be of benefit to the Guarantor and the Guarantor desires to induce the Bank to make the Loans by guaranteeing the payment of the Loans; and

WHEREAS, the Bank is willing to make the Loans to the Borrower upon the terms and subject to the conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the foregoing and of the agreements, covenants and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows;

SECTION 1. DEFINITIONS

As used herein, the following terms, when initial capital letters are used, shall have the respective meanings set forth below. In addition, all terms defined in the applicable Uniform Commercial Code shall have the meanings given therein unless otherwise defined herein.

1.01 Defined Terms. As used in this Agreement, the following terms shall have the following meanings, unless the context otherwise requires:

"Affiliate" shall mean (a) any entity in which the Borrower legally or beneficially owns or holds, directly or indirectly, any capital stock, membership interest or other equity interest; (b) any person or entity that is a partner in or member of the Borrower or a partnership or limited liability company in which the Borrower is a partner, (c) any person that is a director, officer, member, stockholder (legally or beneficially) or other affiliate of any of the foregoing or of the Borrower; and (d) any person or entity that directly or indirectly controls, is under the control of, or is under common control with, the Borrower, including, without limitation, any person or entity that directly or indirectly has the right or power to direct the management or policies of the Borrower and any person or entity whose management or policies the Borrower directly or indirectly has the right or power to direct.

"Collateral" shall mean the real property and personal property of the Borrower upon which the Borrower has granted a lien to the Bank pursuant to the Security Agreement and the Mortgage.

"Developed Campus" shall mean the portion of the Property located in Ingham County, Michigan.

"Environmental Laws" shall mean all federal, State and local laws, whether now or hereafter enacted, and as amended from time to time, relating to pollution or protection of the environment and the handling of Hazardous Materials; including, without limitation, laws relating to emissions, discharges, releases or threatened releases of Hazardous Materials into the environment (including, without limitation, ambient air, surface water, ground water or land), or otherwise relating to the manufacture, generation, production, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, and any and all regulations, codes, plans, orders, decrees, judgments, injunctions, notices or demand letters issued, entered, promulgated or approved thereunder.

"ERISA" shall mean the Employee Retirement Income Security Act of 1974, as amended from time to time, and any successor legislation, and all regulations, codes, orders, decrees, judgments, injunctions, notices or demand letters issued, entered, promulgated or approved thereunder.

"Event of Default" shall mean any of the events specified in Section 6 hereof, provided that any requirement for the giving of notice, the lapse of time, or both have been satisfied.

"Fifth Third Loan" shall mean that certain financing arrangement with Fifth Third Bank related to (i) that certain revolving credit loan in the amount of $10,000,000.00 evidenced by that certain Amended and Restated Loan Agreement dated July 29, 2005 by and between the Borrower and Fifth Third Bank, a Michigan banking corporation, as amended, and that certain Amended and Restated Security Agreement dated July 29, 2005 by and between the Borrower and Fifth Third Bank, as amended, (ii) that certain term loan in the amount of $2,400,000 evidenced by that certain Term Note dated August 10, 2004 by and between the Borrower and Fifth Third Bank, and (iii) various other notes, security agreements, loan agreements and credit documents related to such revolving loan and term loan (collectively, the "**Fifth Third Loan Document**"), which are secured, respectively, by a lien on the proceeds of Government Contracts (as defined in the Fifth Third Loan Documents) and a lien on certain computer software known as the "The Enterprise Resource Planning System".

"GAAP" shall mean generally accepted accounting principles as in effect from time to time.

"Guaranty" shall mean the Guaranty, of even date herewith, made and executed by the Guarantor for the benefit of the Bank, as amended, supplemented, restated or modified from time to time.

"Hazardous Materials" shall mean any (i) hazardous, regulated and/or toxic chemicals, materials, substances or wastes occurring in the air, water, soil or ground water or noise in, on, over or under the Property or the improvements thereon, as defined by the Comprehensive

Environmental Response, Compensation, and Liability Act (Superfund or CERCLA), and the Superfund Amendments and the Reauthorization Act of 1986 (SARA), 42 U.S.C. § 9601 et seq., the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. § 11001 et seq., the Resource Conservation and Recovery Act (the Solid Waste Disposal Act or RCRA), 42 U.S.C. § 6901 et seq., the Federal Water Pollution Control Act, (CWA), 33 U.S.C. § 1251 et seq., the Clean Air Act (CAA), 42 U.S.C. § 7401 et seq., the Hazardous Materials Transportation Act, 49 U.S.C. § 1801 et seq., the Federal Water Pollution Control Act, 33 U.S.C. § 1251 et seq., the Safe Drinking Water Act, 42 U.S.C. § 300 ft. seq. and the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C.A. §136 et seq., the Uranium Mill Tailings Radiation Control Act, 42 U.S.C. § 7901 et seq., the Occupational Safety and Health Act, 29 U.S.C. § 655 et seq., the National Environmental Policy Act, 42 U.S.C. § 4321 et seq., and the Noise Control Act, 42 U.S.C. § 4901 et seq., or comparable state statutes, as each such statute may be amended from time to time, and/or as defined in regulations promulgated thereunder; (ii) oil, petroleum products, and their by-products; (iii) any substance, the presence of which is prohibited or controlled by any other applicable federal or state or local laws, regulations, statutes or ordinances now in force or hereafter enacted relating to waste disposal or environmental protection with respect to hazardous, toxic or other substances generated, produced, leaked, released, spilled or disposed of at or from the Property; (iv) any other substance which by law requires special handling in its collection, storage, treatment or disposal including, but not limited to, asbestos or asbestos-containing material in any form that could be friable, polychlorinated biphenyls (PCBs), was formaldehyde foam insulation and lead-based paints, but not including small quantities of such materials present on the Property in retail containers, (v) Microbial Matter or infectious substances; (vi) underground or above-ground storage tanks, whether empty or containing any substance, the presence of which on the Property is prohibited by any federal, state or local authority; (vii) any substance that requires special handling; and (viii) any other material or substance now or in the future defined as a "hazardous substance," "hazardous material," hazardous waste," "toxic substance," "toxic pollutant," "contaminant," or "pollutant" within the meaning of any Environmental Laws. "Microbial Matter" shall mean the presence of fungi or bacterial matter (which is not normally found in the environment) which reproduces through the release of spores or the splitting of cells, including, but not limited to, mold, mildew and viruses, whether or not such Microbial Matter is living.

"Intercreditor Agreement" shall mean that certain Intercreditor Agreement between Fifth Third Bank and the Bank, consented to by the Borrower and the Guarantor, dated as of the date hereof.

"Lien" shall mean any mortgage, pledge, assignment, security interest, encumbrance, hypothecation, lien, encroachment, reservation, right of way, easement, covenant, condition, restriction or charge of any kind (including any conditional sale or other title retention agreement, any financing lease having substantially the same economic effect as any of the foregoing, and the filing or authorization of, any financing statement under the Uniform Commercial Code or comparable law of any jurisdiction).

"Loan" means the loan of even date herewith from the Bank to the Borrower evidenced by the Notes.

"Loan Documents" shall mean the Notes, this Agreement, the Guaranty, the Mortgage, the Security Agreement and any other agreement or document referred to herein or now or

hereafter delivered and executed by the Borrower and/or the Guarantor and/or the Bank in connection with the Loan contemplated hereby, together with any and all revisions, amendments, restatements and modifications to, replacements of and substitutions for, any of the foregoing.

"Mortgage" shall mean the Mortgage, of even date herewith, made and executed by the Borrower for the benefit of the Bank, as amended, supplemented, restated or modified from time to time, to secure the Notes, which Mortgage, when recorded, shall create a first lien on the Property.

"Notes" shall mean the Term Loan Note and Revolving Credit Note each of even date herewith executed by the Borrower and consented to by the Guarantor to evidence the Loan, as amended, supplemented, restated, replaced or modified from time to time.

"Permitted Liens" shall mean with respect to the Borrower and the Collateral: (a) Liens, if any, for taxes, front foot benefit charges, assessments and other charges enumerated in Section 1.03(a) of the Mortgage, not yet due or payable; (b) applicable building and zoning laws and regulations; (c) any mechanic's, artisan's, materialman's, landlord's, carrier's or other like Lien arising in the ordinary course of business with respect to obligations which are not due; (d) any and all municipal and public utility easements of record; (e) any Lien arising out of a judgment, order or award with respect to which the Borrower shall in good faith be prosecuting diligently an appeal or proceeding for review and with respect to which there shall be in effect a subsisting stay of execution pending such appeal or proceeding for review, provided appropriate reserves therefor are established by the Borrower in accordance with GAAP and provided such Lien is subordinate to any security interest of the Bank in the property encumbered by such Lien; (f) any deposit of funds made in the ordinary course of business to secure obligations of the Borrower under worker's compensation laws, unemployment insurance laws or similar legislation, to secure public or statutory obligations of the Borrower, to secure surety, appeal or customs bonds in proceedings to which the Borrower is a party, or to secure the Borrower's performance in connection with bids, tenders, contracts (other than contracts for the payment of money), leases or subleases made by the Borrower in the ordinary course of business; (g) any Lien set forth in the Commitment for Title Insurance Nos. TRO-06-100063 and TRO-06-100064 issued by Lawyers Title Insurance Corporation, as updated; (h) any lease, sublease or agreement for occupancy or use of any part of the Property, so long as those leases, subleases or agreements are subordinate to the Mortgage and have been approved by the Bank; (i) a Lien in favor of the Bank; (j) such other matters affecting title to the Property as are approved by the Bank in writing; (k) subject to the terms of the Intercreditor Agreement, Liens arising out of or related the Fifth Third Loan, including any extension, amendment or renewal of such Liens; and (l) the liens listed on Schedule 1.1 attached hereto.

"Property" shall mean that certain real property, improvements, fixtures and other real property interests owned by the Borrower and located in Clinton County and Ingham County, Michigan, as more particularly described in the Mortgage.

"Revolving Credit Note" shall mean that certain Promissory Note (Revolving Credit Loan) of even date herewith in the maximum principal amount of $5,000,000.00 from the Borrower payable to the order of the Bank.

"Security Agreement" shall mean the Security Agreement of even date herewith from the Borrower to the Bank granting to the Bank a Lien on the personal property of the Borrower (excepting the collateral for the Fifth Third Loan as permitted pursuant to the Intercreditor Agreement), as amended, supplemented, restated or modified from time to time.

"Subsidiary" shall mean any corporation, partnership or limited liability company, at least a majority of the outstanding equity interests of which, now or in the future, is owned or controlled by the Borrower, directly or indirectly, or through one or more intermediaries.

"Term Note" shall mean that certain Promissory Note (Term Loan) of even date herewith in the principal amount of $10,000,000.00 from the Borrower payable to the order of the Bank.

"UCC Collateral" shall mean all of the personal property of the Borrower upon which the Borrower has granted the Bank a lien pursuant to the Security Agreement.

1.02 Accounting Terms. As used in this Agreement and any of the other Loan Documents, as well as in any certificate, report or other document made or delivered pursuant to or in connection with this Agreement, accounting terms not defined herein and accounting terms only partly defined herein shall have the respective meanings given to them under GAAP.

1.03 Use of Defined Terns. All terms defined in this Agreement shall have the defined meanings when used in any of the other Loan Documents or in any certificate, report or other document made or delivered pursuant to or in connection with this Agreement, unless the context shall require otherwise.

SECTION 2. LOAN AND REPAYMENT

2.01 Term Loan. Subject to the terms and conditions set forth herein and in the Term Note, the Bank agrees to lend to the Borrower, in a single advance to be made on or about the date hereof, the sum of Ten Million and No/100 Dollars ($10,000,000.00). The Term Note shall be payable on the 1st day of each month in monthly installments of accrued interest only for the first six months from the date hereof beginning October 1, 2006. Thereafter the Term Note shall be payable on the 1st day of each month in monthly installments of principal in the amount of $83,334.00, calculated using a 10 year amortization, plus accrued interest. All accrued interest and outstanding principal on the Term Loan shall be due and payable in a final balloon payment on August 25, 2011 (the "**Term Loan Maturity Date**").

Upon the Borrower's request, to be made no sooner than 90 days prior to the Term Loan Maturity Date, and provided no Event of Default shall exist under the Loan Documents, the Bank in its sole discretion may agree to extend the Term Loan Maturity Date for five (5) additional years until August 25, 2016 (the "**Extension Term**") upon the payment to the Bank of an extension fee in the amount of 100 basis points. During the Extension Term, the Term Note shall be payable on the 1st day of each month in monthly installments of principal in the amount of $83,334.00, plus accrued interest. If the Term Loan is extended as provided herein, all accrued interest and outstanding principal on the Term Loan shall be due and payable on August 25, 2016.

2.02 Revolving Credit Loan. Subject to the terms and conditions set forth herein and in the Revolving Credit Note, the Bank agrees to provide the Borrower with a twelve (12) month revolving credit facility in the amount of Five Million and No/100 Dollars ($5,000,000.00). The Revolving Credit Note shall be payable in monthly payments of interest only on the principal amount outstanding, in arrears, on the 1st day of each month beginning on October 1, 2006 and continuing on the first day of each month thereafter until October 1, 2007 (the "**Conversion Date**"). The outstanding principal balance of the Revolving Credit Note on the Conversion Date shall be converted to a four (4) year term loan, with monthly payments on the 1st day of each month, in the amount of principal required to fully amortize the Revolving Credit Note in four (4) years, plus monthly accrued interest. Unless sooner paid, all outstanding principal and any accrued and unpaid interest on the Revolving Credit Note shall be due and payable in full on August 25, 2011.

2.03 Notes, Interest, Payment Terms. The Borrower's indebtedness to the Bank for the Loans together with interest accrued thereon, shall be evidenced by the Notes. The Notes shall bear interest and be payable as set forth therein.

2.04 Fees. As of the date hereof, the Borrower has paid to the Bank an aggregate commitment fee in the amount of One Hundred Thousand and No/100 Dollars ($100,000.00) (the "**Commitment Fee**") for the Loan. In addition, the Borrower shall pay to the Bank, quarterly in arrears as billed by the Bank, an un-used fee in an amount equal to one half percent (.5%) of the average daily difference between $5,000,000.00 and the amount outstanding on the Revolving Credit Note.

SECTION 3. CONDITIONS PRECEDENT.

The Bank shall have no obligation to make any advance under the Loan Documents unless and until:

3.01 Delivery of Documents. The Borrower shall have delivered to the Bank the following:

(i) certificates of good standing for the Borrower certified by the Secretary of State, or other appropriate governmental authority, of the state of incorporation of the Borrower and of the Borrower's principal place of business;

(ii) a certificate of the Borrower, certifying as to attached copies of its certificate of incorporation and bylaws and the resolutions of its Board of Directors authorizing the execution, delivery and performance of the Loan Documents to which the Borrower is a party, the borrowings by the Borrower hereunder, and the granting of the Liens contemplated by the Loan Documents, and certifying as to the incumbency, authority and signatures of the officers of the Borrower authorized to sign the Loan Documents on behalf of the Borrower;

(iii) certificates of good standing for the Guarantor certified by the Secretary of State, or other appropriate governmental authority, of the state of incorporation of the Guarantor and of the Guarantor's principal place of business;

(iv) a certificate of the Guarantor, certifying as to attached copies of its certificate of incorporation and bylaws and the resolutions of its Board of Directors authorizing the execution, delivery and performance of the Loan Documents to which the Guarantor is a party, and certifying as to the incumbency, authority and signatures of the officers of the Guarantor authorized to sign the Loan Documents on behalf of the Guarantor;

(v) the original Agreement executed by the Borrower and the Guarantor;

(vi) the original Notes executed by the Borrower and consented to by the Guarantor;

(vii) the original Guaranty executed by the Guarantor;

(viii) the original Mortgage executed by the Borrower;

(ix) the original Security Agreement executed by the Borrower;

(x) a written opinion of counsel to the Borrower and the Guarantor dated as of the date of this Agreement and addressed to the Bank, which opinion must be, in form and content, satisfactory to the Bank;

(xi) such financing statements or other documents which the Bank may reasonably request in connection with the Collateral; evidence satisfactory to the Bank that all filings under the Uniform Commercial Code or with any federal or state agency or department that the Bank or its counsel deems necessary or desirable in connection with the creation and perfection of the security interests granted under the Loan Documents have been effected; and such other evidence as the Bank may require that confirms that, as a result of such filings, the Bank's security interest in the Collateral is consistent with the representation contained in this Agreement relating thereto;

(xii) the insurance policies evidencing the insurance coverages required by the Loan Documents, together with proof of payment of the premiums for such insurance;

(xiii) with respect to the initial advance of the Loans, the Commitment Fee due to the Bank, plus all other fees and expenses payable to the Bank and third parties in connection with its due diligence, preparation and negotiation of the Loan Documents, filing of various security documents, including legal and administrative fees;

(xiv) with respect to all other advances, fees payable to the Bank, including reasonable legal fees, commitment fees, administration fees, etc.;

(xv) such executed agreements, notices or other documents in form and substance satisfactory to the Bank in connection with the Bank's control of any rights in any deposit accounts, electronic chattel paper, investment property or letter of credit.

(xvi) such other loan documents, agreements, consents, approvals, certificates, resolutions, instruments, opinions and other documents and materials as listed on any closing checklist or as the Bank may reasonably request.

3.02 Compliance. The Borrower and the Guarantor shall have complied and shall then be in compliance in all material respects with all material terms, covenants and conditions of this Agreement.

3.03 No Default. There shall exist no Event of Default and no event which, upon notice or lapse of time or both, would constitute an Event of Default.

3.04 Representations True. The representations and warranties contained in this Agreement shall be true and correct in all material respects.

3.05 No Material Adverse Change. There shall have been no materially adverse change in the total financial condition of the Borrower or the Guarantor, taken as a whole, from the financial condition of the Borrower or the Guarantor, as the case may be, as set forth in the financial statements furnished to the Bank pursuant to this Agreement or from the financial condition of the Borrower or any Guarantor previously disclosed to the Bank in any other manner.

3.06 Appraisal. The Bank shall have received, at the Borrower's expense, an appraisal for the Property showing that the amount of the Loan is no more than 75% of the fair market value of the Property, and being otherwise satisfactory in form and substance to the Bank.

3.07 Environmental. The Bank shall have received, at the Borrower's expense, environmental reports with respect to the Property which are satisfactory in form and substance to the Bank.

SECTION 4. REPRESENTATIONS AND WARRANTIES

To induce the Bank to enter into this Agreement, the Borrower and the Guarantor represent, warrant and agree as of the date hereof and continuing so long as any obligation of the Borrower and/or the Guarantor exists to the Bank under the Loan Documents as follows:

4.01 Corporate Status: Subsidiaries. The Borrower is a corporation, duly organized and validly existing in the jurisdiction in which it is organized, has the power and authority to own its properties and to carry on its business as currently conducted, and is duly qualified to do business and is in good standing in each jurisdiction in which the transaction of its business makes such qualification necessary. The Borrower has no Subsidiaries.

4.02 Mergers and Consolidations. No entity has merged into the Borrower or been consolidated with the Borrower, and the business of the Borrower has not ever been conducted as a partnership or proprietorship in the past.

4.03 Purchase of Assets. Except as disclosed in Schedule 4.03 attached hereto, no entity has sold substantially all of its assets to the Borrower or sold assets to the Borrower

outside the ordinary course of such seller's business or in a transaction subject to the bulk transfer laws at any time in the past.

4.04 Borrower's and Guarantor's Authority and Capacity. The Borrower and the Guarantor have the full legal right, authority and capacity to execute, deliver and perform the Loan Documents to which they are a party and to incur the obligations provided for therein. The execution, delivery and performance of the Loan Documents and the obligations provided for therein have been duly and validly authorized by all necessary corporate actions on the part of the Borrower and the Guarantor (all of which actions are in full force and effect), and do not and will not require any consent or approval of the stockholders of the Borrower which has not been obtained.

4.05 Binding Agreement of Borrower and the Guarantor. The Loan Documents are the valid and legally binding obligations and agreements of the Borrower and of the Guarantor, enforceable in accordance with their respective terms.

4.06 No Conflicting Law and Agreements. Except as disclosed in Schedule 4.06 attached hereto, the execution, delivery and performance by the Borrower and the Guarantor of the Loan Documents to which it is a party will not violate any provision of law, any order of any court or government instrumentality or agency, any indenture, any loan or credit agreement or any other material agreement, commitment, lease, contract, mortgage, note or other instrument binding on the Borrower or Guarantor or affecting the Property, or be in conflict with, result in a breach of, in any material respect, or constitute (with due notice, lapse of time, or both) a default (as defined therein) under any such indenture, agreement, commitment, lease, contract, mortgage, note or other instrument, or result in the creation or imposition of any Lien of any nature whatsoever upon any of the Collateral, or result in or require the acceleration of any indebtedness of the Borrower or Guarantor.

4.07 Compliance with Laws. The Borrower and the Guarantor are in compliance in all material respects with any federal, State and local laws, rules and regulations including, but not limited to Environmental Laws and the Fair Labor Standards Act. The Borrower and the Guarantor maintain all of the necessary permits, licenses and certifications necessary for the operation of their businesses. All of the foregoing are in full force and effect and not in known conflict with the rights of others. The Borrower is not in breach of or default (as defined therein) under the provisions of any of the foregoing, nor is there any event, fact, condition or circumstance which, with notice or passage of time or both, would constitute or result in a conflict, breach, default or event of default (as defined therein) under, any of the foregoing which, if not remedied within any applicable grace or cure period could reasonably be expected to have a material adverse effect on the Borrower.

4.08 Taxes. The Borrower and the Guarantor have filed or caused to be filed all Federal, state and local income, excise, property and other tax returns which are required to be filed. All such returns are true and correct in all material respects and the Borrower and the Guarantor have paid or caused to be paid all taxes, assessments, interest and penalties as shown on such returns or on any assessment received by them, to the extent that such taxes have become due, including, but not limited to, all F.I.C.A. payments and withholding taxes. Except as disclosed in Schedule 4.08 attached hereto, the amounts reserved as a liability for income and

other taxes payable in the most recent financial statements of the Borrower and the Guarantor provided to the Bank pursuant to this Agreement are sufficient for the payment of all unpaid Federal, state, county and local income, excise, property and other taxes, whether or not disputed, of the Borrower and the Guarantor accrued for or applicable to the period and on the dates of such financial statements and all years and periods prior thereto and for which the Borrower, any existing Subsidiary or the Guarantor may be liable in its or their own right or as a transferee of the assets of, or as successor to, any other person or entity.

4.09 Financial Condition. The financial statements of the Borrower and the Guarantor and other related information previously submitted to the Bank are true, complete and correct in all material respects, fairly represent the financial condition of the Borrower and the Guarantor and the result of their respective operations and transactions as of the dates and for the periods of such statements and have been prepared in accordance with GAAP applied on a consistent basis throughout the period involved. There are no liabilities, direct or indirect, fixed or contingent, matured or unmatured, known to the Borrower or the Guarantor which are not reflected therein. There has been no material adverse change in the business, operations, prospects, assets, properties or condition (financial or otherwise) of the Borrower or the Guarantor, taken as a whole since the date of said financial statements.

4.10 Title To Properties. The Borrower has good, valid, insurable (in the case of real property) and marketable title to all of its properties and assets including the Collateral (whether real or personal, tangible or intangible) reflected on the financial statements referred to in this Agreement, except for such properties and assets as have been disposed of since the date of such financial statements as no longer used or useful in the conduct of its business or as have been disposed of in the ordinary course of business, and all such properties and assets are free and clear of all Liens except for Permitted Liens. Except as noted in the Commitment for Title Insurance Nos. TRO-06-100063 and TRO-06-100064 issued by Lawyers Title Insurance Corporation, as updated, none of the real property included in such properties of the Borrower is subject to any covenant or other restriction preventing or limiting the right of the record owner to convey or use it, all such real property has adequate rights of ingress and egress, and the Developed Campus has direct and unobstructed access to electric, gas, water, sewer and telephone lines, all of which are adequate for the uses to which such property is currently devoted.

4.11 Litigation. Except as disclosed in Schedule 4.11 attached hereto, there are no actions, claims, suits or proceedings pending, or, to the knowledge of the Borrower or the Guarantor, threatened or reasonably anticipated against or affecting the Borrower or the Guarantor at law or in equity including, without limitation, under ERISA or any Environmental Laws or before or by any governmental instrumentality or agency (domestic or foreign), commission, board, bureau, arbitrator or arbitration panel, and there is no probable judgment, liability or award which may reasonably be expected to result in any material adverse change in the business, operations, prospects, properties or assets or condition, financial or otherwise, of the Borrower or the Guarantor. The Borrower is not in default with respect to any judgment, order, writ, injunction, decree, rule, award or regulation of any court, governmental instrumentality or agency, commission, board, bureau, or arbitrator or arbitration panel.

4.12 No Other Defaults. Except as disclosed in Schedule 4.12 attached hereto, neither the Borrower nor the Guarantor is in default under any contract, agreement, commitment or other instrument which default would have a material adverse effect on the business, properties or condition, financial or otherwise, of the Borrower or the Guarantor, or in the performance of any covenants or conditions respecting any of their indebtedness. No holder of any indebtedness of the Borrower or Guarantor has given notice of any asserted default thereunder. No liquidation or dissolution of the Borrower or the Guarantor and no receivership, insolvency, bankruptcy, reorganization or other similar proceeding relative to the Borrower or the Guarantor or their properties is pending or, to the knowledge of the Borrower or the Guarantor, is threatened against them or any of them.

4.13 ERISA. (a) The pension, profit sharing, savings, stock bonus and other deferred compensation plans established and maintained by the Borrower, the Guarantor and any Commonly Controlled Entity (as defined below) which are subject to the requirements of ERISA, if any, were stated in their inception or have, since ERISA became effective with respect to such plans, been amended and restated in a manner designed to qualify under the applicable requirements of ERISA and the Internal Revenue Service Code of 1986, as amended (the "Code"); and subsequent to such statement, or restatement, those plans and their related trusts have received favorable determinations from the Internal Revenue Service holding that such plans and trusts so qualify; (b) to the knowledge of the Borrower and the Guarantor, there is no current matter which would materially adversely affect the qualified tax-exempt status of any pension, profit-sharing, savings; stock bonus or other deferred compensation plan and their related trusts of either of the Borrower or any Commonly Controlled Entity under the Code; (c) neither the Borrower, the Guarantor, nor any Commonly Controlled Entity has incurred in connection with any such plan any "accumulated funding deficiency" (as defined in Section 302 of ERISA or Section 412(a) of the Code) whether or not waived; (d) there has been no "prohibited transaction" (within the meaning of Section 4975 of the Code or Section 406 of ERISA) involving any such plan of the Borrower, the Guarantor, or any Commonly Controlled Entity; (e) no "reportable event," as defined by Title IV of ERISA, has occurred with respect to any plan subject to the minimum funding requirements of Section 412 of the Code maintained for employees of the Borrower or any Commonly Controlled Entity; (f) no "multi-employer plan" (as defined in ERISA) to which either the Borrower, the Guarantor or any Commonly Controlled Entity has an obligation to contribute, has "terminated," as that term is defined in ERISA; (g) neither the Borrower, the Guarantor, nor any Commonly Controlled Entity has withdrawn, in a "complete withdrawal" (as defined in ERISA), from any "multi-employer plan" to which either the Borrower or such Commonly Controlled Entity had an obligation to contribute; (h) neither the Borrower, the Guarantor nor any Commonly Controlled Entity has withdrawn, in a "partial withdrawal" (as defined in ERISA), from any "multi-employer plan" to which either the Borrower, the Guarantor or such Commonly Controlled Entity had an obligation to contribute; and (i) no "multi-employer plan" to which either the Borrower, the Guarantor or any Commonly Controlled Entity had an obligation to contribute is in "reorganization" (as defined in ERISA and the Code) nor has notice been received from the administrator of any "multi-employer plan" to which either the Borrower, the Guarantor, or any Commonly Controlled Entity has an obligation to contribute that any such plan will be placed in "reorganization." For purposes of this Section, the term "Commonly Controlled Entity' means any corporation which is a member of a controlled group of corporations (as defined for purposes of Section 414(6) of the Code)

of which the Borrower is a member and any trade or business (whether or not incorporated) which is under "common control" (as defined for purposes of Section 414(c) of the Code) with the Borrower.

4.14 Other Security Interests. The Borrower is the owner of the Collateral, free from any Lien except a Permitted Lien.

4.15 Franchises, Patents, Etc. Except as disclosed in Schedule 4.15 attached hereto, no franchises, licenses, trademarks, trade names, copyrights or patents are owned or licensed by, or registered in the name of, or have been applied for by, the Borrower, and no such rights or agreements are necessary to the conduct of the present business of the Borrower. The Borrower has no knowledge of and has not received any notice to the effect that any product it manufactures or sells, or any service it renders, or any process, method, know-how, trade secret, part or material it employs in the manufacture of any product it makes or sells or any service it renders, or the marketing or use by it or another of any such product or service, may infringe any trademark, trade name, copyright, patent, trade secret or legally protectable right of any other person or entity.

4.16 Approvals. No approval, consent or other action by any governmental instrumentality or agency or any other person or entity, which approval, consent, or other action has not been obtained or taken or which does not remain in effect as of the date hereof, is or will be necessary to permit the valid execution, delivery and performance by the Borrower and the Guarantor of the Loan Documents.

4.17 Tradenames, Name Changes. Except as disclosed in Schedule 4.17 attached hereto, the Borrower utilizes no tradenames in the conduct of its business and has not changed its name. The Borrower shall provide prior written notice to the Bank of any anticipated name change and will executed any additional Loan Documents necessary to confirm and re-affirm the obligations of the Loan Documents in connection with any such name change.

4.18 Labor Relations. There are no strikes, work stoppages, material grievance proceedings or other material controversies pending or, to the best of Borrower's knowledge, threatened between the Borrower and any employees engaged in the business of the Borrower or any union or other collective bargaining unit representing such employees. The Borrower has complied and is in compliance with all laws relating to the employment of labor, including, without limitation, provisions relating to wages, hours, collective bargaining, occupational safety and health, equal employment opportunities and the withholding of income taxes and social security contributions, the non-compliance with which might materially adversely affect its business, operations, prospects, assets, properties or condition (financial or otherwise).

SECTION 5. COVENANTS

The Borrower and the Guarantor covenant and agree that, so long as any of the Loan Documents shall remain in effect, unless the Bank shall otherwise consent in writing, they will:

5.01 Payment of Loan. Comply with the terms and conditions for repayment of the Loan in accordance with the terms of the Note and Guaranty.

5.02 Financial Statements. Furnish to the Bank:

(a) as soon as available but in no event more than one hundred twenty (120) days after the last day of each fiscal year of the Borrower and the Guarantor, consolidated financial statements of the Borrower and the Guarantor containing a balance sheet, a statement of income and expenses and a statement of changes in financial condition as of the close of such period, prepared in accordance with GAAP applied on a basis consistent with prior periods, showing the financial condition of the Borrower and the Guarantor at the close of such year in form reasonably satisfactory to the Bank and prepared and audited by Ernst & Young, or another independent certified public accountant reasonably satisfactory to the Bank and on an annual basis forward looking management prepared projections for the Borrower and the Guarantor;

(b) as soon as available but in no event more than forty five (45) days after the last day of each quarter of each fiscal year of the Borrower and the Guarantor, consolidated financial statements of the Borrower and the Guarantor containing a balance sheet, a statement of income and expenses and a statement of changes in financial condition as of the close of such period, prepared in accordance with GAAP applied on a basis consistent with prior periods, showing the financial condition of the Borrower and the Guarantor at the close of such period, in form reasonably satisfactory to the Bank ;

(c) in the event that a portion of the Property has been leased to third party, unaffiliated tenants, as soon as available but in no event more than forty five (45) days after the last day of each quarter of each fiscal year, a detailed budget and report of operating expenses for the Property;

(d) in the event that a portion of the Property has been leased to third party, unaffiliated tenants, as soon as available but in no event more than forty five (45) days after the last day of each fiscal year, projections for the Property for the following fiscal year;

(e) promptly, and from time to time, such other information regarding the operation, business, affairs and financial condition of the Borrower and the Guarantor as the Bank may reasonably request, including, but not limited to interim financial statements including an income statement, balance sheet, aging of accounts receivable and/or accounts payable; and

(f) within thirty (30) days after the last day of each of the quarters of each fiscal year of the Borrower, a certificate of the chief financial officer of the Borrower certifying that to the best of his knowledge no Event of Default has occurred and is continuing or, if an Event of Default has occurred and is continuing, a statement as to the nature thereof and the action which is proposed to be taken with respect thereto.

The financial statements of the Borrower and the Guarantor delivered to the Bank pursuant to this Section shall each be certified by the president or chief financial officer of the Borrower or the Guarantor, as the case may be, as to the authenticity, accuracy of integrity of the representation contained therein and as having been prepared in accordance with GAAP applied on a basis consistent with prior periods. Any such financial information provided to the Bank shall be maintained by the Bank as confidential proprietary records. The Bank hereby acknowledges that the Borrower may not have its own separate financial statements and shall be

permitted to supply financial statements consolidated with Guarantor's and other subsidiaries of the Guarantor's financial statements.

5.03 Maintaining Records: Access to Properties and Inspections. Maintain financial records in accordance with GAAP consistently applied and permit any authorized representative designated by the Bank to visit and inspect any of the properties of the Borrower or the Guarantor (including, without limitation, their books of account, records, correspondence and other papers and to make extracts therefrom) and to discuss their affairs, finances and accounts with their respective officers and their respective independent certified public accountants or other parties preparing statements for or on behalf of the Borrower or the Guarantor, subject to advance notice and subject to safety limitations and legal limits of general applicability.

5.04 Place of Business, Location of Records; Notices. Maintain their executive offices and their records at their current locations. The Bank shall be entitled to rely upon the foregoing unless it receives fourteen (14) days advance written notice of a change in such executive offices or in such office where such records are kept.

5.05 Maintenance of Business. (a) Maintain the corporate existence of the Borrower and the Guarantor in good standing and in existence in the State of its original formation; and (b) maintain and keep in full force and effect all licenses and permits necessary to the proper conduct of the Borrower's and the Guarantor's business.

5.06 Insurance. The Borrower shall maintain and pay for insurance covering such risks and in such amounts and with such insurance companies as shall be satisfactory to the Bank, and deliver the policies or certificates of all such insurance to the Bank with satisfactory lender's loss payable endorsements naming the Bank as loss payee; and maintain, with financially sound and reputable insurers, insurance with respect to their properties and business against such casualties and contingencies of such types (including personal injury and property damage liability insurance, automobile liability insurance, product liability insurance, biomedical insurance, worker's compensation insurance, business interruption insurance, employee dishonesty insurance, and directors' and officers' liability insurance) and in such amounts as is customary in the case of persons or entities in the same or similar business. Each policy or insurance required hereunder shall require the insurer to give not less than thirty (30) days prior written notice to the Bank in the event of cancellation of such policy for any reason whatsoever, and shall provide that the interest of the Bank thereunder shall not be impaired or invalidated by any act or neglect of the Borrower or the owner of any of the insured property or by the occupation of the premises wherein such property is located for purposes more hazardous than are permitted by such policy. If the Borrower fails to provide and pay for such insurance, the Bank may, at the Borrower's expense, procure the same, but shall not be required to do so. The Borrower agrees to deliver to the Bank, promptly as rendered, true copies of any reports made to any insurance company.

5.07 Execution of Documents. At the reasonable request of the Bank, execute and deliver such financing statements, documents and instruments including, but not limited to, written acknowledgments from any third party holding all or any portion of the Collateral that it does so for the Bank's benefit and any control agreements with respect to any investment property, letter of-credit rights, deposit accounts or electronic chattel paper, and perform all other acts as the Bank deems necessary or desirable, and pay, upon demand, all reasonable costs and

expenses (including reasonable attorneys' fees and disbursements) incurred by the Bank in connection therewith.

5.08 Obligations and Taxes. Pay all indebtedness and obligations promptly and in accordance with their terms, and pay and discharge promptly all taxes, assessments and governmental charges or levies imposed upon them or in respect of their property and the Collateral, including, but not limited to, all F.I.C.A. payments and withholding taxes, before the same shall become in default, as well as all claims for labor, materials, and supplies or otherwise which, if unpaid, might become a Lien upon such properties or any part thereof, provided, however, that the Borrower and the Guarantor are not required hereby to pay and discharge or to cause to be paid and discharged any such indebtedness, obligation, tax, assessment, charge, levy or claim so long as the validity thereof shall be contested in good faith by appropriate proceedings and the Borrower and the Guarantor shall set aside on their books reserves which are in conformity with generally accepted accounting principles and which the Bank deems adequate with respect to any such tax, assessment, charge, levy or claim so contested.

5.09 Litigation Notice. Give the Bank prompt notice of any action, suit or proceeding at law or in equity or by or before any governmental instrumentality or agency (domestic or foreign), commission, board, bureau, arbitrator or arbitration panel which, if adversely determined, could materially impair or affect the right of the Borrower to carry on its business substantially as now conducted or could materially affect its respective business, operations, prospects, properties, assets (including the Collateral) or condition, financial or otherwise, in each case if in excess of $1,000,000.00.

5.10 Notification Relating to Hazardous Materials. Immediately advise the Bank in writing of (a) any and all enforcement, cleanup, remediation or removal, pursuant to any governmental or regulatory actions instituted, completed or threatened pursuant to any applicable federal, state, or local laws, ordinances or regulations relating to any Hazardous Materials affecting the Property or the business operations of the Borrower, and (b) all claims made or threatened by any third party against the Borrower relating to damages, contribution, cost recovery compensation, loss or injury resulting from any Hazardous Materials. The Borrower shall immediately notify the Bank of any remedial action taken by the Borrower with respect to the Property or the business operations of the Borrower.

5.11 Access Onto Property and to the UCC Collateral. Allow the appropriate agents and contractors of the Bank to enter upon the Property and to have access to the UCC Collateral for the purposes of conducting environmental investigations and audits (including taking physical samples) and such other action deemed necessary by the Bank to insure compliance by the Borrower with all Environmental Laws, subject to advance notice and subject to safety limitations and legal limits of general applicability. The Borrower acknowledges that no adequate remedy at law exists for a violation of this covenant and agrees that the Bank is entitled to specific performance of its rights under this covenant, subject to advance notice and subject to safety limitations and legal limits of general applicability. The right of access granted herein shall continue until this Agreement is terminated

5.12 Notice of Default; Material Adverse Change. Promptly notify the Bank of any condition or event that constitutes, or with the running of time, the giving of notice, or both,

would constitute, an Event of Default, and promptly inform the Bank of any material adverse change in the financial condition of the Borrower or of the Guarantor, as set forth in Section 6.11 below.

5.13 Borrower's Claims. Promptly notify the Bank in writing of any action or omission of the Bank which the Borrower claims caused or may cause injury, loss or damage to the Borrower. Failure of the Borrower to so notify the Bank of such claim of which it has knowledge within one hundred eighty (180) days after the Borrower determines that it has such claim shall constitute a waiver of such claim.

5.14 Defense of Collateral. Defend the Collateral, and the Bank's security interest therein, against all claims and demands of all persons at any time claiming the same or any interest therein and pay, upon demand, all reasonable costs and expenses (including reasonable attorneys' fees and disbursements) incurred by the Bank in connection therewith.

5.15 Use of Proceeds. Use the proceeds of the Loan for any commercial purpose not violative of or inconsistent with any provision of this Agreement or the Loan Documents.

5.16 Compliance with Laws. Comply, in all material respects, with all federal, state and local laws, rules and regulations including, but not limited to Environmental Laws and the Fair Labor Standards Act applicable to its business, whether now in effect or hereafter enacted, and upon request of the Bank, the Borrower will provide the Bank with such evidence of compliance as the Bank may reasonably request.

5.17 Hazardous Materials. With respect to all property owned, subleased, operated or occupied by the Borrower, maintain and cause all operators, tenants, subtenants, licensees and occupants of all such property to maintain such property free of all Hazardous Materials, other than those Hazardous Materials used in compliance with all Environmental Laws and prevent all such property from being used for the manufacture, generation, production, processing, distribution, use, treatment, storage, disposal, transport or handling of any Hazardous Materials other than those Hazardous Materials used in compliance with all Environmental Laws; and deliver to the Bank copies of all reports prepared by any governmental authority, any environmental auditor or engineer, or any other person, relating to or in connection with the Borrower's compliance with any Environmental Laws, unless the Borrower cannot obtain such reports or copies thereof.

5.18 Deposit Relationship. The Guarantor shall maintain its primary deposit relationship with the Bank and shall establish a deposit account and cash management facility with the Bank.

5.19 Liens. Not create or permit to exist any Lien on the Property or the UCC Collateral except Permitted Liens.

5.20 Disposition of Property. The Borrower shall not sell, lease or otherwise dispose of any assets with a value in excess of $250,000 except for the sale of inventory in the ordinary course of business and the disposition, in the ordinary course of business, of machinery and equipment that has become obsolete, damaged, unsuitable or unnecessary for its business.

5.21 Loans. The Borrower shall not make loans or advances to any person except for (a) loans and advances to Affiliates and Subsidiaries, and (b) loans and advances to other persons not exceeding $250,000 at any time.

5.22 Guarantees. The Borrower shall not guarantee, endorse, assume or otherwise incur or allow to exist any contingent liability in respect of any obligation of any other person, except an Affiliate or Subsidiary, except by the endorsement of negotiable instruments for deposit or collection in the ordinary course of business and except for guarantees with a maximum aggregate liability for the Borrower of $500,000.00.

5.23 Merger, etc. Not enter into any merger, consolidation, reorganization or recapitalization, or purchase or otherwise acquire all or substantially all of the assets, obligations, capital stock or other equity interest in any other person, if an uncured Event of Default has occurred or such transaction would result in an Event of Default.

5.24 Affiliate Transactions. Not engage in any transaction with an Affiliate on terms that are less favorable than could be obtained in an arm's length transaction with a person who is not an Affiliate.

5.25 Indebtedness. The Borrower shall not incur or permit to exist any indebtedness for borrowed money other than (a) indebtedness to the Bank, (b) the Fifth Third Loan, and any refinancing thereof, (c) purchase money indebtedness, and (d) other indebtedness that does not exceed $500,000 in the aggregate at any time outstanding. The Guarantor shall not incur any indebtedness for borrowed money if such transaction would result in the occurrence of an Event of Default.

5.26 Guarantor Financial Covenants. The Guarantor covenants and agrees that it shall:

(a) Minimum Tangible Net Worth. Maintain a minimum tangible net worth of (i) not less than 85% of the most recently completed fiscal year end tangible net worth, plus (ii) 25% of the current net operating profit after taxes, all as determined by generally accepted accounting principles. Minimum tangible net worth shall be tested annually by the Bank for the Guarantor's most recently completed fiscal year, with the first such test to be performed for the fiscal year ending December 31, 2006.

(b) Debt Coverage Ratio. Maintain a debt coverage ratio of no less than 1.25 to 1.00. The debt coverage ratio shall be calculated as follows: (i) earnings before interest, taxes, depreciation and amortization for the most recent four (4) quarters; (ii) divided by the sum of current obligations under capital leases and principal obligations and interest expenses for borrowed monies, in each case due and payable for the following four (4) quarters. The debt coverage ratio shall be tested on a quarterly basis by the Bank with the first such test to be performed on the results of the fourth quarter of 2006.

SECTION 6. EVENTS OF DEFAULT

The occurrence of any one or more of the following events shall constitute an Event of Default hereunder (subject to any applicable notice and cure periods contained in the Loan Documents):

6.01 Payments. Default shall be made in the payment of the principal of, or any installment of principal of, or interest on, the Note, whether at the due date thereof, at a date fixed for prepayment thereof, upon acceleration thereof or otherwise.

6.02 Representations. Any representation or warranty made in or in connection with any of the Loan Documents shall prove to have been false or misleading in any material respect when made or deemed to have been made.

6.03 Covenants. Default shall be made in the due observance or performance of any covenant, condition or agreement on the part of the Borrower or the Guarantor pursuant to the terms of any of the Loan Documents, and not already subject to a grace or cure period, and such default shall continue unremedied for thirty (30) business days after notice to the Borrower and the Guarantor thereof.

6.04 (a) Voluntary Bankruptcy. Etc. The Borrower or the Guarantor: (i) voluntarily is adjudicated as bankrupt or insolvent, (ii) seeks or consents to the appointment of a receiver or trustee for itself or for all or any part of its property, (iii) files a petition seeking relief under the bankruptcy or similar laws of the United States or any state or any other competent jurisdiction, (iv) makes a general assignment for the benefit of creditors, or (v) admits in writing its inability to pay its debts as they mature.

(b) Involuntary Bankruptcy. Etc. A court of competent jurisdiction enters an order, judgment or decree appointing, without the consent of the Borrower or the Guarantor, a receiver or trustee for the Borrower or the Guarantor or for all or any part of their property, or a petition is filed against the Borrower or the Guarantor seeking relief under the bankruptcy or other similar laws of the United States or any state or other competent jurisdiction, and such petition, order, judgment or decree shall remain in force undischarged or unstayed for a period of 60 calendar days.

6.05 Attachment. The issuance of any attachment or garnishment against the Borrower or the Guarantor, which is not released, terminated or set aside within thirty (30) days.

6.06 Cross Default. The occurrence of (a) an uncured event of default (as defined therein) under any of the Loan Documents, (b) any uncured event of default under (i) any promissory note payable to the Bank under which the Borrower or the Guarantor is an obligor, or (ii) any other agreement between the Borrower or the Guarantor and the Bank, (c) an uncured event of default (as defined therein) under the Fifth Third Loan, or (d) an uncured event of default (as defined therein) under any other indebtedness or liability for borrowed money of the Borrower in an amount in excess of $1,000,000.00, if the effect of such default is to accelerate the maturity of such evidence of indebtedness or liability or to permit the holder thereof to cause any indebtedness to become due prior to its stated maturity and the Bank determines, in its

discretion, that such default impairs or prevents the Borrower from performing its obligations under the Loan Documents.

6.07 Judgment. Unless in the opinion of the Bank, adequately covered by insurance, the entry of one or more final judgments, decrees or orders for the payment of money involving more than $1,000,000.00 in the aggregate against the Borrower or the Guarantor and all applicable periods for appeal have terminated and such judgment or decree is not satisfied within sixty (60) days thereafter.

6.08 Loss, Damage to Collateral. Loss, theft, damage, or destruction of any material portion of the Collateral for which there is either no insurance coverage or for which, in the opinion of the Bank, there is insufficient insurance coverage.

6.09 Validity of Loan Documents. Any Loan Document shall, at any time after its execution and delivery and for any reason, cease to be in full force and effect or shall be declared null and void, or the validity or enforceability thereof shall be contested by the Borrower or the Guarantor, or the Borrower or the Guarantor shall deny it has any further liability or obligation thereunder.

6.10 Payments to Subordinated Creditors. The Borrower makes any payment on account of indebtedness that has been subordinated to the Loan, other than payments specifically permitted by the terms of such subordination or in the ordinary course of business.

6.11 Material Adverse Change. There shall be a materially adverse change in the total financial condition of the Borrower or the Guarantor, taken as a whole.

SECTION 7. RIGHTS AND REMEDIES

7.01 Remedies. If any one or more Events of Default shall occur, then in each and every such case, the Bank may at any time thereafter exercise and/or enforce any of the following rights and remedies:

(a) Acceleration. Declare the Note to be immediately due and payable, together with accrued interest thereon, without presentment, demand, protest or notice of dishonor, all of which the Borrower and the Guarantor hereby waive.

(b) Possession and Collection (i) Take possession or control of, sell or otherwise dispose of all of any part of the Collateral; (ii) endorse as the agent of the Borrower any chattel paper, documents, or instruments forming all or any part of the Collateral; (iii) pay, purchase, contest, or compromise any encumbrance, charge, or lien that, in the opinion of the Bank, appears to be prior or superior to its Lien and pay all reasonable expenses incurred in connection therewith; (iv) take any other action which the Bank deems necessary or desirable to protect and realize upon its security interest in the Collateral; and (v) in addition to the foregoing, and not in substitution therefor, exercise any one or more of the rights and remedies exercisable by the Bank under other provisions of this Agreement, under the Note, under any of the other Loan Documents, or provided by applicable law (including, without limitation, the Uniform Commercial Code as in effect in any applicable jurisdiction) and may specifically disclaim any warranties of title or the like. In taking possession of the Collateral the Bank may proceed without

legal process, if this can be done without breach of the peace. The Borrower waives any right it may have to require the Bank to pursue any third person for payment of the Loan.

(c) Receiver. Obtain appointment of a receiver for all or any of the Collateral, the Borrower and the Guarantor hereby consenting to the appointment of such a receiver and each agreeing not to oppose any such appointment. Any receiver so appointed shall have such powers as may be conferred by the appointing authority including any or all of the powers, rights and remedies which the Bank is authorized to exercise by the Loan Documents, and shall have the right to incur such obligations and to issue such certificates therefor as the appointing authority shall authorize.

(d) Performance by Bank. Make such payment or perform any of the conditions, covenants, terms, stipulations or agreements contained in this Agreement or any of the other Loan Documents for the account and at the expense of the Borrower.

7.02 Sales on Credit. If the Bank sells any of the Collateral upon credit, the Borrower will be credited only with payments actually made by the purchaser, received by the Bank and applied to the indebtedness of the purchaser. In the event the purchaser fails to pay for the Collateral, the Bank may resell the Collateral and the Borrower shall be credited with the proceeds of the sale.

7.03 Proceeds. Any proceeds of the collection of the Loan or of the sale or other disposition of the Collateral will be applied by the Bank to the payment of fees and costs, and any balance of such proceeds (if any) will be applied by the Bank to the payment of the remaining Loan (whether then due or not), at such time or times and in such order and manner of application as the Bank may from time to time in its sole discretion determine. If the sale or other disposition of the Collateral fails to pay the Loan in full, the Borrower and the Guarantor shall remain jointly and severally liable to the Bank for any deficiency.

7.04 Notices. Any notices required under the Uniform Commercial Code with respect to the sale or other disposition of the Collateral shall be deemed reasonable if mailed by the Bank to the persons entitled thereto at their last known address at least ten (10) days prior to disposition of the Collateral.

7.05 Waiver of Jury Trial. **THE BORROWER, THE GUARANTOR AND THE BANK HEREBY VOLUNTARILY AND KNOWINGLY WAIVE ANY RIGHT THEY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY ACTION, PROCEEDING, OR COUNTERCLAIM BROUGHT BY ANY PARTY AGAINST THE OTHER ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED HEREIN. THE BORROWER AND THE GUARANTOR ACKNOWLEDGE THAT THEY HAVE BEEN INFORMED BY THE BANK THAT THE PROVISIONS OF THIS PARAGRAPH CONSTITUTE A MATERIAL INDUCEMENT UPON WHICH THE BANK HAS RELIED, IS RELYING AND WILL RELY IN MAKING THE LOAN. THE BORROWER AND THE GUARANTOR HEREBY CERTIFY THAT NO REPRESENTATIVE OR AGENT OF THE BANK (INCLUDING ITS COUNSEL) HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT THE BANK WOULD NOT, IN THE EVENT OF LITIGATION, ENFORCE THIS WAIVER OF**

RIGHT TO JURY TRIAL. THE BORROWER AND THE GUARANTOR ACKNOWLEDGE THAT THEY HAVE CONSULTED WITH AN ATTORNEY AND FULLY UNDERSTAND THE LEGAL EFFECT OF THE PROVISIONS OF THIS PARAGRAPH.

7.06 Cumulative Remedies. Each right, power and remedy of the Bank as provided for in the Loan Documents, or now or hereafter existing at law or in equity or by statute or otherwise shall be cumulative and concurrent and shall be in addition to every other such right, power or remedy, and the exercise or beginning of the exercise by the Bank of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by the Bank of any or all other such rights, powers or remedies. The Bank may comply with any applicable state or federal law requirements in connection with a disposition of the Collateral and compliance will not be considered to adversely affect the commercial reasonableness of any sale of the Collateral.

7.07 No Waiver. No failure or delay by the Bank in insisting upon the strict performance of any term, condition, or covenant of the Loan Documents or in exercising any right, power or remedy consequent upon an Event of Default shall constitute a waiver of any such term, condition or covenant or of any such breach, or preclude the Bank from exercising any such right, power or remedy at any later time or times. By accepting payment after the due date of any amount payable under the Loan Documents, the Bank shall not be deemed to waive the right either to require prompt payment when due of all other amounts payable under the Loan Documents, or to declare a default for failure to effect such prompt payment of any such other amount.

SECTION 8. MISCELLANEOUS

8.01 Survival. All covenants, agreements, representations and warranties made in this Agreement and the Loan Documents shall survive the execution and delivery of the Note and shall continue in full force and effect so long as the Note, or any of the other obligations under the Loan Documents, or any renewal or extensions of the Note, is outstanding and unpaid.

8.02 Notices. All notices, demands, instructions and other communications required or permitted to be given to or made upon any party hereto shall be in writing, personally delivered or sent by postage prepaid first class certified mail, return receipt requested, overnight courier or by facsimile machine, and shall be deemed to be given on the day that such writing is delivered or sent by facsimile machine or one (1) business day after such notice is sent by overnight courier or three (3) business days after said notice is sent by certified mail. Unless otherwise specified in a notice sent or delivered in accordance with the foregoing provisions of this paragraph, notices, demands, instructions and other communications in writing shall be given to or made upon the respective parties hereto at their respective addresses indicated for such party below:

Bank: HSBC Realty Credit Corporation (USA)
1130 Connecticut Avenue, N. W., 12th Floor
Washington, D. C. 20036
Attention: Jeffrey M. Henry, Vice President
Facsimile Number: (202) 496-8758

With a simultaneous copy to:

McGuireWoods LLP
1750 Tysons Boulevard, Suite 1800
McLean, Virginia 22102-3915
Attn: E. Kristen Moye, Attorney-at-Law
Facsimile Number: 703-712-5238

Borrower and Guarantor:

Emergent BioSolutions Inc.
300 Professional Drive, Suite 100
Gaithersburg, MD 20879
Attn: Finance Department
Attn: Legal Department
Facsimile Number: (301) 944-0173

With a simultaneous copy to:

BioPort Corporation
3500 N. Martin Luther King, Jr. Blvd.
Building One, Third Floor
Lansing, MI 48906
Attn: Finance Department
Facsimile Number: 517-327-1560

With a simultaneous copy to:

Thelen Reid & Priest LLP
701 Eighth Street, N.W.
Washington, DC 20001
Attn: Carl A. Valenstein, Esq.
Facsimile Number: 202-654-1836

or at such other address as the parties may have furnished to each other in writing, and shall be deemed to be given on delivery or upon mailing.

8.03 Costs and Expenses. The Borrower and the Guarantor shall bear any and all reasonable fees, costs and expenses, of whatever kind and nature, including any taxes of any kind and reasonable attorneys' fees and disbursements, which the Bank may incur: (a) in connection with the closing of the Loan, including, without limitation, the filing of public notices, the preparation of the Loan Documents, the recording of the UCC financing statements, and the making of title examinations, and in connection with any amendment of the Loan Documents; (b) in maintaining, preserving, enforcing or foreclosing any pledge, lien, encumbrance or security interest granted hereunder or in connection herewith, whether through judicial proceedings or otherwise; (c) in conducting audits of the Borrower's business and with respect to the Collateral; and (d) in successfully defending or prosecuting any actions or proceedings arising out of or relating to transactions with any one or more of the Borrower and the Guarantor. All such fees, costs and expenses until paid shall be included in the Loan or deducted from any amount due the Borrower or the Guarantor. The Borrower and the Guarantor agree that the attorneys retained by the Bank shall represent only the interests of the Bank.

8.04 Indemnification of Bank. The Borrower and the Guarantor shall protect and indemnify the Bank from and against any and all demands, suits, losses, assessments, fines, claims, damages, penalties, causes of action, costs or other expenses (including, without limitation, reasonable attorneys' fees and disbursements), imposed upon or incurred by or asserted against the Bank or the directors, officers, agents or employees of the Bank, except those arising out of the willful misconduct or gross negligence of the Bank, by reason of and including but not limited to liability or damage resulting from: (a) any failure on the part of the Borrower to perform or comply with any of the terms of this Agreement; (b) any action brought against the Bank attacking the validity of this Agreement or any other Loan Document; and/or (c) actual or threatened damage to the environment, agency costs of investigation, personal injury or death, or property damage, due to a release or alleged release of Hazardous Materials, on or under the Property or arising from the Borrower's business operations or in the surface or ground water located on or under the Property arising from the Borrower's business operations, or gaseous emissions from the Property or arising from the Borrower's business operations resulting from the use or existence of Hazardous Materials, whether such claim proves to be true or false. The term "property damage" as used in this Section includes, but is not limited to, damage of any real or personal property of the Borrower, the Bank, and of any third parties. Any amounts payable to the Bank under this Section which are not paid within thirty (30) days after written demand therefor by the Bank shall bear interest at the rate of interest in effect under the Note from the date of such demand. In the event any action, suit or proceeding is brought against the Bank or the directors, officers, agents or employees of the Bank by reason of any such occurrence, the Borrower, upon the request of the Bank and at the Borrower's expense, shall resist and defend such action, suit or proceeding or cause the same to be resisted and defended by counsel designated by the Borrower and approved by the Bank. Such obligations under this Section as shall have accrued at the time of any termination of this Agreement shall survive any such termination.

8.05 Reinstatement of Liens. If, at any time after payment in full by the Borrower of the Loan and termination of the Bank's Liens, any payments on the Loan previously made by the Borrower or any other person must be disgorged by the Bank for any reason whatsoever (including, without limitation, the insolvency, bankruptcy, or reorganization of the Borrower or such other person), this Agreement and the Bank's Liens granted hereunder shall be reinstated as to all disgorged payments as though such payments had not been made, and the Borrower shall sign and deliver to the Bank all documents and things necessary to reperfect all terminated Liens.

8.06 Bank Disclosures. Upon the prior written consent of the Borrower (such consent not to be unreasonable withheld or delayed), the Bank may issue press releases concerning, and otherwise publicly announce or publicize, financings provided by the Bank to the Borrower. The Borrower hereby authorizes the Bank to disclose to any subsidiary or affiliate of the Bank, to any fiduciary institution or to any banking institution, credit union or savings and loan association organized under the laws of any state, and hereby authorizes all subsidiaries and affiliates of the Bank, to disclose to the Bank, the financial record of the Borrower.

8.07 Participation. The Bank shall have the right to grant participations in the Loan held by it to others at any time and from time to time, and the Bank may divulge to any such participant or potential participant all information, reports, financial statements and documents

obtained in connection with this Agreement, the Note and any of the other Loan Documents or otherwise.

8.08 Change, etc. Neither this Agreement nor any term, condition, representation, warranty, covenant or agreement contained herein may be changed, waived, discharged or terminated orally, but only by an instrument in writing signed by the party against whom such change, waiver, discharge or termination is sought.

8.09 Governing Law. This Agreement, the Note and the other Loan Documents shall be governed and construed in accordance with the laws of the State of New York, except to the extent that the law of other jurisdictions governs the creation, perfection and enforcement of Liens on the Property pursuant to the Mortgage and on the UCC Collateral pursuant to the security Agreement.

8.10 Terms Binding. All of the terms, conditions, stipulations, warranties, representations and covenants of this Agreement shall apply to and be binding upon and shall inure to the benefit of the Borrower, the Guarantor and the Bank and each of their respective heirs, executors, personal representatives, successors and assigns and all persons or entities who become bound as a debtor under this Agreement, but neither the Borrower nor the Guarantor shall have the right to assign this Agreement to any person or entity without the prior written consent of the Bank.

8.11 Invalidity of Certain Provisions. If any term or provision of this Agreement or the application thereof to any person or circumstances shall, to any extent, be invalid or unenforceable, the remainder of such term or provision or the application thereof to persons or circumstances other than those as to which it is held invalid or unenforceable shall not be affected thereby and shall be valid and enforceable to the fullest extent permitted by law.

8.12 Merger Integration and Interpretation. The Loan Documents contain the entire agreement of the parties with respect to the matters covered and the transactions contemplated hereby and thereby, and no other agreement, statement or promise made by any such party, or by any employee, officer, agent or attorney of any such party, which is not contained herein or therein, shall be valid or binding. Neither this Agreement nor any uncertainty or ambiguity herein shall be construed or resolved against the Bank or the Borrower, whether under any role of construction or otherwise. On the contrary, this Agreement has been reviewed by each of the parties and its counsel and shall be construed and interpreted according to the ordinary meaning of the words used so as to accomplish the purposes and intentions of all parties hereto fairly.

8.13 No Partnership; Control; Third Parties. This Agreement contemplates the extension of credit by the Bank, in its capacity as a lender, to the Borrower, in its capacity as a borrower, and for the payment of interest and repayment of principal by the Borrower to the Bank. The relationship between the Bank and the Borrower is limited to that of creditor/secured party, and debtor. The provisions herein for compliance with financial covenants, delivery of financial statements, and other covenants are intended solely for the benefit of the Bank to protect its interests as lender in assuring payments of interest and repayment of principal, and nothing contained in this Agreement shall be construed as permitting or obligating the Bank to act as financial or business advisor or consultant to the Borrower, as permitting or obligating the

Bank to control the Borrower, or to conduct the Borrower's operations, as creating any fiduciary obligation on the part of the Bank to the Borrower, as creating any joint venture, agency, or other relationship between the parties other than as explicitly and specifically stated in this Agreement. The Borrower acknowledges that it has had the opportunity to obtain the advice of experienced counsel of its own choosing in connection with the negotiation and execution of this Agreement and to obtain the advice of such counsel with respect to all matters contained herein, including, without limitation, the provision herein relative to the waiver of trial by jury. The Borrower further acknowledges that it is experienced with respect to financial and credit matters and has made its own independent decision to apply to the Bank for credit and to execute and deliver this Agreement. The terms and provisions of the Note and the Loan Documents are for the benefit of the Borrower and the Bank, their respective successors, assigns, endorsees and transferees and all persons claiming under or through them and no other person shall have any right or cause of action or account thereof.

8.14 Electronic Transmission of Data. The Bank, the Borrower and the Guarantor agree that certain data related to the Loan (including confidential information, documents, applications and reports) may be transmitted electronically, including transmission over the Internet. This data may be transmitted to, received from or circulated among agents and representatives of the Borrower, the Guarantor and/or the Bank and their affiliates and other persons involved with the subject matter of this Agreement. The Borrower and the Guarantor acknowledge and agree that (a) there are risks associated with the use of electronic transmission and that the Bank does not control the method of transmittal or service providers, (b) the Bank has no obligation or responsibility whatsoever and assumes no duty or obligation for the security, receipt or third party interception of any such transmission, and (c) the Borrower and the Guarantor will release, hold harmless and indemnify the Bank from any claim, damage or loss, including that arising in whole or part from the Bank's strict liability or sole, comparative or contributory negligence, which is related to the electronic transmission of data.

8.15 Gender etc. Whenever used herein, the singular shall include the plural, the plural shall include the singular, and the use of the masculine, feminine or neuter gender shall include all genders.

8.16 Authority to File Financing Statements and Amendments. The Borrower hereby authorizes the Bank to file Uniform Commercial Code Financing Statements describing the Collateral without the Borrower's signature thereon. After notice to the Borrower, the Bank is authorized to file amendments without the Borrower's signature thereon to any financing statements naming the Bank as a secured party in order to add collateral or a debtor. The Borrower is not authorized to file correction statements to financing statements.

8.17 Heading. The section and subsection headings of this Agreement are for convenience only, and shall not limit or otherwise affect any of the terms hereof.

8.18 Counterparts. To facilitate execution, this Agreement may be executed in any number of counterparts as may be required; and it shall not be necessary that the signatures of, or on behalf of, each party, or that the signatures of all persons required to bind any party, appear on each counterpart; but it shall be sufficient that the signature of, or on behalf of, each party, or that the signatures of the persons required to bind any party, appear on one or more counterparts.

All counterparts shall collectively constitute a single agreement. It shall not be necessary in making proof of this Agreement to produce or account for more than a number of counterparts containing the respective signatures of, or on behalf of, all of the parties hereto.

(Signature Page Follows)

IN WITNESS WHEREOF, each of the parties hereto have caused this Agreement to be executed, sealed and attested the day and year first above mentioned.

BORROWER:

ATTEST:

BIOPORT CORPORATION,
a Michigan corporation

/s/ José Ochoa
José Ochoa

By: /s/ R. Don Elsey (SEAL)
Name: R. Don Elsey
Title: Treasurer

GUARANTOR:

ATTEST:

EMERGENT BIOSOLUTIONS INC.,
a Delaware corporation

/s/ José Ochoa
José Ochoa

By: /s/ Fuad El-Hibri (SEAL)
Name: Fuad El-Hibri
Title: President & CEO

BANK:

HSBC REALTY CREDIT CORPORATION (USA),
a Delaware corporation

By: /s/ Jeffrey M. Henry (SEAL)
Name: Jeffrey M. Henry
Title: Vice President

Exhibit 10.41

PROMISSORY NOTE

(Term Note)

$10,000,000.00 August 25, 2006

FOR VALUE RECEIVED, **BIOPORT CORPORATION**, a Michigan corporation (the "**Borrower**") promises to pay to the order of **HSBC REALTY CREDIT CORPORATION (USA)**, a Delaware corporation (hereinafter referred to as the "**Bank**") at its office at 1130 Connecticut Avenue, N.W., 12th Floor, Washington, D. C. 20036, or at such other place as the Bank may from time to time direct, the sum of TEN MILLION AND NO/100 DOLLARS ($10,000,000.00), with interest computed daily on the unpaid principal balance at the Interest Rate (as such term is hereinafter defined), and payable according to the repayment terms set forth herein (the "**Loan**"). The Loan is made pursuant to a Loan Agreement of even date herewith (the "**Loan Agreement**") among the Borrower, the Bank and Emergent BioSolutions Inc. (the "**Guarantor**"). The Loan is guaranteed by a Guaranty of even date herewith from the Guarantor to the Bank (the "**Guaranty**"). The Loan is secured by, among other things, a Mortgage of even date herewith from the Borrower to the Bank (the "**Mortgage**") and a Security Agreement of even date herewith from the Borrower to the Bank (the "**Security Agreement**"). This Note, the Loan Agreement, the Guaranty, the Mortgage, the Security Agreement and any other documents entered into in connection with the Loan are referred to as the "**Loan Documents**").

Interest Rate and Payment Terms

This Note shall bear interest at a rate per annum (the "**Interest Rate**") equal to LIBOR plus three and 75/100 percent (3.75%). "**LIBOR**" means the daily fluctuating rate of interest (rounded upwards, if necessary to the nearest 1/100 of 1%) appearing on Telerate Page 3750 (or any successor page) as the 3-month London interbank offered rate for deposits in United States Dollars at approximately 11:00 a.m. (London time) on the second preceding Business Day, as adjusted from time to time in the Bank's sole discretion for then-applicable reserve requirements, deposit insurance assessment rates and other regulatory costs (the "**Index**"). If for any reason such rate is not available, the term "LIBOR" shall mean the fluctuating rate of interest equal to the rate of interest (rounded upwards, if necessary to the nearest 1/100 of 1%) appearing on Reuters Screen LIBO Page as the 3-month London interbank offered rate for deposits in United States Dollars at approximately 11:00 a.m. (London time) on the second preceding day, as adjusted from time to time in the Bank's sole discretion for then-applicable reserve requirements, deposit insurance assessment rates and other regulatory costs; provided, however, if more than one rate is specified on Reuters Screen LIBO page, the applicable rate shall be the arithmetic mean of all such rates. Any change in the rate will take effect on the date of such change in the Index as indicated on Telerate Page 3750. Interest will accrue on any non-banking day at the rate in effect on the immediately preceding banking day.

This Note shall be payable on the 1st day of each month in monthly installments of accrued interest only for the first six months from the date hereof beginning October 1, 2006. Thereafter this Note shall be payable on the 1st day of each month in monthly installments of principal in the amount of $83,334 (calculated using a 10 year amortization) plus accrued

interest. All accrued interest and outstanding principal shall be due and payable in a final balloon payment on August 25, 2011 (the "**Maturity Date**").

Upon the Borrower's request, to be made no sooner than 90 days prior to the Maturity Date, and provided no Event of Default shall exist under the Loan Documents, the Bank in its sole discretion may agree to extend the Maturity Date for five (5) additional years until August 25, 2016 (the "**Extension Term**") upon the payment to the Bank of an extension fee in the amount of 100 basis points. During the Extension Term, this Note shall continue to be payable on the 1st day of each month in monthly installments of principal in the amount of $83,334, plus accrued interest. If the Maturity Date is extended as provided herein, all accrued interest and outstanding principal on this Note shall be due and payable on August 25, 2016.

The Interest Rate on this Note: (a) will not exceed applicable legal limits, and in the event a payment is made by the Borrower or received by the Bank in excess of the applicable legal limits, such excess payment shall be credited as a payment of principal; and (b) shall be computed on the basis of 360-day year and charged for the actual number of days elapsed in each interest calculation period.

In the event that the Bank shall determine that by reason of circumstances affecting the interbank Eurodollar market, adequate and reasonable means do not exist for determining LIBOR, or Eurodollar deposits in the relevant amount and for the relevant maturity are not available to the Bank in the interbank Eurodollar market, the Bank shall give the Borrower prompt notice of such determination. If such notice is given, and until such notice is withdrawn, the Interest Rate on this Note shall be a rate per annum equal to the Prime Rate plus 0.25%. "**Prime Rate**" means the rate per annum from time to time established by the Bank as the Prime Rate and made available by the Bank at its main office or, in the discretion of the Bank, the base, reference or other rate then designated by the Bank for general commercial loan reference purposes, it being understood that such rate is a reference rate, not necessarily the lowest, established from time to time, which serves as the basis upon which effective interest rates are calculated for loans making reference thereto. If, after the date of this Note, any applicable law, treaty, regulation or directive, or any change therein or in the interpretation or application thereof, shall make it unlawful for the Bank to make or maintain any LIBOR loan, the Interest Rate on this Note shall be a rate per annum equal to the Prime Rate plus 0.25%, for so long as such illegality exists.

Prepayment

Upon five (5) business days' written notice from the Borrower to the Bank, the Borrower may prepay, without penalty or premium (except as described below), the outstanding principal balance of this Note, in whole or in part, subject to the following terms and conditions:

(a) any prepayment must be made on an interest payment date or scheduled principal and interest payment date;

(b) must include payment of all interest accrued and unpaid on the amount so prepaid as of the date of such prepayment;

(c) partial prepayment shall not postpone the due date of any subsequent payment, nor shall it change the amount of any monthly payment otherwise required to be made under this Note, unless the Bank otherwise agrees in writing and in advance of receipt of such partial prepayment; and

(d) if the Interest Rate at the time of prepayment has been converted to a fixed rate pursuant to an ISDA Master Agreement or other interest rate protection agreement or product provided by the Bank to fix the interest rate ("**Master Agreement**"), the Borrower shall pay any breakage fees, make whole provisions or other costs and expenses related to such Master Agreement.

Fixing Interest Rate

At any time, the Borrower may enter into a Master Agreement with the Bank to convert the Interest Rate to a fixed rate for a period of up to, but no longer thank, the final maturity date on this Note, on such terms as may be agreed to be by the Bank and the Borrower.

Late Charge

In the event the Borrower fails to make a payment of principal and/or interest in fully collected funds within fifteen (15) days after such payment is due, the Borrower shall pay a late charge to the Bank in an amount equal to five percent (5%) of the overdue installment.

Default Interest

Upon an Event of Default (as such term is hereinafter defined) and until such Event of Default is cured or this Note is paid in full, this Note shall bear interest at a rate equal to three percent (3%) per annum above the Interest Rate in effect on the date of such Event of Default.

Events of Default and Remedies

Subject to any applicable notice and cure periods contained in the Loan Documents, each of the following shall constitute a default ("**Event of Default**") under this Note:

(a) A failure to make a payment of any sum within ten (10) days of when due under this Note.

(b) A failure to perform or observe any of the covenants, conditions or terms of this Note or any other Loan Document.

(c) Upon the occurrence of an Event of Default or failure to pay the balance hereof when otherwise due, and notwithstanding the payment of any late charges: (i) all remaining payments under this Note shall become due and payable together with interest accrued to the date of payment without notice, at the option of the Bank; (ii) the Borrower shall reimburse the Bank for any reasonable expenses, costs and attorneys' fees which the Bank may incur in connection with the collection of any monies due under this Note or in connection with the enforcement of any right under this Note or under any of the Loan Documents; and (iii) the Bank

may exercise any or all of the other rights, powers and remedies provided for in any of the Loan Documents, or now or hereafter existing at law or in equity or by statute or otherwise.

Miscellaneous

The Borrower hereby waives demand, presentment for payment, protest, and notice of dishonor, and agrees that at any time and from time to time and with or without consideration, the Bank may, without notice to or further consent of the Borrower and without in any manner releasing, lessening or affecting the obligations of the Borrower: (a) release, surrender, waive, substitute, settle, exchange, compromise, modify, extend or grant indulgences with respect to: (i) this Note; and (ii) all or any part of any collateral or security for this Note; or (b) grant any extension or other postponements of the time of payment hereof.

Each right, power and remedy of the Bank as provided for in this Note, or now or hereafter existing at law or in equity or by statute or otherwise, shall be cumulative and concurrent and shall be in addition to every other right, power or remedy, and the exercise or beginning of the exercise by the Bank of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by the Bank of any or all of such other rights, powers or remedies.

No failure or delay by the Bank to insist upon the strict performance of any term, condition or covenant of this Note, or to exercise any right, power or remedy upon a breach hereof, shall constitute a waiver of any such term, condition or covenant or of any such breach, nor shall it preclude the Bank from exercising any such right, power or remedy at any later time or times, unless such waiver is in writing signed by an authorized representative of the Bank. If the Bank accepts any payment after its due date, this does not constitute a waiver of the Bank's right to receive timely payment of all other subsequent amounts or to declare a default for the failure to make any other subsequent payment when due.

Any payment on this Note coming due on a day on which the Bank is not open to conduct full banking business shall be due on the next succeeding business day. Each payment hereunder may be applied to pay interest, principal, late fees or costs as the Bank, in its sole discretion, may determine.

All notices under this Note shall be given as provided in the Loan Agreement.

The Borrower authorizes the Bank to disburse funds represented by this Note to the Borrower and agrees that such disbursement shall be deemed to be full and absolute consideration for the undertaking to make payment hereunder. The Borrower hereby authorizes the Bank to disclose to any subsidiary or affiliate of the Bank, to any fiduciary institution or to any banking institution, credit union or savings and loan association organized under the laws of any State, and hereby authorizes all subsidiaries and affiliates of the Bank, to disclose to the Bank, the financial record of the Borrower.

THE BORROWER AND THE BANK HEREBY VOLUNTARILY AND KNOWINGLY WAIVE ANY RIGHT THEY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY ACTION, PROCEEDING, OR COUNTERCLAIM BROUGHT BY EITHER PARTY AGAINST THE OTHER ARISING OUT OF, UNDER OR IN

CONNECTION WITH THIS NOTE AND THE TRANSACTIONS CONTEMPLATED HEREIN. THE BORROWER ACKNOWLEDGES THAT IT HAS BEEN INFORMED BY THE BANK THAT THE PROVISIONS OF THIS PARAGRAPH CONSTITUTE A MATERIAL INDUCEMENT UPON WHICH THE BANK HAS RELIED, IS RELYING AND WILL RELY IN MAKING THE LOAN. THE BORROWER HEREBY CERTIFIES THAT NO REPRESENTATIVE OR AGENT OF THE BANK (INCLUDING ITS COUNSEL) HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT THE BANK WOULD NOT, IN THE EVENT OF LITIGATION, ENFORCE THIS WAIVER OF RIGHT TO JURY TRIAL. THE BORROWER ACKNOWLEDGES THAT IT HAS CONSULTED WITH AN ATTORNEY AND FULLY UNDERSTANDS THE LEGAL EFFECT OF THE PROVISIONS OF THIS PARAGRAPH.

This Note shall be governed by and construed under and in accordance with the laws of the State of New York (but not including the choice of law rules thereof). The Borrower hereby submits to the non-exclusive jurisdiction of any State of New York court or Federal court sitting in the State of New York in any action or proceeding arising out of or relating to this Note, and hereby waives any objection it may have to the laying of venue of any such action or proceeding in any of said courts and any claim that it may have that any such action or proceeding has been brought in an inconvenient forum. A final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

Whenever used herein, the word “Borrower” or “Bank” shall be deemed to include, as appropriate, its/his/her respective heirs, personal representatives, successors and assigns. All words used herein shall be deemed to refer to the singular, plural, masculine, feminine or neuter as the identity of the person or entity or the context may require.

(Signature Page Follows)

IN WITNESS WHEREOF, the Borrower has duly executed this Note under seal as of the date and year first hereinabove set forth. This instrument may be signed in multiple counterparts.

BIOPORT CORPORATION,
a Michigan corporation

By: /s/ R. Don Elsey (SEAL)
Name: R. Don Elsey
Title: Treasurer

CONSENT OF THE GUARANTOR

The undersigned Guarantor hereby consents to the terms of this Note and acknowledges it has guaranteed this Note pursuant to the terms of that certain Guaranty executed by the undersigned of even date herewith.

EMERGENT BIOSOLUTIONS INC.,
a Delaware corporation

By: /s/ Fuad El-Hibri (SEAL)
Name: Fuad El-Hibri
Title: President & CEO

Exhibit 10.42

PROMISSORY NOTE

(Revolving Credit Loan)

$5,000,000.00 August 25, 2006

FOR VALUE RECEIVED, **BIOPORT CORPORATION**, a Michigan corporation (the "**Borrower**") promises to pay to the order of **HSBC REALTY CREDIT CORPORATION (USA)**, a Delaware corporation (hereinafter referred to as the "**Bank**") at its office at 1130 Connecticut Avenue, N.W., 12th Floor, Washington, D. C. 20036, or at such other place as the Bank may from time to time direct, the sum of FIVE MILLION AND NO/100 DOLLARS ($5,000,000.00), as such has been advanced and may be re-advanced, with interest computed daily on the unpaid principal balance at the Interest Rate (as such term is hereinafter defined), and payable according to the repayment terms set forth herein (the "**Loan**"). The Loan is made pursuant to a Loan Agreement of even date herewith (the "**Loan Agreement**") among the Borrower, the Bank and Emergent BioSolutions Inc. (the "**Guarantor**"). The Loan is guaranteed by a Guaranty of even date herewith from the Guarantor to the Bank (the "**Guaranty**"). The Loan is secured by, among other things, a Mortgage of even date herewith from the Borrower to the Bank (the "**Mortgage**") and a Security Agreement of even date herewith from the Borrower to the Bank (the "**Security Agreement**"). This Note, the Loan Agreement, the Guaranty, the Mortgage, the Security Agreement and any other documents entered into in connection with the Loan are referred to as the "**Loan Documents**").

Interest Rate and Payment Terms

This Note shall bear interest at a rate per annum (the "**Interest Rate**") equal to LIBOR plus three and 75/100 percent (3.75%). "**LIBOR**" means the daily fluctuating rate of interest (rounded upwards, if necessary to the nearest 1/100 of 1%) appearing on Telerate Page 3750 (or any successor page) as the 1-month London interbank offered rate for deposits in United States Dollars at approximately 11:00 a.m. (London time) on the second preceding Business Day, as adjusted from time to time in the Bank's sole discretion for then-applicable reserve requirements, deposit insurance assessment rates and other regulatory costs (the "**Index**"). If for any reason such rate is not available, the term "LIBOR" shall mean the fluctuating rate of interest equal to the rate of interest (rounded upwards, if necessary to the nearest 1/100 of 1%) appearing on Reuters Screen LIBO Page as the 1-month London interbank offered rate for deposits in United States Dollars at approximately 11:00 a.m. (London time) on the second preceding day, as adjusted from time to time in the Bank's sole discretion for then-applicable reserve requirements, deposit insurance assessment rates and other regulatory costs; provided, however, if more than one rate is specified on Reuters Screen LIBO page, the applicable rate shall be the arithmetic mean of all such rates. Any change in the rate will take effect on the date of such change in the Index as indicated on Telerate Page 3750. Interest will accrue on any non-banking day at the rate in effect on the immediately preceding banking day.

1.01 Interest only on the principal amount outstanding shall be due and payable in arrears on the 1st day of each month beginning on October 1, 2006 and continuing on the first day of each month thereafter until October 1, 2007 (the "**Conversion Date**"). The outstanding principal balance of this Note on the Conversion Date shall be converted to a four (4) year term

loan, and thereafter monthly payments on this Note shall be made on the 1st day of each month, in the amount of principal required to fully amortize this Note in four (4) years, plus monthly accrued interest. Unless sooner paid, all outstanding principal and any accrued and unpaid interest on this Note shall be due and payable in full on August 25, 2011.

The Interest Rate on this Note: (a) will not exceed applicable legal limits, and in the event a payment is made by the Borrower or received by the Bank in excess of the applicable legal limits, such excess payment shall be credited as a payment of principal; and (b) shall be computed on the basis of 360-day year and charged for the actual number of days elapsed in each interest calculation period.

In the event that the Bank shall determine that by reason of circumstances affecting the interbank Eurodollar market, adequate and reasonable means do not exist for determining LIBOR, or Eurodollar deposits in the relevant amount and for the relevant maturity are not available to the Bank in the interbank Eurodollar market, the Bank shall give the Borrower prompt notice of such determination. If such notice is given, and until such notice is withdrawn, the Interest Rate on this Note shall be a rate per annum equal to the Prime Rate plus 0.25%. "**Prime Rate**" means the rate per annum from time to time established by the Bank as the Prime Rate and made available by the Bank at its main office or, in the discretion of the Bank, the base, reference or other rate then designated by the Bank for general commercial loan reference purposes, it being understood that such rate is a reference rate, not necessarily the lowest, established from time to time, which serves as the basis upon which effective interest rates are calculated for loans making reference thereto. If, after the date of this Note, any applicable law, treaty, regulation or directive, or any change therein or in the interpretation or application thereof, shall make it unlawful for the Bank to make or maintain any LIBOR loan, the Interest Rate on this Note shall be a rate per annum equal to the Prime Rate plus 0.25%, for so long as such illegality exists.

Prepayment

Upon five (5) business days' written notice from the Borrower to the Bank, the Borrower may prepay, without penalty or premium (except as described below), the outstanding principal balance of this Note, in whole or in part, subject to the following terms and conditions:

(a) any prepayment must be made on an interest payment date or scheduled principal and interest payment date;

(b) must include payment of all interest accrued and unpaid on the amount so prepaid as of the date of such prepayment;

(c) partial prepayment shall not postpone the due date of any subsequent payment, nor shall it change the amount of any monthly payment otherwise required to be made under this Note, unless the Bank otherwise agrees in writing and in advance of receipt of such partial prepayment; and

(d) if the Interest Rate at the time of prepayment has been converted to a fixed rate pursuant to an ISDA Master Agreement or other interest rate protection agreement or product provided by the Bank to fix the interest rate ("**Master Agreement**"), the Borrower shall pay any

breakage fees, make whole provisions or other costs and expenses related to such Master Agreement.

Fixing Interest Rate

At any time, the Borrower may enter into a Master Agreement with the Bank to convert the Interest Rate to a fixed rate for a period of up to, but no longer thank, the final maturity date on this Note, on such terms as may be agreed to be by the Bank and the Borrower.

Late Charge

In the event the Borrower fails to make a payment of principal and/or interest in fully collected funds within fifteen (15) days after such payment is due, the Borrower shall pay a late charge to the Bank in an amount equal to five percent (5%) of the overdue installment.

Default Interest

Upon an Event of Default (as such term is hereinafter defined) and until such Event of Default is cured or this Note is paid in full, this Note shall bear interest at a rate equal to three percent (3%) per annum above the Interest Rate in effect on the date of such Event of Default.

Events of Default and Remedies

Subject to any applicable notice and cure periods contained in the Loan Documents, each of the following shall constitute a default ("**Event of Default**") under this Note:

(a) A failure to make a payment of any sum within ten (10) days of when due under this Note.

(b) A failure to perform or observe any of the covenants, conditions or terms of this Note or any other Loan Document.

(c) Upon the occurrence of an Event of Default or failure to pay the balance hereof when otherwise due, and notwithstanding the payment of any late charges: (i) all remaining payments under this Note shall become due and payable together with interest accrued to the date of payment without notice, at the option of the Bank; (ii) the Borrower shall reimburse the Bank for any reasonable expenses, costs and attorneys' fees which the Bank may incur in connection with the collection of any monies due under this Note or in connection with the enforcement of any right under this Note or under any of the Loan Documents; and (iii) the Bank may exercise any or all of the other rights, powers and remedies provided for in any of the Loan Documents, or now or hereafter existing at law or in equity or by statute or otherwise.

Miscellaneous

The Borrower hereby waives demand, presentment for payment, protest, and notice of dishonor, and agrees that at any time and from time to time and with or without consideration, the Bank may, without notice to or further consent of the Borrower and without in any manner releasing, lessening or affecting the obligations of the Borrower: (a) release, surrender, waive,

substitute, settle, exchange, compromise, modify, extend or grant indulgences with respect to: (i) this Note; and (ii) all or any part of any collateral or security for this Note; or (b) grant any extension or other postponements of the time of payment hereof.

Each right, power and remedy of the Bank as provided for in this Note, or now or hereafter existing at law or in equity or by statute or otherwise, shall be cumulative and concurrent and shall be in addition to every other right, power or remedy, and the exercise or beginning of the exercise by the Bank of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by the Bank of any or all of such other rights, powers or remedies.

No failure or delay by the Bank to insist upon the strict performance of any term, condition or covenant of this Note, or to exercise any right, power or remedy upon a breach hereof, shall constitute a waiver of any such term, condition or covenant or of any such breach, nor shall it preclude the Bank from exercising any such right, power or remedy at any later time or times, unless such waiver is in writing signed by an authorized representative of the Bank. If the Bank accepts any payment after its due date, this does not constitute a waiver of the Bank's right to receive timely payment of all other subsequent amounts or to declare a default for the failure to make any other subsequent payment when due.

Any payment on this Note coming due on a day on which the Bank is not open to conduct full banking business shall be due on the next succeeding business day. Each payment hereunder may be applied to pay interest, principal, late fees or costs as the Bank, in its sole discretion, may determine.

All notices under this Note shall be given as provided in the Loan Agreement.

The Borrower authorizes the Bank to disburse funds represented by this Note to the Borrower and agrees that such disbursement shall be deemed to be full and absolute consideration for the undertaking to make payment hereunder. The Borrower hereby authorizes the Bank to disclose to any subsidiary or affiliate of the Bank, to any fiduciary institution or to any banking institution, credit union or savings and loan association organized under the laws of any State, and hereby authorizes all subsidiaries and affiliates of the Bank, to disclose to the Bank, the financial record of the Borrower.

THE BORROWER AND THE BANK HEREBY VOLUNTARILY AND KNOWINGLY WAIVE ANY RIGHT THEY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY ACTION, PROCEEDING, OR COUNTERCLAIM BROUGHT BY EITHER PARTY AGAINST THE OTHER ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS NOTE AND THE TRANSACTIONS CONTEMPLATED HEREIN. THE BORROWER ACKNOWLEDGES THAT IT HAS BEEN INFORMED BY THE BANK THAT THE PROVISIONS OF THIS PARAGRAPH CONSTITUTE A MATERIAL INDUCEMENT UPON WHICH THE BANK HAS RELIED, IS RELYING AND WILL RELY IN MAKING THE LOAN. THE BORROWER HEREBY CERTIFIES THAT NO REPRESENTATIVE OR AGENT OF THE BANK (INCLUDING ITS COUNSEL) HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT THE BANK WOULD NOT, IN THE EVENT OF LITIGATION, ENFORCE THIS WAIVER OF

RIGHT TO JURY TRIAL. THE BORROWER ACKNOWLEDGES THAT IT HAS CONSULTED WITH AN ATTORNEY AND FULLY UNDERSTANDS THE LEGAL EFFECT OF THE PROVISIONS OF THIS PARAGRAPH.

This Note shall be governed by and construed under and in accordance with the laws of the State of New York (but not including the choice of law rules thereof). The Borrower hereby submits to the non-exclusive jurisdiction of any State of New York court or Federal court sitting in the State of New York in any action or proceeding arising out of or relating to this Note, and hereby waives any objection it may have to the laying of venue of any such action or proceeding in any of said courts and any claim that it may have that any such action or proceeding has been brought in an inconvenient forum. A final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

Whenever used herein, the word “Borrower” or “Bank” shall be deemed to include, as appropriate, its/his/her respective heirs, personal representatives, successors and assigns. All words used herein shall be deemed to refer to the singular, plural, masculine, feminine or neuter as the identity of the person or entity or the context may require.

(Signature Page Follows)

IN WITNESS WHEREOF, the Borrower has duly executed this Note under seal as of the date and year first hereinabove set forth. This instrument may be signed in multiple counterparts.

BIOPORT CORPORATION,
a Michigan corporation

By: /s/ R. Don Elsey (SEAL)
Name: R. Don Elsey
Title: Treasurer

CONSENT OF THE GUARANTOR

The undersigned Guarantor hereby consents to the terms of this Note and acknowledges it has guaranteed this Note pursuant to the terms of that certain Guaranty executed by the undersigned of even date herewith.

EMERGENT BIOSOLUTIONS INC.,
a Delaware corporation

By: /s/ Fuad El-Hibri (SEAL)
Name: Fuad El-Hibri
Title: President & CEO

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption “Experts” and to the use of our report dated May 23, 2006, in the Registration Statement (Amendment No. 1 to Form S-1 No. 333-136622) and related Prospectus of Emergent BioSolutions Inc. and Subsidiaries for the registration of an aggregate of $86,250,000 of its common stock.

/s/ Ernst & Young LLP

McLean, Virginia
September 21, 2006

FOIA Confidential Treatment Request
The entity requesting confidential treatment is
Emergent BioSolutions Inc.
300 Professional Drive, Suite 250
Gaithersburg, MD 20879
Attn: General Counsel
(301) 944-0290

Brian A. Johnson
+1 212 937 7206 (t)
+1 212 230 8888 (f)
brian.johnson@wilmerhale.com

September 25, 2006

VIA EDGAR SUBMISSION

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, NE
Washington, DC 20549

Attention: Song P. Brandon, Esq.

Re: Emergent BioSolutions Inc.
Registration Statement on Form S-1
File Number 333-136622

Ladies and Gentlemen:

On behalf of Emergent BioSolutions Inc. (the "Company"), submitted herewith for filing is Amendment No. 1 ("Amendment No. 1") to the Registration Statement referenced above (the "Registration Statement").

Amendment No. 1 is being filed in response to comments contained in the letter dated September 9, 2006 from Jeffrey Riedler of the Staff (the "Staff") of the Securities and Exchange Commission (the "Commission") to Fuad El-Hibri, the Company's Chief Executive Officer. The responses set forth below are based upon information provided to Wilmer Cutler Pickering Hale and Dorr LLP ("WilmerHale") by the Company. The responses are keyed to the numbering of the comments and the headings used in the Staff's letter. Where appropriate, the Company has responded to the Staff's comments by making changes to the disclosure in the Registration Statement as set forth in Amendment No. 1.

On behalf of the Company, we advise you as follows:

General

1. *Please note that we have received your request for confidential treatment for certain of your exhibits. In that regard, please be advised that comments related to your request for confidential treatment will be delivered under separate cover. We will not be in a position to consider a request for acceleration of effectiveness of this registration statement until we resolve all issues concerning the confidential treatment request.*

   Response: The Company acknowledges that the Staff will not consider a request for acceleration of effectiveness of the Registration Statement until all confidential treatment issues have been resolved.

2. *Please provide updated interim financial information in accordance with Item 3-12 of Regulation S-X.*

   Response: The Company has revised the Registration Statement to provide updated interim financial information in accordance with Item 3-12 of Regulation S-X.

Comments Applicable to the Entire Prospectus

3. *Please provide us proofs of all graphic, visual, or photographic information you will provide in the printed prospectus prior to its use, for example in a preliminary prospectus. Please note we may have comments regarding these materials.*

   Response: The Company does not currently intend to include any graphical, visual or photographic information in the prospectus. If the Company determines to include any visual information in the prospectus, the Company will promptly provide such additional information to the Staff on a supplemental basis. The Company acknowledges that the Staff may have further comments regarding any such additional information.

4. *Please note that when you file a pre-effective amendment containing pricing-related information, we may have additional comments. As you are likely aware, you must file this amendment prior to circulating the prospectus.*

   Response: The Company acknowledges that the Staff may have additional comments when the Company files a pre-effective amendment containing pricing-related information. The Company is aware that it must file this amendment prior to circulating the prospectus.

5. *Please note that when you file a pre-effective amendment that includes your price range, it must be bona fide. We interpret this to mean your range may not exceed $2 if you price below $20 and 10% if you price above $20.*

Response: The Company acknowledges the Staff's interpretation regarding the parameters of a bona fide price range. When the Company files a pre-effective amendment containing a price range, the range will satisfy these parameters.

Summary, page 1

6. *In instances where you have stated that BioThrax is safe and effective, please revise to state that it is sufficiently safe and effective.*

Response: The Company advises the Staff that the only references in the prospectus to BioThrax as "safe and effective" are references to the final order issued by the U.S. Food and Drug Administration ("FDA") in December 2005 categorizing BioThrax as safe and effective and not misbranded. Disclosure regarding the FDA's final order is included in Amendment No. 1 on pages 1, 23, 79, 89 and 125. The Company respectfully submits that the existing disclosure in the prospectus accurately describes the conclusion of the FDA in its final order. Under separate cover, the Company has supplementally provided the Staff with a marked copy of the FDA final order.

7. *You indicate on page 1 that a study by the Institute of Medicine supported the FDA ruling that BioThrax is safe and effective for the prevention of anthrax infection by all routes of exposure, including inhalation. Please provide us a marked copy of this source to support your statement.*

Response: Under separate cover, the Company has supplementally provided the Staff with a marked copy of the source to support the statement that a study by the Institute of Medicine supported the FDA ruling that BioThrax is safe and effective for the prevention of anthrax infection by all routes of exposure, including inhalation.

8. *We note the statistical information you include on pages 2 and 76-77 regarding the data obtained from Frost & Sullivan. Please provide us with copies of this source in which you obtained the statistical figures. The copy should be marked to indicate the information supporting your statements.*

Response: Under separate cover, the Company has supplementally provided the Staff

with a marked copy of the source to support the statistical information on pages 2 and 84 of Amendment No. 1 regarding the data obtained from Frost & Sullivan.

9. *If any of the data from Frost & Sullivan were derived from studies or reports that were performed on your behalf, please so indicate and file any appropriate third party consents.*

Response: The Company advises the Staff that the data from Frost & Sullivan were not derived from studies or reports that were performed on the Company's behalf.

Our Business, page 1

10. *We note that you have completed Phase I clinical trials for your typhoid vaccine. Please tell us if the IND filed with the FDA was filed by you or another party. Additionally, tell us the product name used in the IND that was filed.*

Response: The Company advises the Staff that the investigational new drug application ("IND") for the Company's typhoid vaccine candidate was originally filed by Microscience Limited ("Microscience") prior to the Company's acquisition of Microscience in June 2005. The IND is currently held by Emergent Product Development UK. The product name used in the IND at the time of filing was Micro-Ty. The product name currently used in IND submissions is M01ZH09.

11. *Are you planning to conduct clinical trials for your hepatitis B therapeutic vaccine or Group B streptococcus vaccine in the US?*

Response: The Company advises the Staff that if the results of the Company's planned Phase II clinical trial of its hepatitis B therapeutic vaccine candidate in the United Kingdom are favorable, it currently anticipates that it will conduct one or more clinical trials of this vaccine candidate in the United States as may be appropriate. The Company further advises the Staff that it currently anticipates that the majority of the remainder of the clinical development for its group B streptococcus vaccine candidate will be conducted in the United States. The Company has revised the disclosure on pages 100 and 102 accordingly.

Our Strategy, page 3

12. *We note your summary of the primary goals for your company for the future. Please balance the discussion of your strategy in the summary with an equally prominent discussion of obstacles and risks in implementing the stated goals.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 3 of Amendment No. 1 to refer to the risks related to the Company's strategy. The Company advises the Staff that a summary of these risks is included in the prospectus summary under the subheading "—Risks associated with our business" on page 4 of Amendment No. 1.

The Offering, page 5

13. *Please revise to include disclosure relating to the rights which are being offered with the common stock.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 5 of Amendment No. 1.

Risk Factors, page 8

14. *Please include a separate risk factor disclosing the possibility that the issuance of the preferred stock purchase rights might prevent a change in control in instances where some shareholders may believe the change in control may be in their best interests.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 41 of Amendment No. 1 as requested to include a separate risk factor.

"We have derived substantially all of our revenue from sales of our . . . ," page 8

15. *Please revise your risk factor header and discussion to clearly state that BioThrax is currently your only product available for commercial sale.*

Response: In response to the Staff's comment, the Company has revised the risk factor heading on page 9 of Amendment No. 1.

16. *Please revise to include a separate stand alone risk factor disclosing the ongoing legal proceedings and the effects they may have on your sales to the US government.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 12 of Amendment No. 1 as requested to include a

separate risk factor.

"Our U.S. government contracts for BioThrax® require annual funding . . . .," page 9

17. *This risk factor appears to be discussing three separate risks factors, the risks associated with Congressional appropriations that the funding of governmental programs are subject to; the risks permitting unilateral termination of government contracts; and the risk associated with specific procurement regulations in conducting business with the government. Please ensure that each risk factor only discusses one risk factor and move the discussion pertaining to unilateral termination by the government to the risk factor entitled "Unfavorable provisions in government contracts may harm our business . . . ." on page 10 and the discussion regarding governmental oversight as a new separate risk factor.*

Response: In response to the Staff's comment, the Company has revised the disclosure on pages 10 to 12 of Amendment No. 1 to include a separate risk factor regarding specific procurement regulations and other compliance obligations and to move the discussion regarding unilateral termination by the government as requested.

"The pricing under our fixed price government contracts is based on . . . .," page 10

18. *If in the past your estimated costs were not accurate and therefore, you were not able to earn an adequate return on your contract, if such impact was material, please describe the incidence and further describe the impact it had on your operations.*

Response: The Company advises the Staff that the accuracy of the Company's estimates of its costs under its fixed price contracts to supply BioThrax to U.S. government customers has had no material impact on the ability of the Company to date to earn an adequate return under these contracts.

"We have a limited operating history and may not maintain profitability . . . .," page 11

19. *If there were any material factors that resulted in losses for the three months ended March 31, 2006, please explain. If these factors involved increased expenses that are likely to recur, please identify them and discuss their impact going forward.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 12 of Amendment No. 1. The Company advises the Staff that the primary factor that affects profitability for any period is the timing of fulfilling orders from the U.S. government because the Company recognizes revenue from BioThrax product sales following FDA release of the product for sale and distribution.

"We may need additional funding and may be unable to raise capital when . . . .," page 12

20. *You indicate that you are committed to substantial capital expenditures in connection with the expansion of your Lansing, Michigan facility as well as for the planned build out of two buildings in Frederick, Maryland. Please quantify the approximate amount of expenditure you are committed for in connection with these expansions. Please provide similar information in the risk factor entitled "We have initiated a manufacturing facility expansion program. . . ." on page 13.*

Response: In response to the Staff's comment, the Company has revised the disclosure on pages 13 and 15 of Amendment No. 1.

"BioThrax and our immunobiotic product candidates are difficult to . . . .," page 13

21. *If your financial condition has historically been materially impacted by lot failures, product recalls or other acceptance criteria, please describe the situation and further describe the impact it had on your operations.*

Response: The Company advises the Staff that lot failures, product recalls and other acceptance criteria have not had a material impact on the Company's financial condition to date.

"Disruption at, damage to or destruction of our manufacturing facilities . . . .," page 14

22. *If you have experienced any of the situations described in your bullet point list, please revise to describe the situation you experienced and the consequences. It may be necessary to include such discussion as a separate risk factor discussion.*

Response: The Company advises the Staff that none of the factors described in the bullet point list has had a material impact on the Company's manufacturing operations to date.

"If third parties do not manufacture our product candidates in sufficient . . . .," page 15

23. *Please identify the third parties that manufacture the supplies of your immunobiotic product candidates for your preclinical and clinical developments needs. If any of these parties have failed to meet your preclinical and development needs, please discuss the failure and the effects of the failure.*

Response: The Company advises the Staff that the Company generally contracts with third parties on a non-exclusive basis to manufacture its product candidates. After an initial agreement is signed, these manufacturers supply materials to the Company under purchase orders or project

agreements. As disclosed on page 17 of Amendment No. 1, the Company's only long-term manufacturing agreements for supplies of its product candidates for preclinical and clinical development are its agreement with Talecris Biotherapeutics, Inc. ("Talecris"), for purification and fractionation of plasma for the Company's anthrax immune globulin candidate, and its collaboration with the U.K. Health Protection Agency ("HPA"), under which HPA provides specialized manufacturing capabilities for the Company's recombinant bivalent botulinum vaccine candidate and the bivalent botulinum toxoid vaccine that the Company plans to use as the basis of its botulinum immune globulin candidate. Third party manufacturers under short-term supply agreements are not obligated to accept any purchase orders that the Company may submit. The Company further advises the Staff that (i) it has no binding obligations that would require it to purchase specified amounts of product from any other third parties on a continuing basis, (ii) all existing short-term supply contracts are terminable by the Company and (iii) alternative sources are available. Accordingly, the Company respectfully submits that it is not substantially dependent on any other third party manufacturer and that the identity of third party manufacturers other than Talecris and HPA is not material to investors in this offering.

The Company advises the Staff that there has been no failure to date by any third party manufacturer that has had any material impact on the ability of the Company to obtain adequate supplies of its product candidates on a timely basis.

24. *Please identify the third party who provides you with services related to your purification and fractionation of plasma for your anthrax immune globulin candidate.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 17 of Amendment No. 1 as requested to identify Talecris as the third party who provides services related to purification and fractionation of plasma for the Company's anthrax immune globulin candidate.

"Our use of hazardous materials, chemicals, bacteria and viruses requires . . . .," page 16

25. *If you have been in violation of the environmental laws or been the subject of any investigations for violations in the past, please revise to include this information.*

Response: The Company advises the Staff that it is subject to routine inspections by federal, state, local and foreign agencies that are responsible for the

regulation of flammable, toxic or radioactive materials, but the Company has not been the subject of a specific investigation for violations of environmental laws. The Company further advises the Staff that, other than minor infractions that have not exposed the Company to material liability, it has not previously been in violation of environmental laws.

26. *Please state whether you currently have reasonably adequate insurance to insulate yourself from damage claims arising from your use of hazardous materials and quantify the extent of your insurance coverage.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 18 of Amendment No. 1.

"We will not be able to commercialize our product candidates if our . . . .," page 17

27. *You indicate in the first full paragraph following the bullet points that you anticipate that the FDA will not require you to conduct a Phase II clinical trial for the botulinum toxoid vaccine before permitting you to initiate a donor stimulation program for your botulinum immune globulin candidate. Please provide the basis for your believe that the FDA will not require to conduct a Phase II clinical trial related to your botulinum immune globulin candidate.*

Response: The Company advises the Staff that, as disclosed, it expects to rely on the safety and immunogenicity data from the pentavalent botulinum toxoid ("PBT") vaccine previously manufactured by the State of Michigan. This safety data reflects the safe administration of more than 21,000 immunizations with the PBT vaccine. In discussions with the FDA, the Company has designed the Phase I clinical trial as a safety and dose ranging study using a regimen of three doses. The timing of these doses is based on previous results with the PBT vaccine. These cohorts will be followed for safety and immunogenicity for one year to evaluate the duration of the immune response and the optimal timing for a booster dose. The Company expects the Phase I clinical trial to provide valuable data to support the acceptable dose for the new vaccine and the optimal dosing schedule. The Company believes that the design of the Phase I clinical trial, together with detailed safety monitoring during the plasma collection program, will allow the Company to proceed directly to the plasma collection phase without conducting a Phase II clinical trial of the botulinum toxoid vaccine. The Company has revised the disclosure on page 20 of Amendment No. 1 to provide additional support regarding its anticipated development plan.

"If we fail to achieve significant sales of BioThrax to customers in . . . .," page 19

28. *Please identify the potential customers you are targeting the BioThrax product. Please also identify the type of customers who are currently purchasing your BioThrax product, other than the U.S. government.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 21 of Amendment No. 1.

29. *Please disclose when your new Lansing facility will be completed.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 22 of Amendment No. 1.

"The commercial success of BioThrax and any products we develop . . . .," page 19

30. *Please explain the meaning of the term "recombinant."*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 22 of Amendment No. 1.

31. *To the extent that there have been reports of any material side effects from BioThrax or any of your products in development, please revise to include this information.*

Response: In response to the Staff's comment, the Company has revised the disclosure on pages 22 and 23 of Amendment No. 1.

"We have a small marketing and sales group. If we are unable to expand . . . .," page 21

32. *To the extent known, please disclose the projected time frame of your hiring the additional marketing personnel and the approximately how many employees you plan to hire.*

Response: The Company advises the Staff that it does not have a specific plan, timeline or budget for expanding its sales and marketing organization. Although the Company believes it will require additional sales and marketing personnel in the future, the Company does not currently plan to add a material number of such employees to its staff in the near term.

33. *If you have had problems attracting or retaining qualified marketing and sales employees, please revise to describe the problems you have experienced.*

Response: The Company advises the Staff that it has not had any material difficulty to date in attracting or retaining qualified sales and marketing employees.

"We face substantial competition . . . .," page 21

34. *Much of the detail included in this discussion is more appropriate for the Business section. Please revise the discussion to include a level of detail that helps readers understand the risk and consequences. Move the detailed discussion to the Business section.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 25 of Amendment No. 1 to reduce the level of detail. A more detailed discussion is included in the Business section.

"Legislation and contractual provisions limiting or restricting liability . . . .," page 23

35. *You indicate that you have applied to the Department of Homeland Security for liability protection for sales of BioThrax. Please disclose when you submitted the application and when you expect to hear from the Department of Homeland Security.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 26 of Amendment No. 1 to disclose that the Department of Homeland Security approved the Company's Safety Act application in August 2006.

"Product liability lawsuits could cause us to incur substantial liabilities . . . ," page 24

36. *You indicate that the lawsuits claim damages resulting from personal injuries allegedly suffered because of the BioThrax vaccination. Please specify what type of personal injuries the lawsuits claims arose from the use of your BioThrax vaccination. Additionally, disclose the amount of damages they are seeking.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 26 of Amendment No. 1.

"If we fail to attract and keep senior management and key scientific . . . .," page 27

37. *If you have experienced difficulties hiring or retaining employees, please describe these difficulties. Similarly, if you have reason to expect that you may experience difficulties due to shortages of qualified people or other reasons, please discuss these expectations and the conditions that create the expectations.*

Response: The Company advises the Staff that it has not had any material difficulty to date in hiring or retaining employees. The Company further advises the Staff that, other than the intense competition for qualified personnel already disclosed in this risk factor, it does not currently have any reason to expect that it will experience difficulties due to shortages of qualified people or other reasons.

"We rely on property and equipment owned by the Department of Defense . . . .," page 28

38. *Please disclose the fee you currently pay to the government for use of their equipment, if such amount is material.*

Response: In response to the Staff's comment, the Company has revised page 30 of Amendment No. 1 to disclose that the Company pays the DoD a "small" usage fee for the government furnished equipment. The Company advises the Staff that the Company paid a usage fee of less than $100,000 in each of the last three fiscal years.

"If third parties on whom we rely for clinical trials do not perform as . . . .," page 33

39. *Please identify the third parties on whom you "heavily" rely for the successful execution of your clinical trials. To the extent you have any agreements with such parties, please describe the agreements in your Business section and file the agreement as an exhibit. If you do not believe such agreements are material to you, please provide us with a detailed analysis explaining why you do not believe such agreements are material to you.*

Response: The Company advises the Staff that it does not believe that it is substantially dependent on any particular third party for successful execution of its clinical trials. The contracts with the independent investigators, contract research organizations and other third party service providers that conduct the Company's clinical trials are terminable by the Company on short notice without penalty. In addition, the Company believes that there are many third parties that can perform the services described in this risk factor and that the Company could easily replace any of these third parties without significant delay, expense or other

disruption. The Company respectfully submits that because it is not substantially dependent upon any such third party for successful execution of its clinical trials, the identity of the third parties that conduct the Company's clinical trials is not material to investors in this offering.

The Company also believes that its arrangements with independent investigators, contract research organizations and other third party service providers that conduct the Company's clinical trials are of the type that ordinarily accompany the kind of business conducted by the Company and are made in the ordinary course of business. As discussed above, the Company does not believe that the Company's business is substantially dependent on any specific arrangement. Accordingly, the Company respectfully submits that the agreements with these third parties are neither required to be filed as exhibits to the Registration Statement nor described in the Business section of the prospectus.

40. *You indicate that you expect to rely on the data from the development efforts of CDC, assuming CDC consents to such use and the study is completed. Please expand your disclosure by describing how frequent your contact with the CDC is and what information you are privy to, if any.*

Response: The Company advises the Staff that it is working closely with the Centers for Disease Control and Prevention (the "CDC") with respect to the CDC's independent clinical trial to evaluate the administration of BioThrax in a regimen of fewer doses. Dr. Tom Waytes, Vice President of Medical and Scientific Affairs at the Company, participates in monthly Investigator meetings with the CDC. In addition, Dr. Waytes and other Company personnel provide scientific and regulatory advice to the CDC concerning this trial and participate in the annual review meeting for the trial.

The Company further advises the Staff that the CDC has conducted this trial under an IND sponsored by the CDC. The CDC submitted the Interim Report from this trial as an amendment to the IND and provided the Interim Report to the Company for submission by the Company as a license supplement for a label change. In addition, the CDC has provided the Company permission to cross-reference the CDC's IND in support of the Company's license supplement. Teleconferences and meetings with the FDA concerning the license supplement and the conduct of the remainder of the trial include representatives from the CDC and the Company. All responses to FDA questions and requests for additional

information involve participation and input by both the CDC and the Company.

The Company has revised the disclosure on page 35 to provide additional detail regarding the Company's interaction with the CDC.

41. *Please remove the discussion relating to your plans to expand your internal clinical development and regulatory capabilities and the risk that you may not be able to recruit appropriately trained personnel to your infrastructure to a new separate risk factor discussion.*

Response: In response to the Staff's comment, the Company has removed the discussion relating to its plans to expand its internal clinical development and regulatory capabilities from this risk factor. The Company respectfully submits that the second paragraph of the risk factor on page 29, "If we fail to attract and keep senior management and key scientific personnel, we may be unable to successfully sustain or expand our BioThrax operations or develop or commercialize our product candidates.," adequately summarizes the risks related to the Company's plans to expand its internal clinical development and regulatory capabilities.

"We may fail to protect our intellectual property rights, which would . . . .," page 33

42. *To the extent you are aware that you have any intellectual property that is being infringed upon or that you have been notified of a third party's belief that you are infringing on their intellectual property, please revise to disclose the situation and potential consequences.*

Response: The Company advises the Staff that it is not aware of any infringement of its intellectual property and has not been notified of any claim by a third party that the Company is infringing on the intellectual property of such third party.

43. *Please disclose who has the obligations to take necessary actions to protect patents under your license and collaboration agreements. If you do not have the obligation to take action, do you have the right to take necessary actions if the other party does not?*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 36 of Amendment No. 1.

"If we infringe or are alleged to infringe intellectual property rights . . . .," page 35

44. *If you or your collaborators were ever required to pay license fees or royalties, or both as a result of patent infringement claims or to avoid potential claims, please so indicate and provide a description of the circumstances.*

Response: The Company advises the Staff that neither it nor, to its knowledge, any of its collaborators have ever been required to pay license fees or royalties as a result of patent infringement claims or to avoid potential claims with respect to any development and commercialization activities conducted by or on behalf of the Company or products or product candidates resulting from such activities.

"Fuad El-Hibri, our president, chief executive officer and chairman of . . . .," page 37

45. *Please revise your risk factor heading to include the fact that Mr. El-Hibri will also control the outcome for the election of directors. We note you have provided this disclosure in your risk factor discussion.*

Response: In response to the Staff's comment, the Company has revised the risk factor heading on page 39 of Amendment No. 1.

"If you purchase shares of our common stock in this offering, you will . . . ." page 38

46. *Please revise this risk factor to state that shareholders will contribute ___% of the total amount to fund BioSolutions but will own only ___% of the shares outstanding.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 41 of Amendment No. 1.

"A significant portion of our total outstanding shares are restricted from . . . .," page 39

47. *Please disclose the total number of shares that will available for immediate sale in the market. Please also disclose the percentage that the shares will represent of your total outstanding shares after the offering.*

Response: In response to the Staff's comment, the Company has revised the disclosure on pages 42 and 43 of Amendment No. 1.

48. *Please also disclose the total amount beneficially owned by Mr. El-Hibri and the percentage that his shares represent of your total outstanding after the offering. We note you have provided this information in the risk factor entitled "Fuad El- Hibri, our president, chief executive officer and chairman . . . ," page 37.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 43 of Amendment No. 1.

49. *Please indicate how many shares you plan to register with respect to shares you intend to issue under your employee benefit plans. Please also indicate when you expect to do so.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 43 of Amendment No. 1.

Use of Proceeds, page 42

50. *Please disclose the approximate amount and timing of the proceeds you obtain from the offering for each of the purposes you list in this section, including how much you anticipate spending for each product candidate. Please also specify what type of developmental activities you intend to engage in. Please also indicate where in the development process you expect to be after the expenditure of these proceeds.*

Response: In response to the Staff's comment, the Company has revised the use of proceeds discussion on page 45 of Amendment No. 1 to disclose the approximate amount of net proceeds that it expects to use to fund each of the purposes listed. The Company has disclosed that the net proceeds it expects to use to fund biodefense product development will be principally for BioThrax label expansions and improvements and animal efficacy trials and clinical development of its anthrax immune globulin and botulinum immune globulin candidates. The Company also has disclosed that the net proceeds it expects to use to fund commercial product development will be principally for clinical development of its typhoid and hepatitis B therapeutic vaccine candidates. In addition, the Company has disclosed that it does not expect that its existing cash and cash equivalents, committed sources of funds and net proceeds from this offering alone will be sufficient to enable it to fund the completion of the development of all of its product candidates or all of the construction costs of its new manufacturing facility in Lansing, Michigan. As noted in Amendment No. 1, the Company's business plan contemplates that it will raise $10 million to $20 million of additional external debt financing to fund the Lansing facility construction and to provide additional financial flexibility. The Company respectfully submits that greater specificity regarding use of proceeds would not be appropriate or practicable given that the Company expects to continue to fund a significant portion of its development and commercialization costs with internally generated funds from sales of BioThrax.

51. *Please describe which "general corporate purposes" you plan to use the proceeds from this offering for. State an approximate dollar amount for each.*

Response: The Company advises the Staff that it does not have a specific plan, timeline or budget for the allocation of the net proceeds among potential general corporate purposes. In particular, as disclosed in the prospectus, because the Company is in the preliminary planning stages of its build out in Frederick, Maryland, it cannot reasonably estimate the timing and costs that will be necessary to complete this project. In addition, as disclosed, the Company has no current understandings, commitments or agreements to acquire or in license any technologies, products or businesses. Furthermore, as discussed in response to Comment 32, although the Company believes it will require additional sales and marketing personnel in the future, the Company does not currently plan to add a material number of such employees to its staff in the near term. Accordingly, the Company respectfully submits that greater specificity regarding the use of proceeds for general corporate purposes would not be appropriate or practicable.

Management's discussion and analysis of financial condition, page 49

Critical accounting policies and estimates

Revenue recognition, page 51

52. *Please disclose the amount of allowances for sales returns, rebates, special promotional programs, and discounts recorded as a reduction of gross sales for each of the years presented. Additionally, please tell us and disclose for each year presented, whether management has recorded a current year provision for sales made in the prior year.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 56 of Amendment No. 1.

53. *We note that you recognize revenue upon FDA release of product. Please explain to us in detail the FDA review process for your product including how often it occurs and the average length of the review.*

Response: The Company advises the Staff that the Company cannot sell BioThrax to its customers without written FDA approval for "Continued Manufacturing Use." As part of the FDA review process, the Company submits a detailed lot protocol to the Product Release Branch at the Center for Biologics Evaluation and Research for each BioThrax lot that the

Company produces for external sale. The Company also is required to submit product samples to the FDA for testing. Although the Company generally submits lot protocols and product samples promptly following the satisfactory completion of internal testing, the Company also is permitted to submit product samples in advance of the lot protocols. During 2005, the Company submitted lot protocols to the FDA on 30 occasions. During 2006 to date, the Company has submitted lot protocols to the FDA on 14 occasions. The length of the FDA review process is approximately four to six weeks. However, individual lots may be released sooner or later depending on factors including: reviewer questions, license supplement approval, reviewer availability and whether internal Company testing of product samples is completed before or concurrently with FDA testing.

Stock-based compensation, page 53

54. *We note that you have used an "independent valuation specialists" to help determine the fair value of your equity securities. It appears that these specialists are used by management as experts. As such, please name the independent valuation specialists and provide written consents, as appropriate.*

Response: The Company advises the Staff that, as disclosed, the Company's board of directors determines the fair value of the common stock for accounting purposes, including with respect to stock option grants. The assessments provided by independent valuation specialists were only one of a number of factors that the board of directors considered in determining the fair value of the common stock underlying previous stock option grants. The Company does not believe that consideration by the board of directors of assessments of the fair value of the underlying common stock by the independent valuation specialists results in either the independent valuation specialists being deemed experts or requires the filing of a consent pursuant to Rule 436 under the Securities Act. In addition, the Company submits that given the role of the independent valuation specialists, the identity of the independent valuation specialists is not material to investors in this offering.

Results of operations, page 59

55. *Please revise the comparison of years to discuss and quantify the reasons for each significant factor that resulted in significant increases or decreases in line items on your financial statements. Refer to Financial Reporting Codification Section 501.04. Based on your existing disclosures, it appears that you could have better quantified your discussion of revenues, cost of product sales, research and development expenses, and selling, general and administrative expenses. Additionally, please tell us why your cost of product sales as a percentage of revenues has substantially decreased over the years presented.*

Response: In response to the Staff's comment, the Company has revised and expanded the disclosure beginning on page 63 of Amendment No. 1 to better quantify the discussion of revenues, cost of product sales, research and development expenses and selling, general and administrative expenses.

The Company advises the Staff that the cost of product sales as a percentage of revenues has substantially decreased over the years presented primarily as a result of increasing manufacturing capacity at the Company's Lansing, Michigan facility by extending the hours of operation of the facility. This increase in manufacturing capacity allowed the Company to spread its fixed manufacturing costs over a greater number of doses manufactured, resulting in a decrease in the cost of product sales per dose. The Company respectfully advises the Staff that this increase in manufacturing capacity and the resulting decrease in cost of product sales per dose is disclosed on page 61 under "—Financial Operations Overview—Cost of product sales." The improved utilization of the Company's manufacturing capacity as a result of extending the hours of operation of the manufacturing facility is also disclosed in the applicable comparative period discussions with respect to cost of product sales under "—Results of operations." The Company further advises the Staff that, by comparison, the average sales price per dose sold has remained relatively stable during the years presented based on pricing in the Company's contracts with the DoD and HHS.

Liquidity and Capital Resources, page 66

56. *It appears your discussion of material changes in the components of cash flows is just a reiteration of your Statement of Cash Flows. Please include a discussion and analysis of the material changes in components of cash flows from operating activities. Please refer to Section IV of the Securities and Exchange Commission's Guidance Regarding Management's Discussion and Analysis of Financial Conditions and Results of Operations (Release Nos. 33-8350; 34-48960; FR-72).*

Response: In response to the Staff's comment, the Company has revised the disclosure on pages 71 to 73 of Amendment No. 1.

57. *Please revise to describe any material intended uses and sources of funds. For example, you have disclosed that you are in the process of building a new facility and expanding two other facilities. Your discussion should discuss the anticipated costs of these projects and how you expect to finance them.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 76 of Amendment No. 1.

Contractual Obligations, page 68

58. *We note that you did not include future royalties and milestone payments in your contractual obligations table. Please disclose, to the extent material, the amount and timing of milestone commitments that are reasonably likely to be paid and the events that would require payment. Additionally, please consider enhancing your discussion of these potential milestone payments within Liquidity and Capital Resources. Please refer to Financial Reporting Release 72, section IV.*

Response: In response to the Staff's comment, the Company has updated the contractual obligations table in Amendment No. 1 to disclose financially material royalties and milestones related to current development programs that the Company estimates are probable to occur.

59. *We note that you have included scheduled interest payments, net of capitalization. Please revise table to include scheduled interest payment gross or tell us why you believe that the net presentation is appropriate. It would appear that you are obligated to make the scheduled payments regardless of whether you capitalize or expense them.*

Response: In response to the Staff's comment, the Company has updated the contractual obligations table in Amendment No. 1 to include total scheduled interest payments.

60. *Please reconcile the $13.8 million of short and long-term debt disclosed in the contractual obligation table to the $19.5 million in debt you disclose as debt outstanding as of July 31, 2006.*

Response: The reconciliation of total short and long-term debt as of March 31, 2006 of $13.8 million disclosed in the contractual obligations table to debt outstanding as of July 31, 2006 of $19.5 million is as follows: The $13.8 million of short and long-term debt as of March 31, 2006 includes $2.1 million in scheduled interest payments, leaving a total book value of $11.7 million. The Company made total principal payments of approximately $0.7 million between April 1 and July 31, 2006, bringing the total to $11.0 million. The Company incurred additional debt in May 2006 of $8.5 million in connection with a mortgage loan with HSBC Realty Credit Corporation, bringing the total to $19.5 million.

As part of providing updated interim financial information in accordance with Item 3-12 of Regulation S-X, the Company has updated the contractual obligations table in Amendment No. 1 to reflect obligations as of June 30, 2006. The reconciliation of total short and long-term debt as of June 30, 2006 of $26.1 million disclosed in the contractual obligations table to debt outstanding as of August 31, 2006 of $39.5 million is as follows: The $26.1 million of short and long-term debt as of June 30, 2006 includes $6.5 million in scheduled interest payments, leaving a total book value of $19.6 million. The Company made total principal payments of approximately $0.1 million between July 1 and August 31, 2006, bringing the total to $19.5 million. The Company incurred additional debt in August 2006 of $20.0 million, consisting of $10.0 million in connection with a term loan with HSBC Credit Corporation and $10.0 million under its line of credit with Fifth Third Bank, bringing the total to $39.5 million.

Debt financing, page 68

61. *We note you have received approximately $7.0 million and $8.5 million under debt facilities. Please identify the interest rate, maturity date, and any other material terms for each facility. We note you have provided for some of the terms of these agreements on page 69. We also note you have filed each of these agreements as exhibits to your registration statement.*

Response: In response to the Staff's comment, the Company has revised the disclosure on pages 73 to 75 of Amendment No. 1 to identify the material terms for each debt facility.

62. *Are you currently in compliance with all debt covenants?*

Response: The Company advises the Staff that as of June 30, 2006, it was in compliance with all covenants under its debt facilities.

Business, page 72

Products, page 79

63. *Your agreements with HPA are not sufficiently described. Please revise to disclose all the material terms, including amounts paid or received to date, potential milestone payments to be made or received, the existence of royalty rights, expiration and termination provisions, and any other material terms.*

Response: In response to the Staff's comment, the Company has added a cross reference on page 86 to the more detailed description of the HPA agreements in "Intellectual property and licenses — License agreements" on pages 111 and 112. The Company respectfully submits that such disclosure, as revised, describes all material terms of the HPA agreements. The Company further advises the Staff that the HPA agreements do not provide for milestone payments.

64. *Please include a discussion of the material terms of your funding agreement with Wellcome Trust and file the agreement as an exhibit.*

Response: The Company advises the Staff that it does not believe that the terms of the funding agreement with the Wellcome Trust are material to investors in this offering. Accordingly, the Company respectfully submits that a more detailed discussion of the material terms of the agreement is not necessary. In addition, the Company respectfully submits that the funding agreement with the Wellcome Trust is not required to be filed as an exhibit to the Registration Statement.

The Company believes that the funding agreement with the Wellcome Trust is of the type that ordinarily accompanies the kind of business conducted by the Company and was entered into in the ordinary course of business. In addition, the Company does not believe that the Company's business is substantially dependent on this arrangement or that the agreement is material to the Company in light of the substantial revenues that the Company has generated from BioThrax product sales, which it uses to fund product development. The Wellcome Trust agreement provides for funding of approximately £1.9 million, or approximately $3.7

million. The Company's average annual product sales for the past three full fiscal years is approximately $87.9 million.

Botulinum immune globulin, page 86

65. *We note you plan to do a proof-of-concept trial for your botulinum immune globulin candidate as stated on page 87. Please explain what a proof-concept trial is and how it fits into the typical three-phase clinical trial process.*

Response: The Company advises the Staff that a proof-of-concept study is a preclinical study designed to determine the suitability of a product candidate for further development and potential Phase I clinical testing. The goal of a proof-of-concept study for a vaccine is to demonstrate protective efficacy in animal challenge models or an immune response that is associated with protection following administration of the product candidate. The Company has revised the disclosure on page 95 to provide additional detail regarding the proof-of-concept study.

66. *In the fourth full paragraph on page 87 you state that you expect to rely on the safety and immunogenicity data from the pentavalent botulinum toxoid vaccine previously manufactured by the State of Michigan in the development of bivalent botulinum toxoid vaccine. Please indicate when the study was completed and why you believe the FDA will accept the State of Michigan's data to replace a Phase II clinical trial by you.*

Response: The Company advises the Staff that the Michigan Department of Public Health previously manufactured the PBT vaccine at the site in Lansing, Michigan that the Company acquired in 1998. The PBT vaccine was used and distributed by the CDC for the immunization of at risk laboratory personnel. In all, more than 21,000 immunizations have been safely administered. In addition, the DoD funded clinical trials of the PBT vaccine and used the PBT vaccine during Operation Desert Shield/Desert Storm. In 1996, the FDA's Vaccine and Related Products Advisory Committee reviewed the safety data for the PBT vaccine. This Advisory Committee reviewed and approved the plan for demonstration of efficacy under what is now referred to as the FDA's "animal rule." The plan involved the passive administration of various concentrations of botulinum immune globulin to animal models to determine the level of antibody required to elicit protection to toxin challenge. The plan was carried out, animal efficacy models were developed and preliminary protective levels of antibody were determined.

As part of the overall licensing plan, the DoD conducted a Phase II safety and immunogenicity clinical trial for the PBT vaccine from July 1998 to May 2000. A total of 348 subjects enrolled in the trial.

The trial provided useful information concerning the optimal immunization schedule and also indicated that the PBT vaccine appeared to be safe and that the incidence and severity of local and systemic reactions was acceptable. The Company believes that this study, together with the animal efficacy data and the extensive use of the PBT vaccine by the CDC, provides the FDA a level of comfort with the Company's new botulinum toxoid vaccine. For example, the FDA has agreed to allow the Company to proceed into Phase I clinical testing without conducting a preclinical toxicity study. While the ability to proceed with a plasma collection program under an IND after the planned Phase I clinical trial will depend on the safety and immunogenicity results of the trial, the Company believes the extensive previous experience with the PBT vaccine supports its plans.

The Company has revised the disclosure on page 95 of Amendment No. 1 accordingly to provide additional support regarding its anticipated development plan.

Typhoid vaccine, page 88
Hepatitis B therapeutic vaccine, page 90
Group B streptococcus vaccine, page 92
Chlamydia vaccine, page 93
Meningitis B vaccine, page 94

67. *We note the statistical and other figures you cite to in each of the above referenced sections relating to market opportunity. Please provide us with copies of the reports you cite to in that section. The copies should be marked to indicate the information supporting your statements.*

Response: Under separate cover, the Company has supplementally provided the Staff with the documentary support for the statistical and other figures cited in each of the above referenced sections relating to market opportunity. As requested, the materials provided to the Staff have been marked to indicate the information supporting the statements in the Registration Statement.

68. *We note your disclosure in the above referenced sections where you provide the results of your clinical trials. Please revise your discussions to include appropriate caveats indicating that the results do not provide enough evidence regarding efficacy or safety to support an application with the FDA, that additional tests will be conducted and that subsequent results often do not corroborate earlier results.*

Response: In response to the Staff's comment, the Company has included cautionary language on page 88 of Amendment No. 1 regarding the clinical trial process and the development of the Company's product candidates.

69. *Please also indicate whether the results of your initial clinical tests done on the vaccine candidates referenced in the each of the above referenced sections have been subject to any type of statistical analysis and, if so, whether the results of trial were statistically significant. In addition, the degree of statistical significance or the P value should be disclosed and explained.*

Response: The Company advises the Staff that the immunogenicity data from some of the Company's Phase I clinical trials of its typhoid, hepatitis B, and group B streptococcus vaccine candidates were subject to statistical analysis. The purpose of these Phase I clinical trials was to evaluate the safety and immunogenicity of the product candidates. However, the Company does not believe that the p-values or other measures of statistical significance of immunogenicity data generated in these Phase I clinical trials are material to investors. Immunogenicity does not establish efficacy for purposes of regulatory approval of pharmaceutical product candidates. Phase I clinical trials are required to establish the safety of the product candidate, not its immunogenicity, before Phase II clinical trials to evaluate the efficacy of the product candidate can begin. With respect to vaccines, early indications of efficacy through the evaluation of immunogenicity data may be obtained at the same time as safety data by testing the blood titer levels of the participants in the trial and comparing the titer levels among participants who receive different doses of the vaccine candidate. These data, however, only provide indications of efficacy and are neither required nor sufficient to enable a product candidate to proceed to Phase II clinical development. Accordingly, the Company respectfully submits that a discussion in the prospectus of the statistical analyses of the immunogenicity data from these clinical trials discussed above is neither required nor appropriate.

Government Contracts, page 104

70. *When do you expect to complete delivery of the additional five million doses of BioThrax to HHS?*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 112 of Amendment No. 1.

Litigation, page 116

71. *Please revise to disclose the amounts sought in each lawsuit.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 124 of Amendment No. 1.

Management, page 121

72. *It does not appear the business description for Mr. Ronald Richard contains dates of employment or other business related activities for the last five years. Please revise your business description for Mr. Richard to include this information.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 130 of Amendment No. 1.

Summary Compensation Table, page 125

73. *You indicate in footnote 1 that bonus amounts for the 2005 have not yet been determined. Please indicate when you expect to know your 2005 bonus amounts.*

Response: In response to the Staff's comment, the Company has revised the disclosure on page 135 of Amendment No. 1.

Selling Shareholders, page 147

74. *Please tell us whether any of the selling stockholders is a broker-dealer or an affiliate of a broker-dealer. If any of the selling shareholders are broker-dealers or affiliates of a broker-dealer, tell us supplementally whether any of the selling shareholders received these shares as underwriting compensation. We may have further comments.*

Response: Microscience Investments Limited may be an affiliate of a broker-dealer. J.P. Morgan Partners, LLC, an affiliate of J.P. Morgan Securities Inc., an underwriter in the offering, through its ownership of various entities, owns approximately 10.9% of the voting securities of Microscience Investments

Limited.

On June 23, 2005, the Company acquired all of the outstanding shares of capital stock of Microscience from Microscience Investments Limited in exchange for 1,264,051 shares of the Company's Class A Common Stock. The Company advises the Staff that the shares received by Microscience Investments Limited are not considered underwriting compensation under the rules and regulations of the National Association of Securities Dealers, Inc.

Financial Statements

Consolidated statements of operations, page F-4

75. *Please tell us why management determined that classification of the "settlement of State of Michigan obligation" and the "litigation settlement" are properly classified as credits to operating expenses as opposed to other income (expense). Please cite authoritative literature management relied upon.*

Response: In determining the proper presentation for the settlement of the State of Michigan obligation and the litigation settlement, the Company relied on the guidance in Article 5 of Regulation S-X as well as Statement of Financial Accounting Concepts No. 6.

The settlement of the State of Michigan obligation represents the reversal of a prior accrual. A portion of the consideration for the Company's acquisition of assets from the State of Michigan in 1998 was an obligation to deliver specific products and royalties to the State of Michigan over time. The Company estimated the value of this obligation at the time of the asset acquisition and accrued for this amount. In 2004, the Company negotiated a settlement with the State of Michigan that fulfilled all previously established obligations for less than the estimated and accrued amount. As a result, the Company accounted for the reversal of the prior accrual in operating income. The Company recorded the full amount of the accrual in 2004 and considered it in the purchase price allocation. Accordingly, the value of the accrual affected asset values. As of December 31, 2005, the assets had been depreciated or amortized completely through operating expense. Therefore, the Company concluded that the reversal of the accrual should be treated consistently.

The litigation settlement in the financial statements was a resolution of a lawsuit that the Company had initiated against Elan Pharmaceuticals, Inc.,

Athena Neurosciences, Inc. and Solstice Neurosciences, Inc. in an effort to clarify intellectual property rights and recover royalties owed to the Company. In June 2005, the Company settled this dispute for $10 million. The settlement proceeds partially compensated the Company for development expenses incurred in prior periods to develop the intellectual property that was the subject of the litigation. In prior years, the Company had included these development expenses as operating expenses within research and development expenses.

Accordingly, the Company concluded that neither the settlement of the State of Michigan obligation nor the litigation settlement met the criteria of non-operating income and believes that each of these items is properly classified as a component of operating income and expense.

Notes to consolidated financial statements

1. Nature of the business and organization

76. *Please tell us, and disclose how you have accounted for the reorganization in June 2004. It would appear that the transaction should have been accounted for as a reverse acquisition. Additionally, please disclose whether Emergent BioSolutions had any operations prior to June 2004 and, if so, whose historical financial information is being presented.*

Response: In determining the proper presentation of the Microscience acquisition the Company relied upon the guidance in Statement of Financial Accounting Standards No. 141, *Business Combinations* ("SFAS No. 141"), Appendix D, Continuing Authoritative Guidance speaks to Transactions Between Entities Under Common Control. This guidance states that:

> ...the term business combination excludes transfers of net assets or exchanges of shares between entities under common control. The following are examples of those types of transactions:
>
> a. An entity charters a newly formed entity and then transfers some or all of its net assets to that newly chartered entity.
>
> b. A parent company transfers the net assets of a wholly owned subsidiary into the parent company and liquidates the subsidiary. That transaction is a change in legal organization but not a change in the reporting entity.

c. A parent company transfers its interest in several partially owned subsidiaries to a new wholly owned subsidiary. That also is a change in legal organization but not in the reporting entity.

d. A parent company exchanges its ownership interests or the net assets of a wholly owned subsidiary for additional shares issued by the parent's partially owned subsidiary, thereby increasing the parent's percentage of ownership in the partially owned subsidiary but leaving all of the existing minority interest outstanding.

At the time of the reorganization in June of 2004, BioPort Corporation ("BioPort") and Emergent BioSolutions were under common control. As a result of the reorganization, BioPort became a wholly owned subsidiary of Emergent BioSolutions. Prior to this reorganization, Emergent BioSolutions had no operations. The financial statements presented for the periods prior to June 2004 represent the results generated by BioPort. SFAS No.141, Paragraph D12 states that, " When accounting for a transfer of assets or exchange of shares between entities under common control, the entity that receives the net assets or the equity interests shall initially recognize the assets and liabilities transferred at their carrying amounts in the accounts of the transferring entity at the date of transfer." The Company employed this accounting treatment for the reorganization.

2. Summary of significant accounting policies

Revenue recognition, page F-10

77. *Please provide to us, in disclosure type format, the following information regarding your application of the SEC Interpretation Commission Guidance Regarding Accounting for Sales of Vaccines and BioTerror Countermeasures to the Federal Government for Placement in the Pediatric Vaccine Stockpile or the Strategic Nation Stockpile or tell us why this information should not be disclosed:*

    a. *Material terms and conditions of contracts, including all fees received, description of each enumerated vaccine product that you sell to the vaccine stockpiles, and any continuing involvement with the stockpiles;*

    b. *Market value of inventory available to be rotated out of vaccine stockpiles and of sales to third parties that were filled from vaccine stockpiles; and*

    c. *Product quantities and related product sales revenue for enumerated vaccines actually delivered from stockpiles.*

Response: The Company advises the Staff that it did consider the SEC Interpretation noted in the Staff's comment in preparing its Registration Statement. As the Company describes in the prospectus, the Company has had three primary customers during the period covered by the financial statements included in the Registration Statement: the DoD, the U.S. Department of Health and Human Services ("HHS") and other non-U.S. governmental entities. The sales of the Company's product to the DoD and to non-U.S. governments do not fall into the classification of sales into the strategic national stockpile ("SNS"). Accordingly, the Company's recognition of revenue from those sales does not incorporate or rely upon the alternative accounting provisions of the SEC Interpretation.

Although the SEC Interpretation is applicable to the Company's contracts with HHS for sales of BioThrax to the SNS, because the Company recognizes revenue upon delivery of product, the Company has not applied this guidance. The Company's contract with HHS provides for physical delivery of BioThrax to a HHS carrier at which time HHS assumes title and risk of loss. There are no subsequent obligations on the part of the Company, and the earning process is completed. To the Company's knowledge, the doses delivered to the HHS remain in the SNS until expiration or use. As a result of these conditions surrounding the Company's sales, the Company has referenced the standard revenue recognition policies contained in Staff Accounting Bulletin No. 104 and is not relying upon the provisions of the SEC Interpretation.

To address the points above, the Company further advises the Staff that:

- the Company has no continuing involvement with the SNS (other than continued delivery of product to HHS for the SNS);
- the Company does not rotate doses out of the SNS;
- the Company does not, and is not able to, make sales of product to any third parties from the doses that the Company delivers to HHS for the SNS; and
- the Company realizes no revenue during the reporting period for doses of BioThrax that HHS provides from the SNS.

78. *Please note that you have determined that the acquisition of Microscience Limited was an asset purchase under SFAS 141. Please provide to us whether Microscience meets the definition of a business as defined in section 11-01(d) of Regulation S-X. If so, please tell us why you have not included financial statements in compliance with Rule 3-05 of Regulation S-X.*

Response: In determining the proper presentation of the Microscience acquisition, the Company relied upon the guidance in Rule 11-01 of Regulation S-X, Emerging Issues Task Force 98-3, *Determining Whether a Nonmonetary Transaction Involves Receipt of Productive Assets or of a Business* ("EITF No. 98-3") and Statement of Financial Accounting Standards No. 7, *Accounting and Reporting by Development Stage Enterprises* ("SFAS No. 7").

Rule 11-01(d) of Regulation S-X states that a business should be evaluated in light of the facts and circumstances involved and whether there is sufficient continuity of the acquired entity's operations prior to and after the transactions so that disclosure of prior financial information is material to an understanding of future operations.

At the time of the acquisition of the Microscience assets, Microscience was not generating any revenues. Prior to the acquisition, Microscience issued audited financial statements as a development stage enterprise in accordance with SFAS No. 7. In addition, the business plan that Microscience had prepared at the time of acquisition did not show any significant revenue generating capability for the foreseeable future. At the time of the acquisition, Microscience had employees, certain intellectual property rights, a leased physical facility and minimal fixed assets. The

employees consisted primarily of an at will work force with skill sets similar to most development stage companies. In addition, Microscience had no market distribution system, no sales force and no customer base. At the time of the acquisition, Microscience's product candidates were either in preclinical or Phase I clinical development. Product candidates at these stages of development require significant additional investment of time and effort prior to submission to a regulatory authority for the evaluation of potential marketing approval. The Microscience development plan did not show marketability for the foreseeable future.

Subsequent to the acquisition of Microscience, the Company (i) installed a new management team, (ii) performed an extensive evaluation of existing Microscience programs, resulting in the reallocation of resources among these programs, and (iii) advanced the development of the Microscience assets. For example, the Company recently entered into a collaboration agreement with Sanofi Pasteur that provided for an upfront license fee of €3 million and the opportunity for significant ongoing revenue.

Based on these facts and circumstances, the Company determined that Microscience did not qualify as a business. In addition, the Company believes that the guidance contained in EITF No. 98-3 and SFAS No. 7 also supports the assertion that Microscience was not a business. Specifically, EITF No. 98-3 states:

> A business is a self-sustaining integrated set of activities and assets conducted and managed for the purpose of providing a return to investors. A business consists of (a) inputs, (b) processes applied to those inputs, and (c) resulting outputs that are used to generate revenues. For a transferred set of activities and assets to be a business, it must contain all of the inputs and processes necessary for it to continue to conduct normal operations after the transferred set is separated from the transferor, which includes the ability to sustain a revenue stream by providing its outputs to customers.
>
> The elements necessary for a transferred set to continue to conduct normal operations will vary by industry and by the operating strategies of the transferred set. An evaluation of the necessary elements should consider:

Inputs

- Long-lived assets, including intangible assets, or rights to the use of long-lived assets.
- Intellectual property.
- The ability to obtain access to necessary materials or rights.
- Employees.

Processes

The existence of systems, standards, protocols, conventions, and rules that act to define the processes necessary for normal, self-sustaining operations, such as (i) strategic management processes, (ii) operational processes, and (iii) resource management processes.

Outputs

The ability to obtain access to the customers that purchase the outputs of the transferred set.

A transferred set of activities and assets fails the definition of a business if it excludes one or more of the above items such that it is not possible for the set to continue normal operations and sustain a revenue stream by providing its products and/or services to customers.

Based on the authoritative accounting guidance and Rule 11-01(d) of Regulation S-X, the Company determined that Microscience did not meet the definition of a business, based on the facts and circumstances at the time, and concurred with the determination by the previous management of Microscience that it was a development stage enterprise. In addition, the Company concluded that disclosure of prior financial information was not material to an understanding of future operations, due to operational changes implemented at the time of acquisition. Accordingly, the Company accounted for the Microscience transaction as an acquisition of assets in accordance with SFAS No. 141 and concluded that standalone financial statements for Microscience were not required to be presented in the Registration Statement under Rule 3-05 of Regulation S-X.

9. Long-term debt and related party notes payable, page F-19

79. *You disclose on page F-19 that your obligations under the Term Loan dated October 2004 are guaranteed by all of the subsidiaries of the company. Please explain to us your consideration of Rule 3-10 of Regulation S-X to include one of the following in your annual report:*

a. *financial statements of the subsidiary guarantors;*

b. *condensed consolidating financial information in the notes to the financial statements; or,*

c. *the disclosures specified in the Notes to Rule 3-10(f) of Regulation S-X including the narrative disclosures required by Rule 3-10(i)(9) and (10) of Regulation S-X.*

Response: The Term Loan that is referenced above, dated October 2004, is a real estate mortgage loan between Emergent Commercial Operations Frederick, Inc. (formerly named Advanced BioSolutions, Inc.), a wholly owned subsidiary of the Company and Mercantile Potomac Bank. The guaranty provisions of this mortgage loan are limited to the punctual payment of indebtedness.

Rule 3-10(a)(1) of Regulation S-X requires that: “Every issuer of a registered security that is guaranteed and every guarantor of a registered security must file the financial statements required for a registrant by Regulation S-X.” The Company respectfully advises the Staff that the real estate mortgage loan with Mercantile Potomac Bank is not a registered security. Accordingly, the Company does not believe that Rule 3-10 is applicable.

10. Stockholders' equity, page F-20

80. *In order for us to fully understand the equity fair market valuations reflected in your financial statements, please provide an itemized chronological schedule covering all equity instruments issued since January 1, 2005 through the date of your response. Please provide the following information separately for each equity issuance:*

a. *The date of the transaction;*

b. *The number of shares/options issued/granted;*

c. *The exercise price or per share amount paid;*

d. *Management's fair market value per share estimate and how the estimate was made;*

e. *An explanation of how the fair value of the convertible preferred stock and common stock relate, given the one for one conversion ratio;*

f. *The identity of the recipient, indicating if the recipient was a related party;*

g. *Nature and terms of concurrent transactions; and,*

h. *The amount of any compensation or interest expense element.*

Progressively bridge management's fair market value determinations to the current estimated IPO price range. Please reconcile and explain the differences between the mid-point of your estimated offering price range and the fair values included in your analysis.

Response: *Introduction*

Attached to this letter as Schedule A is an itemized chronological schedule detailing each issuance of common stock and each grant of options to purchase common stock by the Company since January 1, 2005 through the date of this response, including the date of the transaction, the number of shares/options issued/granted, the exercise or purchase price per share, vesting terms, the identity of the recipient and his or its relationship to the Company and the amount of deferred compensation expense or interest expense element, if any, recorded by the Company with respect thereto.

The Company has from time to time granted stock options as incentives to directors and employees. The Company did not recognize any compensation or interest expense related to stock options granted from January 1, 2005 through December 31, 2005 as all options were granted with an exercise price equal to the estimated fair value of the class B non-voting common stock ("Class B Common Stock") underlying the options as determined by the Company's board of directors. The Company recognized compensation expense related to stock options granted during

2006 based on the Company's adoption of Statement of Financial Accounting Standards No. 123 (revised 2004), *Share Based Payment* (SFAS No. 123(R)) on January 1, 2006.

The Company has not previously issued any shares of preferred stock. The only issuance of common stock by the Company since January 1, 2005, other than upon the exercise of outstanding stock options, was the issuance of 1.3 million shares of class A voting common stock ("Class A Common Stock") in connection with the Microscience acquisition on June 23, 2005. These shares of Class A Common Stock were valued for accounting purposes at $21.36 per share. There were no other equity transactions completed concurrently with the Microscience acquisition. The Company has not issued any warrants since January 1, 2005 through the date of this response.

In connection with each grant of stock options, the Company's board of directors made a good faith determination of the fair value of the Company's Class B Common Stock as of the date of grant. In making its determination, the board of directors drew on the knowledge and business and financial experience of its officers and directors. Factors considered by the directors in determining the fair value of the Class B Common Stock at the various grant dates included the following:

- the history and nature of the Company's business and results of operations;
- the Company's prospects for growth, including potential contracts for BioThrax product sales;
- the Company's available cash, assets and financial condition;
- prior determinations of the fair value of the Class B Common Stock underlying stock options granted and the effect of corporate developments, including the progress of the Company's product candidates, that have occurred between the time of the grants;
- rights and preferences of the Class B Common Stock compared to the rights and preferences of the Company's Class A Common Stock;
- values of public companies that the Company believes are comparable, adjusted for the risks related to and the lack of liquidity for the shares;

- the time frame in which a liquid market would likely be available for the shares;
- the assessments provided by independent valuation specialists;
- business developments involving direct competitors; and
- general economic trends and the economic outlook and market conditions for the Company's industry.

The assessments of independent valuation specialists considered by the board of directors were based upon the application of the following approaches:

- Market approach — determines an estimated value based on an analysis of revenues, earnings and enterprise values of comparable public companies.
- Income approach — determines an estimated value using a discounted cash flow analysis based on projections of the Company's future cash flows.

As indicated on Schedule A, in January 2005 through April 2005, the Company granted options to purchase an aggregate of 110,000 shares of Class B Common Stock to directors and employees of the Company at an exercise price of $7.89 per share. The Company's board of directors made good faith determinations that the fair value of the Company's Class B Common Stock at the time of grant was $7.89 per share. The board of directors made these determinations based on the factors described above. In making its own independent determination of the fair value of the Class B Common Stock underlying options granted, the board, among other factors, considered information provided by a professional national valuation firm.

From May 2005 to the middle of June 2005, the Company granted options to purchase an aggregate of 135,000 shares of Class B Common Stock to directors and employees of the Company at an exercise price of $10.06 per share. The Company's board of directors made a good faith determination that the fair value of the Company's Class B Common Stock at the time of these grants was $10.06 per share. The board of directors made this determination based on the factors described above. In making its own independent determination of the fair value of the Class B Common Stock

underlying options granted, the board, among other factors, considered information provided by a professional national valuation firm.

From the end of June 2005 to December 2005, the Company granted options to purchase an aggregate of 35,000 shares of Class B Common Stock to directors and employees of the Company at an exercise price of $24.52 per share. The Company's board of directors made a good faith determination that the fair value of the Company's Class B Common Stock at the time of these grants was $24.52 per share. The board of directors made this determination based on the factors described above. In making its own independent determination of the fair value of the Class B Common Stock underlying options granted, the board, among other factors, considered information provided by a professional national valuation firm.

On June 30, 2006, the Company granted options to purchase an aggregate of 57,500 shares of Class B Common Stock to directors and employees of the Company at an exercise price of $29.58 per share. The Company's board of directors made a good faith determination that the fair value of the Company's Class B Common Stock at the time of these grants was $29.58 per share. The board of directors made this determination based on the valuation factors described above.

On September 20, 2006, the Company granted options to purchase an aggregate of 32,500 shares to employees of the Company at an exercise price of $38.16 per share. The Company's board of directors made a good faith determination that the fair value of the Company's Class B Common Stock at the time of these grants was $38.16 per share. The board of directors made this determination based on the valuation factors described above.

Determination of Fair Value for Accounting Purposes

Independent valuation specialists conducted valuations to aid the board of directors in the determination as to the fair value of the Class B Common Stock underlying the stock option grants. The independent valuation specialists performed the stock option value analysis in accordance with standards established by the American Institute of Certified Public Accountants.

In determining the fair value of the Company's Class B Common Stock at the time of the option grants from January 2005 through April 2005, the

board of directors considered the stock option grant valuation conducted by an independent valuation specialist during the fourth quarter of 2004, with the analysis being finalized during the first quarter of 2005. This valuation was conducted to calculate the fair value of the Company, which at this time had two operating subsidiaries: BioPort and Antex Biologics, Inc.

This valuation was conducted using:

- unaudited financial statements for the year ended June 30, 2004 and audited financial statements for the year ended December 31, 2003;
- internally prepared forecasted financial statements for the years ending December 31, 2004 through 2008;
- a market analysis of commercial demand for anthrax vaccine for the years ending 2005 through 2009, prepared by management;
- a review of venture capital rates of return applicable to a company in the third stage of investment; and
- interviews with members of senior management of the Company to discuss the Company's history, operations, financial condition, industry and future prospects.

During this period, the Company had no expectations of completing an initial public offering in the near term. Accordingly, the Company's board of directors determined that the fair value of the Company's Class B Common Stock during this period was $7.89 per share, and the Company recorded no stock-based compensation in connection with the options granted during this period.

In determining the fair value of the Company's Class B Common Stock with respect to the option grants from May 2005 to the middle of June 2005, the board of directors considered the stock option grant valuation conducted by an independent valuation specialist during the first quarter of 2005, with the analysis being finalized during the second quarter of 2005.

This valuation was conducted using:

- unaudited financial statements for the year ended December 31, 2004 and audited financial statements for the year ended December 31, 2003;
- internally prepared forecasted financial statements for the years ending December 31, 2005 through 2009;
- a market analysis of commercial demand for anthrax vaccine for the years ending 2005 through 2009, prepared by management;
- a review of venture capital rates of return applicable to a company in the third stage of investment;
- a review and analysis of the valuation metrics implied by comparable public companies and the control and marketability attributes of the Company's non-voting equity stock, as a private company;
- interviews with members of senior management of the Company to discuss the Company's history, operations, financial condition, industry and future prospects; and
- an analysis of the Company's industry.

The Company's board of directors determined that the fair value of the Class B Common Stock for this period was $10.06 per share, and the Company recorded no stock-based compensation in connection with the options granted during this period.

In determining the fair value of the Company's Class B Common Stock with respect to the option grants from the end of June 2005 to December 2005, the board of directors considered the stock option grant valuation conducted by an independent valuation specialist during the third and fourth quarters of 2005, with the analysis being finalized during the first quarter of 2006.

This valuation was conducted using:

- a consideration of the history and nature of the Company's business and growth opportunities;

- general economic trends and the economic outlook and market conditions for the Company's industry;
- the market position, recognition and profitability of the Company's products and services;
- financial projections of the Company; and
- the risks associated with competition, customers and barriers to entry and exit from the industry.

The Company's board of directors determined that the fair value of the Class B Common Stock for this period was $24.52 per share, and the Company recorded no stock-based compensation in connection with the options granted during this period.

The Company's board of directors determined that the fair value of the Class B Common Stock for the options granted on June 30, 2006 was $29.58 per share, and the Company recorded stock-based compensation in connection with the options granted on that date in accordance with SFAS 123(R). The Company also recorded stock-based compensation in connection with previously granted options that continued to vest during this period in accordance with SFAS 123(R). The increase in the fair value of the Class B Common Stock from the prior determination reflected the progress towards the Company's initial public offering and the growth and development in the Company's business.

The Company's board of directors determined that the fair value of the Class B Common Stock for the options granted on September 20, 2006 was $38.16 per share, and the Company recorded stock-based compensation in connection with the options granted on that date in accordance with SFAS 123(R). The increase in the fair value of the Class B Common Stock from the prior determination reflected the progress towards the Company's initial public offering and the growth and development in the Company's business.

Discussion of Increases from Estimates of Fair Value to Current Estimated Preliminary Filing Range

For purposes of the Company's analysis in response to the Staff's comment, the Company has assumed an indicative filing price range of $40 to $44 per share for the offering based on existing conditions in the

public capital markets, the Company's financial position, results of operations and prospects, the market valuations of comparable publicly traded companies and preliminary discussions with the underwriters regarding potential valuations for the Company. The actual price range to be included in a subsequent pre-effective amendment to the Registration Statement has not yet been determined and remains subject to adjustment based on factors outside of the Company's control, such as changes in market conditions and the valuation of comparable publicly traded companies. However, the Company believes that the foregoing indicative filing price range will not be subject to significant change.

The Company believes that the increase in the fair value of its Class B Common Stock from $7.89 per share in January 2005 to $38.16 in September 2006 and to the mid-point of the currently anticipated filing range of $42 per share is attributable to the Company's continued growth in its business and prospects, as described in further detail below.

- in May 2005, the Company entered into an agreement to supply five million doses of BioThrax to HHS for placement into the SNS for a fixed price of $123 million;
- in May 2005, the Company finalized a settlement agreement in the litigation that it had initiated against Elan Pharmaceuticals, Inc., Athena Neurosciences, Inc. and Solstice Neurosciences, Inc. in an effort to clarify intellectual property rights and recover royalties owed to the Company, resulting in a $10 million settlement payment to the Company;
- in June 2005, the Company's Microscience acquisition created a company with two business segments (biodefense and commercial), with a significantly expanded product portfolio, including products in Phase I clinical development;
- in November 2005, VaxGen announced that it would not be able to perform its contractual obligations to deliver 25 million doses of an experimental recombinant anthrax vaccine to HHS for the SNS in 2006 as required;
- in December 2005, the FDA published its final order concluding that BioThrax is safe and effective for the prevention of anthrax infection by all routes of exposure, including inhalation;

- in February 2006, the Company commenced the construction of a new 50,000 square foot manufacturing facility on its Lansing, Michigan campus;
- in February 2006, a federal appellate court ruled that an injunction prohibiting the DoD from administering BioThrax to military personnel without informed consent of the recipient or a Presidential waiver had been dissolved;
- in March 2006, the Company formally initiated its efforts to effect an initial public offering of its common stock by identifying managing underwriters and conducting an organizational meeting for the proposed offering;
- in March 2006, the U.K. Medicines and Healthcare Products Regulatory Agency approved the Company's Phase II clinical trial application for the Company's hepatitis B therapeutic vaccine candidate;
- in April 2006, the Company completed the acquisition of a facility in Frederick, Maryland to enable the development of a pilot plant and large scale commercial manufacturing facility for the production of new vaccine product candidates;
- in April 2006, the DoD issued a notice that it intends to negotiate a sole source fixed price contract for the purchase of up to an additional 11 million doses of BioThrax over one base contract year plus four option years;
- in April 2006, a federal court entered summary judgment in the Company's favor in four lawsuits asserting BioThrax product liability claims on behalf of approximately 122 individuals;
- in May 2006, the Company entered into a license and co-development agreement with Sanofi Pasteur, the vaccines business of Sanofi-Aventis, for the Company's meningitis B vaccine candidate, that provided for an upfront license fee to the Company of €3 million, payments to the Company of up to a maximum of €73 million upon the achievement of specified milestones and royalties based on net sales of licensed products;

- in May 2006, VaxGen indicated that its new anthrax vaccine product would be further delayed, and its HHS contract was modified to extend the deadlines to complete various milestones, including deliveries, and impose additional requirements for clinical and non-clinical studies to be completed prior to the initiation of vaccine deliveries to the SNS;
- in May 2006, the Company entered into a contract modification with HHS for the delivery of an additional five million doses of BioThrax by May 2007 for a fixed price of $120 million;
- on August 14, 2006, the Company filed a Registration Statement for its initial public offering;
- in August 2006, the Department of Homeland Security approved the Company's application under the Safety Act, enacted by the U.S. Congress in 2002, for liability protection for sales of BioThrax;
- in August 2006, the National Institute of Allergy and Infectious Diseases awarded grant funding to the Company of up to $3.7 million for preclinical tolerability, pharmacokinetic and efficacy studies of the Company's anthrax immune globulin candidate; and
- in August 2006, the Company obtained a $10 million term loan to fund a portion of the construction costs of its facility expansion in Lansing, Michigan.

Prior to August 2006, when the Company filed the Registration Statement, there was significant uncertainty as to whether the Company would proceed with an IPO. As a result of the filing of the Registration Statement and continued progress towards completing the registration process after this time, the Company's board of directors reduced the discount for lack of liquidity and marketability that it applied in its determination of the fair value of the Class B Common Stock.

The Company believes that the successful completion of its initial public offering will add value to its common stock for the following reasons:

- the Company's common stock will gain increased liquidity and marketability;
- the Company's cost of capital will be lowered;

- the proceeds from the offering will enhance the Company's enterprise value by improving its ability to execute its business strategy, expand its sales, marketing and manufacturing capabilities and fund its development activities; and
- the Company will be better situated, utilizing common stock that will have a readily ascertainable market value and enhanced liquidity, to obtain marketed products and development stage product candidates through acquisition, which is an important component of its growth strategy.

In addition, the Company notes that although the Class B Common Stock is convertible on a one-for-one basis into common stock upon the completion of the initial public offering, the Class B Common Stock has no voting rights under the Company's certificate of incorporation and is subject to a contractual right of repurchase by the Company at the Company's option upon the occurrence of specified events. The board of directors considered the lack of voting rights and the right of repurchase in its determinations of the fair value of the Class B Common Stock underlying options granted during the period discussed above.

Conclusion

In light of the considerations described above and the information set forth on Schedule A attached hereto, the Company believes that it has properly accounted for its stock options in accordance with Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations, and Emerging Issues Task Force Issue No. 96-18, *Accounting for Equity Instruments that Are Issued to Other than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*, and other relevant accounting literature.

13. Commitments and settlement gains, page F-26

81. *As your noncancelable operating lease contains a 3% annual escalation, please disclose the amount of deferred rent as of each reporting date.*

Response: Because the Company has determined that deferred rent is not material, it has not been recorded or disclosed in the financial statements or accompanying notes. If deferred rent had been recorded, the maximum balance during the period from January 1, 2003 to June 30, 2006 would have been less than $100,000. Therefore, the Company respectfully

submits that disclosure of the amount of deferred rent as of each reporting date is not necessary.

14. Related party transactions

82. *We note that you have terminated some of the arrangements disclosed. Please tell us and disclose specifically which arrangements remain in effect as of the latest reporting period.*

Response: The Company advises the Staff that the arrangements disclosed in "Note 14. Related party transactions" have all been terminated, except that the following agreements remain in effect: an agreement with a director to perform corporate strategic issues consultation and directed project support to the Company's marketing and communications group and an agreement with East West Resources Inc., a company owned by the Company's Chief Executive Officer, to provide transportation and logistical support. The Company has revised the disclosure on pages F-27 and F-28 of Amendment No. 1 accordingly.

17. Subsequent events, page F-29

83. *Please explain to us what is meant by "The Company paid $1,250 in cash and financed the balance with cash and with a bank loan in the amount of $8,500."*

Response: The Company advises the Staff that the reference to "with cash" in the above disclosure was a typographical error and has been deleted. The Company has revised the disclosure accordingly on page F-20 in "Note 9 — Long-term debt and related party notes payable."

84. *Please disclose when you will recognize revenue associated with the upfront fee received from Sanofi Pasteur relating to the development and commercialization of its meningitis B vaccine candidate.*

Response: The Company advises the Staff that, in conjunction with the update of the interim financial information in accordance with Item 3-12 of Regulation S-X, the Company has deleted disclosure of the collaboration agreement with Sanofi Pasteur and the related accounting treatment of the upfront license fee as a subsequent event. The Company further advises the Staff that it has revised the disclosure on page 56 of Amendment No. 1 to describe the recognition of revenue related to the upfront license fee from Sanofi Pasteur. In accordance with Emerging Issues Task Force Issue No. 00-21, *Accounting for Revenue Arrangements with Multiple Deliverables*,

the Company recorded the amount of the upfront license fee as deferred revenue and is recognizing the revenue over the estimated development period under the contract, currently estimated at seven years, as adjusted from time to time for any delays or acceleration in the development of the product candidate.

* * * *

Amendment No. 1 includes as an exhibit a form of opinion of WilmerHale. WilmerHale hereby confirms to the Staff that the reference made in its opinion to the General Corporation Law of the State of Delaware includes the statutory provisions and also all applicable provisions of the Delaware Constitution and reported judicial decisions interpreting these laws.

If you have any further questions or comments, or if you require any additional information, please contact the undersigned by telephone at (212) 937-7206 or facsimile at (212) 230-8888 or David E. Redlick of WilmerHale by telephone at (617) 526-6434 or facsimile at (617) 526-5000. Thank you for your assistance.

Very truly yours,

/s/ Brian A. Johnson

Brian A. Johnson

cc: Fuad El-Hibri
Daniel J. Abdun-Nabi, Esq.
David E. Redlick, Esq.
James A. Lebovitz, Esq.
Brian D. Short, Esq.

Office of Freedom of Information and Privacy Act Operations
Securities and Exchange Commission
Operations Center
6432 General Green Way
Alexandria, VA 22312-2413

Rule 83 Confidential Treatment Request by Emergent BioSolutions Inc.

Emergent BioSolutions Inc. respectfully requests that the information contained under the heading "Recipient" in this Schedule A be treated as confidential information and that the Commission provide timely notice to Emergent BioSolutions Inc., Daniel J. Abdun-Nabi, General Counsel, 300 Professional Drive, Suite 250, Gaithersburg, Maryland, (301) 944-0290, before it permits any disclosure of the bracketed information contained in this Schedule A.

Emergent BioSolutions Inc.

Schedule A

Chronological Schedule

Equity Instruments Issued from 1/1/2005 to 9/22/2006

Recipient	Relationship	Date of Transaction	No. of Shares/ Options Granted	Exercise/ Purchase Price	Vesting Terms	Deferred Compensation/ Interest Expense*
Richard, Ronald	Director	1/26/2005	15,000	$7.89	(1)	7,425
Arcuri, Edward	Executive Officer	2/9/2005	38,000	$7.89	(2)	19,911
Arcuri, Edward	Executive Officer	2/9/2005	2,000	$7.89	(2)	1,065
Chatfield, Steven	Executive Officer	2/9/2005	20,000	$7.89	(2)	10,650
[**]	Employee	2/9/2005	5,000	$7.89	(2)	2,910
[**]	Employee	2/9/2005	5,000	$7.89	(2)	2,910
[**]	Employee	4/2/2005	25,000	$7.89	(2)	14,755
Kramer, Robert	Executive Officer	5/25/2005	24,850	$10.06	(3)	11,120
Kramer, Robert	Executive Officer	5/25/2005	15,150	$10.06	(3)	13,286
El-Hibri, Fuad	Executive Officer and Director	5/25/2005	75,000	$10.06	(3)	55,051
Elsey, R. Don	Executive Officer	6/6/2005	5,000	$10.06	(4)	3,737
Hauer, Jerome	Director	6/15/2005	15,000	$10.06	(5)	11,255
Microscience Investments Limited	Unrelated Third Party	6/23/2005	1,264,051	$21.36	N/A	—
[**]	Employee	6/24/2005	5,000	$24.52	(4)	9,105
[**]	Employee	6/24/2005	5,000	$24.52	(4)	9,105
[**]	Employee	7/6/2005	5,000	$24.52	(4)	9,147
[**]	Employee	7/27/2005	5,000	$24.52	(4)	9,206
[**]	Employee	9/12/2005	5,000	$24.52	(4)	9,179
[**]	Employee	11/21/2005	5,000	$24.52	(4)	9,292
[**]	Employee	11/28/2005	5,000	$24.52	(4)	9,274
[**]	Employee	6/30/2006	5,000	$29.58	(6)	—
[**]	Employee	6/30/2006	2,500	$29.58	(6)	—
Zink, Thomas	Executive Officer	6/30/2006	10,140	$29.58	(7)	—
Zink, Thomas	Executive Officer	6/30/2006	9,860	$29.58	(7)	—
Allbaugh, Joe	Director	6/30/2006	15,000	$29.58	(6)	—
Sullivan, Louis	Director	6/30/2006	15,000	$29.58	(6)	—
Elsey, R. Don	Executive Officer	9/20/2006	15,000	$38.16	(8)	—
[**]	Employee	9/20/2006	5,000	$38.16	(9)	—
[**]	Employee	9/20/2006	5,000	$38.16	(10)	—
[**]	Employee	9/20/2006	5,000	$38.16	(11)	—
[**]	Employee	9/20/2006	2,500	$38.16	(6)	—
					Total	218,383
						*All compensation expense incurred is a result of the adoption of FASB No. 123(R).

(1) These options vest in three equal annual installments beginning on June 1, 2006.

(2) These options vest in three equal annual installments beginning on December 31, 2005.

(3) These options vest in three annual installments, with 40% of the original number of shares vesting on December 31, 2005 and 30% of the original number of shares vesting on each of December 31, 2006 and December 31, 2007.

(4) These options vest in three annual installments, with 40% of the original number of shares vesting six months from the date of grant, 30% of the original number of shares vesting 1.5 years from the date of grant and the remaining 30% of the original number of shares vesting 2.5 years from the date of grant.

(5) These options vest in three equal annual installments beginning on January 1, 2006.

(6) These options vest in three equal annual installments beginning one year from the date of grant.

(7) These options vest in three equal annual installments beginning on May 9, 2007.

(8) These options vest in three equal annual installments beginning on March 1, 2007.

(9) These options vest in three equal annual installments beginning on August 7, 2007.

(10) These options vest in three equal annual installments beginning on August 14, 2007.

(11) These options vest in three equal annual installments beginning on July 31, 2007.