

ANTIGENICS INC /DE/  
Form 10-Q  
November 05, 2008  
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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**Form 10-Q**

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

For the Quarterly Period Ended September 30, 2008

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

For the transition period from                    to

Commission File Number: 000-29089

**Antigenics Inc.**

(Exact name of registrant as specified in its charter)

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**Delaware** **06-1562417**  
(State or other jurisdiction of **(I.R.S. Employer**  
incorporation or organization) **Identification No.)**  
**162 Fifth Avenue, Suite 900, New York, New York 10010**  
(Address of principal executive offices, including zip code)  
**(212) 994-8200**  
(Registrant's telephone number, including area code)

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

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

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company   
(Do not check if a smaller reporting company)

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

Number of shares outstanding of the registrant's Common Stock as of October 31, 2008: 66,270,710 shares.

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**Antigenics Inc.**

**Quarterly Period Ended September 30, 2008**

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**Table of Contents****PART I FINANCIAL INFORMATION****Item 1. Financial Statements****ANTIGENICS INC. AND SUBSIDIARIES****CONDENSED CONSOLIDATED BALANCE SHEETS****(Unaudited)**

	September 30, 2008	December 31, 2007
<b>ASSETS</b>		
Cash and cash equivalents	\$ 30,919,024	\$ 14,479,322
Short-term investments	9,954,942	4,199,996
Accounts receivable		318,707
Inventories	226,376	510,872
Prepaid expenses	869,980	837,075
Other current assets	378,786	436,012
<b>Total current assets</b>	<b>42,349,108</b>	<b>20,781,984</b>
Plant and equipment, net	12,260,218	14,604,243
Goodwill	2,572,203	2,572,203
Core and developed technology, net	2,703,601	3,534,048
Debt issuance costs, net	1,151,026	1,380,963
Other long-term assets	1,467,063	1,663,401
<b>Total assets</b>	<b>\$ 62,503,219</b>	<b>\$ 44,536,842</b>
<b>LIABILITIES AND STOCKHOLDERS DEFICIT</b>		
Current portion, long-term debt	\$ 146,061	\$ 146,061
Current portion, deferred revenue	1,230,467	1,413,255
Accounts payable	698,758	674,473
Accrued liabilities	6,673,812	5,783,740
Other current liabilities	330,201	365,037
<b>Total current liabilities</b>	<b>9,079,299</b>	<b>8,382,566</b>
Convertible senior notes	78,496,554	77,400,533
Deferred revenue	2,168,251	3,038,280
Other long-term liabilities	2,647,757	2,775,766
Commitments and contingencies (Note F)		
Stockholders' deficit:		
Preferred stock, par value \$0.01 per share; 25,000,000 shares authorized:		
Series A convertible preferred stock; 31,620 shares designated, issued, and outstanding at September 30, 2008 and December 31, 2007; liquidation value of \$31,817,625 at September 30, 2008	316	316
Series B1 convertible preferred stock; 0 and 10,000 shares designated, issued, and outstanding at September 30, 2008 and December 31, 2007, respectively		100
Series B2 convertible preferred stock; 5,250 shares designated, issued, and outstanding at September 30, 2008 and December 31, 2007	53	53
Common stock, par value \$0.01 per share; 250,000,000 shares authorized; 66,377,662 and 47,557,007 shares issued at September 30, 2008 and December 31, 2007, respectively	663,777	475,570
Additional paid-in capital	502,312,483	451,114,779

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Treasury stock, at cost; 143,031 and 5,953 shares of common stock at September 30, 2008 and December 31, 2007, respectively	(269,849)	(12,168)
Accumulated deficit	(532,595,422)	(498,638,953)
Total stockholders' deficit	(29,888,642)	(47,060,303)
Total liabilities and stockholders' deficit	\$ 62,503,219	\$ 44,536,842

See accompanying notes to unaudited condensed consolidated financial statements.

**Table of Contents****ANTIGENICS INC. AND SUBSIDIARIES****CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS****(Unaudited)**

	Quarter Ended September 30,		Nine Months Ended September 30,	
	2008	2007	2008	2007
Revenue	\$ 684,566	\$ 862,631	\$ 2,129,503	\$ 4,659,020
Operating expenses:				
Research and development	(5,395,804)	(6,132,653)	(16,965,309)	(18,145,535)
General and administrative	(5,132,204)	(4,579,887)	(16,141,706)	(13,311,193)
Operating loss	(9,843,442)	(9,849,909)	(30,977,512)	(26,797,708)
Other income (expense):				
Non-operating income			2,310	
Interest expense	(1,302,091)	(1,261,773)	(3,851,922)	(3,722,254)
Interest income	213,776	325,386	870,655	1,184,745
Net loss	(10,931,757)	(10,786,296)	(33,956,469)	(29,335,217)
Dividends on series A convertible preferred stock	(197,625)	(197,625)	(592,875)	(592,875)
Net loss attributable to common stockholders	\$ (11,129,382)	\$ (10,983,921)	\$ (34,549,344)	\$ (29,928,092)
Per common share data, basic and diluted:				
Net loss attributable to common stockholders	\$ (0.17)	\$ (0.24)	\$ (0.56)	\$ (0.65)
Weighted average number of common shares outstanding, basic and diluted	66,208,764	46,429,973	62,194,760	46,126,316

See accompanying notes to unaudited condensed consolidated financial statements.

**Table of Contents****ANTIGENICS INC. AND SUBSIDIARIES****CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS****(Unaudited)**

	<b>Nine Months Ended September 30,</b>	
	<b>2008</b>	<b>2007</b>
<b>Cash flows from operating activities:</b>		
Net loss	\$ (33,956,469)	\$ (29,335,217)
<b>Adjustments to reconcile net loss to net cash used in operating activities:</b>		
Depreciation and amortization	3,578,034	4,094,730
Share-based compensation	4,813,468	3,248,677
Noncash interest expense	1,096,021	1,013,334
Loss on disposal of plant and equipment	14,227	
<b>Changes in operating assets and liabilities:</b>		
Accounts receivable	318,707	(141,101)
Inventories	284,496	(34,257)
Prepaid expenses	(32,905)	93,933
Accounts payable	17,836	(112,740)
Deferred revenue	(1,052,817)	1,477,044
Accrued liabilities and other current liabilities	1,295,818	(858,742)
Other operating assets and liabilities	(76,449)	55,283
<b>Net cash used in operating activities</b>	<b>(23,700,033)</b>	<b>(20,499,056)</b>
<b>Cash flows from investing activities:</b>		
Proceeds from maturities of available-for-sale securities	14,162,968	22,750,000
Purchases of available-for-sale securities	(19,917,910)	(10,101,737)
Investment in AGTC		(165,000)
Proceeds from the sale of limited partner interest in AGTC		1,665,000
Purchases of plant and equipment	(133,437)	(8,174)
<b>Net cash (used in) provided by investing activities</b>	<b>(5,888,379)</b>	<b>14,140,089</b>
<b>Cash flows from financing activities:</b>		
Net proceeds from sale of equity	46,545,177	4,318,700
Proceeds from exercise of stock options	46,562	
Proceeds from employee stock purchases	286,931	77,998
Treasury stock received to satisfy minimum tax withholding requirements	(257,681)	
Payment of series A convertible preferred stock dividend	(592,875)	(592,875)
Debt issuance costs		(50,000)
<b>Net cash provided by financing activities</b>	<b>46,028,114</b>	<b>3,753,823</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>16,439,702</b>	<b>(2,605,144)</b>
<b>Cash and cash equivalents, beginning of period</b>	<b>14,479,322</b>	<b>24,218,683</b>
<b>Cash and cash equivalents, end of period</b>	<b>\$ 30,919,024</b>	<b>\$ 21,613,539</b>

See accompanying notes to unaudited condensed consolidated financial statements.





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**ANTIGENICS INC. AND SUBSIDIARIES**

**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**

**September 30, 2008**

**Note A Business and Basis of Presentation**

Antigenics Inc. (including its subsidiaries, also referred to as Antigenics, the Company, we, us, and our) is a biotechnology company developing technologies to treat cancers and infectious diseases, primarily based on immunological approaches. Our most advanced product, Oncophage<sup>®</sup> (vitespen), is a patient-specific therapeutic cancer vaccine registered for use in Russia in the treatment of kidney cancer patients at intermediate risk for disease recurrence. Oncophage has been tested in Phase 3 clinical trials for the treatment of renal cell carcinoma, the most common type of kidney cancer, and for metastatic melanoma, and it has also been tested in Phase 2 and Phase 1 clinical trials in a range of indications and is currently in a Phase 2 clinical trial in recurrent glioma, a type of brain cancer. Our product candidate portfolio includes (1) QS-21 Stimulon<sup>®</sup> adjuvant, or QS-21, which is used in numerous vaccines under development in trials, some as advanced as Phase 3, for a variety of diseases, including hepatitis, human immunodeficiency virus, influenza, cancer, Alzheimer's disease, malaria, and tuberculosis, (2) AG-707, a therapeutic vaccine program in a Phase 1 clinical trial for the treatment of genital herpes, and (3) Aroplatin, a liposomal chemotherapeutic in a Phase 1 clinical trial for the treatment of solid malignancies and B-cell lymphomas. Our related business activities include research and development, regulatory and clinical affairs, clinical manufacturing, business development, marketing, and administrative functions that support these activities.

Our product candidates require clinical trials and approvals from regulatory agencies, as well as acceptance in the marketplace. We are conducting clinical trials in various cancer indications and in one infectious disease indication. Part of our strategy is to develop and commercialize some of our product candidates by continuing our existing collaborative arrangements with academic and corporate collaborators and licensees and by entering into new collaborations.

We have incurred significant losses since our inception. As of September 30, 2008, we had an accumulated deficit of \$532.6 million. Since our inception, we have financed our operations primarily through the sale of equity and convertible notes, interest income earned on cash, cash equivalents, and short-term investment balances, and debt provided through secured lines of credit. We believe, based on our current plans and activities, that our working capital resources at September 30, 2008, anticipated revenues, and the estimated proceeds from our license, supply, and collaborative agreements will be sufficient to satisfy our liquidity requirements through 2009. We expect to attempt to raise additional funds in advance of depleting our current funds. Satisfying long-term liquidity needs may require the successful commercialization of our product, Oncophage and/or one or more partnering arrangements for Oncophage, successful commercialization of QS-21 by our licensees, and potentially successful commercialization of other product candidates, and will require additional capital.

The accompanying condensed consolidated balance sheet as of December 31, 2007, which has been derived from audited consolidated financial statements, and the unaudited interim condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles for interim financial information and with the instructions to Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by U.S. generally accepted accounting principles for complete annual consolidated financial statements. In the opinion of management, the condensed consolidated financial statements include all normal and recurring adjustments considered necessary for a fair presentation of our financial position and operating results. All significant intercompany transactions and accounts have been eliminated in consolidation. Certain amounts previously reported have been reclassified in order to conform to the current period's presentation. Operating results for the nine-month period ended September 30, 2008 are not necessarily indicative of the results that may be expected for the year ending December 31, 2008 or for any other period. For further information, refer to our consolidated financial statements and footnotes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2007 filed with the Securities and Exchange Commission (the SEC) on March 17, 2008.

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Management bases its estimates on historical experience and on various assumptions that are believed to be reasonable under the circumstances. Actual results could differ materially from those estimates.

**Table of Contents****ANTIGENICS INC. AND SUBSIDIARIES****NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (continued)****Note B Net Loss Per Share**

Basic loss per common share is calculated by dividing the net loss attributable to common stockholders by the weighted average number of common shares outstanding (including common shares issuable under our Directors' Deferred Compensation Plan). Diluted loss per common share is calculated by dividing the net loss attributable to common stockholders by the weighted average number of common shares outstanding (including common shares issuable under our Directors' Deferred Compensation Plan) plus the dilutive effect of outstanding convertible instruments such as warrants, stock options, nonvested shares, convertible preferred stock, and convertible notes. Because we have reported a net loss attributable to common stockholders for all periods, diluted loss per common share is the same as basic loss per common share, as the effect of utilizing the fully diluted share count would have reduced the net loss per common share. Therefore, shares underlying the 33,126,151 warrants outstanding or issuable, the 7,943,047 outstanding stock options, the 31,620 outstanding shares of series A convertible preferred stock, the 5,250 outstanding shares of series B2 convertible preferred stock, and the impact of conversion of our 5.25% convertible senior notes due February 2025 and our 8% senior secured convertible notes due August 2011 (the 2006 Notes) and vesting of the 933,666 outstanding nonvested shares, are not included in the calculation of diluted net loss per common share.

**Note C Inventories**

Inventories are stated at cost using the first-in, first-out method. The components of inventories are as follows (in thousands).

	September 30, 2008	December 31, 2007
Work in process	\$ 194	\$ 414
Finished goods	32	97
	\$ 226	\$ 511

**Note D Share-Based Compensation**

Share-based compensation expense includes compensation expense for all share-based options granted prior to, but not yet vested as of, January 1, 2006, based on the grant date fair value estimated in accordance with the original provisions of Statement of Financial Accounting Standards (SFAS) No. 123, *Accounting for Stock-Based Compensation*. Share-based compensation expense also includes compensation expense for all share-based options granted, modified, or settled after January 1, 2006, based on the grant date fair value estimated in accordance with the provisions of SFAS No. 123 (revised 2004), *Share-Based Payment* (SFAS No. 123R), and the fair market value of shares issued to non-employees for services rendered.

We have applied the provisions of Staff Accounting Bulletin (SAB) No. 107, *Share-Based Payment* (SAB No. 107), in accounting for share-based compensation in accordance with SFAS No. 123R. SAB No. 107 contains the SEC's guidance on certain aspects of SFAS No. 123R and the valuation of share-based payments for public companies.

Stock options granted to non-employees are accounted for based on the fair-value method of accounting in accordance with SFAS No. 123R and Emerging Issues Task Force (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*. As a result, the noncash charge to operations for non-employee options with vesting or other performance criteria is affected each reporting period, until the non-employee options vest, by changes in the fair value of our common stock.

Certain of our fully vested options granted to non-employees are outside the scope of SFAS No. 123R and are subject to EITF Issue No. 00-19, *Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company's Own Stock*, which requires that stock options held by certain non-employee consultants be accounted for as liability-classified awards. The fair value of the award is remeasured at each



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financial statement date until the award is exercised or expires. As of September 30, 2008, fully vested stock options to acquire approximately 615,000 shares of common stock held by non-employee consultants were accounted for as liability-classified awards and remained unexercised.

We use the Black-Scholes option pricing model to value options for employees, as well as options granted to members of our Board of Directors. All stock option grants have 10-year terms and generally vest ratably over a four-year period.

A summary of option activity for the nine months ended September 30, 2008 is presented below:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at December 31, 2007	6,782,901	\$ 5.75		
Granted	1,642,186	1.70		
Exercised	(28,468)	1.64		
Forfeited	(121,359)	2.93		
Expired	(332,213)	5.07		
Outstanding at September 30, 2008	7,943,047	\$ 5.00	6.9	\$ 12,857
Vested or expected to vest at September 30, 2008	7,514,224	\$ 5.15	6.8	\$ 11,002
Exercisable at September 30, 2008	4,468,484	\$ 6.96	5.5	\$ 4

The weighted average grant-date fair values of options granted during the nine months ended September 30, 2008 and 2007 were \$1.06 and \$1.57, respectively.

During the first nine months of 2008, all options were granted with exercise prices equal to the market value of the underlying shares of common stock on the grant date.

As of September 30, 2008, \$3.6 million of total unrecognized compensation cost related to stock options granted to employees and directors is expected to be recognized over a weighted average period of 2.5 years.

As of September 30, 2008, unrecognized expense for options granted to outside advisors for which performance (vesting) has not yet been completed but the exercise price of the option is known is \$64,000. Such amount is subject to change each reporting period based upon changes in the fair value of our common stock, expected volatility, and the risk-free interest rate, until the outside advisor completes his or her performance under the option agreement.

Certain employees and consultants have been granted nonvested stock. In accordance with SFAS No. 123R, the fair value of nonvested stock is calculated based on the closing sale price of the Company's common stock on the date of issuance.

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A summary of nonvested stock activity for the nine months ended September 30, 2008 is presented below:

	Nonvested Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2007	440,878	\$ 2.03
Granted	1,149,153	1.70
Vested	(646,951)	2.01
Forfeited	(9,414)	2.13
Outstanding at September 30, 2008	933,666	\$ 1.63

As of September 30, 2008, there was \$676,000 of unrecognized share-based compensation expense related to these nonvested shares. This cost is expected to be recognized over a weighted average period of 1.8 years. The total intrinsic value of shares vested during the nine months ended September 30, 2008 was \$1.2 million.

Cash received from option exercises and purchases under our 1999 Employee Stock Purchase Plan ( 1999 ESPP ) for the nine months ended September 30, 2008 was \$333,000. We issue new shares upon option exercises, purchases under our 1999 ESPP, vesting of nonvested stock, and under the Directors' Deferred Compensation Plan. During the nine months ended September 30, 2008, 171,113 shares were issued under our 1999 ESPP. During the nine months ended September 30, 2008, 509,873 shares, net of 137,078 shares withheld to cover personal income tax withholding, were issued as a result of the vesting of nonvested stock. The shares withheld were recorded as treasury stock using the cost method, at a weighted average price of \$1.88 per share, based on the closing sale price of the Company's common stock on the vesting dates, for a total of approximately \$258,000. In addition, during the nine months ended September 30, 2008, 61,938 shares were issued under our Directors' Deferred Compensation Plan.

The impact on our results of operations from share-based compensation was as follows (in thousands).

	Quarter Ended September 30,		Nine Months Ended September 30,	
	2008	2007	2008	2007
Research and development	\$ 79	\$ 256	\$ 1,428	\$ 1,344
General and administrative	821	713	3,385	1,905
Total share-based compensation expense	\$ 900	\$ 969	\$ 4,813	\$ 3,249

**Note E Comprehensive Loss**

The following table provides the calculation of comprehensive loss (in thousands).

	Quarter Ended September 30,		Nine Months Ended September 30,	
	2008	2007	2008	2007

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Net loss	\$ (10,932)	\$ (10,786)	\$ (33,956)	\$ (29,335)
Other comprehensive income:				
Unrealized gain on available-for-sale securities, net		7		22
Comprehensive loss	\$ (10,932)	\$ (10,779)	\$ (33,956)	\$ (29,313)

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**Table of Contents****ANTIGENICS INC. AND SUBSIDIARIES****NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (continued)****Note F Commitments and Contingencies**

Antigenics, our Chairman and Chief Executive Officer, Garo H. Armen, Ph.D., and two investment banking firms that served as underwriters in our initial public offering have been named as defendants in a federal civil class action lawsuit pending in the United States District Court for the Southern District of New York. Substantially similar actions were filed concerning the initial public offerings for more than 300 different issuers, and the cases were coordinated as *In re Initial Public Offering Securities Litigation*, 21 MC 92 for pre-trial purposes. The suit alleges that the brokerage arms of the investment banking firms charged secret excessive commissions to certain of their customers in return for allocations of our stock in the offering. The suit also alleges that shares of our stock were allocated to certain of the investment banking firms customers based upon agreements by such customers to purchase additional shares of our stock in the secondary market. Dr. Armen has been dismissed without prejudice from the lawsuit pursuant to a stipulation. In June 2004, a stipulation of settlement and release of claims against the issuer defendants, including us, was submitted to the court for approval. The court preliminarily approved the settlement in August 2005. In December 2006, the appellate court overturned the certification of classes in six test cases that were selected by the underwriter defendants and plaintiffs in the coordinated proceedings. The case involving Antigenics is not one of the six test cases. Class certification had been one of the conditions of the settlement. Accordingly, on June 25, 2007, the court entered an order terminating the proposed settlement based on a stipulation among the parties to the settlement. Plaintiffs have filed amended master allegations and amended complaints in the six test cases. On March 26, 2008, the court largely denied the defendants' motion to dismiss the amended complaints. It is uncertain whether there will be any revised or future settlement. To date, the plaintiffs have not asserted a specific amount of damages and, at this time, we cannot make a reliable estimate of possible loss, if any, related to this litigation. Accordingly, no accrual has been recorded at September 30, 2008.

We currently are a party, or may become a party, to other legal proceedings as well. While we currently believe that the ultimate outcome of any of these proceedings will not have a material adverse effect on our financial position, results of operations, or liquidity, litigation is subject to inherent uncertainty. Furthermore, litigation consumes both cash and management attention.

**Note G License and Supply Agreements**

On July 6, 2006, we and GlaxoSmithKline Biologicals SA ( GSK ) entered into an expanded license agreement (the GSK license agreement ) and an expanded Manufacturing Technology Transfer and Supply Agreement (the GSK supply agreement ) for the use of QS-21, an investigational adjuvant used in numerous vaccines under development. Under the terms of the agreements, we agreed to supply QS-21 to GSK through 2014. In addition, we agreed to transfer manufacturing technologies under the GSK supply agreement. In conjunction with the GSK license agreement and the GSK supply agreement, we received a \$3.0 million up-front non-refundable payment in July 2006. In February 2007, we received and recorded \$2.0 million in revenue as a result of the achievement of a milestone related to the transfer of manufacturing technologies to GSK.

On July 20, 2007, we executed a letter with GSK amending the GSK supply agreement to accelerate GSK's commercial grade QS-21 manufacturing rights previously granted in July 2006. Accordingly, from the effective date of the letter, GSK has the right to manufacture all of its requirements of commercial grade QS-21. In addition, the parties have amended their purchase and supply obligations with respect to pre-commercial grade QS-21. In accordance with the terms of the letter, upon our election, GSK is obligated to supply us (or our affiliates, licensees, or customers) certain quantities of commercial grade QS-21 for a stated period of time.

As consideration for our entering into the letter, we received a \$2.0 million up-front non-refundable payment from GSK in August 2007, in lieu of a milestone payment that would have otherwise been payable under the GSK supply agreement. In addition, GSK is obligated to make payments to us totaling \$5.25 million through December 2012, for manufacturing profits that were anticipated to have otherwise been earned under the GSK supply agreement. Except as expressly provided in the letter, all other financial obligations of GSK under the GSK supply agreement, including potential royalty payments, remain unchanged. The letter does not affect the rights and obligations of the parties under the GSK license agreement.

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**ANTIGENICS INC. AND SUBSIDIARIES**

**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (continued)**

During the nine months ended September 30, 2008 and 2007, we recognized revenue of \$995,000 and \$456,000, respectively, from the amortization of deferred revenue relating to the GSK payments discussed above. \$3.0 million related to our agreement with GSK is included in deferred revenue on our consolidated balance sheet as of September 30, 2008.

**Note H Debt**

Interest on the 2006 Notes is payable semi-annually on December 30 and June 30 in cash or, at our option, in additional notes or a combination thereof. During the nine months ended September 30, 2008 and 2007, we issued additional 2006 Notes in the amounts of \$1.1 million and \$1.0 million, respectively, as payment for interest due.

**Note I Equity**

On January 9, 2008, we entered into a private placement agreement pursuant to which we sold 8,708,717 shares of common stock. Investors also received (i) 10-year warrants to purchase, at an exercise price of \$3.00 per share, up to 8,708,717 shares of common stock and (ii) unit warrants to purchase, at an exercise price of \$3.00 per unit, contingent upon a triggering event as defined in the January 9, 2008 private placement documents, (a) up to 8,708,717 shares of common stock and (b) additional 10-year warrants to purchase, at an exercise price of \$3.00 per share, up to 8,708,717 additional shares of common stock. We raised net proceeds in the January 9, 2008 private placement of \$25.8 million, after deducting offering costs of \$296,000.

In accordance with the terms of the January 9, 2008 private placement, the 10-year warrants became exercisable for a period of 9.5 years as of July 9, 2008. Our private placement in April 2008 qualified as a triggering event, and therefore the unit warrants became exercisable for a period of eighteen months as of July 9, 2008.

In February 2008, we filed a registration statement covering the sale of the 8,708,717 shares of common stock issued and the 8,708,717 shares issuable upon the exercise of the 10-year warrants issued in the January 9, 2008 private placement, and the SEC declared the registration statement effective. Shares issuable under the unit warrants have not been registered as of this time.

On April 8, 2008, we entered into a private placement agreement under which we sold (i) 7,000,000 shares of common stock and (ii) five-year warrants to acquire up to 7,000,000 shares of common stock at an exercise price of \$3.75 per share, for \$3.00 for each share and warrant sold, generating net proceeds of \$19.7 million, after deducting offering costs of \$1.3 million. The warrants became exercisable for a period of 4.5 years as of October 10, 2008. We filed a registration statement on April 18, 2008 covering the sale of the 7,000,000 shares of common stock issued and the 7,000,000 shares issuable upon the exercise of the related warrants, and the SEC declared the registration statement effective.

As part of the private placement agreements, we entered into registration payment arrangements as defined by Financial Accounting Standards Board ( FASB ) Staff Position ( FSP ) EITF 00-19-2, *Accounting for Registration Payment Arrangements* ( FSP EITF 00-19-2 ). FSP EITF 00-19-2 specifies that the contingent obligation to make future payments or otherwise transfer consideration under a registration payment arrangement should be separately recognized and measured in accordance with SFAS No. 5, *Accounting for Contingencies*. We agreed to register the shares of common stock issued in the equity sales, and the shares of common stock underlying the warrants issued to the investors, within contractually specified time periods. As noted above, we filed registration statements covering all required shares. We have also agreed to use our best efforts to keep the registration statements continuously effective. If we are unable to keep the registration statements continuously effective in accordance with the contractual terms, we are subject to liquidated damages of up to a maximum of 10% of the aggregate purchase price paid by the investors. We have determined that no loss contingency related to the private placements is required to be recorded as of September 30, 2008.

On April 25, 2008, we issued 1,585,197 shares of our common stock to Fletcher International, Ltd. upon conversion by Fletcher of 10,000 shares of our series B1 convertible preferred stock via a cashless conversion. These shares were issued pursuant to an effective shelf registration statement.





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**ANTIGENICS INC. AND SUBSIDIARIES**

**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (continued)**

In April 2008, we also issued and sold a total of 271,762 shares of our common stock through our placement agent, Wm Smith & Co., and raised net proceeds of \$804,000, after deducting offering costs of \$38,000. Proceeds from the offering will be used for general corporate purposes. This offering was made under an effective shelf registration statement.

**Note J Recent Accounting Pronouncements**

We adopted the provisions of SFAS No. 157, *Fair Value Measurements* ( SFAS No. 157 ), effective January 1, 2008, for our financial assets and liabilities. The FASB delayed the effective date of SFAS No. 157 until January 1, 2009, with respect to the fair value measurement requirements for non-financial assets and liabilities that are not remeasured on a recurring basis. Under SFAS No. 157, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (i.e. the exit price ) in an orderly transaction between market participants at the measurement date. The adoption of SFAS No. 157 did not have a material impact on our consolidated financial statements.

SFAS No. 157 establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances. The fair value hierarchy is broken down into three levels based on the source of inputs as follows:

Level 1 Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access;

Level 2 Valuations based on quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active and models for which all significant inputs are observable, either directly or indirectly; and

Level 3 Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The availability of observable inputs can vary among the various types of financial assets and liabilities. To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for financial statement disclosure purposes, the level in the fair value hierarchy within which the fair value measurement is categorized is based on the lowest level input that is significant to the overall fair value measurement.

The Company's short-term investments are comprised of U.S. Treasury securities that are valued using quoted market prices with no valuation adjustments applied. Accordingly, these securities are categorized in Level 1. The fair value of the U.S. Treasury securities at September 30, 2008, excluding accrued interest, was approximately \$10.0 million.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities* ( SFAS No. 159 ). SFAS No. 159 provides companies with the option to measure specified financial instruments and certain other items at fair value. We adopted the provisions of SFAS No. 159 as of January 1, 2008 and have elected not to measure any additional financial instruments and other items at fair value.

In December 2007, the FASB issued SFAS No. 141 (revised 2007), *Business Combinations* ( SFAS No. 141R ). This revised standard expands the types of transactions or other events that will qualify as business combinations and requires that all business combinations will result in all assets and liabilities of the acquired business being recorded at their fair values, with limited exceptions. The standard also requires, among other

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provisions, that certain contingent assets and liabilities will be recognized at their fair values on the acquisition date. An acquirer will also recognize contingent consideration at its fair value on the acquisition date and, for certain arrangements, changes in fair value will be recognized in earnings until the contingency is settled. Under SFAS No. 141R, acquisition-related transaction and restructuring costs will be expensed rather than treated as part of the cost of the acquisition and included in the amount recorded for assets acquired. SFAS No. 141R is required to be applied prospectively to business combinations for which the acquisition is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008, and may not be early adopted.

In December 2007, the FASB issued SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements* ( SFAS No. 160 ). SFAS No. 160, which is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008, governs the accounting for and reporting of noncontrolling interests in partially owned consolidated subsidiaries and the loss of control in subsidiaries. The provisions of SFAS No. 160 will be applied to transactions on a prospective basis once adopted.

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**ANTIGENICS INC. AND SUBSIDIARIES**

**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (continued)**

In March 2008, the FASB issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities* ( SFAS No. 161 ). SFAS No. 161, which is effective for fiscal years, and interim periods within those fiscal years, beginning after November 15, 2008, is intended to improve financial reporting about derivative instruments and hedging activities by requiring enhanced disclosures to enable investors to better understand their effects on an entity's financial position, financial performance, and cash flows. We do not expect that the adoption of SFAS No. 161 will have a material impact on our financial position or results of operations.

In May 2008, the FASB issued FSP Accounting Principles Board ( APB ) 14-1, *Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement)* ( FSP APB 14-1 ), which is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2008. FSP APB 14-1 clarifies that convertible debt instruments that may be settled in cash upon conversion are not addressed by paragraph 12 of APB Opinion No. 14, *Accounting for Convertible Debt and Debt Issued with Stock Purchase Warrants*. FSP APB 14-1 also specifies that issuers of such instruments should separately account for the liability and equity components in a manner that will reflect the entity's nonconvertible debt borrowing rate when interest cost is recognized in subsequent periods. We are currently evaluating the effect of FSP APB 14-1, and we have not yet determined the impact of the standard on our financial position or results of operations.

In June 2008, the FASB ratified the consensus in EITF Issue No. 07-5, *Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock* ( EITF Issue No. 07-5 ), which is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. EITF Issue No. 07-5 defines when adjustment features within contracts are considered to be equity-indexed. We are currently evaluating the effect of EITF Issue No. 07-5, and we have not yet determined the impact of the standard on our financial position or results of operations.

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**Item 2. *Management's Discussion and Analysis of Financial Condition and Results of Operations***  
**Overview**

We are currently researching and/or developing technologies and product candidates to treat cancers and infectious diseases. Since our inception in March 1994, our activities have primarily been associated with the development of our heat shock protein technology and our product, Oncophage® (vitespen), a patient-specific therapeutic cancer vaccine registered for use in Russia for the treatment of kidney cancer patients at intermediate risk for disease recurrence. Oncophage has been tested in Phase 3 clinical trials for the treatment of renal cell carcinoma, the most common type of kidney cancer, and for metastatic melanoma, and it has also been tested in Phase 2 and Phase 1 clinical trials in a range of indications and is currently in a Phase 2 clinical trial in recurrent glioma, a type of brain cancer. Our business activities have included product research and development, intellectual property prosecution, manufacturing therapeutic vaccines for clinical trials, regulatory and clinical affairs, corporate finance and development activities, marketing, and integration of our acquisitions.

We have incurred significant losses since our inception. As of September 30, 2008, we had an accumulated deficit of \$532.6 million. Since our inception, we have financed our operations primarily through the sale of equity and convertible notes, interest income earned on cash, cash equivalents, and short-term investment balances, and debt provided through secured lines of credit. We believe, based on our current plans and activities, that our working capital resources at September 30, 2008, anticipated revenues, and the estimated proceeds from our license, supply, and collaborative agreements will be sufficient to satisfy our liquidity requirements through 2009. We expect to attempt to raise additional funds in advance of depleting our current funds. Satisfying long-term liquidity needs may require the successful commercialization of our product, Oncophage and/or one or more partnering arrangements for Oncophage, successful commercialization of QS-21 by our licensees, and potentially successful commercialization of other product candidates, and will require additional capital.

In April 2008, the Russian Ministry of Public Health issued a registration certificate for the use of Oncophage in the treatment of kidney cancer patients at intermediate risk for disease recurrence and, in September 2008, the U.S. Food and Drug Administration granted the necessary permission to allow for the export of Oncophage from the United States for patient administration in Russia. The Russian registration was our first product approval from a regulatory authority, and the first approval of a patient-specific therapeutic cancer vaccine in a major market.

In October 2008, we announced the submission of a Marketing Authorization Application to the European Medicines Agency (the EMEA) requesting conditional authorization of Oncophage in earlier-stage, localized kidney cancer. Conditional authorization, a relatively new provision, is reserved for products intended to treat serious and life-threatening diseases where a high unmet medical need currently exists.

In addition, we are exploring the steps necessary to seek approval of Oncophage in other markets outside the U.S. This exploration process includes formal and informal discussions with international regulatory authorities, key opinion leaders, and consultants with country-specific regulatory experience regarding potential applications for full or conditional marketing approval, and/or named patient programs.

Guidance received from past interaction with the FDA indicated that further clinical studies must be conducted to demonstrate the efficacy and safety of Oncophage. At the appropriate time, we intend to seek a meeting with the FDA to discuss the results of the updated analyses utilizing data through March 2007 to determine whether there is an opportunity to file a biologics license application on the basis of these results with appropriate commitments to conduct further post approval trials. Because evidence of clinically significant improvement has been observed in a subgroup analysis of the pre-specified primary and secondary endpoints and was not demonstrated in the intent-to-treat population of the Phase 3 study of Oncophage in renal cell carcinoma, this trial is likely not sufficient to support a biologics license application (BLA) for product approval, based on existing standards. Furthermore, this trial may not be sufficient to support approval outside of the United States in countries other than Russia.

On January 9, 2008, we entered into a private placement agreement pursuant to which we sold 8,708,717 shares of common stock. Investors also received (i) 10-year warrants to purchase, at an exercise price of \$3.00 per share, up to 8,708,717 shares of common stock and (ii) unit warrants to purchase, at an exercise price of \$3.00 per unit, contingent upon a triggering event as defined in the January 9, 2008 private placement documents, (a) up to

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8,708,717 shares of common stock and (b) additional 10-year warrants to purchase, at an exercise price of \$3.00 per share, up to 8,708,717 additional shares of common stock. We raised net proceeds in the January 9, 2008 private placement of \$25.8 million, after deducting offering costs of \$296,000.

In accordance with the terms of the January 9, 2008 private placement, the 10-year warrants became exercisable for a period of 9.5 years as of July 9, 2008. Our private placement in April 2008 qualified as a triggering event, and therefore the unit warrants became exercisable for a period of eighteen months as of July 9, 2008.

On April 8, 2008, we entered into a private placement agreement under which we sold (i) 7,000,000 shares of common stock and (ii) five-year warrants to acquire up to 7,000,000 shares of common stock at an exercise price of \$3.75 per share, for \$3.00 for each share and warrant sold, generating net proceeds of \$19.7 million, after deducting offering costs of \$1.3 million. The warrants became exercisable for a period of 4.5 years as of October 10, 2008.

On April 25, 2008, we issued 1,585,197 shares of our common stock to Fletcher International, Ltd. upon conversion by Fletcher of 10,000 shares of our series B1 convertible preferred stock via a cashless conversion.

In April 2008, we also issued and sold a total of 271,762 shares of our common stock through our placement agent, Wm Smith & Co., and raised net proceeds of \$804,000, after deducting offering costs of \$38,000.

## **Forward-Looking Statements**

This Quarterly Report on Form 10-Q contains forward-looking statements. Generally, these statements can be identified by the use of terms like believe, expect, anticipate, plan, may, will, could, estimate, potential, opportunity, future, project, and similar terms.

Forward-looking statements include, but are not limited to, statements about generating sales from Oncophage in Russia, generating royalty revenue from QS-21 in the 2010 timeframe, our plans or timelines for performing and completing research, preclinical studies and clinical trials, timelines for releasing data from clinical trials, plans or timelines for initiating new clinical trials, expectations regarding research, preclinical studies, clinical trials, and regulatory processes (including additional clinical studies for Oncophage in renal cell carcinoma), expectations regarding test results, future product research and development activities, the expected effectiveness of therapeutic drugs, vaccines, and combinations in treating diseases, applicability of our heat shock protein technology to multiple cancers and infectious diseases, competitive position, plans for regulatory filings and meetings with regulatory authorities (including potential requests for meetings with the FDA regarding Oncophage clinical studies and seeking conditional authorization of Oncophage in Europe and approvals for Oncophage in other markets outside the United States), the sufficiency of our clinical trials in renal cell carcinoma and melanoma, or subgroup analyses of data from these trials, to support a BLA or foreign marketing application for product approval, possible receipt of future regulatory approvals, the performance of collaborative partners in, and revenue expectations from, our strategic license and partnering collaborations, expected liquidity and cash needs, plans to commence, accelerate, decelerate, postpone, discontinue, or resume clinical programs, the rate of our net cash burn (defined as cash used in operating activities plus capital expenditures and dividend payments), plans for commercial launch, and sales and marketing activities in Russia, implementation of corporate strategy, increased foreign currency exposure when we commercialize in Russia, and future financial performance.

These forward-looking statements involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. These risks and uncertainties include, among others, that clinical trials may not demonstrate that our products are safe and more effective than current standards of care; that the subgroup analyses of our Oncophage clinical trials do not predict survival or efficacy of the product in future studies or use of Oncophage; that we may be unable to obtain sufficient funding or the regulatory authorization necessary to conduct additional clinical trials; that we may not be able to enroll sufficient numbers of patients in our clinical trials; that we may be unable to obtain the regulatory review or approval necessary to commercialize our product candidates because regulatory agencies are not satisfied with our trial protocols or the results of our trials; that we may fail to adequately protect our intellectual property or that it is determined that we infringe on the intellectual property of others; our strategic licenses and partnering collaborations may not meet expectations; that we or our business partners may fail to take all steps necessary for the successful

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commercial launch of Oncophage in Russia; that we may not be able to secure adequate reimbursement mechanisms and/or private pay for Oncophage in Russia; manufacturing problems may cause product development and launch delays and unanticipated costs; our ability to raise additional capital; our ability to attract and retain key employees; changes in financial markets, regulatory requirements, and geopolitical developments; the solvency of counterparties under material agreements, including subleases; and general real estate risks.

We have included more detailed descriptions of these risks and uncertainties and other risks and uncertainties applicable to our business in Part II-Item 1A. Risk Factors of this Quarterly Report on Form 10-Q. We encourage you to read those descriptions carefully. We caution investors not to place significant reliance on forward-looking statements contained in this document; such statements need to be evaluated in light of all the information contained in this document. Furthermore, the statements speak only as of the date of this document, and we undertake no obligation to update or revise these statements.

Oncophage® and Stimulon® are registered trademarks of Antigenics and Aroplatin is a trademark of Antigenics. All rights reserved.

## **Historical Results of Operations**

### ***Quarter Ended September 30, 2008 Compared to the Quarter Ended September 30, 2007***

*Revenue:* We generated revenue of \$685,000 and \$863,000 during the quarters ended September 30, 2008 and 2007, respectively. This includes revenue earned on shipments of QS-21 to our QS-21 licensees, license fees and royalties earned, and in 2007, \$100,000 earned for the achievement of a milestone. In the quarters ended September 30, 2008 and 2007, we recorded \$361,000 and \$302,000, respectively, from the amortization of deferred revenue.

*Research and Development:* Research and development expenses include the costs associated with our internal research and development activities, including compensation and benefits, occupancy costs, clinical manufacturing costs, administrative costs, and services provided by clinical research organizations. Research and development expense decreased 12% to \$5.4 million for the quarter ended September 30, 2008 from \$6.1 million for the quarter ended September 30, 2007. The decrease included declines of \$894,000 in our clinical trial-related expenses, \$155,000 for depreciation and amortization, and \$152,000 in employee noncash share-based compensation expense, partially offset by a \$464,000 increase in other expenses primarily relating to our efforts in Russia and other territories.

*General and Administrative:* General and administrative expenses consist primarily of personnel costs, facility expenses, and professional fees. General and administrative expenses increased 12% to \$5.1 million for the quarter ended September 30, 2008 from \$4.6 million for the quarter ended September 30, 2007. This increase is largely related to an increase in expenses related to our efforts in Russia and other territories.

*Interest Expense:* Interest expense of \$1.3 million for the quarter ended September 30, 2008 represented a slight increase over the quarter ended September 30, 2007. Interest on our 8% senior secured convertible notes due August 2011 (the 2006 Notes ) is payable semi-annually on December 30 and June 30 in cash or, at our option, in additional notes or a combination thereof. The quarter ended September 30, 2008 included interest expense of \$563,000 on the 2006 Notes. The quarter ended September 30, 2007 included interest expense of \$527,000 that was subsequently paid in the form of additional 2006 Notes.

*Interest Income:* Interest income decreased 34% to \$214,000 for the quarter ended September 30, 2008 from \$325,000 for the same period in 2007. This decrease is primarily attributable to a decrease in interest rates earned on our cash, cash equivalents, and short-term investments. Our average interest rate decreased from 5.6% for the quarter ended September 30, 2007 to 1.9% for the quarter ended September 30, 2008.

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***Nine Months Ended September 30, 2008 Compared to the Nine Months Ended September 30, 2007***

*Revenue:* We generated revenue of \$2.1 million and \$4.7 million during the nine months ended September 30, 2008 and 2007, respectively. This includes revenue earned on shipments of QS-21 to our QS-21 licensees, license fees and royalties earned, and in 2007, \$3.1 million earned for the achievement of milestones, including \$2.0 million related to the transfer of manufacturing technologies to GlaxoSmithKline Biologicals SA. In the nine months ended September 30, 2008 and 2007, we recorded \$1.1 million and \$523,000, respectively, from the amortization of deferred revenue.

*Research and Development:* Research and development expenses include the costs associated with our internal research and development activities, including compensation and benefits, occupancy costs, clinical manufacturing costs, administrative costs, and services provided by clinical research organizations. Research and development expense decreased 7% to \$17.0 million for the nine months ended September 30, 2008 from \$18.1 million for the nine months ended September 30, 2007. The decrease included declines of \$2.3 million in our clinical trial-related expenses, \$429,000 in employee noncash share-based compensation expense, and \$382,000 for depreciation and amortization, partially offset by a \$1.9 million increase in other expenses primarily relating to our efforts in Russia and other territories, which includes the fair market value of shares issued to non-employees for services rendered.

*General and Administrative:* General and administrative expenses consist primarily of personnel costs, facility expenses, and professional fees. General and administrative expenses increased 21% to \$16.1 million for the nine months ended September 30, 2008 from \$13.3 million for the nine months ended September 30, 2007. This increase is largely related to an increase in employee and director noncash share-based compensation expense of \$736,000, and an increase in expenses related to our efforts in Russia and other territories, which includes the fair market value of shares issued to non-employees for services rendered.

*Interest Expense:* Interest expense increased 3% to \$3.9 million for the nine months ended September 30, 2008 from \$3.7 million for the nine months ended September 30, 2007. Interest on our 2006 Notes is payable semi-annually on December 30 and June 30 in cash or, at our option, in additional notes or a combination thereof. During the nine months ended September 30, 2008 and 2007, interest expense included \$1.1 million and \$1.0 million, respectively, paid in the form of additional 2006 Notes. In addition, the quarter ended September 30, 2007 included interest expense of \$527,000 that was subsequently paid in the form of additional 2006 Notes.

*Interest Income:* Interest income decreased 27% to \$871,000 for the nine months ended September 30, 2008 from \$1.2 million for the same period in 2007. This decrease is primarily attributable to a decrease in interest rates earned on our cash, cash equivalents, and short-term investments. Our average interest rate decreased from 5.3% for the nine months ended September 30, 2007 to 2.8% for the nine months ended September 30, 2008.



**Table of Contents****Research and Development Programs**

Prior to 2002, we did not track costs on a per project basis, and therefore have estimated the allocation of our total research and development costs to our largest research and development programs for that time period. During the first nine months of 2008, these research and development programs consisted largely of Oncophage, AG-707, Aroplatin, and QS-21, as indicated in the following table (in thousands).

Research and Development Program	Product	Nine Months Ended					Prior to 2005	Total
		September 30, 2008	Year Ended December 31, 2007		2006			
Heat Shock Proteins for Cancer	Oncophage & AG-858	\$ 13,832	\$ 13,970	\$ 19,985	\$ 37,836	\$ 166,635	\$ 252,258	
Heat Shock Proteins for Infectious Diseases	AG-702/707	1,264	2,005	1,939	3,001	9,126	17,335	
Liposomal Cancer Treatments*	Aroplatin	796	3,005	2,475	3,214	5,878	15,368	
Vaccine Adjuvant**	QS-21	597	2,064	2,492	325	4,619	10,097	
Other Research and Development Programs		476	745	1,752	2,704	11,922	17,599	
Total Research and Development Expenses		\$ 16,965	\$ 21,789	\$ 28,643	\$ 47,080	\$ 198,180	\$ 312,657	

\* Prior to 2001, costs were incurred by Aronex Pharmaceuticals, Inc., a company we acquired in July 2001.

\*\* Prior to 2000, costs were incurred by Aquila Biopharmaceuticals, Inc., a company we acquired in November 2000.

Research and development program costs include compensation and other direct costs plus an allocation of indirect costs, based on certain assumptions and our review of the status of each program. Our product, Oncophage, and our product candidates are in various stages of development as described below. Significant additional expenditures will be required if we start new trials, encounter delays in our trials, apply for regulatory approvals, continue development of our technologies, expand our operations, and bring Oncophage and our product candidates to market. The eventual total cost of each clinical trial is dependent on a number of factors such as trial design, length of the trial, number of clinical sites, and number of patients. The process of obtaining and maintaining regulatory approvals for new therapeutic products is lengthy, expensive, and uncertain. Because the further development of Oncophage is subject to further evaluation and uncertainty, and because AG-707 and Aroplatin are in early-stage clinical development, we are unable to reliably estimate the cost of completing our research and development programs, the timing of bringing such programs to various markets, and, therefore, when, if ever, material cash inflows are likely to commence. Our collaborations involving QS-21 depend on our collaborative partners or licensees successfully completing clinical trials, successfully supplying QS-21 to meet demand, and obtaining regulatory approvals and successfully commercializing product candidates containing QS-21.

**Table of Contents****Product Development Portfolio**

Below is a table showing the clinical trials completed or ongoing with Oncophage and our product candidates under development by Antigenics.

PRODUCT PIPELINE		Phase 1	Phase 2	Phase 3
<b>Oncophage</b>	Renal cell carcinoma			
	Metastatic melanoma			
	Glioma (a)(c)(d)			
	Colorectal cancer			
	Non-Hodgkin's lymphoma ( NHL )			
	Gastric cancer (a)			
	Metastatic renal cell carcinoma (b)			
	Lung cancer			
	Metastatic melanoma (a)			
	Pancreatic cancer			
	<b>Aroplatin</b>	Colorectal cancer		
	Solid malignancies/NHL (c)			
	Solid malignancies			
<b>AG-707</b>	Genital herpes (c)			

- (a) Phase 1/2 trials.  
 (b) Includes two separate Phase 1/2 and Phase 2 trials.  
 (c) Trial is ongoing.  
 (d) Investigator-sponsored trial.

*Oncophage*

We started enrolling patients in our first clinical trial studying Oncophage at Memorial Sloan-Kettering Cancer Center in New York, New York in November 1997. To date, we have treated over 750 cancer patients with Oncophage in our clinical trials. Because Oncophage is a novel therapeutic cancer vaccine that is patient-specific, meaning it is derived from the patient's own tumor, it may experience a long regulatory review process and high development costs, either of which could delay or prevent our commercialization efforts. For additional information regarding regulatory risks and uncertainties, please read the risks identified under Part II-Item 1A. Risk Factors of this Quarterly Report on Form 10-Q.

Our Phase 1/2 clinical trial in recurrent, high-grade glioma is currently our lead ongoing clinical trial. This study is being lead by the Brain Tumor Research Center at the University of California, San Francisco, with grants from the American Brain Tumor Association and the National Cancer Institute Special Programs of Research Excellence. Phase 1 results, presented at the International Conference on Molecular Targets and Cancer Therapeutics, showed that 11 out of 12 patients exceeded the historical median benchmark of 6.5 months survival from time of recurrence. The study also showed that all 12 treated patients demonstrated a significant immune response after vaccination with Oncophage ( $P < 0.001$ ) and that patients with minimal residual disease at time of first vaccination ( $n = 7$ ) were more likely to survive beyond nine months compared with patients with significant residual disease. The study has progressed to the Phase 2 portion, which is designed to enroll 30 patients.



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We believe that the collective results from our clinical trials thus far show that Oncophage has a favorable safety profile. We also believe that available results from clinical trials suggest that treatment with Oncophage can generate immunological and anti-tumor responses.

On March 24, 2006, we announced top-line results from part I of our Phase 3 study of Oncophage in renal cell carcinoma patients who are at high risk of recurrence after surgery, and disclosed that the trial did not meet its primary endpoint. We subsequently announced the termination of part II of the trial.

The Eastern Cooperative Oncology Group is currently sponsoring a large adjuvant renal cell carcinoma trial that stratifies patients by certain prognostic risk factors for recurrence, and puts patients into intermediate risk, high risk, and very high risk categories. We are able to apply these definitions to the data generated as part of our Phase 3 trial of Oncophage in renal cell carcinoma and it is in the intermediate risk, or better-prognosis population, where significant improvement in favor of the Oncophage arm was demonstrated.

We have opened a subsequent protocol that will continue to follow patients in the format of a registry in order to collect overall survival information, as well as investigator reports of disease recurrence. The registry, which is expected to provide additional data on the effectiveness of Oncophage, will follow patients for an additional three years from closure of the initial trial, providing more than five years of data collection following the enrollment of the last patient in the trial. In addition to the patient registry, we intend to initiate a small study in non-metastatic renal cell carcinoma that measures immunological data in the intermediate risk patient population. The results of this continued data collection and our ongoing analysis are uncertain, and may negatively affect or not affect the acceptability of the overall results of the trial and, even if clinically meaningful, may not meet the requirements of the FDA or other regulatory authorities for submission and approval of a marketing application or similar applications for product approval outside the United States.

In April 2008, the Russian Ministry of Public Health issued a registration certificate for the use of Oncophage in the treatment of kidney cancer patients at intermediate risk for disease recurrence and, in September 2008, the FDA granted the necessary permission to allow for the export of Oncophage from the United States for patient administration in Russia. The Russian registration was our first product approval from a regulatory authority, and the first approval of a patient-specific therapeutic cancer vaccine in a major market.

We or our distributors must also obtain import and export approvals from the Russian authorities, as well as complete a number of post approval activities. In addition, since Oncophage can only be manufactured from a patient's own tumor, patients will need to be diagnosed, and their tumors will need to be removed and sent to our manufacturing facility for vaccine to be prepared, released, and then returned to the site for patient administration. Complexities unique to the logistics of commercial products may delay shipments and limit our ability to move commercial product in an efficient manner without incident. In addition, if we are unable to secure import and export approvals in Russia, establish and execute on successful local distribution arrangements including favorable pricing and payment terms, and/or implement appropriate logistical processes for distribution of Oncophage, our commercialization efforts would be adversely affected.

Even with a successful commercial launch, the amount of revenue generated from the sale of Oncophage in Russia will depend on, among other things, identifying sources of reimbursement and obtaining adequate reimbursement, including from national or regional funds, and physician and patient assessments of the benefits and cost-effectiveness of Oncophage. We will rely heavily on private-pay for the foreseeable future and the ability and willingness of patients to pay is unclear. Many patients will not be capable of paying for Oncophage by themselves. In addition, cost-containment measures by third parties may prevent us from becoming profitable. Because we have limited resources and minimal sales and marketing experience, commercial launch of Oncophage may be slow. Furthermore, we may experience significant delays in the receipt of payment for Oncophage, or an inability to collect payments at all.

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In October 2008, we announced the submission of a Marketing Authorization Application ( MAA ) to the EMEA requesting conditional authorization of Oncophage in earlier-stage, localized kidney cancer. Conditional authorization, a relatively new provision, is reserved for products intended to treat serious and life-threatening diseases where a high unmet medical need currently exists. Products that have orphan designation in the European Union can also qualify for conditional authorization. Specifically, conditional authorization allows for the commercialization of a product with post approval commitments associated with the requirement to provide comprehensive clinical information about the products efficacy and safety profile. Products receiving conditional authorization are required to undergo annual regulatory evaluation and renewal until all commitments are fulfilled. Currently, there are no EMEA-approved drug therapies for this patient population. The MAA is undergoing review through the Centralized Procedure, which means that an approval, if granted, would apply to all current 27 EU countries plus Norway and Iceland.

In addition, we are exploring the steps necessary to seek approval of Oncophage in other markets outside the U.S. This exploration process includes formal and informal discussions with international regulatory authorities, key opinion leaders, and consultants with country-specific regulatory experience regarding potential applications for full or conditional marketing approvals, and/or named patient programs.

Guidance received from past interaction with the FDA indicated that further clinical studies must be conducted to demonstrate the efficacy and safety of Oncophage. At the appropriate time, we intend to seek a meeting with the FDA to discuss the results of the updated analyses utilizing data through March 2007 to determine whether there is an opportunity to file a BLA on the basis of these results with appropriate commitments to conduct post approval trials. Because evidence of clinically significant improvement has been observed in a subgroup analysis of the pre-specified primary and secondary endpoints and was not demonstrated in the intent-to-treat population of the Phase 3 study of Oncophage in renal cell carcinoma, this trial is likely not sufficient to support a BLA for product approval, based on existing standards. Furthermore, this trial may not be sufficient to support approval outside of the United States in countries other than Russia.

### *QS-21*

QS-21 is an adjuvant, or a substance added to a vaccine or other immunotherapy, that is designed to enhance the body s immune response to the antigen contained within the treatment. QS-21 is best known for its ability to stimulate antibody, or humoral, immune response, and has also been shown to activate cellular immunity. A natural product, QS-21 is a triterpene glycoside, or saponin, a natural compound purified from the bark of a South American tree called *Quillaja saponaria*. It is sufficiently characterized with a known molecular structure, thus distinguishing it from other adjuvant candidates, which are typically emulsions, polymers, or biologicals.

QS-21 has been tested in approximately 185 clinical trials involving, in the aggregate, over 10,000 subjects in a variety of cancer indications, infectious diseases, and other disorders. These studies have been carried out by academic institutions and pharmaceutical companies in the United States and internationally. A number of these studies have shown QS-21 to be significantly more effective in stimulating antibody responses than aluminum hydroxide or aluminum phosphate, the adjuvants most commonly used in approved vaccines in the United States today. None of the QS-21 trials completed to date have been pivotal.

A number of pharmaceutical and biotechnology companies have licensed QS-21 for use in vaccines to treat a variety of human diseases. Companies with QS-21 programs include GSK and Elan Corporation, plc, through its affiliate Elan Pharmaceuticals International Limited. In return for rights to use QS-21, these companies have generally agreed to pay us license fees, manufacturing payments, milestone payments, and royalties on product sales for a minimum of 10 years after commercial launch. In addition to our corporate licensing arrangements, we have developed a number of academic collaborations to test new vaccine concepts and products containing QS-21. There are approximately 15 vaccines currently in clinical development that contain QS-21.

On July 20, 2007, we executed a letter of intent with GSK amending the supply agreement to accelerate GSK s commercial grade QS-21 manufacturing rights previously granted in July 2006. Accordingly, from the effective date of the letter, GSK has the right to manufacture all of its requirements of commercial grade QS-21. In addition, the parties have amended their purchase and supply obligations with respect to pre-commercial grade QS-21. Also, in accordance with the terms of the letter, upon our election, GSK is obligated to supply us (or our

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affiliates, licensees, or customers) certain quantities of commercial grade QS-21 for a stated period of time. We understand that QS-21 is a key component included in several of GSK's proprietary adjuvant systems and that a number of GSK's vaccine candidates currently under development are formulated using adjuvant systems containing QS-21. GSK has initiated a Phase 3 study evaluating its investigational MAGE-A3 Antigen-Specific Cancer Immunotherapeutic containing QS-21 in non-small cell lung cancer. GSK has also released data from a Phase 2 study of its malaria vaccine candidate in African infants. GSK has indicated that it intends to proceed into late stage trials of what could be the first malaria vaccine for infants and young children in Africa.

Elan has a commercial license for the use of QS-21 in research and commercialization of products. Under the terms of the agreement, we are entitled to receive future milestone payments and product royalties in the event of the successful development of Elan's Alzheimer's disease vaccine that contains QS-21. In 2007, Elan initiated a Phase 2 study of their vaccine. Pursuant to the terms of the supply agreement between the parties, we (directly or through a third-party manufacturer) are Elan's exclusive supplier of QS-21.

### *AG-707*

The first potential off-the-shelf application of our heat shock protein technology, AG-707, is an investigational therapeutic vaccine product candidate directed at the virus that causes genital herpes (herpes simplex virus-2, or HSV-2). AG-707 is a multivalent vaccine containing multiple synthetic HSV-2 peptides. Based on the results of completed toxicology studies and other preclinical activities, we submitted to the FDA an investigational new drug application for AG-707 during the second quarter of 2005. In October 2005, we initiated a multicenter Phase 1 clinical trial of AG-707 in genital herpes. Analysis of immune responses from this study is ongoing and results are expected in the first half of 2009.

### *Aroplatin*

Aroplatin is a novel liposomal formulation of a third-generation platinum chemotherapeutic structurally similar to Eloxatin (oxaliplatin; Sanofi Aventis), a treatment for colorectal cancer. Although structural similarity does not guarantee similar clinical benefit, laboratory studies comparing Aroplatin to oxaliplatin showed that Aroplatin suppressed tumor growth, caused a reduction in tumor size, and provided a 50% increase in survival as compared to control animals. This data represents a five-fold improvement to results seen from the oxaliplatin arm of the study. Laboratory studies also indicate that Aroplatin has the ability to kill cancer cells. This anti-tumor activity has been demonstrated in over 10 tumor cell lines with results that are at least three-fold, or better, than those of cisplatin and/or carboplatin, two other approved platinum chemotherapeutic agents.

In 2002, we initiated a Phase 2 trial with Aroplatin for advanced colorectal cancer unresponsive to medical treatment. This single-arm, open-label trial, conducted at the Arizona Cancer Center, was designed to evaluate the effect of Aroplatin alone in patients whose disease is not responsive to standard first-line cancer treatments (5-fluorouracil/leucovorin or capecitabine and irinotecan). In September 2003, the investigators presented findings from this trial at the European Cancer Conference, also known as ECCO. One out of the 15 evaluable patients demonstrated a partial clinical response and two experienced disease stabilization. Researchers observed that Aroplatin appeared well tolerated in this pretreated patient population. Because this was a single-arm study without a comparator arm, statistical significance is not calculable. This trial is closed to enrollment.

In January 2003, we also initiated at the John Wayne Cancer Center, in Santa Monica, California, a Phase 1/2 trial of Aroplatin for a variety of advanced solid malignancies amenable to platinum therapy. The final study data demonstrated that out of the 15 evaluable patients, 14 were reported with disease progression at the first evaluation for disease status after the first treatment with Aroplatin, and one patient demonstrated stabilization of disease with subsequent disease progression after two months. The median time to progression was 66 days with a minimum of 49 days and a maximum of 105 days. This study is complete, and the data have undergone final review and analysis.

In October 2005, we initiated a Phase 1, dose-escalation trial of Aroplatin in advanced solid malignancies and B cell lymphoma. In collaboration with the trial investigators, we have determined that the maximum tolerated dose of Aroplatin has been reached in this study. Based on this result, the trial has been closed and a study report is under preparation. We plan to review the results from this trial with our medical advisors and to discuss future development options. In addition, we continue to pursue licensing and/or co-development arrangements to advance the product.

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**Liquidity and Capital Resources**

We have incurred annual operating losses since inception, and we had an accumulated deficit of \$532.6 million as of September 30, 2008. We expect to incur significant losses over the next several years as we continue our clinical trials, apply for regulatory approvals, prepare for commercialization, continue development of our technologies, and expand our operations. Phase 3 trials are particularly expensive to conduct. Since our inception, we have financed our operations primarily through the sale of equity and convertible notes, interest income earned on cash, cash equivalents, and short-term investment balances, and debt provided through secured lines of credit. From our inception through September 30, 2008, we have raised aggregate net proceeds of \$476.0 million through the sale of common and preferred stock, the exercise of stock options and warrants, proceeds from our employee stock purchase plan, and the issuance of convertible notes, and borrowed \$20.5 million under two credit facilities. As of September 30, 2008, we had debt outstanding of \$78.6 million, including \$28.5 million of our 2006 Notes maturing August 30, 2011 and \$50.0 million of our 5.25% convertible senior notes maturing February 20, 2025, but subject to redemption at the option of the holders or us beginning February 1, 2012.

Based on our current plans and activities, we anticipate that our net cash burn (defined as cash used in operating activities plus capital expenditures and dividend payments) will be in the \$35 million range for the year ending December 31, 2008. We continue to support and develop our QS-21 partnering collaborations, with the goal of generating royalties from this product in the 2010 timeframe.

We believe, based on our current plans and activities, that our working capital resources at September 30, 2008, anticipated revenues, and the estimated proceeds from our license, supply, and collaborative agreements will be sufficient to satisfy our liquidity requirements through 2009. We expect to attempt to raise additional funds in advance of depleting our current funds. In order to fund our operations beyond 2009, we will need to raise additional funds and may attempt to do so by: (1) licensing technologies or products to one or more collaborative partners, (2) renegotiating license and/or supply agreements with current collaborative partners, (3) completing an outright sale of assets, (4) securing additional debt financing, and/or (5) selling additional equity securities. Our ability to successfully enter into any such arrangements is uncertain, and if funds are not available, or not available on terms acceptable to us, we may be required to revise our planned clinical trials, other development activities, capital expenditures, and/or the scale of our operations. As noted above, we expect to attempt to raise additional funds in advance of depleting our current funds; however, we may not be able to raise funds or raise amounts sufficient to meet the long-term needs of the business. Satisfying long-term liquidity needs may require the successful commercialization of Oncophage and/or one or more partnering arrangements for Oncophage, successful commercialization of QS-21 by our licensees, and potentially successful commercialization of other product candidates, and will require additional capital, as discussed above. Please see the **Forward-Looking Statements** section and the risks highlighted under Part II-Item 1A. **Risk Factors** of this Quarterly Report on Form 10-Q.

Our future cash requirements include, but are not limited to, efforts to commercialize Oncophage in Russia and other jurisdictions we are currently exploring, as well as supporting our clinical trial and regulatory efforts and continuing our other research and development programs. Since inception, we have entered into various agreements with institutions and clinical research organizations to conduct and monitor our current clinical studies. Under these agreements, subject to the enrollment of patients and performance by the applicable institution of certain services, we have estimated our payments to be \$47.9 million over the term of the studies. Through September 30, 2008, we have expensed \$46.3 million as research and development expenses and \$45.6 million has been paid related to these clinical studies. The timing of expense recognition and future payments related to these agreements is subject to the enrollment of patients and performance by the applicable institution of certain services.

We have also entered into sponsored research agreements related to our product candidates that required payments of \$6.5 million, all of which has been paid through September 30, 2008. We plan to enter into additional agreements, and we anticipate significant additional expenditures will be required to advance our clinical trials, apply for regulatory approvals, continue development of our technologies, and bring Oncophage and our product candidates to market. Part of our strategy is to develop and commercialize some of our product candidates by

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continuing our existing collaborative arrangements with academic and collaborative partners and licensees and by entering into new collaborations. As a result of our collaborative agreements, we will not completely control the efforts to attempt to bring those product candidates to market. We have various agreements, for example, with collaborative partners and/or licensees, which allow the use of our QS-21 adjuvant in numerous vaccines. These agreements grant exclusive worldwide rights in some fields of use and co-exclusive or non-exclusive rights in others. These agreements generally provide us with rights to manufacture and supply QS-21 to the collaborative partner or licensee and also call for royalties to be paid to us on future sales of licensed vaccines that include QS-21, which may or may not be achieved. Significant investment in manufacturing capacity could be required if we were to retain our manufacturing and supply rights.

Our cash, cash equivalents, and short-term investments at September 30, 2008 were \$40.9 million, an increase of \$22.2 million from December 31, 2007.

On January 9, 2008, we entered into the January 9, 2008 private placement pursuant to which we sold 8,708,717 shares of common stock. Investors also received (i) 10-year warrants to purchase, at an exercise price of \$3.00 per share, up to 8,708,717 shares of common stock and (ii) unit warrants to purchase, at an exercise price of \$3.00 per unit, contingent upon a triggering event as defined in the January 9, 2008 private placement documents, (a) up to 8,708,717 shares of common stock and (b) additional 10-year warrants to purchase, at an exercise price of \$3.00 per share, up to 8,708,717 additional shares of common stock. We raised net proceeds in the January 9, 2008 private placement of \$25.8 million, after deducting offering costs of \$296,000.

In accordance with the terms of the January 9, 2008 private placement, the 10-year warrants became exercisable for a period of 9.5 years as of July 9, 2008. Our private placement in April 2008 qualified as a triggering event, and therefore the unit warrants became exercisable for a period of eighteen months as of July 9, 2008.

In February 2008, we filed a registration statement covering the sale of the 8,708,717 shares of common stock issued and the 8,708,717 shares issuable upon the exercise of the 10-year warrants issued in the January 9, 2008 private placement. The SEC has declared the registration statement effective. Shares issuable under the unit warrants have not been registered as of this time.

On April 8, 2008, we entered into a private placement agreement under which we sold (i) 7,000,000 shares of common stock and (ii) five-year warrants to acquire up to 7,000,000 shares of common stock at an exercise price of \$3.75 per share, for \$3.00 for each share and warrant sold. The warrants became exercisable for a period of 4.5 years as of October 10, 2008. We filed a registration statement on April 18, 2008 covering the sale of the 7,000,000 shares of common stock issued and the 7,000,000 shares issuable upon the exercise of the related warrants, and the SEC declared the registration statement effective. We raised net proceeds in the April 8, 2008 private placement of \$19.7 million, after deducting offering costs of \$1.3 million.

As part of the private placement agreements, we agreed to register the shares of common stock issued in the equity sales, and the shares of common stock underlying the warrants issued to the investors, with the SEC within contractually specified time periods. As noted above, we filed registration statements covering all required shares. We have also agreed to use our best efforts to keep the registration statements continuously effective. If we are unable to keep the registration statements continuously effective in accordance with the terms of the private placements, we are subject to liquidated damages of up to a maximum of 10% of the aggregate purchase price paid by the investors, or \$4.7 million.

In April 2008, we issued and sold a total of 271,762 shares of our common stock through our placement agent, Wm Smith & Co., and raised net proceeds of \$804,000, after deducting offering costs of \$38,000. Proceeds from the offering will be used for general corporate purposes. This offering was made under an effective shelf registration statement.

During the nine months ended September 30, 2008, we used cash primarily to finance our operations. Net cash used in operating activities for the nine months ended September 30, 2008 and 2007 was \$23.7 million and \$20.5 million, respectively. We continue to support and develop our QS-21 partnering collaborations, with the goal of generating royalties from this product in the 2010 timeframe. Our future ability to generate cash from operations



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will depend on achieving regulatory approval of our product candidates and market acceptance of Oncophage and our product candidates, achieving benchmarks as defined in existing collaborative agreements, and our ability to enter into new collaborations. Please see the Forward-Looking Statements section and the risks highlighted under Part II-Item 1A. Risk Factors of this Quarterly Report on Form 10-Q.

Net cash used in investing activities for the nine months ended September 30, 2008 was \$5.9 million as compared to net cash provided by investing activities of \$14.1 million for the nine months ended September 30, 2007. During the nine months ended September 30, 2008, we had net purchases of short-term securities of \$5.8 million compared with net maturities of short-term securities of \$12.6 million during the nine months ended September 30, 2007.

Net cash provided by financing activities was \$46.0 million for the nine months ended September 30, 2008 as compared to \$3.8 million for the nine months ended September 30, 2007. During the nine months ended September 30, 2008, we raised net proceeds from private placements of \$45.7 million. During the nine months ended September 30, 2008 and 2007, proceeds from our employee stock purchase plan totaled \$287,000 and \$78,000, respectively. In addition, during the nine months ended September 30, 2008, we received proceeds of \$804,000 from at the market offerings and \$47,000 from the exercise of stock options. No stock options were exercised during the nine months ended September 30, 2007. Dividends paid on our series A convertible preferred stock totaled \$593,000 during both nine-month periods.

Effective July 19, 2002, we sublet part of our Framingham facility to GTC Biotherapeutics, Inc. and we have leased related leasehold improvements and equipment under agreements that were to expire on December 31, 2006. GTC exercised its option to extend this lease until September 2010. Under the terms of our original lease, we are obligated to pay our landlord approximately 7% of our rental income. Effective March 17, 2004, we sublet an additional part of our Framingham facility to PP Manufacturing, whose lease also expires in September 2010. We are contractually entitled to receive base rental payments of \$288,000 during the remainder of 2008, \$1.2 million in 2009, and \$863,000 in 2010. The collection of this income, however, is subject to uncertainty.

We are currently involved in certain legal proceedings as detailed in Note F of the notes to our unaudited condensed consolidated financial statements. While we currently believe that the ultimate outcome of any of these proceedings will not have a material adverse effect on our financial position, results of operations, or liquidity, litigation is subject to inherent uncertainty. Furthermore, litigation consumes both cash and management attention.

### **Recent Accounting Pronouncements**

We adopted the provisions of SFAS No. 157, *Fair Value Measurements*, effective January 1, 2008, for our financial assets and liabilities. The FASB delayed the effective date of SFAS No. 157 until January 1, 2009, with respect to the fair value measurement requirements for non-financial assets and liabilities that are not remeasured on a recurring basis. Under SFAS No. 157, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (i.e. the exit price) in an orderly transaction between market participants at the measurement date. The adoption of SFAS No. 157 did not have a material impact on our consolidated financial statements.

SFAS No. 157 establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances. The fair value hierarchy is broken down into three levels based on the source of inputs as follows:

Level 1 Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access;

Level 2 Valuations based on quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active and models for which all significant inputs are observable, either directly or indirectly; and

Level 3 Valuations based on inputs that are unobservable and significant to the overall fair value measurement.



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The availability of observable inputs can vary among the various types of financial assets and liabilities. To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for financial statement disclosure purposes, the level in the fair value hierarchy within which the fair value measurement is categorized is based on the lowest level input that is significant to the overall fair value measurement.

The Company's short-term investments are comprised of U.S. Treasury securities that are valued using quoted market prices with no valuation adjustments applied. Accordingly, these securities are categorized in Level 1. The fair value of the U.S. Treasury securities at September 30, 2008, excluding accrued interest, was approximately \$10.0 million.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities*. SFAS No. 159 provides companies with the option to measure specified financial instruments and certain other items at fair value. We adopted the provisions of SFAS No. 159 as of January 1, 2008 and have elected not to measure any additional financial instruments and other items at fair value.

In December 2007, the FASB issued SFAS No. 141 (revised 2007), *Business Combinations*. This revised standard expands the types of transactions or other events that will qualify as business combinations and requires that all business combinations will result in all assets and liabilities of the acquired business being recorded at their fair values, with limited exceptions. The standard also requires, among other provisions, that certain contingent assets and liabilities will be recognized at their fair values on the acquisition date. An acquirer will also recognize contingent consideration at its fair value on the acquisition date and, for certain arrangements, changes in fair value will be recognized in earnings until the contingency is settled. Under SFAS No. 141R, acquisition-related transaction and restructuring costs will be expensed rather than treated as part of the cost of the acquisition and included in the amount recorded for assets acquired. SFAS No. 141R is required to be applied prospectively to business combinations for which the acquisition is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008, and may not be early adopted.

In December 2007, the FASB issued SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements*. SFAS No. 160, which is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008, governs the accounting for and reporting of noncontrolling interests in partially owned consolidated subsidiaries and the loss of control in subsidiaries. The provisions of SFAS No. 160 will be applied to transactions on a prospective basis once adopted.

In March 2008, the FASB issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities*. SFAS No. 161, which is effective for fiscal years, and interim periods within those fiscal years, beginning after November 15, 2008, is intended to improve financial reporting about derivative instruments and hedging activities by requiring enhanced disclosures to enable investors to better understand their effects on an entity's financial position, financial performance, and cash flows. We do not expect that the adoption of SFAS No. 161 will have a material impact on our financial position or results of operations.

In May 2008, the FASB issued FSP Accounting Principles Board 14-1, *Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement)*, which is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2008. FSP APB 14-1 clarifies that convertible debt instruments that may be settled in cash upon conversion are not addressed by paragraph 12 of APB Opinion No. 14, *Accounting for Convertible Debt and Debt Issued with Stock Purchase Warrants*. FSP APB 14-1 also specifies that issuers of such instruments should separately account for the liability and equity components in a manner that will reflect the entity's nonconvertible debt borrowing rate when interest cost is recognized in subsequent periods. We are currently evaluating the effect of FSP APB 14-1, and we have not yet determined the impact of the standard on our financial position or results of operations.

In June 2008, the FASB ratified the consensus in Emerging Issues Task Force Issue No. 07-5, *Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock*, which is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. EITF Issue No. 07-5 defines when adjustment features within contracts are considered to be equity-indexed. We are currently evaluating the effect of EITF Issue No. 07-5, and we have not yet determined the impact of the standard on our financial position or results of operations.

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### **Item 3. *Quantitative and Qualitative Disclosures About Market Risk***

In the normal course of business, we are exposed to fluctuations in interest rates as we seek debt financing and invest excess cash. We are also exposed to foreign currency exchange rate fluctuation risk related to our transactions denominated in foreign currencies. We do not currently employ specific strategies, such as the use of derivative instruments or hedging, to manage these exposures. Our currency exposures vary, but are primarily concentrated in the Euro. There has been no material change with respect to our interest rate and foreign currency exposures or our approach toward those exposures, as described in our Annual Report on Form 10-K for the year ended December 31, 2007. However, commercialization of Oncophage in Russia and possible commercialization of Oncophage in other locations outside of the United States could result in increased foreign currency exposure.

We had cash, cash equivalents, and short-term investments at September 30, 2008 of \$40.9 million, which are exposed to the impact of interest rate changes, and our interest income fluctuates as interest rates change. Due to the short-term nature of our investments in money market funds, the carrying value approximates the fair value of these investments at September 30, 2008; however, we are subject to investment risk.

We invest our cash, cash equivalents, and short-term investments in accordance with our Investment Policy. The primary objectives of our Investment Policy are to preserve principal, maintain liquidity to meet operating needs, and maximize yields. We review our Investment Policy annually and amend it as deemed necessary. Currently, the Investment Policy prohibits investing in any structured investment vehicles and asset-backed commercial paper. Although our investments are subject to credit risk, our Investment Policy specifies credit quality standards for our investments and limits the amount of credit exposure from any single issue, issuer, or type of investment. Our investments are also subject to interest rate risk and will decrease in value if market interest rates increase. However, due to the conservative nature of our investments and relatively short duration, interest rate risk is mitigated. We do not invest in derivative financial instruments. Accordingly, we do not believe that there is currently any material market risk exposure with respect to derivative or other financial instruments that would require disclosure under this item.

### **Item 4. *Controls and Procedures***

#### **Evaluation of Disclosure Controls and Procedures**

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Securities Exchange Act. Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were functioning effectively as of the end of the period covered by this Quarterly Report on Form 10-Q to provide reasonable assurance that the Company can meet its disclosure obligations.

#### **Changes in Internal Control Over Financial Reporting**

During the quarter ended September 30, 2008, there was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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Antigenics, our Chairman and Chief Executive Officer, Garo H. Armen, Ph.D., and two investment banking firms that served as underwriters in our initial public offering have been named as defendants in a federal civil class action lawsuit pending in the United States District Court for the Southern District of New York. Substantially similar actions were filed concerning the initial public offerings for more than 300 different issuers, and the cases were coordinated as *In re Initial Public Offering Securities Litigation*, 21 MC 92 for pre-trial purposes. The suit alleges that the brokerage arms of the investment banking firms charged secret excessive commissions to certain of their customers in return for allocations of our stock in the offering. The suit also alleges that shares of our stock were allocated to certain of the investment banking firms customers based upon agreements by such customers to purchase additional shares of our stock in the secondary market. Dr. Armen has been dismissed without prejudice from the lawsuit pursuant to a stipulation. In June 2004, a stipulation of settlement and release of claims against the issuer defendants, including us, was submitted to the court for approval. The court preliminarily approved the settlement in August 2005. In December 2006, the appellate court overturned the certification of classes in six test cases that were selected by the underwriter defendants and plaintiffs in the coordinated proceedings. The case involving Antigenics is not one of the six test cases. Class certification had been one of the conditions of the settlement. Accordingly, on June 25, 2007, the court entered an order terminating the proposed settlement based on a stipulation among the parties to the settlement. Plaintiffs have filed amended master allegations and amended complaints in the six test cases. On March 26, 2008, the court largely denied the defendants' motion to dismiss the amended complaints. It is uncertain whether there will be any revised or future settlement. To date, the plaintiffs have not asserted a specific amount of damages and, at this time, we cannot make a reliable estimate of possible loss, if any, related to this litigation. Accordingly, no accrual has been recorded at September 30, 2008.

We currently are a party, or may become a party, to other legal proceedings as well. While we currently believe that the ultimate outcome of any of these proceedings will not have a material adverse effect on our financial position, results of operations, or liquidity, litigation is subject to inherent uncertainty. Furthermore, litigation consumes both cash and management attention.

**Item 1A. Risk Factors**

Our future operating results could differ materially from the results described in this Quarterly Report on Form 10-Q due to the risks and uncertainties described below. We cannot assure investors that our assumptions and expectations will prove to be correct. Important factors could cause our actual results to differ materially from those indicated or implied by forward-looking statements. See Forward-Looking Statements on page 14 of this Quarterly Report on Form 10-Q. Factors that could cause or contribute to such differences include those factors discussed below.

**Risks Related to our Business**

*If we incur operating losses for longer than we expect, or we are not able to raise additional capital, we may be unable to continue our operations, or we may become insolvent.*

From our inception through September 30, 2008, we have generated net losses totaling \$532.6 million. Our net losses for the nine months ended September 30, 2008 and for the year ended December 31, 2007 were \$34.0 million and \$36.8 million, respectively. We expect to incur significant losses over the next several years as we continue our clinical trials, apply for regulatory approvals, continue development of our technologies, and pursue commercialization efforts and related activities. Furthermore, our ability to generate cash from operations is dependent on the success of our licensees and collaborative partners, as well as the likelihood and timing of new strategic licensing and partnering relationships and/or successful commercialization of Oncophage and our various product candidates. If we incur operating losses for longer than we expect and/or we are unable to raise additional capital, we may become insolvent and be unable to continue our operations.

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On September 30, 2008, we had \$40.9 million in cash, cash equivalents, and short-term investments. We believe, based on our current plans and activities, that our working capital resources at September 30, 2008, anticipated revenues, and the estimated proceeds from our license, supply, and collaborative agreements will be sufficient to satisfy our liquidity requirements through 2009. We expect to attempt to raise additional funds in advance of depleting our current funds. For the nine months ended September 30, 2008, our average monthly cash used in operating activities was \$2.6 million. Capital expenditures for the nine months ended September 30, 2008 were \$188,000. We do not anticipate significant capital expenditures during the remainder of 2008.

As part of certain private placement agreements, we are required to maintain effective registration statements. If we are unable to keep the registration statements continuously effective in accordance with the terms of the private placement agreements, we are subject to liquidated damages penalties of up to a maximum of 10% of the aggregate purchase price paid by the investors, or \$4.7 million.

Since our inception, we have financed our operations primarily through the sale of equity and convertible notes, interest income earned on cash, cash equivalents, and short-term investment balances, and debt provided through secured lines of credit. In order to finance future operations, we will be required to raise additional funds in the capital markets, through arrangements with collaborative partners, or from other sources.

Many economists are now predicting that the United States economy, and possibly the global economy, may enter into a prolonged recession as a result of the deterioration in the credit markets and related financial crisis, as well as a variety of other factors. While the ultimate outcome of these events cannot be predicted, they may have a material adverse effect on our liquidity and financial condition if our ability to raise additional funds were to be impaired. The ability of potential patients and/or health care payers to pay for Oncophage treatments could also be adversely impacted, thereby limiting our potential revenue. In addition, any negative impacts on our collaborative partners could limit potential revenue from our product candidates.

Additional financing may not be available on favorable terms, or at all. If we are unable to raise additional funds when we need them, we will be required to delay, reduce, or eliminate some or all of our development and commercialization programs and some or all of our clinical trials, including the development and commercialization programs and clinical trials supporting Oncophage. We also may be forced to license or sell technologies to others under agreements that allocate to third parties substantial portions of the potential value of these technologies. We may also be unable to continue our operations, or we may become insolvent.

***We have significant long-term debt, and we may not be able to make interest or principal payments when due.***

As of September 30, 2008, our total long-term debt, excluding the current portion, was \$78.5 million. Our 5.25% convertible senior notes due February 2025 do not restrict our ability or the ability of our subsidiaries to incur additional indebtedness, including debt that effectively ranks senior to the notes. On each of February 1, 2012, February 1, 2015, and February 1, 2020, holders may require us to purchase their notes for cash equal to 100% of the principal amount of the notes, plus any accrued and unpaid interest. Holders may also require us to repurchase their notes upon a fundamental change, as defined, at a cash price equal to 100% of the principal amount of the notes to be repurchased, plus any accrued and unpaid interest, and in some cases, an additional make-whole premium.

Our 2006 Notes mature on August 30, 2011, at which point we may elect to repay the outstanding balance in cash or in common stock, subject to certain limitations. In no event will any of the noteholders be obligated to accept equity that would result in them owning in excess of 9.99% of our outstanding common stock at any given time in connection with any conversion, redemption, or repayment of these notes. The note agreements include material restrictions on our incurrence of debt and liens while these notes are outstanding, as well as other customary covenants.

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Our ability to satisfy our obligations will depend upon our future performance, which is subject to many factors, including the factors identified in this Risk Factors section and other factors beyond our control. If we are not able to generate sufficient cash flow from operations in the future to service our indebtedness, we may be required, among other things, to:

seek additional financing in the debt or equity markets;

refinance or restructure all or a portion of our indebtedness;

sell, out-license, or otherwise dispose of assets; and/or

reduce or delay planned expenditures on research and development and/or commercialization activities.

Such measures might not be sufficient to enable us to make principal and interest payments. In addition, any such financing, refinancing, or sale of assets might not be available on economically favorable terms, if at all.

To date, we have had negative cash flows from operations. For the nine months ended September 30, 2008 and for the year ended December 31, 2007, net cash used in operating activities was \$23.6 million and \$26.7 million, respectively. Excluding our 2006 Notes, which mature in 2011 and for which we may elect to pay the interest in cash or additional notes, at our option, and for which the outstanding balance at maturity may be paid in cash or in common stock, subject to certain limitations, and assuming no additional interest-bearing debt is incurred and none of our notes are converted, redeemed, repurchased, or exchanged, our interest payments will be \$2.6 million annually during 2009 and thereafter until maturity.

***Several factors could delay or prevent the successful commercial launch of Oncophage in Russia. In addition, we do not expect to generate significant revenue from sales of Oncophage in Russia for several months, if ever.***

In April 2008, the Russian Ministry of Public Health issued a registration certificate for the use of Oncophage in the treatment of kidney cancer patients at intermediate risk for disease recurrence and, in September 2008, the FDA granted the necessary permission to allow for the export of Oncophage from the United States for patient administration in Russia. The Russian registration was our first product approval from a regulatory authority, and the first approval of a patient-specific therapeutic cancer vaccine in a major market.

We or our distributors must also obtain import and export approvals from the Russian authorities, as well as complete a number of post approval activities. In addition, since Oncophage can only be manufactured from a patient's own tumor, patients will need to be diagnosed, and their tumors will need to be removed and sent to our manufacturing facility for vaccine to be prepared, released, and then returned to the site for patient administration. Complexities unique to the logistics of commercial products may delay shipments and limit our ability to move commercial product in an efficient manner without incident. In addition, if we are unable to secure import and export approvals in Russia, establish and execute on successful local distribution arrangements including favorable pricing and payment terms, and/or implement appropriate logistical processes for distribution of Oncophage, our commercialization efforts would be adversely affected.

Even with a successful commercial launch, the amount of revenue generated from the sale of Oncophage in Russia will depend on, among other things, identifying sources of reimbursement and obtaining adequate reimbursement, including from national or regional funds, and physician and patient assessments of the benefits and cost-effectiveness of Oncophage. We will rely heavily on private-pay for the foreseeable future and the ability and willingness of patients to pay is unclear. Many patients will not be capable of paying for Oncophage by themselves. In addition, cost-containment measures by third parties may prevent us from becoming profitable. Because we have limited resources and minimal sales and marketing experience, commercial launch of Oncophage may be slow. Furthermore, we may experience significant delays in the receipt of payment for Oncophage, or an inability to collect payments at all.

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*Our approval to market Oncophage in Russia is limited to the treatment of kidney cancer patients at intermediate risk for disease recurrence, and is subject to regulatory requirements. If we fail to comply with these regulatory requirements in Russia or elsewhere, if these regulatory requirements change, or if we experience unanticipated regulatory problems, our commercial launch of Oncophage could be prevented or delayed, or Oncophage could be subjected to restrictions, or be withdrawn from the market, or some other action may be taken that may be adverse to our business.*

Just as our registration for Oncophage in Russia is currently limited to the treatment of kidney cancer patients at intermediate risk for disease recurrence, the FDA and international regulatory authorities generally approve products for particular indications. If an approval is for a limited indication, this limitation reduces the size of the potential market for that product. Product approvals, once granted, are subject to continual review and periodic inspections by regulatory authorities. Later discovery of previously unknown problems or safety issues and/or failure to comply with applicable FDA and/or other international regulatory requirements can result in, among other things, warning letters, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, refusal of the government to renew marketing applications, complete withdrawal of a marketing application, and/or criminal prosecution. Such regulatory enforcement could have a direct and negative impact on the product for which approval is granted, but also could have a negative impact on the approval of any pending applications for marketing approval of new drugs or supplements to approved applications.

*We face a risk of government enforcement actions in connection with our business and marketing activities.*

Our operations and marketing practices are subject to regulation and scrutiny by the United States government, as well as governments of any other countries in which we do business or conduct activities. Because we are a company operating in a highly regulated industry, regulatory authorities could take enforcement action against us in connection with our business and marketing activities for various reasons.

For example, our marketing and sales, labeling, and promotional activities in Russia are subject to local regulations. If we fail to comply with regulations prohibiting the promotion of products for non-approved indications or products for which marketing approval has not been granted, regulatory authorities could bring enforcement actions against us that could inhibit our marketing capabilities, as well as result in penalties. In addition, the United States Foreign Corrupt Practices Act prohibits U.S. companies and their representatives from offering, promising, authorizing, or making payments to foreign officials for the purpose of obtaining or retaining business abroad. Failure to comply with domestic or foreign laws, knowingly or unknowingly, could result in various adverse consequences, including possible delay in approval or refusal to approve a product, recalls, seizures, withdrawal of an approved product from the market, exclusion from government health care programs, imposition of significant fines, injunctions, and/or the imposition of civil or criminal sanctions against us and/or our officers or employees.

*We may not be able to obtain approval to market Oncophage in countries other than Russia. Because we expect additional Phase 3 clinical trials of Oncophage may be required prior to submitting a BLA to the FDA for any indication, we likely will not commercialize Oncophage in the United States for several years, if ever. We may face similar hurdles in other territories where we may seek marketing approval.*

Oncophage is currently only approved for marketing in Russia for the treatment of kidney cancer patients at intermediate risk for disease recurrence. In October 2008, we submitted a Marketing Authorization Application to the European Medicines Evaluation Agency requesting conditional authorization of Oncophage in earlier-stage, localized kidney cancer. Conditional authorization, a relatively new provision, is reserved for products intended to treat serious and life-threatening diseases where a high unmet medical need currently exists. Products that have orphan designation in the European Union can also qualify for conditional authorization. Specifically, conditional authorization allows for the commercialization of a product with post approval commitments associated with the requirement to provide comprehensive clinical information about the products' efficacy and safety profile. We believe that Oncophage in this indication meets the criteria for conditional authorization. Based on current limited precedence regarding the conditional authorization process, and as is inherent in any regulatory review of a marketing application, there is a high level of uncertainty regarding the probability and timing of a favorable outcome.



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Additionally, and as resources allow, we continue to explore potential opportunities to seek product approval in other jurisdictions, including the U.S. and Canada. The probability and timing of submissions and/or approval in any jurisdiction or indication for this product is uncertain. The FDA has indicated that our Phase 3 clinical trials of Oncophage cannot, by themselves, support BLA filings in the studies indications (renal cell carcinoma and metastatic melanoma). The signals and trends observed in the Phase 3 renal cell carcinoma and melanoma trials of Oncophage are based on data analysis of subgroups of patients that were not pre-specified in these studies. While the subgroup data might be suggestive of treatment effect, under current regulatory guidelines the results cannot be expected, alone, to support registration or approval of Oncophage in the United States, and our existing data may not support registration or approval in other territories outside of Russia. Any additional studies may take years to complete and may fail to support regulatory filings for many reasons, including failure of the trials to demonstrate that Oncophage is safe and effective in the studies indications, failure to conduct the studies in compliance with the clinical trial protocols, failure to recruit physicians or patients, or the clinical and/or regulatory environment at the time. In addition, Oncophage is a novel therapeutic cancer vaccine that is patient-specific, meaning it is derived from the patient's own tumor. The FDA and foreign regulatory agencies, including the European Medicines Agency, which is responsible for product approvals in Europe, and Health Canada, which is responsible for product approvals in Canada, have relatively little experience in reviewing patient-specific oncology therapies. Therefore, Oncophage may experience a long regulatory review process and high development costs, either of which could delay or prevent our commercialization efforts.

***Risks associated with doing business internationally could negatively affect our business.***

With the registration of Oncophage in Russia, we have begun to focus our efforts on the commercial launch of this product. However, Russia is an evolving market and regulatory, legal, and commercial structures are less predictable than in more mature markets. This unpredictability, combined with changes in Russian leadership, as well as potential geopolitical instability in the Russian region, could negatively impact the regulatory and/or commercial environment there, which in turn could have an adverse effect on our business.

In addition, various other risks associated with foreign operations may impact our success. Possible risks include fluctuations in the value of foreign currencies, disruptions in the import, export, and transportation of patient tumors and our product, the product and service needs of foreign customers, difficulties in building and managing foreign relationships, the performance of our collaborators, and unexpected regulatory, economic, or political changes in foreign markets.

Our financial position, results of operations, and cash flows can be affected by fluctuations in foreign currency exchange rates, primarily for the euro and the ruble. Movement in foreign currency exchange rates could cause revenue or clinical trial costs to vary significantly in the future and may affect period-to-period comparisons of our operating results. Historically, we have not hedged our exposure to these fluctuations in exchange rates.

***Regulatory reforms may create additional burdens that would cause us to incur additional costs and may adversely affect our ability to commercialize our products.***

From time to time, new legislation is passed into law that could significantly change the statutory provisions governing the approval, manufacturing, and marketing of products regulated by the FDA and other global health authorities. Additionally, regulations and guidance are often revised or reinterpreted by health agencies in ways that may significantly affect our business and our products. It is impossible to predict whether further legislative changes will be enacted, or whether regulations, guidance, or interpretations will change, and what the impact of such changes, if any, may be.

***If we fail to obtain adequate levels of reimbursement for Oncophage or our product candidates, there may be no commercially viable market for Oncophage or our product candidates, or the commercial potential of Oncophage or our product candidates will be significantly limited.***

It is not clear that public and private insurance programs will determine that Oncophage or our product candidates come within a category of items and services covered by their insurance plans. Generally, in Russia,

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Europe, and other countries outside the United States, government-sponsored health care systems pay a substantial share of health care costs, and they may regulate reimbursement levels of our products to control costs. Many patients will not be capable of paying for Oncophage or our product candidates by themselves. Government and private third-party payers are increasingly challenging the prices charged for medical products and services, and increasingly attempting to limit and/or regulate the reimbursement for medical products. In many of the markets where we or our collaborative partners would commercialize a product following regulatory approval, the prices of pharmaceutical products are subject to price controls by various mechanisms. Russia is an evolving market and regulatory, legal, and commercial structures are less predictable than in more mature markets. In addition, the reimbursement system in Russia is changing rapidly and has experienced serious funding and administrative problems in its national and regional reimbursement programs. For example, the program known by the Russian acronym of DLO, which was established in January 2005 to provide free-of-charge prescriptions to certain Russians, has substantially delayed payments and covered fewer drugs recently. In addition, the Russian government is attempting to reduce coverage for drugs produced outside of Russia, as they tend to cost more than drugs produced in Russia. Furthermore, it is possible that reimbursement for cancer drugs and other therapeutic areas will not be covered by a newly created system, which may result in uncertainties regarding levels of reimbursement. Drug reimbursement in Russia could continue to undergo change. There can be no assurance regarding the timing, scope, or availability of reimbursement in Russia for Oncophage.

It is possible that there will be substantial delays in obtaining coverage of Oncophage or our product candidates, if at all, and that, if coverage is obtained, there may be significant restrictions on the circumstances in which there would be reimbursement. Where government or insurance coverage is available, there may be prohibitive levels of patient coinsurance, making Oncophage unaffordable, or limits on the payment amount, which could have a material adverse effect on sales of Oncophage or any of our product candidates that receive marketing approval. If we are unable to obtain or retain adequate levels of reimbursement from government or private health plans, our ability to sell Oncophage and our potential products will be adversely affected. We are unable to predict what impact any future regulation or third-party payer initiatives relating to reimbursement for Oncophage or any of our potential products, if any of them are approved for sale, will have on sales.

***Our commercial operations experience and resources are limited and need to be developed or acquired. If we fail to do so, our revenues may be limited or nonexistent. In addition, we may be required to incur significant costs and devote significant efforts to augment our existing capabilities.***

As we have limited experience with commercial operations, it may be difficult to accurately estimate our costs. We currently do not have employees, manufacturing, or business operations facilities outside of the United States. As we prepare for the commercial launch of Oncophage in Russia, we currently rely, and likely will continue to rely, significantly on consultants, partners, and other third parties to conduct our sales, marketing, and distribution operations. If these third parties are unable to fulfill their obligations, our commercial launch of Oncophage could be delayed or prevented. If in the future we elect to perform sales, marketing, and distribution functions for these types of products ourselves, we will face a number of additional risks, including the need to recruit experienced marketing and sales personnel, or incur significant expenditures. In addition, we may need to compete with other companies that have more experienced and better-funded operations. Where we have licensed our products to third-party collaborators or licensees, we will be dependent on their commercial operations, sales and marketing expertise and resources, and any revenues we receive from those products will depend primarily on the sales and marketing efforts of others.

For our patient-specific heat shock protein product candidates, we need to develop specialized commercial operations to manage patient-specific ordering, tracking, and control. There are few companies that have developed this expertise and we do not know whether we will be able to establish commercial operations or enter into marketing and sales agreements with others on acceptable terms, if at all.

***Our competitors in the biotechnology and pharmaceutical industries may have superior products, manufacturing capability, and/or selling and marketing expertise.***

Our business may fail because we face intense competition from major pharmaceutical companies and specialized biotechnology companies engaged in the development of product candidates directed at cancer and

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infectious diseases. Several of these companies have products that utilize similar technologies and/or patient-specific medicine techniques, such as Dendreon, Oxford BioMedica and its partner Sanofi-Aventis, Nventa (formerly Stressgen), Accentia, and Cell Genesys. Additionally, Liponova has completed a Phase 3 trial for its Reniale cancer vaccine in Germany for non-metastatic renal cell carcinoma and is expected to start a Phase 3 trial in the United States in 2008. Patents have been issued in both the United States and Europe related to Nventa's heat shock protein technology.

There is no guarantee that we will be able to compete with potential future products being developed by our competitors. More specifically, Oncophage may compete with therapies currently in development for non-metastatic renal cell carcinoma, such as LipoNova's Reniale and Willex AG's Rencarex (WX-G250), which are in Phase 3 clinical trials. Additionally, sorafenib and sunitinib, which are approved for advanced renal cell carcinoma, are being studied in non-metastatic renal cell carcinoma, and other products that have been developed for metastatic renal cell carcinoma, such as temsirolimus and bevacizumab, may also be developed for non-metastatic renal cell carcinoma. As Oncophage is potentially developed in other indications, it will face additional competition in those indications. Our product candidate, Aroplatin, may compete with existing approved chemotherapies or other chemotherapies that are in development by various companies, including GPC Biotech and Poniard Pharmaceuticals. In addition, for Oncophage and all of our product candidates, prior to regulatory approval, we may compete for access to patients with other products in clinical development, with products approved for use in the indications we are studying, or with off-label use of products in the indications we are studying. We anticipate that we will face increased competition in the future as new companies enter markets we seek to address and scientific developments surrounding immunotherapy and other traditional cancer therapies continue to accelerate.

The remaining patent life for our QS-21 proprietary adjuvant is limited. Upon patent expiry, it is possible that our competitors may develop competing or generic saponin adjuvants. Accordingly, entering into new license agreements is unlikely and may be impossible. While our license and supply agreements for QS-21 provide revenues for us and typically provide royalties for at least 10 years after commercial launch, there is no guarantee that we will be able to collect royalties related to QS-21 in the future.

Several other vaccine adjuvants are in development and could compete with QS-21 for inclusion in vaccines in development. These adjuvants include, but are not limited to, oligonucleotides, under development by Pfizer, Idera, Juvaris, and Dynavax, anti-CTLA-4 antibody, under development by Medarex, MF59 and SAF, under development by Novartis, and MPL, under development by GlaxoSmithKline. In addition, several companies, such as CSL Limited and Galenica, are developing saponin adjuvants, including synthetic formulations.

Additionally, many of our competitors, including large pharmaceutical companies, have greater financial and human resources and more experience than we do. Our competitors may:

commercialize their product candidates sooner than we commercialize our own;

develop safer or more effective therapeutic drugs or preventive vaccines and other therapeutic products;

implement more effective approaches to sales and marketing and capture some of our potential market share;

establish superior intellectual property positions;

discover technologies that may result in medical insights or breakthroughs, which render our drugs or vaccines obsolete, possibly before they generate any revenue; or

adversely affect our ability to recruit patients for our clinical trials.

***Manufacturing problems may cause product launch delays and unanticipated costs.***

If one of our product candidates or our licensees' product candidates for which we maintain exclusive or primary manufacturing rights for a component nears marketing approval or is approved for sale, or if the Russian market for Oncophage is substantially greater than we anticipate,

or if we obtain approval or conditional approval for Oncophage in another territory, we may be required to manufacture substantially more than we have been

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required to manufacture for preclinical studies and clinical trials. We have no experience manufacturing products in commercial quantities, and we can provide no assurance that we will be able to do so successfully. We may experience higher manufacturing failure rates than we have in the past if and when we attempt to substantially increase production volume.

We currently manufacture Oncophage in our Lexington, Massachusetts facility. We intend to use this facility to manufacture Oncophage for the Russian market, as well as for ongoing and future clinical trials. While we believe we will be able to cover both our commercial and clinical Oncophage demands in the near term, there is no guarantee that we will be able to meet any unanticipated increase in demand, and a failure to do so could adversely affect our business. An unanticipated increase in the demand for the commercial supply of Oncophage could result in our inability to meet commercial demand or to manufacture sufficient Oncophage product to support our clinical trials, and this could cause a delay or failure in our Oncophage programs.

Manufacturing of Oncophage is complex, and various factors could cause delays or an inability to supply vaccine. Oncophage is a patient-specific biologic and requires product characterization steps that are more onerous than those required for most chemical pharmaceuticals. Accordingly, we employ multiple steps to attempt to control the manufacturing processes. Minor deviations in these manufacturing processes could result in unacceptable changes in the vaccine and result in production failures.

Currently, we can also manufacture other clinical product in our own manufacturing facility. This manufacturing facility has certain support areas that it shares with the Oncophage manufacturing areas. As we seek to expand the market opportunities for Oncophage, including possibly filing for approvals in other territories, the applicable regulatory bodies may require us to make our Oncophage manufacturing facility a single product facility. In such an instance, we would no longer have the ability to manufacture AG-707 in our current facility. AG-707 is a complex product requiring Good Manufacturing Practices, or GMP, for the manufacture and release of a recombinant protein and a large number of peptides. In order to prepare additional AG-707 to support future clinical trials, we will have to manufacture or have manufactured these critical raw materials in a GMP compliant facility.

Currently, we do not manufacture QS-21 or Aroplatin in our own manufacturing facility. If we choose to manufacture QS-21 or Aroplatin in our own manufacturing facility, the investment of substantial funds and the recruitment of qualified personnel would be required in order to build and/or lease and operate new manufacturing facilities. While we have previously relied on a third-party manufacturer to meet QS-21 supply demands, that supplier currently does not, and may never, have the ability to manufacture commercial grade QS-21. Our ability to use GSK as a supplier to meet our other QS-21 licensees' needs is limited. In order to continue to support QS-21 product candidates and Aroplatin development, apply for regulatory approvals, and commercialize these product candidates, we or our licensees or collaborators will need to develop, contract for, or otherwise arrange for the necessary manufacturing capabilities. There is no assurance that we or our licensees or collaborators will be successful in these endeavors. If we fail to comply with our obligations in our supply agreements with third parties, we could lose revenue streams that are important to our business.

Our ability to manufacture, or have manufactured, additional product to support our and our partners clinical trials for AG-707, Aroplatin, and QS-21 may be limited by the resources we have available.

We currently rely upon and expect to continue to rely upon third parties, potentially including our collaborators or licensees, to produce materials required for product candidates, preclinical studies, clinical trials, and commercialization. A number of factors could cause production interruptions at our manufacturing facility or our contract manufacturers, including equipment malfunctions, labor or employment retention problems, natural disasters, power outages, terrorist activities, or disruptions in the operations of our suppliers. Alternatively, there is the possibility we may have excess manufacturing capacity if product candidates do not progress as planned.

There are a limited number of contract manufacturers that operate under applicable GMP regulations that are capable of manufacturing our product candidates. If we are unable to do so ourselves or to arrange for third-party manufacturing of these product candidates, or to do so on commercially reasonable terms, we may not be able to complete development of these product candidates or commercialize them ourselves or through our collaborative partners or licensees. Reliance on third-party manufacturers entails risks to which we would not be subject if we

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manufactured products ourselves, including reliance on the third party for regulatory compliance, the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control, and the possibility of termination or non-renewal of the agreement by the third party, based on its own business priorities, at a time that is costly or inconvenient for us.

Manufacturing is also subject to extensive government regulation. Regulatory authorities must approve the facilities in which human health care products are produced. In addition, facilities are subject to ongoing inspections and minor changes in manufacturing processes may require additional regulatory approvals, either of which could cause us to incur significant additional costs and lose revenue.

### ***The drug development and approval process is uncertain, time-consuming, and expensive.***

Oncophage is a novel patient-specific therapeutic cancer vaccine and, as such, there are many challenges due to a lack of precedents. The FDA and foreign regulatory agencies, including the European Medicines Agency, which is responsible for product approvals in Europe, and Health Canada, which is responsible for product approvals in Canada, have relatively little experience in reviewing patient-specific oncology therapies. Therefore, Oncophage may experience a long regulatory review process and unforeseen additional development costs, either of which could delay or prevent our commercialization efforts in those markets.

The process of obtaining and maintaining regulatory approvals for new therapeutic products is lengthy, expensive, and uncertain. It also can vary substantially based on the type, complexity, and novelty of the product. We must provide regulatory authorities with preclinical and clinical data demonstrating that our product candidates are safe and effective before they can be approved for commercial sale. Clinical development, including preclinical testing, is also a long, expensive, and uncertain process. It may take us several years to complete our testing, and failure can occur at any stage of testing. Interim results of preclinical studies or clinical trials do not necessarily predict their final results, and acceptable results in early studies might not be seen in later studies. Any preclinical or clinical test may fail to produce results satisfactory to regulatory authorities for many reasons, including but not limited to study structure, conduct, and collectability of data. Preclinical and clinical data can be interpreted in different ways, which could delay, limit, or prevent regulatory approval. Negative or inconclusive results from a preclinical study or clinical trial, adverse medical events during a clinical trial, or safety issues resulting from products of the same class of drug could require a preclinical study or clinical trial to be repeated or cause a program to be terminated, even if other studies or trials relating to the program are successful. As of September 30, 2008, we have spent approximately 14 years and \$252.3 million on our research and development program in heat shock proteins for cancer.

To obtain regulatory approvals, we must, among other requirements, complete carefully controlled and well designed preclinical studies and clinical trials demonstrating that a particular product candidate is safe and effective for the applicable disease. Several biotechnology companies have failed to obtain regulatory approvals because regulatory agencies were not satisfied with the structure or conduct of the preclinical studies and clinical trials, or the ability to collect data or interpret the data from the trials. In addition, data from clinical trials are subject to varying interpretations and the data may not demonstrate the desired safety and efficacy. Similar problems could delay or prevent us from obtaining approvals.

We may not complete our planned preclinical studies or clinical trials on schedule or at all. We may not be able to confirm the safety and efficacy of our potential drugs in long-term clinical trials, which may result in further delays or failure to commercialize our product candidates. The timing and success of a clinical trial is dependent on enrolling sufficient patients in a timely manner, avoiding serious or significant adverse patient reactions, and demonstrating efficacy of the product candidate in order to support a favorable risk versus benefit profile, among other considerations. Because we rely on third-party clinical investigators and contract research organizations to conduct our clinical trials, we may encounter delays outside our control, particularly if our relationships with any third-party clinical investigators or contract research organizations are adversarial. The timing and success of our clinical trials, in particular, are also dependent on clinical sites and regulatory authorities accepting each trial's protocol, statistical analysis plan, product characterization tests, and clinical data. If we are unable to satisfy clinical sites or regulatory authorities with respect to such matters, including the specific matters noted above, or our clinical trials yield inconclusive or negative results, we will be required to modify or expand the scope of our clinical studies

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or conduct additional studies to support marketing approvals, or modify our development pipeline. In addition, regulatory authorities may request additional information or data that is not readily available. Delays in our ability to respond to such requests would delay, and failure to adequately address concerns would prevent, our commercialization efforts.

Also, we or regulatory authorities might further delay or halt our clinical trials for various reasons, including but not limited to:

we may fail to comply with extensive regulations;

a product candidate may not appear to be more effective than current therapies;

a product candidate may have unforeseen, undesirable, or significant adverse side effects, toxicities, or other characteristics;

we may fail to prospectively identify, or identify at all, the most appropriate patient populations and/or statistical analyses for inclusion in our clinical trials;

the time required to determine whether a product candidate is effective may be longer than expected;

we may be unable to adequately follow or evaluate patients after treatment with a product candidate;

patients may die during a clinical trial because their disease is too advanced or because they experience medical problems that may not be related to the product candidate;

sufficient numbers of patients may not meet our eligibility criteria and/or enroll in our clinical trials and may withdraw from our clinical trials after they have enrolled; or

we may be unable to produce sufficient quantities of a product candidate to complete the trial.

Furthermore, regulatory authorities, including the FDA and the European Medicines Agency, may have varying interpretations of our preclinical study and clinical trial data, which could delay, limit, or prevent regulatory approval or clearance. Any delays or difficulties in obtaining regulatory approvals or clearances for our product candidates may:

adversely affect the marketing of any products we or our collaborators develop;

impose significant additional costs on us or our collaborators;

diminish any competitive advantages that we or our collaborators may attain;

limit our ability to receive royalties and generate revenue and profits; and

adversely affect our business prospects and ability to obtain financing.

If we are delayed in these activities or do not receive regulatory approval for our product candidates in a timely manner, we may have to incur additional development expense, and subject to securing additional financing, we will not be able to commercialize them in the timeframe anticipated, and therefore our business will suffer.

***Challenges in identifying sufficient numbers of patients that meet our eligibility criteria, enrolling patients in our studies, or retaining patients in our studies after they have enrolled, will slow or prevent completion of clinical trials.***

We have encountered in the past, and may encounter in the future, delays in initiating trial sites and in enrolling patients into our clinical trials. Future enrollment delays will postpone the dates by which we expect to complete the impacted trials and the potential receipt of regulatory approvals, and may result in increased cost. If we fail to enroll a sufficient number of patients in clinical trials, the trials may fail to demonstrate the efficacy of a product candidate at a statistically significant level. Enrollment difficulties may arise due to many factors, including the nature of our product candidates, the identification of patients meeting the inclusion criteria, the speed of clinical trial site review of our protocols and their success in enrollment, delay in contract negotiations with clinical trial sites, increased



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industry demand for trial patients, the advanced disease state of the patients, or a high dropout rate, among others. Patients may also die during a clinical trial if their disease is advanced or because they experience problems unrelated to the product candidate.

***New data from our research and development activities could modify our strategy and result in the need to adjust our projections of timelines and costs of programs.***

Because we are focused on novel technologies, our research and development activities, including our preclinical studies and clinical trials, involve the ongoing discovery of new facts and the generation of new data, based on which we determine next steps for a relevant program. These developments are sometimes a daily occurrence and constitute the basis on which our business is conducted. We need to make determinations on an ongoing basis as to which of these facts or data will influence timelines and costs of programs. We may not always be able to make such judgments accurately, which may increase the costs we incur attempting to commercialize our product candidates. These issues are pronounced in our efforts to commercialize Oncophage, which represents an unprecedented approach to the treatment of cancer.

We may need to successfully address a number of technological challenges in order to complete development of our product candidates. Moreover, these product candidates may not be effective in treating any disease or may prove to have undesirable or unintended side effects, toxicities, or other characteristics that may preclude our obtaining regulatory approvals or prevent or limit commercial use.

***Failure to enter into significant collaboration agreements may hinder our efforts to develop and commercialize our product candidates and will increase our need to rely on other financing mechanisms, such as sales of securities, to fund our operations.***

We have been engaged in efforts to enter into collaborative agreements with one or more pharmaceutical or larger biotechnology companies to assist us with development and/or commercialization of our product candidates.

While we have been pursuing these business development efforts for several years, we have not concluded an agreement relating to the potential development or commercialization of Oncophage. Due to the announcement in March 2006 that part I of our Phase 3 trial in renal cell carcinoma did not achieve its primary endpoint, and because companies may be skeptical regarding the potential success of a patient-specific product candidate, many companies may be unwilling to commit to an agreement prior to receipt of additional clinical data, if at all. In the absence of such data, potential collaborative partners may demand economic terms that are unfavorable to us, or may be unwilling to collaborate with us at all. Even if Oncophage generates favorable clinical data over the next several years, we may not be able to negotiate a collaborative transaction at all, or negotiate one that provides us with favorable economic terms.

We plan on pursuing business development efforts to partner each of Aroplatin and AG-707. These products are at an early stage, and collaborative partners or licensees may defer discussions until results from early clinical trials become available, or they may not engage in such discussions at all.

We may not be able to negotiate agreements with economic terms similar to those negotiated by other companies. We may not, for example, obtain significant up-front payments or substantial royalty rates. If we fail to enter into collaboration agreements, our efforts to develop and/or commercialize Oncophage, Aroplatin, or AG-707 may be undermined. In addition, if we do not raise funds through collaboration agreements, we will need to rely on other financing mechanisms, such as sales of securities, to fund our operations. Sales of certain securities may substantially dilute the ownership of existing stockholders.

***Because we rely on collaborators and licensees for the development and commercialization of some of our product candidate programs, these programs may not prove successful, and/or we may not receive significant payments from such parties.***

Part of our strategy is to develop and commercialize some of our product candidates by continuing our existing arrangements with academic and corporate collaborators and licensees and by entering into new collaborations. Our

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success depends on our ability to negotiate such agreements and on the success of the other parties in performing research, preclinical and clinical testing, completing regulatory applications, and commercializing product candidates. For example, the development of Oncophage for the treatment of glioma is currently dependent in part on the efforts of our institutional collaborators, such as the Brain Tumor Research Center at the University of California, San Francisco, which is conducting a Phase 2 clinical trial of Oncophage for the treatment of recurrent glioma. In addition, all product candidates containing QS-21 depend on the success of our collaborative partners or licensees, and the Company's relationships with these third parties. Such product candidates depend on our collaborators and licensees successfully enrolling patients and completing clinical trials, being committed to dedicating the resources to advance these product candidates, obtaining regulatory approvals, and successfully commercializing product candidates.

These development activities may fail to produce marketable products due to unsuccessful results or abandonment of these programs, failure to enter into future collaborations or license agreements, or the inability to manufacture product supply requirements for our collaborators and licensees. For example, in August 2006, Pharmexa A/S announced a decision to cease dosing patients in their Phase 2 clinical trial of their HER-2 Protein AutoVac breast cancer vaccine containing our QS-21 adjuvant, after it was determined that the trial was unlikely to meet its primary endpoint. Several of our agreements also require us to transfer important rights and regulatory compliance responsibilities to our collaborators and licensees. As a result of collaborative agreements, we will not control the nature, timing, or cost of bringing these product candidates to market. Our collaborators and licensees could choose not to devote resources to these arrangements or, under certain circumstances, may terminate these arrangements early. They may cease pursuing product candidates or elect to collaborate with different companies. In addition, these collaborators and licensees, outside of their arrangements with us, may develop technologies or products that are competitive with those that we are developing. From time to time, we may also become involved in disputes with our collaborators. Such disputes could result in the incurrence of significant expense. As a result of these factors, our strategic collaborations may not yield revenue. Furthermore, we may be unable to enter into new collaborations or enter into new collaborations on favorable terms. Failure to generate significant revenue from collaborations would increase our need to fund our operations through sales of securities and could limit financial resources available for investment in manufacturing capacity expansion.

***If we are unable to purify heat shock proteins from some cancer types, we may have difficulty successfully initiating clinical trials in new indications or completing our clinical trials, and, even if we do successfully complete our clinical trials, the size of our potential market could decrease.***

Our ability to successfully develop and commercialize Oncophage for a particular cancer type depends in part on our ability to purify heat shock proteins from that type of cancer. If we experience difficulties in purifying heat shock proteins for a sufficiently large number of patients in our clinical trials, it may lower the probability of a successful analysis of the data from these trials and, ultimately, the ability to obtain regulatory approvals. For example, our inability to manufacture adequate amounts of Oncophage for approximately 30% of the patients randomized in the Oncophage treatment arm of the metastatic melanoma trial undermined the potential for the trial to meet its pre-specified clinical endpoints. To address this lower success rate for melanoma, we included additional protease inhibitors in the manufacturing process to further limit the breakdown of the product. Subsequent to the implementation of this change, we successfully produced Oncophage for 18 of 23 patients, a success rate of approximately 78%, whereas previously we had produced Oncophage for 123 of 179 patients, a success rate of approximately 69%. The small sample size used subsequent to our process change may make the reported improvement in our manufacturing success unreliable as a predictor of future success.

We have successfully manufactured product for 100%, 10 of 10, of the patients randomized to treatment in our Phase 2 lung cancer trial and 95%, 21 of 22, of the patients randomized to treatment in our Phase 2 metastatic renal cell carcinoma trial. Based on our clinical trials to date, we have been able to manufacture Oncophage from 87% of the tumors delivered to our manufacturing facility in Lexington, Massachusetts; for non-metastatic renal cell carcinoma, 92%; for melanoma, 70%; for colorectal cancer, 98%; for gastric cancer, 81%; for lymphoma, 89%; for glioma, 84%; and for pancreatic cancer, 46%. The relatively low rate of manufactured product for pancreatic cancer is due to the abundance of proteases in pancreatic tissue. Proteases, which are enzymes that break down proteins, are believed to degrade the heat shock proteins during the purification process.

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We may encounter problems with other types of cancer as we expand our research. If we cannot overcome these problems, the number of cancer types that our heat shock protein product candidates could treat would be limited. In addition, if we commercialize our heat shock protein product candidates, we may not be able to replicate past manufacturing success rates and we may face claims from patients for whom we are unable to produce a vaccine.

***If we fail to sustain and further build our intellectual property rights, competitors will be able to take advantage of our research and development efforts to develop competing products.***

If we are not able to protect our proprietary technology, trade secrets, and know-how, our competitors may use our inventions to develop competing products. We currently have exclusive rights to 77 issued United States patents and 109 foreign patents. We also have exclusive rights to 19 pending United States patent applications and 92 pending foreign patent applications. However, we currently do not have any issued patents in Russia covering Oncophage and we may not have rights to Oncophage patents in other territories where we may pursue regulatory approval. In addition, our patents may not protect us against our competitors. Our patent positions, and those of other pharmaceutical and biotechnology companies, are generally uncertain and involve complex legal, scientific, and factual questions. The standards which the United States Patent and Trademark Office uses to grant patents, and the standards which courts use to interpret patents, are not always applied predictably or uniformly and can change, particularly as new technologies develop. Consequently, the level of protection, if any, that will be provided by our patents if we attempt to enforce them, and they are challenged, is uncertain. In addition, the type and extent of patent claims that will be issued to us in the future is uncertain. Any patents that are issued may not contain claims that permit us to stop competitors from using similar technology.

In addition to our patented technology, we also rely on unpatented technology, trade secrets, and confidential information. We may not be able to effectively protect our rights to this technology or information. Other parties may independently develop substantially equivalent information and techniques or otherwise gain access to or disclose our technology. We generally require each of our employees, consultants, collaborators, and certain contractors to execute a confidentiality agreement at the commencement of an employment, consulting, collaborative, or contractual relationship with us. However, these agreements may not provide effective protection of our technology or information, or in the event of unauthorized use or disclosure, they may not provide adequate remedies.

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

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

We may not have rights under some patents or patent applications related to some of our existing and proposed products or processes. Third parties may own or control these patents and patent applications in the United States and abroad. Therefore, in some cases, such as those described below, in order to develop, use, manufacture, sell, or import some of our existing or proposed products, or develop or use some of our existing or proposed processes, we or our collaborators may choose to seek, or be required to seek, licenses under third-party patents issued in the United States and abroad, or those that might issue from United States and foreign patent applications. In such an event, we likely would be required to pay license fees or royalties or both to the licensor. If licenses are not available to us on acceptable terms, we or our collaborators may not be able to exploit these products or processes.

Furthermore, a third party may claim that we are using inventions covered by such third-party's patents or other intellectual property rights and may go to court to stop us from engaging in our normal operations and activities. These lawsuits are expensive and would consume time and other resources. There is a risk that a court would decide that we are infringing the third-party's patents and would order us to stop the activities covered by the patents. In

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addition, there is a risk that a court will order us to pay the other party substantial damages for having violated the other party's patents. The biotechnology industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. We know of patents issued to third parties relating to heat shock proteins and alleviation of symptoms of cancer. We have reviewed these patents, and we believe, as to each claim in those patents, that we either do not infringe the claim, or that the claim is invalid. Moreover, patent holders sometimes send communications to a number of companies in related fields suggesting possible infringement, and we, like a number of biotechnology companies, have received such communications, including with respect to the third-party patents mentioned above, as well as communications alleging infringement of a patent relating to certain gel-fiberglass structures. If we are sued for patent infringement, we would need to demonstrate that our products either do not infringe the patent claims of the relevant patent and/or that the patent claims are invalid, which we may not be able to do. Proving invalidity, in particular, is difficult, since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents.

***We may become involved in expensive patent litigation or other proceedings, which could result in our incurring substantial costs and expenses or substantial liability for damages, or require us to stop development and commercialization efforts.***

There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical and biotechnology industries. We may become a party to patent litigation or other proceedings regarding intellectual property rights.

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 cost of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. If a patent litigation or other proceeding is resolved against us, we or our collaborators may be enjoined from using, manufacturing, selling, or importing our products or processes without a license from the other party, and we may be held liable for significant damages. We may not be able to obtain any required licenses on commercially acceptable terms or at all.

Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to enter into collaborations with other entities, obtain financing, or compete in the marketplace. Patent litigation and other proceedings may also absorb significant management time.

***Our patent protection for any compound or product that we seek to develop may be limited to a particular method of use or indication such that, if a third party were to obtain approval of the compound or product for use in another indication, we could be subject to competition arising from off-label use.***

The patent landscape in our business is becoming increasingly congested with competing applications for protection of closely related compounds and technologies that arise from both industrial and academic research. Although we generally seek the broadest patent protection available for our proprietary compounds, competing art may prevent us from obtaining patent protection for the actual composition of matter of any particular compound and we may be limited to protecting a new method of use for the compound or otherwise restricted in our ability to prevent others from exploiting the compound. If we are unable to obtain patent protection for the actual composition of matter of any compound that we seek to develop and commercialize and must rely on method of use patent coverage, we would likely be unable to prevent others from manufacturing or marketing that compound for any use that is not protected by our patent rights. If a third party were to receive marketing approval for the compound for another use, physicians might nevertheless prescribe it for indications that are not described in the product's labeling or approved by the FDA or other regulatory authorities. Even if we have patent protection of the prescribed indication, as a practical matter, we likely would have little recourse as a result of this off-label use. In that event, our revenues from the commercialization of the compound would likely be adversely affected.

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***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 various license agreements under which we receive the right to practice and use important third-party patent rights and we may 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 fail to retain the services of, and/or maintain positive relations with, key individuals and our employees, we may be unable to successfully develop our product candidates, conduct clinical trials, and obtain financing.***

Garo H. Armen, Ph.D., the Chairman of our Board of Directors and our Chief Executive Officer, co-founded Antigenics in 1994 with Pramod K. Srivastava, Ph.D., and has been and continues to be integral to building our company and developing our technology. If Dr. Armen severed his relationship with Antigenics, our business may be adversely impacted.

Effective December 1, 2005, we entered into an employment agreement with Dr. Armen. Subject to the earlier termination as provided in the agreement, the agreement had an original term of one year and is automatically extended thereafter for successive terms of one year each, unless either party provides notice to the other at least ninety days prior to the expiration of the original or any extension term. Dr. Armen plays an important role in our day-to-day activities. We do not carry key employee insurance policies for Dr. Armen or any other employee.

Dr. Srivastava currently has a consulting agreement with us pursuant to which he is retained to provide advice and services to Antigenics from time to time. This agreement has an initial term ending March 31, 2010.

We also rely greatly on employing and retaining other highly trained and experienced senior management and scientific and operations personnel. The competition for these and other qualified personnel in the biotechnology field is intense. In order to reduce our expenses, we have restructured our business and reduced staffing levels. This has in many cases eliminated any redundancy in skills and capabilities in key areas. If we are not able to attract and retain qualified personnel, we may not be able to achieve our strategic and operational objectives.

***We may face litigation that could result in substantial damages and may divert management's time and attention from our business.***

Antigenics, our Chairman and Chief Executive Officer, Garo H. Armen, Ph.D., and two investment banking firms that served as underwriters in our initial public offering have been named as defendants in a federal civil class action lawsuit pending in the United States District Court for the Southern District of New York. Substantially similar actions were filed concerning the initial public offerings for more than 300 different issuers, and the cases were coordinated as *In re Initial Public Offering Securities Litigation*, 21 MC 92 for pre-trial purposes. The suit alleges that the brokerage arms of the investment banking firms charged secret excessive commissions to certain of their customers in return for allocations of our stock in the offering. The suit also alleges that shares of our stock were allocated to certain of the investment banking firms customers based upon agreements by such customers to purchase additional shares of our stock in the secondary market. Dr. Armen has been dismissed without prejudice from the lawsuit pursuant to a stipulation. In June 2004, a stipulation of settlement and release of claims against the issuer defendants, including us, was submitted to the court for approval. The court preliminarily approved the settlement in August 2005. In December 2006, the appellate court overturned the certification of classes in six test cases that were selected by the underwriter defendants and plaintiffs in the coordinated proceedings. The case involving Antigenics is not one of the six test cases. Class certification had been one of the conditions of the settlement. Accordingly, on June 25, 2007, the court entered an order terminating the proposed settlement based on a stipulation among the parties to the settlement. Plaintiffs have filed amended master allegations and amended complaints in the six test cases. On March 26, 2008, the court largely denied the defendants' motion to dismiss the amended complaints. It is uncertain whether there will be any revised or future settlement. To date, the plaintiffs have not asserted a specific amount of damages and, at this time, we cannot make a reliable estimate of possible loss, if any, related to this litigation. Regardless of the outcome, participation in this lawsuit diverts our management's time and attention from our business and may result in our paying damages.

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In addition, we are involved in other litigation and may become involved in additional litigation. Any such litigation could be expensive in terms of out-of-pocket costs and management time, and the outcome of any such litigation is uncertain.

Our directors and officers insurance policies provide \$25.0 million annual aggregate coverage and \$25.0 million per occurrence coverage. This limited insurance coverage may not be sufficient to cover us for future claims.

***Product liability and other claims against us may reduce demand for our products and/or result in substantial damages.***

We face an inherent risk of product liability exposure related to testing our product candidates in human clinical trials and will face even greater risks upon the sale of Oncophage commercially, as well as if we sell our various product candidates commercially. An individual may bring a product liability claim against us if Oncophage or one of our product candidates causes, or merely appears to have caused, an injury. Product liability claims may result in:

decreased demand for Oncophage or our product candidates;

injury to our reputation;

withdrawal of clinical trial volunteers;

costs of related litigation; and

substantial monetary awards to plaintiffs.

We manufacture Oncophage from a patient's cancer cells, and a medical professional must inject Oncophage into the same patient from which it was manufactured. A patient may sue us if a hospital, a shipping company, or we fail to deliver the removed cancer tissue or that patient's Oncophage. We anticipate that the logistics of shipping will become more complex if the number of patients we treat increases and that shipments of tumor and/or Oncophage may be lost, delayed, or damaged. Additionally, complexities unique to the logistics of commercial products may delay shipments and limit our ability to move commercial product in an efficient manner without incident. Currently, we do not have insurance that covers loss of or damage to Oncophage or tumor material, and we do not know whether insurance will be available to us at a reasonable price or at all. We have limited product liability coverage for use of our product candidates. Our product liability policy provides \$10.0 million aggregate coverage and \$10.0 million per occurrence coverage. This limited insurance coverage may be insufficient to fully cover us for future claims.

***If we do not comply with environmental laws and regulations, we may incur significant costs and potential disruption to our business.***

We use hazardous, infectious, and radioactive materials, and recombinant DNA in our operations, which have the potential of being harmful to human health and safety or the environment. We store these hazardous (flammable, corrosive, toxic), infectious, and radioactive materials, and various wastes resulting from their use, at our facilities pending use and ultimate disposal. We are subject to a variety of federal, state, and local laws and regulations governing use, generation, storage, handling, and disposal of these materials. We may incur significant costs complying with both current and future environmental health and safety laws and regulations. In particular, we are subject to regulation by the Occupational Safety and Health Administration, the Environmental Protection Agency, the Drug Enforcement Agency, the Department of Transportation, the Centers for Disease Control and Prevention, the National Institutes of Health, the International Air Transportation Association, and various state and local agencies. At any time, one or more of the aforementioned agencies could adopt regulations that may affect our operations. We are also subject to regulation under the Toxic Substances Control Act and the Resource Conservation Development programs.

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Although we believe that our current procedures and programs for handling, storage, and disposal of these materials comply with federal, state, and local laws and regulations, we cannot eliminate the risk of accidents involving contamination from these materials. Although we have limited pollution liability coverage (\$2.0 million) and a workers' compensation liability policy, we could be held liable for resulting damages in the event of an accident or accidental release, and such damages could be substantially in excess of any available insurance coverage and could substantially disrupt our business.

**Risks Related to our Common Stock**

***Our officers and directors may be able to block proposals for a change in control.***

Antigenics Holdings LLC is a holding company that owns shares of our common stock, and as of September 30, 2008, Antigenics Holdings LLC controlled approximately 17% of our outstanding common stock. Due to this concentration of ownership, Antigenics Holdings LLC can substantially influence all matters requiring a stockholder vote, including:

the election of directors;

the amendment of our organizational documents; or

the approval of a merger, sale of assets, or other major corporate transaction.

Our Chief Executive Officer directly and indirectly owns approximately 47% of Antigenics Holdings LLC. In addition, several of our directors and officers directly and indirectly own approximately 4% of our outstanding common stock.

***The unaffiliated holders of certain convertible securities have the right to convert such securities into a substantial percentage of our outstanding common stock.***

According to publicly filed documents, Mr. Brad M. Kelley beneficially owns 5,546,240 shares of our outstanding common stock and 31,620 shares of our series A convertible preferred stock. The shares of preferred stock are currently convertible at any time into 2,000,000 shares of common stock at an initial conversion price of \$15.81, are non-voting, and carry a 2.5% annual dividend yield. If Mr. Kelley had converted all of the shares of preferred stock on September 30, 2008, he would have held approximately 11% of our outstanding common stock. We currently have a right of first refusal agreement with Mr. Kelley that provides us with limited rights to purchase certain of Mr. Kelley's shares if he proposes to sell them to a third party.

Mr. Kelley's substantial ownership position provides him with the ability to substantially influence the outcome of matters submitted to our stockholders for approval. Furthermore, collectively, Mr. Kelley and Antigenics Holdings LLC control approximately 25% of our outstanding common stock as of September 30, 2008, providing substantial ability, if they vote in the same manner, to determine the outcome of matters submitted to a stockholder vote. If Mr. Kelley were to convert all of his preferred stock into common stock, the combined total would increase to 27%. Additional purchases of our common stock by Mr. Kelley also would increase both his percentage of outstanding voting rights and the percentage combined with Antigenics Holdings LLC. While Mr. Kelley's shares of preferred stock do not carry voting rights, the shares of common stock issuable upon conversion carry the same voting rights as other shares of common stock.

On October 30, 2006, we issued \$25.0 million of our 2006 Notes to a group of institutional investors. These 2006 Notes, together with any interest paid in the form of additional 2006 Notes, are convertible into our common stock at an initial fixed conversion price of \$3.50 per share at the option of the investors. On September 30, 2008, one holder of the 2006 Notes had holdings which, if totally converted into shares of our common stock, would result in this holder owning 6,513,498 shares. If such holder had exercised such conversion right on September 30, 2008, such holder would have owned approximately 9% of our outstanding common stock.

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On September 10, 2007, we issued 10,000 shares of our series B1 convertible preferred stock and 5,250 shares of our series B2 convertible preferred stock to a single institutional investor. In April 2008, all of the series B1 convertible preferred stock was converted into 1,585,197 shares of our common stock via a cashless conversion. Shares of the series B2 convertible preferred stock permit the investor to purchase common shares for consideration of up to 35 percent of the total dollar amount previously invested, pursuant to the agreement with the investor, at a purchase price equal to the lesser of \$4.16 per common share or a price calculated based on the then-prevailing price of our common stock, and expire seven years from the date of issuance. The total number of shares of common stock issued or issuable to the holder of the class B convertible preferred stock cannot exceed 19.9% of our outstanding common stock.

While the 2006 Notes and the outstanding class B convertible preferred stock do not carry any voting rights, the common stock issuable upon conversions of such securities do carry the same voting rights as other shares of common stock. The ownership positions following any such conversions, along with any open market purchases by such holders, could provide the holders with the ability to substantially influence the outcome of matters submitted to our stockholders for approval.

***Provisions in our organizational documents could prevent or frustrate attempts by stockholders to replace our current management.***

Our certificate of incorporation and bylaws contain provisions that could make it more difficult for a third party to acquire us without consent of our Board of Directors. Our certificate of incorporation provides for a staggered board and removal of directors only for cause. Accordingly, stockholders may elect only a minority of our Board at any annual meeting, which may have the effect of delaying or preventing changes in management. In addition, under our certificate of incorporation, our Board of Directors may issue additional shares of preferred stock and determine the terms of those shares of stock without any further action by our stockholders. Our issuance of additional preferred stock could make it more difficult for a third party to acquire a majority of our outstanding voting stock and thereby effect a change in the composition of our Board of Directors. Our certificate of incorporation also provides that our stockholders may not take action by written consent. Our bylaws require advance notice of stockholder proposals and director nominations and permit only our President or a majority of the Board of Directors to call a special stockholder meeting. These provisions may have the effect of preventing or hindering attempts by our stockholders to replace our current management. In addition, Delaware law prohibits a corporation from engaging in a business combination with any holder of 15% or more of its capital stock until the holder has held the stock for three years unless, among other possibilities, the Board of Directors approves the transaction. Our Board of Directors may use this provision to prevent changes in our management. Also, under applicable Delaware law, our Board of Directors may adopt additional anti-takeover measures in the future.

***Our stock has generally had low trading volume, and its public trading price has been volatile.***

Between our initial public offering on February 4, 2000 and September 30, 2008, and for the twelve months ended September 30, 2008, the closing price of our common stock has fluctuated between \$1.48 and \$52.63 per share and \$1.48 and \$3.03 per share, respectively, with an average daily trading volume for the twelve months ended September 30, 2008 of approximately 267,000 shares. The market may experience significant price and volume fluctuations that are often unrelated to the operating performance of individual companies.

In addition to general market volatility, many factors may have a significant adverse effect on the market price of our stock, including:

continuing operating losses, which we expect over the next several years as we continue our development activities;

announcements of decisions made by public officials;

results of our preclinical studies and clinical trials;

announcements of technological innovations, new commercial products, failures of products, or progress toward commercialization by our competitors or peers;



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developments concerning proprietary rights, including patent and litigation matters;

publicity regarding actual or potential results with respect to product candidates under development by us or by our competitors;

regulatory developments; and

quarterly fluctuations in our financial results.

Our common stock is listed on The NASDAQ Global Market, which sets forth various requirements that we must meet in order for our common stock to qualify for continued listing. Failure to meet these requirements could result in the delisting of our common stock for various reasons, including: (1) if the closing bid price of our common stock drops below \$1.00 for a period of 30 consecutive trading days; (2) if we fail to maintain a market value of our common stock of at least \$50 million for 10 consecutive trading days; or (3) if we fail to maintain a market value of publicly held securities of at least \$15 million for 30 consecutive trading days. The delisting of our common stock would significantly affect the ability of investors to trade our common stock. In addition, the delisting of our common stock could materially adversely impact our ability to raise capital on acceptable terms or at all. Delisting from The NASDAQ Global Market could also have other negative results, including the potential loss of confidence by suppliers and employees, the loss of institutional investor interest, and fewer business development opportunities.

On October 16, 2008, given the extraordinary market conditions, NASDAQ suspended the enforcement of the rules requiring a minimum \$1.00 closing bid price and requiring a minimum market value of publicly held shares. NASDAQ further indicated that it will not take any action to delist any security for these concerns during the suspension. The suspension will remain in effect through Friday, January 16, 2009 and these rules will be reinstated on Monday, January 19, 2009.

***The sale of a significant number of shares could cause the market price of our stock to decline.***

The sale by us or the resale by stockholders of a significant number of shares of our common stock could cause the market price of our common stock to decline. As of September 30, 2008, we had approximately 66,235,000 shares of common stock outstanding. All of these shares are eligible for sale on The NASDAQ Global Market, although certain of the shares are subject to sales volume and other limitations. We have filed registration statements to permit the sale of 12,436,831 shares of common stock under our equity incentive plan and certain equity plans that we assumed in the acquisitions of Aquila Biopharmaceuticals, Inc. and Aronex Pharmaceuticals, Inc. We have also filed registration statements to permit the sale of 450,000 shares of common stock under our employee stock purchase plan, to permit the sale of 250,000 shares of common stock under our Directors' Deferred Compensation Plan, to permit the sale of 17,417,434 shares of common stock pursuant to the private placement agreement dated January 9, 2008, and to permit the sale of 14,000,000 shares of common stock pursuant to the private placement agreement dated April 8, 2008. As of September 30, 2008, an aggregate of 26,212,456 shares remain available for sale under these registration statements. The market price of our common stock may decrease based on the expectation of such sales.

As of September 30, 2008, options to purchase 7,943,047 shares of our common stock with a weighted average exercise price per share of \$5.00 were outstanding. Many of these options are subject to vesting that generally occurs over a period of up to four years following the date of grant. As of September 30, 2008, we have 933,666 nonvested shares outstanding.

***Because we are a relatively small public company, we believe we have been disproportionately negatively impacted by the Sarbanes-Oxley Act of 2002 and related regulations, which have increased our costs and required additional management resources.***

The Sarbanes-Oxley Act of 2002 and rules adopted by the SEC and the NASDAQ have resulted in, and we expect will continue to result in, significant costs to us. In particular, our efforts to comply with Section 404 of the Sarbanes-Oxley Act of 2002 and related regulations regarding the required assessment of our internal control over financial reporting, and our independent registered public accounting firm's audit of internal control over financial reporting, have required commitments of significant financial resources and management time. We expect these

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commitments to continue. Additionally, these laws and regulations could make it more difficult for us to attract and retain qualified members for our Board of Directors, particularly independent directors, or qualified executive officers.

Our internal control over financial reporting (as defined in Rules 13a-15 of the Securities Exchange Act) is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our consolidated financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect all deficiencies or weaknesses in our financial reporting. While our management has concluded in our Annual Report on Form 10-K for the year ended December 31, 2007 that there were no material weaknesses in our internal control over financial reporting as of December 31, 2007, our procedures are subject to the risk that our controls may become inadequate because of changes in conditions or as a result of a deterioration in compliance with such procedures. No assurance is given that our procedures and processes for detecting weaknesses in our internal control over financial reporting will be effective.

**Item 6. Exhibits**

The Exhibits listed in the Exhibit Index are included in this Quarterly Report on Form 10-Q.

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**ANTIGENICS INC.**

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ANTIGENICS INC.

/s/ SHALINI SHARP  
Shalini Sharp  
*Chief Financial Officer*

Date: November 5, 2008

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**EXHIBIT INDEX**

<b>Exhibit No.</b>	<b>Description</b>
3.1	Amended and Restated Certificate of Incorporation of Antigenics Inc. Filed as Exhibit 3.1 to our Current Report on Form 8-K (File No. 0-29089) dated June 10, 2002 and incorporated herein by reference.
3.2	Amended and Restated By-laws of Antigenics Inc. Filed as Exhibit 3.2 to our Current Report on Form 8-K (File No. 0-29089) dated June 10, 2002 and incorporated herein by reference.
10.1	Employment Agreement dated September 16, 2008 between Antigenics Inc. and Karen Valentine. Filed as Exhibit 10.1 to our Current Report on Form 8-K (File No. 0-29089) dated September 16, 2008 and incorporated herein by reference.
10.2	Fourth Amendment to Lease dated September 30, 2008 between TBCI, LLC, as successor to BHX, LLC, as Trustee of 3 Forbes Road Realty Trust, and Antigenics Inc. Filed herewith.
10.3	Sales Agreement dated March 14, 2008 between Antigenics Inc. and Wm Smith & Co. Filed as Exhibit 1.1 to our Current Report on Form 8-K (File No. 0-29089) dated March 14, 2008 and incorporated herein by reference.
10.4	Amendment No. 1 to Sales Agreement dated July 8, 2008 between Antigenics Inc. and Wm Smith & Co. Filed as Exhibit 1.1 to our Current Report on Form 8-K (File No. 0-29089) dated July 10, 2008 and incorporated herein by reference.
31.1	Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended. Filed herewith.
31.2	Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended. Filed herewith.
32.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. Furnished herewith.