

ANTIGENICS INC /DE/  
Form 424B3  
November 12, 2009  
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**Filed Pursuant to Rule 424(b)(3) and Rule 424(c)**

**Registration No. 333-149116**

**November 12, 2009**

**PROSPECTUS SUPPLEMENT NO. 19**

**17,417,434 SHARES OF COMMON STOCK**

**ANTIGENICS INC.**

This prospectus supplement amends the prospectus dated March 16, 2009 (as supplemented on April 15, 2009, April 17, 2009, April 22, 2009, April 27, 2009, May 4, 2009, May 11, 2009, May 27, 2009, June 4, 2009, June 8, 2009, June 9, 2009, June 11, 2009, June 15, 2009, July 7, 2009, July 15, 2009, August 3, 2009, August 5, 2009, September 11, 2009, and September 18, 2009) to allow certain stockholders or their pledgees, donees, transferees, or other successors in interest (the "Selling Stockholders"), to sell, from time to time, up to 8,708,717 shares of our common stock, which they have acquired in a private placement in the United States, and up to 8,708,717 shares of our common stock issuable upon the exercise of warrants which are held by the Selling Stockholders named in the prospectus.

We would not receive any proceeds from any such sale of these shares. To the extent any of the warrants are exercised for cash, if at all, we will receive the exercise price for those warrants.

This prospectus supplement is being filed to include the information set forth in the Quarterly Report on Form 10-Q filed on November 9, 2009, which is set forth below. This prospectus supplement should be read in conjunction with the prospectus dated March 16, 2009, Prospectus Supplement No. 1 dated April 15, 2009, Prospectus Supplement No. 2 dated April 17, 2009, Prospectus Supplement No. 3 dated April 22, 2009, Prospectus Supplement No. 4 dated April 27, 2009, Prospectus Supplement No. 5 dated May 4, 2009, Prospectus Supplement No. 6 dated May 11, 2009, Prospectus Supplement No. 7 dated May 27, 2009, Prospectus Supplement No. 8 dated June 4, 2009, Prospectus Supplement No. 9 dated June 8, 2009, Prospectus Supplement No. 10 dated June 9, 2009, Prospectus Supplement No. 11 dated June 11, 2009, Prospectus Supplement No. 12 dated June 15, 2009, Prospectus Supplement No. 13 dated July 7, 2009, Prospectus Supplement No. 14 dated July 15, 2009, Prospectus Supplement No. 15 dated August 3, 2009, Prospectus Supplement No. 16 dated August 5, 2009, Prospectus Supplement No. 17 dated September 11, 2009, and Prospectus Supplement No. 18 dated September 18, 2009, which are to be delivered with this prospectus supplement.

Our common stock is quoted on The NASDAQ Capital Market ( "NASDAQ ") under the ticker symbol "AGEN". On November 11, 2009, the last reported closing price per share of our common stock was \$1.05 per share.

**Investing in our securities involves a high degree of risk. Before investing in any of our securities, you should read the discussion of material risks in investing in our common stock. See "Risk Factors" on page 1 of the prospectus.**

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

**THE DATE OF THIS PROSPECTUS SUPPLEMENT NO. 19 IS NOVEMBER 12, 2009**

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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, 2009**

**OR**

“ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
**For the transition period from                      to**

**Commission File Number: 000-29089**

**Antigenics Inc.**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction of

**06-1562417**  
(I.R.S. Employer

incorporation or organization)

Identification No.)

**3 Forbes Road, Lexington, MA 02421**

(Address of principal executive offices, including zip code)

**(781) 674-4400**

(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 has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). 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 ☐  
(Do not check if a smaller

Smaller reporting company ☐

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 November 4, 2009: 89,739,446 shares.

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**Antigenics Inc.**

**Quarterly Period Ended September 30, 2009**

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

	<b>September 30, 2009</b>	<b>December 31, 2008 As adjusted</b>
<b>ASSETS</b>		
Cash and cash equivalents	\$ 29,010,953	\$ 24,469,008
Short-term investments	4,997,535	9,993,617
Accounts receivable	325,126	
Inventories	23,669	226,376
Prepaid expenses	915,154	610,462
Other current assets	694,341	187,013
Total current assets	35,966,778	35,486,476
Plant and equipment, net	9,432,498	11,535,467
Goodwill	2,572,203	2,572,203
Core and developed technology, net	1,596,338	2,426,785
Debt issuance costs, net (Note I)	327,281	717,833
Other long-term assets	1,455,279	4,083,442
Total assets	\$ 51,350,377	\$ 56,822,206
<b>LIABILITIES AND STOCKHOLDERS DEFICIT</b>		
Current portion, long-term debt	\$ 146,061	\$ 146,061
Current portion, deferred revenue	1,435,537	1,481,999
Accounts payable	660,928	540,529
Accrued liabilities	3,269,282	4,618,806
Other current liabilities	675,274	209,585
Total current liabilities	6,187,082	6,996,980
Long-term debt (Note I)	47,966,163	64,125,926
Deferred revenue	2,765,396	3,436,845
Derivative liability (Note I)	10,915,353	
Other long-term liabilities	2,426,363	2,592,882
Commitments and contingencies (Note E)		
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, 2009 and December 31, 2008; liquidation value of \$31,817,625 at September 30, 2009	316	316
Series B2 convertible preferred stock; 3,105 and 5,250 shares designated, issued, and outstanding at September 30, 2009 and December 31, 2008, respectively	31	53
	899,755	664,977

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Common stock, par value \$0.01 per share; 250,000,000 shares authorized; 89,975,583 and 66,497,702 shares issued at September 30, 2009 and December 31, 2008, respectively

Additional paid-in capital	544,886,359	511,447,653
Treasury stock, at cost; 260,944 and 143,031 shares of common stock at September 30, 2009 and December 31, 2008, respectively	(324,792)	(269,849)
Accumulated deficit	(564,371,649)	(532,173,577)
 Total stockholders' deficit	 (18,909,980)	 (20,330,427)
 Total liabilities and stockholders' deficit	 \$ 51,350,377	 \$ 56,822,206

See accompanying notes to unaudited condensed consolidated financial statements.

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

	<b>Quarter Ended September 30,</b>		<b>Nine Months Ended September 30,</b>	
	<b>2009</b>	<b>2008 As adjusted</b>	<b>2009</b>	<b>2008 As adjusted</b>
Revenue	\$ 896,462	\$ 684,566	\$ 2,787,653	\$ 2,129,503
Operating expenses:				
Research and development	3,747,180	5,395,804	13,680,290	16,965,309
General and administrative	3,516,127	5,132,204	11,589,216	16,141,706
Operating loss	(6,366,845)	(9,843,442)	(22,481,853)	(30,977,512)
Other income (expense):				
Non-operating (expense) income	(3,039,372)		(5,679,769)	2,310
Interest expense	(1,224,578)	(1,614,930)	(4,137,186)	(4,771,260)
Interest income	18,182	213,776	121,984	870,655
Net loss	(10,612,613)	(11,244,596)	(32,176,824)	(34,875,807)
Dividends on series A convertible preferred stock	(197,625)	(197,625)	(592,875)	(592,875)
Net loss attributable to common stockholders	\$ (10,810,238)	\$ (11,442,221)	\$ (32,769,699)	\$ (35,468,682)
Per common share data, basic and diluted:				
Net loss attributable to common stockholders	\$ (0.13)	\$ (0.17)	\$ (0.43)	\$ (0.57)
Weighted average number of common shares outstanding, basic and diluted	85,801,855	66,208,764	75,334,382	62,194,760

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>2009</b>	<b>2008 As adjusted</b>
Cash flows from operating activities:		
Net loss	\$ (32,176,824)	\$ (34,875,807)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	3,106,654	3,547,186
Disposal of fixed assets	48,774	14,227
Change in fair value of derivative liability	8,202,490	
Share-based compensation	3,375,158	4,813,468
Net gain on extinguishment of debt	(2,653,387)	
Loss on monetization of receivable	317,512	
Non-cash interest expense	2,486,883	2,046,207
Changes in operating assets and liabilities:		
Accounts receivable	(325,126)	318,707
Inventories	202,707	284,496
Prepaid expenses	(304,692)	(32,905)
Accounts payable	101,061	17,836
Deferred revenue	(717,911)	(1,052,817)
Accrued liabilities and other current liabilities	(1,507,423)	1,295,818
Other operating assets and liabilities	(716,089)	(76,449)
Net cash used in operating activities	(20,560,213)	(23,700,033)
Cash flows from investing activities:		
Proceeds from maturities of available-for-sale securities	25,000,000	14,162,968
Proceeds from sale of property and equipment	39,525	
Collection of receivable from sale of patent applications	2,337,475	
Purchases of available-for-sale securities	(19,988,500)	(19,917,910)
Purchases of plant and equipment	(116,420)	(133,437)
Net cash provided by (used in) investing activities	7,272,080	(5,888,379)
Cash flows from financing activities:		
Net proceeds from sale of equity	18,582,501	46,545,177
Proceeds from exercise of stock options	133,462	46,562
Payment of long-term debt	(255,000)	
Proceeds from employee stock purchases	16,933	286,931
Treasury stock received to satisfy minimum tax withholding requirements	(54,943)	(257,681)
Payment of series A convertible preferred stock dividends	(592,875)	(592,875)
Net cash provided by financing activities	17,830,078	46,028,114
Net increase in cash and cash equivalents	4,541,945	16,439,702
Cash and cash equivalents, beginning of period	24,469,008	14,479,322
Cash and cash equivalents, end of period	\$ 29,010,953	\$ 30,919,024



Non-cash investing and financing activities:

Issuance of senior secured convertible notes as payment in-kind for interest	\$ 1,185,456	\$ 1,096,021
Issuance of common stock, \$0.01 par value, as payment of long-term debt including accrued and unpaid interest	14,134,188	

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, 2009**

##### **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 and commercializing technologies to treat cancers and infectious diseases, primarily based on immunological approaches. Our most advanced product, Oncophage® (vitespen), is a patient-specific therapeutic cancer vaccine registered for use in Russia. As resources allow, we explore potential opportunities to seek product approval in other jurisdictions. 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 1 and Phase 2 clinical trials in a range of indications. It is currently in Phase 2 clinical trials in glioma, a type of brain cancer. Our product candidate portfolio also includes (1) QS-21 Stimulon® adjuvant, or QS-21, which is used in numerous vaccines in clinical trials 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 tested in a Phase 1 clinical trial for the treatment of genital herpes, and (3) Aroplatin, a liposomal chemotherapeutic tested in a Phase 1 clinical trial for the treatment of solid malignancies and B-cell lymphomas. Further internal clinical development of AG-707 and Aroplatin is currently on hold due to cost-containment efforts. Our related business activities include product research and development, intellectual property prosecution, manufacturing therapeutic vaccines, regulatory and clinical affairs, corporate finance and development activities, market development, and support of our collaborations.

Our product candidates require clinical trials and approvals from regulatory agencies, as well as acceptance in the marketplace. 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.

We have incurred significant losses since our inception. As of September 30, 2009, we had an accumulated deficit of \$564.4 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 that, based on our current plans and activities, our working capital resources at September 30, 2009, anticipated revenues, and the estimated proceeds from our license, supply, and collaborative agreements, will be sufficient to satisfy our liquidity requirements into 2011. We closely monitor our cash needs. We continue to monitor the likelihood of success of our key initiatives and are prepared to discontinue funding of such activities if they do not prove to be commercially feasible. In addition, we will continue to adjust other spending as needed in order to preserve liquidity. We expect to attempt to raise additional funds in advance of depleting our current funds. We may attempt to raise additional funds by: (1) licensing technologies or products to one or more collaborative partners, (2) renegotiating license and/or supply agreements with current licensees or collaborative partners, (3) completing an outright sale of assets, (4) securing additional debt financing, and/or (5) selling additional equity securities. Satisfying long-term liquidity needs may require the successful commercialization of (1) our product, Oncophage, and/or one or more partnering arrangements for Oncophage, (2) vaccines containing QS-21 under development by our licensees, and/or (3) potentially other product candidates, and will require additional capital.

The accompanying unaudited interim condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ( GAAP ) 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. GAAP 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 adjusted in order to conform to the current period's presentation, including changes resulting from the January 1, 2009 adoption of Financial Accounting Standards Board ( FASB ) Staff Position APB 14-1, Accounting for Convertible Debt Instruments That May Be Settled in Cash Upon Conversion (Including Partial Cash Settlement), contained within Accounting Standards Codification ( ASC ) 470-20, Debt with Conversion and Other Options. Operating results for the nine months ended September 30, 2009 are not necessarily indicative of the results that may be expected for the year ending December 31, 2009. 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, 2008 filed with the Securities and Exchange Commission (the SEC ).

The preparation of consolidated financial statements in conformity with U.S. GAAP 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.

**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

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the net loss per common share. Therefore, shares underlying the warrants outstanding or issuable to acquire 41,966,718 shares, the outstanding stock options to acquire 6,430,105 shares, the 216,938 outstanding nonvested shares, the 31,620 outstanding shares of series A convertible preferred stock, the 3,105 outstanding shares of series B2 convertible preferred stock, and the impact of conversion of our 5.25% convertible senior notes due February 2025 (the 2005 Notes ) and our 8% senior secured convertible notes due August 2011 (the 2006 Notes ), 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, 2009	December 31, 2008
Work in process	\$	\$ 194
Finished goods	24	32
	\$ 24	\$ 226

**Note D Share-Based Compensation**

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

A summary of option activity for the nine months ended September 30, 2009 is presented below:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at December 31, 2008	7,873,464	\$ 5.00		
Granted	1,509,584	1.63		
Exercised	(74,276)	1.80		
Forfeited	(408,665)	2.16		
Expired	(2,470,002)	9.00		
Outstanding at September 30, 2009	6,430,105	\$ 2.89	7.5	\$ 1,665,000
Vested or expected to vest at September 30, 2009	6,249,257	\$ 2.92	7.5	\$ 1,595,000
Exercisable at September 30, 2009	3,188,750	\$ 3.93	6.3	\$ 641,490

The weighted average grant-date fair values of options granted during the nine months ended September 30, 2009 and 2008 were \$1.21 and \$1.06, respectively.

During the first nine months of 2009, all options were granted with exercise prices equal to the fair market value of the underlying shares of common stock on the grant date. On July 16, 2009, we accepted for cancellation options to purchase 1,594,876 shares of common stock in accordance with the terms of our Tender Offer as included in our Schedule TO filed with the SEC on June 17, 2009. As a result, on July 16, 2009, we granted options to purchase 1,196,161 shares of common stock pursuant to and subject to the terms and conditions of the Tender Offer

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dated June 17, 2009. The exercise price of each option granted is \$1.58 per share, which was the closing price of our common stock as reported by the NASDAQ Capital Market on July 16, 2009. The incremental stock-based compensation expense related to the Tender Offer will be recognized over the vesting period of the new options.

As of September 30, 2009, \$1.9 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 1.9 years.

As of September 30, 2009, 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 \$227,000. 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. 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, 2009 is presented below:

	Nonvested Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2008	966,450	\$ 1.54
Granted	1,661,295	0.75
Vested	(2,355,782)	1.03
Forfeited	(55,025)	1.30
Outstanding at September 30, 2009	216,938	\$ 1.13

As of September 30, 2009, there was \$212,000 of unrecognized share-based compensation expense related to these nonvested shares. This cost is expected to be recognized over a weighted average period of 1.9 years. The total intrinsic value of shares vested during the nine months ended September 30, 2009 was \$4.9 million.

Cash received from purchases under the 1999 Employee Stock Purchase Plan (the 1999 ESPP) and exercises of options under the 1999 Equity Incentive Plan for the nine months ended September 30, 2009 was approximately \$17,000 and \$133,000, respectively. We issue new shares upon option exercises, purchases under the 1999 ESPP, vesting of nonvested stock, and under the Directors' Deferred Compensation Plan. During the nine months ended September 30, 2009, 41,300 shares were issued under the 1999 ESPP, 74,276 shares were issued upon the exercise of options, and approximately 2,210,000 shares, net of 118,000 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 \$0.47 per share, based on the NASDAQ Global Market closing price on the vesting dates, for a total cost of approximately \$55,000. In addition, during the nine months ended September 30, 2009, approximately 15,000 shares were issued under our Directors' Deferred Compensation Plan.

The impact on our results of operations from the granting of stock options and nonvested shares was as follows (in thousands).

	Quarter Ended September 30, 2009      2008		Nine Months Ended September 30, 2009      2008	
Research and development	\$ 101	\$ 79	\$ 1,072	\$ 1,428
General and administrative	832	821	2,303	3,385
Total share-based compensation expense	\$ 933	\$ 900	\$ 3,375	\$ 4,813

**Note E 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. 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 and moved for class certification in the six test cases, which the defendants in those cases

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have opposed. On March 26, 2008, the Court largely denied the defendants' motion to dismiss the amended complaints. The parties have reached a global settlement of the litigation. Under the settlement, the insurers will pay the full amount of settlement share allocated to the defendants, and the defendants will bear no financial liability. The company defendants, as well as the officer and director defendants who were previously dismissed from the action pursuant to tolling agreements, will receive complete dismissals from the case. On October 5, 2009, the Court entered an order granting final approval of the settlement. Certain objectors are seeking to appeal. If for any reason the settlement does not become effective, we believe we have meritorious defenses to the claims and intend to defend the action vigorously. We are unable to predict the likelihood of an unfavorable outcome or estimate our potential liability, if any. No accrual has been recorded at September 30, 2009 for this action.

We may currently be, or may become, a party to other legal proceedings as well. The ultimate outcome of any such proceedings is subject to inherent uncertainty. Furthermore, litigation consumes both cash and management attention.

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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 2006 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 2006 GSK Supply Agreement. In conjunction with the GSK License Agreement and the 2006 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 as 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 (the GSK Letter ) with GSK amending the 2006 GSK Supply Agreement to accelerate GSK's commercial grade QS-21 manufacturing rights previously granted in July 2006. On January 16, 2009, we entered into an Amended and Restated Manufacturing Technology Transfer and Supply Agreement (the Amended GSK Supply Agreement ) reflecting the provisions of the letter.

Accordingly, from the effective date of the GSK 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 Amended GSK Supply Agreement, 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 GSK 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 2006 GSK Supply Agreement. In addition, GSK is obligated to make payments to us totaling \$5.25 million through December 2012, of which \$1.75 million has been received, for manufacturing profits that were anticipated to have otherwise been earned under the 2006 GSK Supply Agreement. Except as expressly provided in the Amended GSK Supply Agreement, all other financial obligations of GSK under the 2006 GSK Supply Agreement, including royalty payments, remain unchanged. The Amended GSK Supply Agreement does not affect the rights and obligations of the parties under the GSK License Agreement.

During each of the nine months ended September 30, 2009 and 2008, we recognized revenue of \$995,000 from the amortization of deferred revenue relating to payments received under our license and supply agreements with GSK. Deferred revenue of \$3.5 million related to our agreements with GSK is included in deferred revenue on our consolidated balance sheet as of September 30, 2009.

Effective September 14, 2009, we entered into an Amended and Restated License Agreement ( Amended License Agreement ) with Elan Pharma International Limited and Elan Pharmaceuticals, Inc. On September 17, 2009, the Amended License Agreement was assigned to JANSSEN Alzheimer Immunotherapy, a subsidiary of Johnson & Johnson. Under the terms of the Amended License Agreement assigned to JANSSEN Alzheimer Immunotherapy, they will have the right to develop, make, have made, use, sell, offer for sale, import, and have sold the Alzheimer's disease vaccine that contains QS-21 ( Licensed Product ). In addition, pursuant to the terms of the Amended License Agreement, JANSSEN Alzheimer Immunotherapy has the right to manufacture all of its requirements of QS-21 for use in the Licensed Product and we have no further supply obligations. As consideration, we received an upfront payment and are entitled to receive payments contingent upon successful milestone achievements. In addition, we are entitled to receive royalties on a country-by-country basis on net sales of Licensed Product for a period of at least 10 years after first commercial sale in that country. Deferred revenue of \$396,000 related to this Amended License Agreement is included in deferred revenue on our consolidated balance sheet as of September 30, 2009.

**Note G Restructuring Costs**

On February 2, 2009, we initiated a plan of restructuring that resulted in a reduction of our workforce by approximately 20%, or 19 positions. We engaged in this workforce reduction in order to reduce operating expenses in light of current market conditions and to focus our resources on near-term commercial opportunities. This restructuring action resulted in total charges of approximately \$177,000 in severance and outplacement expenses in the quarter ended March 31, 2009, with \$42,000 included in research and development expenses and \$135,000 included in general and administrative expenses in our consolidated statement of operations. The charge to operations was reduced by \$10,000 during the quarter ended June 30, 2009 based on actual activities. A summary of these costs is as follows (in thousands):

	Liability at December 31, 2008	Charge to Operations	Amounts Paid	Liability at September 30, 2009
Severance	\$	\$ 150	\$ (150)	\$



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Outplacement		17	(17)	
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Total	\$	\$	167	\$	(167)	\$
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## **Note H Recent Accounting Pronouncements**

In June 2009, the FASB issued the ASC as the single source of authoritative U.S. GAAP recognized by the FASB to be applied by nongovernmental entities in preparation of financial statements in conformity with U.S. GAAP. While the adoption of the ASC as of September 30, 2009 changes how we reference accounting standards, the adoption did not have an impact on our financial position, results of operations, or cash flows.

In December 2007, the FASB issued authoritative guidance that expands the types of transactions or other events that will

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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 guidance 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 this guidance, 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. This guidance 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. The adoption of this authoritative guidance did not have an impact on our financial position or results of operations.

In December 2007, the FASB issued authoritative guidance, which is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008, that governs the accounting for and reporting of noncontrolling interests in partially owned consolidated subsidiaries and the loss of control in subsidiaries. The adoption of this authoritative guidance did not have an impact on our financial position or results of operations.

In March 2008, the FASB issued authoritative guidance, which is effective for fiscal years, and interim periods within those fiscal years, beginning on or after November 15, 2008, that 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. The adoption of this authoritative guidance did not have an impact on our financial position or results of operations but required additional disclosure (see Note J).

In May 2008, the FASB revised authoritative guidance, which is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2008, that specifies that issuers of convertible debt instruments that may be settled in cash upon conversion 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 adopted this revised guidance as of January 1, 2009 and the effect on our consolidated financial statements is discussed in Note I.

In June 2008, the FASB ratified revised guidance, which is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years, that defines when adjustment features within contracts are considered to be equity-indexed. We adopted this guidance, which is applicable to our 2006 Notes due to the provisions contained therein that protect the holders from declines in our stock price, as of January 1, 2009. This guidance is applied prospectively, with a cumulative effect adjustment recorded to accumulated deficit as of January 1, 2009, as if the revised guidance had been applied to the 2006 Notes since their issuance. See Note I for additional information as to the effect of the adoption of this revised guidance.

In April 2009, the FASB issued revised guidance requiring an acquirer to recognize at the acquisition date the fair value of an asset acquired or liability assumed in a business combination that arises from a contingency, if the acquisition-date fair value can be determined during the measurement period. This revised guidance is effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. This revised guidance impacts our accounting for future business combinations, if any.

In April 2009, the FASB also issued revised guidance with respect to estimating fair value when the volume and level of activity for the asset or liability have significantly decreased. This revised guidance also focuses on identifying circumstances that indicate a transaction is not orderly. The revised guidance emphasizes that even if there has been a significant decrease in the volume and level of activity for the asset or liability and regardless of the valuation technique(s) used, the objective of a fair value measurement remains the same. This guidance is effective for interim and annual reporting periods ending after June 15, 2009, and is to be applied prospectively with early adoption permitted for periods ending after March 15, 2009. The adoption of this guidance did not have an impact on our consolidated financial statements.

In April 2009, the FASB issued revised guidance amending the other-than-temporary impairment guidance for debt securities to make the guidance more operational and to improve the presentation and disclosure of other-than-temporary impairments on debt and equity securities in the financial statements. This revision does not amend existing recognition and measurement guidance related to other-than-temporary impairments of equity securities. This guidance is effective for interim and annual reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The adoption of this revised guidance did not have an impact on our consolidated financial statements.

In April 2009, the FASB issued revised guidance to require disclosures about the fair value of financial instruments for interim reporting periods of publicly traded companies as well as in annual financial statements. This revised guidance also requires those disclosures in summarized financial information at interim reporting periods. This authoritative guidance is effective for interim reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The adoption of this authoritative guidance did not have an impact

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on our financial position or results of operations but required additional disclosure (see Notes I and J).

In May 2009, the FASB issued authoritative guidance establishing general standards of accounting for and disclosures of events that occur after the balance sheet date but before financial statements are issued. This guidance also requires entities to disclose the date through which subsequent events were evaluated as well as the rationale for why that date was selected. This guidance is effective for interim and annual periods ending after June 15, 2009. The adoption of this guidance did not have an impact on our financial position or results of operations. We evaluated all events or transactions that occurred after September 30, 2009 up through November 9, 2009, the date our financials were issued. During this period, we did not have any material recognized or nonrecognized subsequent events.

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In June 2009, the FASB issued Statement of Financial Accounting Standards ( SFAS ) No. 166, *Accounting for Transfers of Financial Assets* ( SFAS No. 166 ). SFAS No. 166 amends SFAS No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities* ( SFAS No. 140 ), by removing the concept of a qualifying special-purpose entity from SFAS No. 140 and removing the exception from applying FASB Interpretation No. 46, *Consolidation of Variable Interest Entities (revised December 2003)* ( FIN No. 46R ) to variable interest entities that are qualifying special-purpose entities. It also modifies the financial-components approach used in SFAS No. 140. SFAS No. 166 is effective for transfers of financial assets occurring on or after January 1, 2010. The adoption of SFAS No. 166 may impact the accounting for future transactions, if any.

In June 2009, the FASB issued revised guidance which amends the guidelines for determining the existence of a variable interest entity and the related primary beneficiary. This revised guidance also requires ongoing reassessments of whether an enterprise is the primary beneficiary of a variable interest entity. The provisions of this guidance are effective for annual periods beginning after November 15, 2009, with early adoption prohibited. We do not expect the adoption of the provisions of this revised guidance to have a significant impact on our consolidated financial statements.

In October 2009, the FASB revised authoritative guidance on multiple-deliverable revenue arrangements providing a greater ability to separate and allocate arrangement consideration in a multiple-element revenue arrangement by requiring the use of estimated selling price to allocate arrangement consideration, thereby eliminating the use of the residual method of allocation. The revised guidance also requires expanded qualitative and quantitative disclosures surrounding multiple-deliverable revenue arrangements. This guidance is effective for fiscal years beginning after June 15, 2010 and may be applied retrospectively or prospectively for new or materially modified arrangements. Early adoption is permitted. We will evaluate the impact, if any, of this guidance on revenue transactions that we may enter into in the future.

### **Note I Convertible Debt**

As of January 1, 2009, we adopted revised authoritative guidance that addressed certain matters applicable to convertible debt instruments and retrospectively applied this change in accounting to all prior periods presented for which we had applicable outstanding convertible debt, as required by this new guidance. All prior periods presented herein have been adjusted to apply the new method retrospectively. Under this new method of accounting, the debt and equity components of our 2005 Notes and our 2006 Notes are bifurcated and accounted for separately based on the fair value and related interest rate of a non-convertible debt security with the same terms. The fair value of a non-convertible debt instrument at the original issuance dates of our 2005 Notes and our 2006 Notes was determined to be \$42.6 million and \$23.6 million, respectively. The equity (conversion options) components of our convertible debt securities have been included in additional paid-in capital on our consolidated balance sheet and, accordingly, the initial carrying value of the debt securities was reduced by \$8.8 million. Our previously reported net loss for the quarter and nine months ended September 30, 2008 was increased by \$313,000 and \$919,000 respectively, primarily due to recognizing the accretion of the reduced carrying values of our convertible debt securities to their face amount as additional non-cash interest expense. The adoption of this accounting standard has resulted in a reduction in the carrying value of our convertible debt by approximately \$3.7 million as of December 31, 2008. In addition, our deferred debt issuance costs were reduced by \$294,000 as we were required to allocate an amount related to the conversion option to equity.

As a result of the adoption of revised authoritative guidance as of January 1, 2009, the conversion feature embedded in our 2006 Notes is now treated as a derivative and recorded at its fair value, with period to period changes in the fair value recorded as a gain or loss in our consolidated statement of operations. Accordingly, upon adoption we recorded a reduction to additional paid-in capital of \$1.4 million, an increase to debt discount of \$1.3 million, a derivative liability of \$2.7 million, and a charge to opening accumulated deficit of \$21,000. For the quarter and nine months ended September 30, 2009, we have recorded a charge to other expense of \$3.4 million and \$8.2 million, respectively, due to changes in the fair value of the derivative. Interest expense includes \$117,000 and \$502,000 of non-cash interest expense for the quarter and nine months ended September 30, 2009, respectively.

Interest on the 2006 Notes is payable semi-annually on December 30 and September 30 in cash or, at our option, in additional notes or a combination thereof. During the nine months ended September 30, 2009 and 2008, we issued additional 2006 Notes in the amounts of \$1.2 million and \$1.1 million, respectively, as payment for interest due.

During May 2009, we repurchased \$1.0 million of our 2005 Notes for \$255,000 plus accrued interest of \$13,000. In addition, during June 2009, we issued 5,173,000 shares of our common stock as consideration for \$15.9 million of our 2005 Notes including accrued interest of \$282,000. In September 2009, we issued 424,300 shares of our common stock as consideration for \$1.3 million of our 2005 Notes including accrued interest. In connection with the repurchases, we recorded a net gain of \$2.7 million in non-operating income, which is comprised of inducement expense of \$9.8 million and a gain on extinguishment of debt of \$12.5 million for the nine months ended September 30, 2009.

### **Note J Fair Value Measurements**

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We measure fair value based on 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

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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.

We measure our short-term investments and derivative liability at fair value. Our 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. Our derivative liability is classified within Level 3 because it is valued using a modified Black-Scholes model.

Certain inputs into this model were valued using a combination of income and market approaches which are unobservable in the market and are significant. The estimated fair values of all of our financial instruments, excluding long-term debt, approximate their carrying amounts in the consolidated balance sheets. The fair value of our long-term debt was derived by evaluating the nature and terms of each note and considering the prevailing economic and market conditions at the balance sheet date.

Assets and liabilities measured at fair value are summarized below (in thousands):

Description	September 30, 2009	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>			
Short-term investments	\$ 4,998	\$ 4,998	\$
<b>Liabilities:</b>			
Derivative liability	\$ 10,915	\$	\$ 10,915

The following table presents our liabilities measured at fair value using significant unobservable inputs (Level 3), as of September 30, 2009 (amounts in thousands):

Balance, December 31, 2008	\$
Cumulative effect of change in accounting principle adoption of EITF	
Issue No. 07-5 (contained in ASC 815-40)	2,713
Increase in fair value for the nine months ended September 30, 2009	8,202
Balance, September 30, 2009	\$ 10,915

The increase in fair value of the derivative liability is included in non-operating expense in our condensed consolidated statement of operations for the nine months ended September 30, 2009.

As of September 30, 2009, \$20.0 million in principal of the 2005 Notes are outstanding with an estimated fair value of \$14.9 million based on the most recent market transactions. As of September 30, 2009, \$30.8 million in principal of the 2006 Notes are outstanding. The fair value of the debt portion of the 2006 Notes exclusive of the conversion option is \$30.5 million based on a present value methodology.

**Note K Equity**

In April 2009, we issued 5,929,212 shares of our common stock upon conversion of 2,145 shares of our series B2 convertible preferred stock via cashless conversions. These shares were issued pursuant to an effective registration statement. Upon completion of this conversion, 3,105 shares of our series B2 convertible preferred stock are still outstanding although no further shares can be converted into shares of common stock. In addition, in June 2009, we issued 5,173,000 shares of our common stock as consideration for \$15.9 million of our 2005 Notes including accrued interest of \$282,000. In September 2009, we issued 424,300 shares of our common stock as consideration for \$1.3 million of our 2005 Notes including accrued interest (see Note I).

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On July 30, 2009, we entered into a private placement agreement under which we issued and sold (i) 5,000,000 shares of our common stock, (ii) six-month warrants to purchase up to 2,500,000 additional shares of common stock at an exercise price of \$2 per share, and (iii) four-year warrants to purchase up to 2,173,900 additional shares of common stock at an exercise price of \$2.30 per share, for \$2.00 for each share sold generating gross proceeds of \$10.0 million.

In August 3, 2009, we entered into a private placement agreement under which we issued and sold (i) 4,385,965 shares of our common stock, (ii) six-month warrants to purchase up to 2,192,982 additional shares of common stock at an exercise price of \$2.31 per share, and (iii) four-year warrants to purchase up to 1,973,685 additional shares of common stock at an exercise price of \$2.50 per share, for \$2.28 for each share sold generating gross proceeds of \$10.0 million. The warrants are not exercisable for the first six months following the closing, which occurred on August 4, 2009.

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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. As resources allow, we explore potential opportunities to seek product approval in other jurisdictions. 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 the treatment of metastatic melanoma, and it has also been tested in Phase 1 and Phase 2 clinical trials in a range of indications. It is currently in Phase 2 clinical trials in glioma, a type of brain cancer. Our business activities have included product research and development, intellectual property prosecution, manufacturing therapeutic vaccines, regulatory and clinical affairs, corporate finance and development activities, market development, and support of our collaborations.

We have incurred significant losses since our inception. As of September 30, 2009, we had an accumulated deficit of \$564.4 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 that, based on our current plans and activities, our working capital resources at September 30, 2009, anticipated revenues, and the estimated proceeds from our license, supply, and collaborative agreements will be sufficient to satisfy our liquidity requirements into 2011. We expect to attempt to raise additional funds in advance of depleting our current funds. We may attempt to raise additional funds by: (1) licensing technologies or products to one or more collaborative partners, (2) renegotiating license and/or supply agreements with current licensees or collaborative partners, (3) completing an outright sale of assets, (4) securing additional debt financing, and/or (5) selling additional equity securities. Satisfying long-term liquidity needs may require the successful commercialization of (1) our product, Oncophage and/or one or more partnering arrangements for Oncophage, (2) vaccines containing QS-21 under development by our licensees, and/or (3) potentially other product candidates, and will require additional capital.

On February 2, 2009, we initiated a plan of restructuring that resulted in a reduction of our workforce by approximately 20%, or 19 positions. We engaged in this workforce reduction in order to reduce operating expenses in light of current market conditions and to focus our resources on near-term commercial opportunities. This restructuring action resulted in charges of approximately \$167,000 in severance and outplacement expenses in the nine months ended September 30, 2009. All of these expenses have been paid as of September 30, 2009.

In April 2008, the Russian Ministry of Public Health issued a registration certificate for the use of Oncophage for the treatment of kidney cancer patients at intermediate risk for disease recurrence and, in September 2008, the U.S. Food and Drug Administration ( 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. Since approval, our focus in Russia has been on pre-commercial launch activities.

In October 2008, we announced the submission of a marketing authorization application ( MAA ) to the European Medicines Agency ( 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. On October 20, 2009, the Committee for Medicinal Products for Human Use ( CHMP ) of the EMEA informed us at an oral hearing to anticipate a negative opinion on this MAA. We are currently evaluating our options to determine the best path forward with Oncophage in this territory.

In addition, we are exploring the steps necessary to make Oncophage available in other markets directly or through one or more partnering arrangements. 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 from our Phase 3 renal cell carcinoma trial utilizing data through March 2007 as well as based on continued data collection through the follow-on survival registry protocol to determine whether there is an opportunity to file a biologics license application ( BLA ), on the basis of these results with appropriate commitments to conduct further post-approval trials. Because the primary evidence of efficacy comes from a subgroup analysis of the pre-specified primary and secondary endpoints and was not demonstrated in the intent-to-treat population, this trial is likely not sufficient as sole support for product approval based on existing standards in the United States and potentially in other territories.

### **Forward-Looking Statements**



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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 2011 or thereafter, our or our partners' or licensees' intentions for executing plans or timelines for performing and completing research, preclinical studies and clinical trials, and releasing data, plans or timelines for

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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 and safety profile of therapeutic drugs, vaccines, and combinations in treating diseases, statements regarding the potential benefit of Oncophage in kidney cancer based on a subgroup analysis, as well as other potential benefits of Oncophage based on preliminary clinical data, applicability of our heat shock protein technology to multiple cancers and infectious diseases, competitive position, regulatory plans and actions, including with respect to regulatory filings and meetings and communications with regulatory authorities (including potential requests for meetings with the FDA regarding Oncophage clinical studies and strategies for responding to the CHMP's decision regarding the conditional authorization of Oncophage in Europe and for making Oncophage available in other territories), 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, debt repayments, 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 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; that we may not continue to pursue a marketing authorization application for Oncophage with the EMEA, and that even if we do continue such pursuit, Oncophage may not achieve conditional approval in Europe, because we may not successfully address issues associated with post-hoc analysis, subgroup analysis, lack of immunological data in renal cell carcinoma, product characterization, or other issues that may be of concern to the EMEA; that named patient programs may not be launched in the near-term, if ever, and if launched may not generate significant revenue, if any; that 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.

**Results of Operations*****Quarter Ended September 30, 2009 Compared to the Quarter Ended September 30, 2008***

**Revenue:** We generated revenue of \$896,000 and \$685,000 during the quarters ended September 30, 2009 and 2008, respectively. The increase is primarily due to an increase in revenue earned on shipments of QS-21 to our QS-21 licensees in the quarter ended September 30, 2009 as compared to the quarter ended September 30, 2008, primarily due to timing, and an increase in royalties earned. In the quarters ended September 30, 2009 and 2008, we recorded revenue of \$387,000 and \$361,000, 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 31% to \$3.7 million for the quarter ended September 30, 2009 from \$5.4 million for the quarter ended September 30, 2008. The decrease includes declines related to our general cost-containment efforts and to the status of our products under development partially offset by the increase in shipments of QS-21.

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*General and Administrative:* General and administrative expenses consist primarily of personnel costs, facility expenses, and professional fees. General and administrative expenses decreased 31% to \$3.5 million for the quarter ended September 30, 2009 from \$5.1 million for the quarter ended September 30, 2008. This decrease is largely related to our general cost containment.

*Non-Operating Expense:* Non-operating expense of \$3.0 million for the quarter ended September 30, 2009 consists primarily of the change in the fair value of our derivative liability since June 30, 2009 of \$3.4 million primarily due to an increase in our market value, partially offset by net proceeds received from a legal settlement and the net gain on the extinguishment of a portion of our 5.25% convertible senior notes due February 2025 (the 2005 Notes ).

*Interest Expense:* Interest expense decreased to \$1.2 million for the quarter ended September 30, 2009 from \$1.6 million for the quarter ended September 30, 2008. This decrease is related to the repurchase of a portion of our 2005 Notes during the fourth

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quarter of 2008 and the second quarter of 2009. 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. During the quarters ended September 30, 2009 and 2008, interest expense included \$616,000 and \$563,000, respectively, related to the 2006 Notes.

*Interest Income:* Interest income decreased to \$18,000 for the quarter ended September 30, 2009 from \$214,000 for the same period in 2008. This decrease is attributable to a decrease in our average cash, cash equivalents, and short-term investments balance coupled with a decrease in interest rates earned on such items. Our average interest rate earned decreased from 1.9% for the quarter ended September 30, 2008 to 0.3% for the quarter ended September 30, 2009.

### *Nine Months Ended September 30, 2009 Compared to the Nine Months Ended September 30, 2008*

*Revenue:* We generated revenue of \$2.8 million and \$2.1 million during the nine months ended September 30, 2009 and 2008, respectively. The increase is primarily due to an increase for the nine months ended September 30, 2009 over the same period in 2008 in revenue earned on shipments of QS-21 to our QS-21 licensees and an increase in royalties earned. In the nine months ended September 30, 2009 and 2008, we recorded revenue of \$1.1 million each period 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 19% to \$13.7 million for the nine months ended September 30, 2009 from \$17.0 million for the nine months ended September 30, 2008. The decrease includes declines related to our general cost-containment efforts and to the status of our products under development.

*General and Administrative:* General and administrative expenses consist primarily of personnel costs, facility expenses, and professional fees. General and administrative expenses decreased 28% to \$11.6 million for the nine months ended September 30, 2009 from \$16.1 million for the nine months ended September 30, 2008. This decrease is largely related to our general cost-containment efforts and a decrease in non-cash share-based compensation expense primarily attributable to a general decline in our stock price year over year.

*Non-Operating Expense:* Non-operating expense of \$5.7 million for the nine months ended September 30, 2009 consists of the change in the fair value of our derivative liability since December 31, 2008 of \$8.2 million primarily due to an increase in our market value, and a loss of \$318,000 from the monetization of the receivable that was received in the 2008 assignment of certain patent applications, partially offset by the net gain of \$2.7 million on the extinguishment of a portion of our 2005 Notes.

*Interest Expense:* Interest expense decreased 13% to \$4.1 million for the nine months ended September 30, 2009 from \$4.8 million for the nine months ended September 30, 2008. This decrease is related to the repurchase of a portion of our 2005 Notes during the fourth quarter of 2008 and second quarter of 2009. Interest on our 2006 Notes is payable semi-annually on December 30 and September 30 in cash or, at our option, in additional notes or a combination thereof. During the nine months ended September 30, 2009 and 2008, interest expense included \$1.8 million and \$1.1 million, respectively, related to the 2006 Notes.

*Interest Income:* Interest income decreased to \$122,000 for the nine months ended September 30, 2009 from \$871,000 for the same period in 2008. This decrease is attributable to a decrease in our average cash, cash equivalents, and short-term investments balance coupled with a decrease in interest rates earned on such items. Our average interest rate earned decreased from 2.8% for the nine months ended September 30, 2008 to 0.5% for the nine months ended September 30, 2009.

### **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 nine months ended September 30, 2009, our focus was primarily on Oncophage, as indicated in the following table (in thousands).

Research and Development Program	Product	Nine Months Ended September 30, 2009	Year Ended December 31, 2008	2007	2006	Prior to 2006	Total
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Heat Shock Proteins for Cancer	Oncophage	\$	12,244	\$ 17,156	\$ 13,970	\$ 19,985	\$ 204,471	\$ 267,826	
Heat Shock Proteins for Infectious Diseases	AG-702/707		250	1,377	2,005	1,939	12,127	17,698	
Liposomal Cancer Treatments*	Aroplatin		104	865	3,005	2,475	9,092	15,541	
Vaccine Adjuvant**	QS-21		1,027	648	2,064	2,492	4,944	11,175	
Other Research and Development Programs			55	617	745	1,752	14,626	17,795	
Total Research and Development Expenses			\$	13,680	\$ 20,663	\$ 21,789	\$ 28,643	\$ 245,260	\$ 330,035

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\* 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 programs, apply for regulatory approvals, continue development of our technologies, expand our operations, and/or 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 and currently on hold due to cost-containment efforts, 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. Programs involving QS-21 depend on our collaborative partners or licensees successfully completing clinical trials, successfully manufacturing QS-21 to meet demand, obtaining regulatory approvals and successfully commercializing product candidates containing QS-21.

**Product Development Portfolio**

Below is a table showing the clinical trials completed or ongoing in our product portfolio.

**PRODUCT**

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

(a) Phase 1/2 trials.

(b) Includes two separate Phase 1/2 and Phase 2 trials.

(c) Trial is ongoing.

(d) Investigator-sponsored trials, including one Phase 1/2 and one Phase 2 trial.

(e) Approved for use in Russia for the treatment of kidney cancer patients at intermediate risk for disease recurrence.

(f) A registry to monitor patient survival is ongoing.

*Oncophage*

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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, investigators in our clinical trials have administered Oncophage to nearly 800 cancer patients. Because Oncophage is a novel therapeutic cancer vaccine that is patient-specific, meaning it is derived from the patient's own tumor, it is experiencing 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.

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.

An investigator-sponsored Phase 1/2 clinical trial in recurrent, high-grade glioma is currently ongoing. This study is being lead by the Brain Tumor Research Center at the University of California, San Francisco ( UCSF ), with grants from the American Brain Tumor Association and the National Cancer Institute Special Programs of Research Excellence. Phase 1 results, presented at the

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Society for Neuro-Oncology Annual Meeting Conference in November 2008, showed that Oncophage vaccination following brain cancer surgery increased overall median survival to approximately 10.5 months, with four patients surviving beyond 12 months and one patient surviving almost 2.5 years. This is compared to a historical median survival of only 6.5 months post surgery. 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 Phase 2, which is designed to enroll 50 patients, and has expanded to include New York-Presbyterian Hospital/Columbia University Medical Center. Data from the Phase 2 portion was presented at the Society for Neuro-Oncology meeting in October 2009 which showed a median survival of 10.1 months in the first 20 patients treated with Oncophage, and that to date six patients (30 percent) had survived at or beyond 12 months. This early data shows an improvement in overall survival over the previous long-standing historical median survival of 6.5 months, which is also slightly favorable to the recently reported median survival of 9.2 months with Avastin® (bevacizumab) in patients with recurrent high-grade glioma. UCSF also recently initiated an additional Phase 2 clinical trial in newly diagnosed glioma testing Oncophage in combination with Temodar® (temozolomide). This trial is designed to enroll approximately 60 patients.

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, is currently designed to follow patients until March 2010, 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. At the 2009 American Society of Clinical Oncology annual meeting, we announced results of an interim analysis from the ongoing global patient survival registry, which showed that patients with kidney cancer at intermediate risk of disease recurrence demonstrated an approximately 46 percent lower risk of death when treated with Oncophage cancer vaccine after surgery compared with no treatment ( $n = 362$ ;  $P = 0.036$ ; hazard ratio = 0.54).

In addition to the patient registry, we are in the early initiation stage of a small study in non-metastatic renal cell carcinoma to assess immune response in the intermediate-risk patient population. The results of this study continued data collection through the survival registry and ongoing analyses are uncertain, and may not positively 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 for 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. Since approval we have been focusing our efforts in Russia on pre-commercial launch activities.

We have obtained an import/export license from the Russian Ministry of Industry and Trade but prior to commercial launch we, or our distributors, must also complete a number of other post-approval activities. 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 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 may be adversely affected.

Even if we successfully meet the logistical and regulatory requirements for Russian launch, the amount of revenue generated, if any, 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. If we are unsuccessful in obtaining substantial reimbursement for Oncophage from national or regional funds, we will have to rely on private-pay for the foreseeable future, which may delay or prevent our launch efforts because 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, among other things, we have limited resources and minimal sales and marketing experience, commercial launch of Oncophage has been slow. Furthermore, we may experience significant delays in the receipt of payment for Oncophage, or an inability to collect payments at all.

In October 2008, we announced the submission of a MAA to the EMEA requesting conditional authorization of Oncophage in earlier-stage, localized kidney cancer. On October 20, 2009 the CHMP of the EMEA informed us at an oral hearing to anticipate a negative opinion on this MAA. We are currently evaluating our options to determine the best path forward for Oncophage. We do not know what impact, if any, this opinion will have on our Russian activities. If we continue to pursue a marketing authorization application for Oncophage there is a high level of uncertainty regarding the probability and timing of a favorable outcome.

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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. 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 product's 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. If we continue to pursue a marketing authorization application for Oncophage, there is no guarantee that Oncophage will receive conditional authorization in Europe.

In addition, we are exploring the steps necessary to make Oncophage available in other markets outside the United States directly or through one or more partnering arrangements. This exploration process includes formal and informal discussions with international regulatory authorities, key opinion leaders, consultants and potential partners with country-specific regulatory experience regarding potential applications for full or conditional marketing approvals, and/or named patient programs. There is no guarantee that we will succeed in making Oncophage available in these markets.

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 from our Phase 3 renal cell carcinoma trial 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 further post-approval trials. Because the primary evidence of efficacy comes from a subgroup analysis of the pre-specified primary and secondary endpoints and was not demonstrated in the intent-to-treat population, this trial is likely not sufficient as sole support for product approval based on existing standards. Furthermore, this trial ultimately may not be sufficient to support approval in additional countries.

### *QS-21*

QS-21 is an adjuvant, or a substance added to a vaccine and 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 located 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.

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 GlaxoSmithKline Biologicals SA ( GSK ) and JANSSEN Alzheimer Immunotherapy, a subsidiary of Johnson & Johnson. 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, independent of patent life. 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 a supply agreement that we have with GSK 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 affiliates, licensees, or customers) certain quantities of commercial grade QS-21 for a stated period of time. On January 16, 2009, we entered into an Amended and Restated Manufacturing Technology Transfer and Supply Agreement reflecting the provisions of the letter. 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 Phase 3 studies evaluating its investigational MAGE-A3 Antigen-Specific Cancer Immunotherapeutic containing QS-21 in non-small cell lung cancer and melanoma. GSK has also initiated a Phase 3 clinical trial in malaria.

Elan Corporation, plc, through its affiliate Elan Pharmaceuticals International Limited, ( Elan ) had a commercial license for the use of QS-21 in research and commercialization of products. Effective September 14, 2009, we entered into an Amended and Restated License Agreement ( Amended License Agreement ) with Elan. On September 17, 2009, the Amended License Agreement was assigned to JANSSEN Alzheimer Immunotherapy. Under the terms of the Amended License Agreement assigned to JANSSEN Alzheimer Immunotherapy, they will have the right to develop, make, have made, use, sell, offer for sale, import, and have sold, the Alzheimer's disease vaccine that contains QS-21 ( Licensed

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Product ). In addition, pursuant to the terms of the Amended License Agreement, JANSSEN Alzheimer Immunotherapy has the right to manufacture all of its requirements of QS-21 for use in the Licensed Product and we have no further supply obligations. Under the terms of the Amended License Agreement, we are entitled to receive future milestone payments and product royalties in the event of the successful development of the Licensed Product. In 2007, Elan initiated a Phase 2 study of their vaccine.

*AG-707*

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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. Immunological testing in this study has been completed and final study data review is in process. Further internal work on this program is on hold due to cost-containment efforts. However, we would consider licensing and/or co-development opportunities to advance the product.

### *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.

In October 2005, we initiated a Phase 1, dose-escalation trial of a new formulation 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. We have reviewed the results from this trial with our medical advisors and have decided not to pursue internal development of Aroplatin at the present time. However, we would consider licensing and/or co-development opportunities to advance the product.

## **Liquidity and Capital Resources**

We have incurred annual operating losses since inception, and we had an accumulated deficit of \$564.4 million as of September 30, 2009. We expect to incur significant losses over the next several years as we continue our clinical trials, apply for regulatory approvals, prepare for commercialization, and continue development of our technologies. 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, 2009, we have raised aggregate net proceeds of \$494.8 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, 2009, we had debt outstanding of \$51.0 million in principal, including \$30.8 million in principal of our 2006 Notes and \$20.0 million in principal of our 2005 Notes, 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 approximately \$25 million for the year ending December 31, 2009. We continue to support and develop our QS-21 partnering collaborations, with the goal of generating royalties from this product in 2011 or thereafter.

We believe that, based on our current plans and activities, our working capital resources at September 30, 2009, anticipated revenues, and the estimated proceeds from our license, supply, and collaborative agreements will be sufficient to satisfy our liquidity requirements into 2011. We closely monitor our cash needs. We continue to monitor the likelihood of success of our key initiatives and are prepared to discontinue funding of such activities if they do not prove to be commercially feasible. In addition, we will continue to adjust other spending as needed in order to preserve liquidity. We expect to attempt to raise additional funds in advance of depleting our current funds. In order to fund our operations through 2011 and beyond, we will need to contain costs and raise additional funds. We may attempt to raise additional funds 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 vaccines containing QS-21 under development 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 \$46.8 million over the term of the studies. Through September 30, 2009, we have expensed \$46.2 million

as research and development expenses and \$46.0 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 as of September 30, 2009. 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 our product, Oncophage, and our product candidates to market. Part of our strategy is to develop and commercialize some of our product candidates by 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

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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, 2009 were \$34.0 million, a decrease of \$454,000 from December 31, 2008.

As part of our private placement agreements entered into in 2008 and 2009, 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. 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 placement agreements, we are subject to liquidated damages of up to a maximum of 10% of the aggregate purchase price paid by the investors, or \$4.6 million.

During the nine months ended September 30, 2009, the increase in cash and cash equivalents was primarily due to the net cash provided by financing activities of \$17.8 million for the nine months ended September 30, 2009. During the nine months ended September 30, 2009, we raised net proceeds from private placements of \$18.6 million and we repurchased \$1.0 million of our 2005 Notes for \$255,000. Adding to our increase in cash and cash equivalents is our net cash provided by investing activities for the nine months ended September 30, 2009 of \$7.3 million as compared to \$5.9 million used in investing activities for the same period in 2008. During the nine months ended September 30, 2009, we had \$5.0 million of net maturities of short-term securities compared with net purchases of short-term securities of \$5.8 million during the nine months ended September 30, 2008. In addition, during 2009 we received \$2.3 million as payment on a receivable from the 2008 assignment of certain patent applications.

Net cash used in operating activities for the nine months ended September 30, 2009 and 2008 was \$20.6 million and \$23.7 million, respectively. We continue to support and develop our QS-21 partnering collaborations, with the goal of generating royalties from this product in 2011 or thereafter. Our future ability to generate cash from operations 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.

Effective July 19, 2002, we sublet part of our Framingham facility to GTC Biotherapeutics, Inc. ( **GTC** ), 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 aggregating approximately \$295,000 during the remainder of 2009 and \$900,000 in 2010. The collection of this income, however, is subject to uncertainty.

We are currently involved in certain legal proceedings as detailed in Note E 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**

In June 2009, the Financial Accounting Standards Board ( **FASB** ) issued the Accounting Standards Codification ( **ASC** ) as the single source of authoritative U.S. generally accepted accounting principles ( **GAAP** ) recognized by the FASB to be applied by nongovernmental entities in preparation of financial statements in conformity with U.S. GAAP. While the adoption of the ASC as of September 30, 2009 changes how we reference accounting standards, the adoption did not have an impact on our financial position, results of operations, or cash flows.

In December 2007, the FASB issued authoritative guidance that 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 authoritative guidance 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 this guidance 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. This authoritative guidance 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. The adoption

of this authoritative guidance did not have an impact on our financial position or results of operations.

In December 2007, the FASB issued authoritative guidance, which is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008, that governs the accounting for and reporting of noncontrolling interests in partially owned consolidated subsidiaries and the loss of control in subsidiaries. The adoption of this authoritative guidance did not have an impact on our financial position or results of operations.

In March 2008, the FASB issued authoritative guidance, which is effective for fiscal years, and interim periods within those fiscal years, beginning on or after November 15, 2008, that 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. The adoption of this authoritative guidance did not have an impact on our financial position or results of operations but required additional disclosure (see Note J to our unaudited condensed consolidated financial statements).

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In May 2008, the FASB issued revised authoritative guidance, which is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2008, that specifies that issuers of convertible debt instruments that may be settled in cash upon conversion 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 adopted this revised guidance as of January 1, 2009 and the effect on our consolidated financial statements is discussed in Note I to our unaudited condensed consolidated financial statements.

In June 2008, the FASB ratified revised guidance, which is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years, that defines when adjustment features within contracts are considered to be equity-indexed. We adopted this guidance, which is applicable to our 2006 Notes due to the provisions contained therein that protect the holders from declines in our stock price, as of January 1, 2009. This guidance is applied prospectively, with a cumulative effect adjustment recorded to accumulated deficit as of January 1, 2009, as if the revised guidance had been applied to the 2006 Notes since their issuance. See Note I to our unaudited condensed consolidated financial statements for additional information as to the effect of the adoption of this guidance.

In April 2009, the FASB issued revised guidance requiring an acquirer to recognize at the acquisition date the fair value of an asset acquired or liability assumed in a business combination that arises from a contingency, if the acquisition-date fair value can be determined during the measurement period. This revised guidance is effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. This revised guidance may impact our accounting for future business combinations, if any.

In April 2009, the FASB also issued revised guidance with respect to estimating fair value when the volume and level of activity for the asset or liability have significantly decreased. This revised guidance also focuses on identifying circumstances that indicate a transaction is not orderly. The revised guidance emphasizes that even if there has been a significant decrease in the volume and level of activity for the asset or liability and regardless of the valuation technique(s) used, the objective of a fair value measurement remains the same. This guidance is effective for interim and annual reporting periods ending after June 15, 2009, and is to be applied prospectively with early adoption permitted for periods ending after March 15, 2009. The adoption of this guidance did not have an impact on our consolidated financial statements.

In April 2009, the FASB issued revised guidance amending the other-than-temporary impairment guidance for debt securities to make the guidance more operational and to improve the presentation and disclosure of other-than-temporary impairments on debt and equity securities in the financial statements. This revision does not amend existing recognition and measurement guidance related to other-than-temporary impairments of equity securities. This guidance is effective for interim and annual reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The adoption of this revised guidance did not have an impact on our consolidated financial statements.

In April 2009, the FASB issued revised guidance to require disclosures about the fair value of financial instruments for interim reporting periods of publicly traded companies as well as in annual financial statements. This revised guidance also requires those disclosures in summarized financial information at interim reporting periods. This authoritative guidance is effective for interim reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The adoption of this authoritative guidance did not have an impact on our financial position or results of operations but required additional disclosure (see Notes I and J to our unaudited condensed consolidated financial statements).

In May 2009, the FASB issued authoritative guidance establishing general standards of accounting for and disclosures of events that occur after the balance sheet date but before financial statements are issued. This guidance also requires entities to disclose the date through which subsequent events were evaluated as well as the rationale for why that date was selected. This guidance is effective for interim and annual periods ending after June 15, 2009. The adoption of this guidance did not have an impact on our financial position or results of operations. We evaluated all events or transactions that occurred after September 30, 2009 up through November 9, 2009, the date our financials were issued. During this period, we did not have any material recognized or nonrecognized subsequent events.

In June 2009, the FASB issued Statement of Financial Accounting Standards (SFAS) No. 166, *Accounting for Transfers of Financial Assets* (SFAS No. 166). SFAS No. 166 amends SFAS No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities* (SFAS No. 140), by removing the concept of a qualifying special-purpose entity from SFAS No. 140 and removing the exception from applying FASB Interpretation No. 46, *Consolidation of Variable Interest Entities (revised December 2003)* (FIN No. 46R) to variable interest entities that are qualifying special-purpose entities. It also modifies the financial-components approach used in SFAS No. 140. SFAS No. 166 is effective for transfers of financial assets occurring on or after January 1, 2010. The adoption of SFAS No. 166 may impact the accounting for future transactions, if any.

In June 2009, the FASB issued revised guidance which amends the guidelines for determining the existence of a variable interest entity and the related primary beneficiary. This revised guidance also requires ongoing reassessments of whether an enterprise is the primary beneficiary of a



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variable interest entity. The provisions of this guidance are effective for annual periods beginning after November 15, 2009, with early adoption prohibited. We do not expect the adoption of the provisions of this revised guidance to have a significant impact on our consolidated financial statements.

In October 2009, the FASB revised authoritative guidance on multiple-deliverable revenue arrangements providing a greater ability to separate and allocate arrangement consideration in a multiple-element revenue arrangement by requiring the use of estimated selling price to allocate arrangement consideration, thereby eliminating the use of the residual method of allocation. The revised

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guidance also requires expanded qualitative and quantitative disclosures surrounding multiple-deliverable revenue arrangements. This guidance is effective for fiscal years beginning after June 15, 2010 and may be applied retrospectively or prospectively for new or materially modified arrangements. Early adoption is permitted. We will evaluate the impact, if any, of this guidance on revenue transactions that we may enter into in the future.

### **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 and the ruble. 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, 2008. 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, 2009 of \$34.0 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, 2009; 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 derivatives 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) and Rule 15d-15(e) promulgated under the Securities Exchange Act of 1934 (the "Securities Exchange Act"). Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that, as of the end of the period covered by this Quarterly Report on Form 10-Q, our disclosure controls and procedures were effective and were designed to ensure that information we are required to disclose in the reports that we file or submit under the Securities Exchange Act is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure, and is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms. It should be noted that any system of controls is designed to provide reasonable, but not absolute, assurances that the system will achieve its stated goals under all reasonably foreseeable circumstances.

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

During the quarter ended September 30, 2009, 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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### **PART II OTHER INFORMATION**

#### **Item 1. Legal Proceedings**

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. 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 and moved for class certification in the six test cases, which the defendants in those cases have opposed. On March 26, 2008, the Court largely denied the defendants' motion to dismiss the amended complaints. The parties have reached a global settlement of the litigation. Under the settlement, the insurers will pay the full amount of settlement share allocated to the defendants, and the defendants will bear no financial liability. The company defendants, as well as the officer and director defendants who were previously dismissed from the action pursuant to tolling agreements, will receive complete dismissals from the case. On October 5, 2009, the Court entered an order granting final approval of the settlement. Certain objectors are seeking to appeal. If for any reason the settlement does not become effective, we believe we have meritorious defenses to the claims and intend to defend the action vigorously. We are unable to predict the likelihood of an unfavorable outcome or estimate our potential liability, if any.

We may currently be a party, or may become a party, to other legal proceedings as well. The ultimate outcome of any such proceedings 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 have been 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 12 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, 2009, we have generated net losses totaling \$564.4 million. Our net losses for the nine months ended September 30, 2009 and the years ended December 31, 2008, 2007, and 2006 were \$32.2 million, \$30.8 million, \$37.9 million, and \$52.8 million, respectively. We expect to incur significant losses over the next several years as we continue research and clinical development of our technologies, apply for regulatory approvals, 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.

On September 30, 2009, we had \$34.0 million in cash, cash equivalents, and short-term investments. We believe that, based on our current plans and activities, our working capital resources at September 30, 2009, combined with anticipated revenues, and the estimated proceeds from our license, supply, and collaborative agreements will be sufficient to satisfy our liquidity requirements into 2011. We expect to attempt to raise additional funds in advance of depleting our current funds. For the nine months ended September 30, 2009, our average monthly cash used in

operating activities was \$2.3 million. We do not anticipate significant capital expenditures during 2009.

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 original investors, or \$4.6 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. 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.

Additional financing may not be available on favorable terms, or at all. If we are unable to raise additional funds when we need

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them, we will be required to delay, reduce, or eliminate some or all of our development, commercialization and clinical trial programs, including those related to 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.

The United States economy, and possibly the global economy, has been experiencing a recession. While the ultimate outcome cannot be predicted, this may have a material adverse effect on our liquidity and financial condition, particularly if our ability to raise additional funds is 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 from the deterioration in the credit markets and related financial crisis on our collaborative partners could limit potential revenue from our product candidates.

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

As of September 30, 2009, the principal portion of our total long-term debt, excluding the current portion, was \$50.8 million. Our 2005 Notes do not restrict our ability or the ability of our subsidiaries to incur additional indebtedness, including debt that effectively ranks senior to the 2005 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.

At maturity of our 2006 Notes, 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 note holders 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 2006 Note agreements include material restrictions on our incurrence of debt and liens while these notes are outstanding, as well as other customary covenants.

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, 2009 and the years ended December 31, 2008, 2007, and 2006, net cash used in operating activities was \$20.6 million, \$28.9 million, \$26.7 million, and \$44.9 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 no additional notes are converted, redeemed, repurchased, or exchanged, our cash interest payments will be \$1.6 million during 2009 and \$1.0 million annually 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 for 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 to Russia. The Russian registration was our first product approval from a regulatory authority.

We have obtained an import/export license from the Russian Ministry of Industry and Trade, but prior to commercial launch we, or our distributors, must also complete a number of other post-approval activities. 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 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 if we have a successful completion of the logistical and regulatory requirements for Russian 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. If we are unsuccessful in obtaining substantial reimbursement for Oncophage from national or regional funds, we will have to rely on private-pay for the foreseeable future, which may delay or reduce our launch efforts because the ability and willingness of patients to pay is unclear. In addition, cost-containment measures by third parties may prevent

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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.

On October 20, 2009 the CHMP of the EMEA informed us at an oral hearing to anticipate a negative opinion on our marketing authorization application ( MAA ) we submitted to the EMEA in October 2008. We are currently evaluating our options to determine the best path forward for Oncophage. We do not know what impact, if any, this opinion will have on our Russian activities. If we continue to pursue a marketing authorization application for Oncophage with the EMEA, there is a high level of uncertainty regarding the probability and timing of a favorable outcome.

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

Public and private insurance programs may determine that Oncophage, our product candidates, or the product candidates of our licensees or collaborative partners do not come within a category of items and services covered by their insurance plans. In Russia, Europe, and other countries outside the United States, government-sponsored health care systems typically pay a substantial share of health care costs, and they may regulate reimbursement levels of our products to control costs. 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. In addition, we do not know the impact, if any, that the verbal opinion received on our MAA in Europe will have on our reimbursement efforts. If we are unsuccessful in obtaining substantial reimbursement for Oncophage from national or regional funds, we will have to rely on private-pay for the foreseeable future, which may delay or prevent our launch efforts, because the ability and willingness of patients to pay for the product is unclear.

It is possible that there will be substantial delays in obtaining coverage of Oncophage, our product candidates, or the product candidates of our licensees or collaborative partners, 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 products unaffordable, or limits on the payment amount, which could have a material adverse effect on sales. If we are unable to obtain or retain adequate levels of reimbursement from government or private health plans, our or our collaborative partners' ability to sell products will be adversely affected. We are unable to predict what impact any future regulation or third-party payer initiatives relating to reimbursement will have on sales. Healthcare reform that may emerge from current policy debate may result in deleterious pricing and potential price controls on pharmaceutical and biotech products in the United States, Europe, and elsewhere.

***If we fail to comply with regulatory requirements in the countries in which we conduct our business, 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.***

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 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.

In addition, 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



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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.

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.

***We may not be able to obtain approval to make Oncophage available in countries other than Russia.***

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 MAA to the EMEA requesting conditional authorization of Oncophage in earlier-stage, localized kidney cancer. On October 20, 2009 the CHMP of the EMEA informed us at an oral hearing to anticipate a negative opinion on this MAA. We are currently evaluating our options to determine the best path forward for Oncophage. 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. Conditional authorization allows for the commercialization of a product with post-approval commitments associated with the requirement to provide comprehensive clinical information about the product's efficacy and safety profile. If we continue to pursue a marketing authorization application for Oncophage with the EMEA, there is a high level of uncertainty regarding the probability and timing of a favorable outcome. In addition, even if we continue this pursuit, Oncophage may not achieve conditional approval in Europe because we may not successfully address issues associated with post-hoc analysis, subgroup analysis, lack of immunological data, product characterization, or other issues that may be of concern to the EMEA.

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, some of which were not pre-specified. 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, including in Europe. Any additional studies may take years to complete and may fail to support regulatory filings for many reasons. 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 EMEA, 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 this novel class of 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, 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 and domestic 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 licensees or 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.

***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, and in the event we are able to launch Oncophage in other territories, we will 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 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 Oncophage, 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.

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

Our business and the products in development by our collaborative partners may fail because of intense competition from major pharmaceutical companies and specialized biotechnology companies engaged in the development of product candidates directed at cancer, infectious diseases and degenerative disorders. Several of these companies have products that utilize technologies similar to Oncophage and/or patient-specific medicine techniques, such as Dendreon, Accentia, Oxford BioMedica and its partner Sanofi-Aventis.

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 Willex AG's Rencarex (WX-G250), which is 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, bevacizumab and pazopanib, 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. 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.

Our patent to purified QS-21 expired in most territories in 2008. Additional protection for our QS-21 proprietary adjuvant in combination with other agents is provided by our other patents. Our license and supply agreements for QS-21 typically provide royalties for at least 10 years after commercial launch independent of patent expiry. However, there is no guarantee that we will be able to collect royalties in the future.

We are aware of a saponin adjuvant called OPT-821 which is claimed to be identical to QS-21. OPT-821 was developed by Optimer Pharmaceuticals and is being used in ongoing cancer vaccine trials. 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 Pfizer and Bristol-Myers Squibb, MF59 and SAF, under development by Novartis, IC31, under development by Intercell, and MPL, under development by GlaxoSmithKline (GSK). In addition, at least one company, CSL Limited, as well as academic institutions, are developing saponin adjuvants, including derivatives and synthetic formulations.

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, unanticipated costs, or loss of revenue streams.*

If one of our product candidates or our licensees' product candidates nears marketing approval or is approved for sale, or if the demand for Oncophage is substantially greater than we anticipate, we may be required to manufacture substantially more product than we have been required to in the past. With higher manufacturing loads, we may experience higher manufacturing failure rates than we have in the past. We currently manufacture Oncophage in our Lexington, Massachusetts facility and we intend to continue using this facility to manufacture Oncophage to satisfy all demands for product. While we believe we will be able to cover all 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. Such demand may also limit our ability to manufacture Oncophage in support of 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. Deviations in the processes controlling manufacture could result in production failures.

We can also manufacture other clinical products in our own manufacturing facility. This manufacturing facility has certain support areas that it shares with the Oncophage manufacturing areas. As we seek to make Oncophage available 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 products such as AG-707 in our current facility. In order to prepare additional AG-707 to support future clinical trials, we would then have to manufacture or have manufactured this product in a good manufacturing practice ( GMP ) compliant facility.

Currently, we do not manufacture QS-21 in our own manufacturing facility, and we have given our two QS-21 licensees who have the most advanced clinical programs utilizing QS-21 the right to manufacture QS-21 themselves or through third party manufacturers. If these key licensees are unable to successfully manufacture or have manufactured QS-21, the commercialization of

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the product candidates being developed by such licensees could be delayed or prevented, and we could lose important potential future revenue streams. In addition, we continue to support other third party programs through the supply of QS-21 manufactured by our third party manufacturer. There is no guarantee that this third party manufacturer will continue to supply us in the future. In such an event, in order to continue to support such programs, we would need to engage another supplier or build internal capacity. Either of these options would require the investment of substantial funds and the recruitment of a qualified alternative manufacturer or internal personnel. In addition, we or our third party manufacturer(s), collaboration partners or licensees may never have the ability to manufacture commercial grade QS-21.

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 at 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 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 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.***

Clinical development, including preclinical testing and 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. 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, failure to enroll a sufficient number of patients, 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, 2009, we have spent approximately 15 years and \$267.8 million on our research and development program in heat shock proteins for cancer.

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 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;

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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.

Our existing Oncophage data may not support registration or approval for Oncophage in territories outside of Russia. Any additional studies may take years to complete and may fail to support regulatory filings for many reasons. In October 2008, we submitted a MAA to the EMEA, requesting conditional authorization of Oncophage in earlier-stage, localized kidney cancer. On October 20, 2009, the CHMP of the EMEA informed us at an oral hearing to anticipate a negative opinion on this MAA. We are currently evaluating our options to determine the best path forward for Oncophage in this territory. If we continue to pursue a marketing authorization application for Oncophage with the EMEA, there is a high level of uncertainty regarding the probability and timing of a favorable outcome. In addition, even if we continue this pursuit, Oncophage may not achieve conditional approval in Europe. Additionally, 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, some of which were not pre-specified. 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. Furthermore, regulatory authorities, including the FDA and the EMEA, may have varying interpretations of our preclinical study and clinical trial data for our other product candidates, which could delay, limit, or prevent regulatory approval or clearance. Delays or difficulties in obtaining regulatory approvals or clearances for Oncophage and/or our product candidates may:

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

impose significant additional costs on us or our licensees or collaborators;

diminish any competitive advantages that we or our licensees or 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.

Delays or failures in our receiving regulatory approval for our product candidates in a timely manner may result in us having to incur additional development expense and subject us to having to secure additional financing. As a result, we will not be able to commercialize them in the timeframe anticipated, and our business will suffer.

***New data from our research and development activities and/or resource considerations 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. We monitor the likelihood of success of our initiatives and due to our limited resources we may need to discontinue funding of such activities if they do not prove to be commercially feasible. 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. If we are successful in entering into a collaborative agreement, 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 our products or product candidates 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. If we are unable to complete the sale of such securities, we may become insolvent.

While we have been pursuing these business development efforts for several years, we have not entered into an agreement relating to the potential development or commercialization of Oncophage. Due to the announcements in March 2006 that part I of our Phase 3 trial in renal cell carcinoma did not achieve its primary endpoint in the intent to treat population, and in October 2009 that the CHMP has provided a verbal negative opinion on our MAA, 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



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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.

In addition, we would consider license and/or co-development opportunities to advance 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. Further work on these programs is on hold due to cost-containment efforts.

***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 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 large 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 Phase 2 clinical trials of Oncophage for the treatment of 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 the successful and adequate manufacture and/or supply of QS-21, and 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 or licensees. Such disputes could result in the incurrence of significant expense, or the termination of collaborations. We may be unable to fulfill all of our obligations to our collaborators, which may result in the termination of collaborations. 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 would negatively affect our business prospects.

***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 Phase 3 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 facilities in Massachusetts; for non-metastatic renal cell carcinoma, 92%; for melanoma, 70%; for colorectal cancer, 98%; for gastric cancer, 81%; for lymphoma, 89%; for

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glioma, 86%; 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.

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.

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***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 76 issued United States patents and 101 foreign patents. We also have exclusive rights to 14 pending United States patent applications and 66 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.***

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.

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. 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. 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 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. 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 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.

If patent litigation or other proceeding is resolved against us, we or our licensees or 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 and other resources.

*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.*

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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.

***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, 2011.

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 eliminated certain employee benefits, restructured our business, and reduced staffing levels. This restructuring 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

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March 26, 2008, the Court largely denied the defendants' motion to dismiss the amended complaints. The parties have reached a global settlement of the litigation. On October 5, 2009, the Court entered an order granting final approval of the settlement. Under the settlement, the insurers will pay the full amount of settlement share allocated to the defendants, and the defendants will bear no financial liability. The company defendants, as well as the officer and director defendants who were previously dismissed from the action pursuant to tolling agreements, will receive complete dismissals from the case. A group of objectors has filed a petition requesting permission to appeal the Court's October 5, 2009 order certifying the settlement class. If for any reason the settlement does not become effective, we believe we have meritorious defenses to the claims and intend to defend the action vigorously. We are unable to predict the likelihood of an unfavorable outcome or estimate our potential liability, if any.

In addition, we are involved in other litigation and may become involved in additional litigation. Any such litigation could be

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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 other 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;

regulatory investigations;

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 such 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.

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, 2009, Antigenics Holdings LLC controlled approximately 12% 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 48% 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.***



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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, 2009, he would have held approximately 8% 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 19% of our outstanding common stock as of September 30, 2009, 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 20%. 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 a conversion price of \$3.00 per share at the option of the investors. On September 30, 2009, one holder of the 2006 Notes had holdings which, if totally converted into shares of our common stock, would result in this holder owning 7,045,000 shares. If such holder had exercised such conversion right on September 30, 2009, such holder would have owned approximately 7% of our outstanding common stock.

While the 2006 Notes do not carry any voting rights, the common stock issuable upon conversion of such securities do carry the same voting rights as other shares of common stock. The ownership positions following any such conversion, 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 the 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, 2009, and for the nine months ended September 30, 2009, the closing price of our common stock has fluctuated between \$0.30 and \$52.63 per share and \$0.30 and \$2.99 per share, respectively. The average daily trading volume for the nine months ended September 30, 2009 was approximately 2,131,000 shares, which is a significant increase from our average trading volume for the three months ended March 31, 2009 of 111,000 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;

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.

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

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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, 2009, we had 89,714,639 shares of common stock outstanding. All of these shares are eligible for sale on the NASDAQ, although certain of the shares are subject to sales volume and other limitations. We have filed registration statements to permit the sale of 25,436,831 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 1,000,000 shares of common stock under our employee stock purchase plan, to permit the sale of 450,000 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, to permit the sale of 14,000,000 shares of common stock pursuant to the private placement agreement dated April 8, 2008 and to permit the sale of 9,673,900 shares of common stock pursuant to a private placement agreement dated August 3, 2009. As of September 30, 2009, an aggregate of 36,809,200 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, 2009, options to purchase 6,430,105 shares of our common stock with a weighted average exercise price per share of \$2.89 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, 2009, we have 216,938 nonvested shares outstanding.

***If we fail to meet the requirements for continued listing on the NASDAQ Capital Market, our common stock could be delisted from trading, which would adversely affect the liquidity of our common stock and our ability to raise additional capital.***

Our common stock is currently listed for quotation on the NASDAQ Capital Market. Accordingly, we are required to meet specified financial requirements in order to maintain our listing. One such requirement is that we maintain a minimum closing bid price of at least \$1.00 per share for our common stock. Our common stock has recently closed at prices that are below this minimum bid price requirement. If our stock price falls below \$1.00 per share for 30 consecutive business days, we could receive a deficiency notice from NASDAQ advising us that we have 180 days to regain compliance. Thereafter, we could receive an additional 180-day compliance period if we meet all initial inclusion requirements for the NASDAQ Capital Market, except for the bid price requirement. In order to achieve compliance with the bid price requirement, a security must maintain a closing \$1.00 bid price for a minimum of 10 consecutive business days. If a company does not demonstrate compliance within the compliance period, it will be issued a delisting letter, which it may appeal at that time. If in the future we fail to satisfy the NASDAQ's continued listing requirements, our common stock could be delisted from the NASDAQ Capital Market. Any potential delisting of our common stock from the NASDAQ Capital Market would make it more difficult for our stockholders to sell our stock in the public market and would likely result in decreased liquidity and increased volatility for our common stock.

***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 in the past and have required additional management resources.***

The Sarbanes-Oxley Act of 2002 and rules adopted by the SEC and the NASDAQ have resulted 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 management time. We expect these 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 U.S. GAAP. 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 that there were no material weaknesses in our internal control over financial reporting as of December 31, 2008, 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.

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**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.

Date: November 9, 2009

ANTIGENICS INC.

/s/ SHALINI SHARP

**Shalini Sharp**

*Chief Financial Officer*

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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.
3.1.1	Certificate of Amendment to 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 11, 2007 and incorporated herein by reference.
3.2	Third Amended and Restated By-laws of Antigenics Inc. filed as Exhibit 3.2 to our Quarterly Report on Form 10-Q/A (File No. 0-29089) dated November 10, 2008 and incorporated herein by reference.
3.3	Certificate of Designation, Preferences and Rights of the Series A Convertible Preferred Stock of Antigenics Inc. filed with the Secretary of State of the State of Delaware on September 24, 2003. Filed as Exhibit 3.1 to our Current Report on Form 8-K (File No. 0-29089) filed on September 25, 2003 and incorporated herein by reference.
3.4	Certificate of Designations, Preferences and Rights of the Class B Convertible Preferred Stock of Antigenics Inc. Filed as Exhibit 3.1 to our Current Report on Form 8-K (File No. 0-29089) filed on September 5, 2007 and incorporated herein by reference.
4.1	Form of 6 Month Warrant under the Securities Purchase Agreement dated July 30, 2009. Filed as Exhibit 4.1 to our Current Report on Form 8-K (File No. 0-29089) filed on August 3, 2009 and incorporated herein by reference.
4.2	Form of 4 Year Warrant under the Securities Purchase Agreement dated July 30, 2009. Filed as Exhibit 4.2 to our Current Report on Form 8-K (File No. 0-29089) filed on August 3, 2009 and incorporated herein by reference.
4.3	Waiver of Rights Upon Issuance of Other Securities dated July 29, 2009 between Antigenics Inc. and Ingalls & Snyder Value Partners L.P. Filed herewith.
4.4	Form of 6 Month Warrant under the Securities Purchase Agreement dated August 3, 2009. Filed as Exhibit 4.1 to our Current Report on Form 8-K (File No. 0-29089) filed on August 5, 2009 and incorporated herein by reference.
4.5	Form of 4 Year Warrant under the Securities Purchase Agreement dated August 3, 2009. Filed as Exhibit 4.2 to our Current Report on Form 8-K (File No. 0-29089) filed on August 5, 2009 and incorporated herein by reference.
4.6	Waiver of Rights Upon Issuance of Other Securities dated August 3, 2009 between Antigenics Inc. and Ingalls & Snyder Value Partners L.P. Filed herewith.
10.1*	First Amendment to Employment Agreement dated July 2, 2009 between Antigenics Inc. and Garo Armen. Filed herewith.
10.2*	First Amendment to Employment Agreement dated July 2, 2009 between Antigenics Inc. and Shalini Sharp. Filed herewith.
10.3*	First Amendment to Employment Agreement dated July 2, 2009 between Antigenics Inc. and Karen Valentine. Filed herewith.
10.4*	First Amendment to Employment Agreement dated July 2, 2009 between Antigenics Inc. and Kerry Wentworth. Filed herewith.
10.5(1)	Amended and Restated License Agreement by and between Antigenics Inc., a Massachusetts corporation and wholly owned subsidiary of Antigenics Inc., Elan Pharma International Limited, and Elan Pharmaceuticals, Inc. dated September 14, 2009. Filed herewith.
10.6	Notice of Assignment of Amended and Restated License Agreement by and between Antigenics Inc., a Massachusetts corporation and wholly owned subsidiary of Antigenics Inc., Elan Pharma International Limited, and Elan Pharmaceuticals, Inc. dated September 17, 2009. Filed herewith.
10.7(1)	Supply Agreement by and between Antigenics Inc. and ISSI-Strategy LLC dated July 9, 2009. Filed herewith.
10.8	Securities Purchase Agreement dated as of July 30, 2009 by and among Antigenics Inc. and the investors listed on the Schedule of Buyers thereto. Filed as Exhibit 10.1 to our Current Report on Form 8-K (File No. 0-29089) filed on August 3, 2009 and incorporated herein by reference.
10.9	

## Edgar Filing: ANTIGENICS INC /DE/ - Form 424B3

Securities Purchase Agreement dated as of August 3, 2009 by and among Antigenics Inc. and the investors listed on the Schedule of Buyers thereto. Filed as Exhibit 10.1 to our Current Report on Form 8-K (File No. 0-29089) filed on August 5, 2009 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.

\* Indicates a management contract or compensatory plan.

- (1) Certain confidential material contained in the document has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended or Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

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**Exhibit 4.3**

ANTIGENICS, INC.

Waiver of Rights Upon Issuance of Other Securities

RECITALS

1. Reference is made to the Senior Secured Convertible Notes issued on October 30, 2006 (together with any senior secured convertible notes issued in replacement or exchange thereof in accordance with the terms thereof and any senior secured convertible notes issued to pay interest, the Notes ), by Antigenics, Inc., a Delaware corporation (the Company ) to Ingalls & Snyder Value Partners L.P. ( Ingalls ) and Penrith LTD ( Penrith and together with Ingalls, the Investors ).
  2. Pursuant to an Agreement to be negotiated and executed within 30 days of the date hereof to be entered into between the Company and certain prospective investors, the Company will agree to sell and issue up to an aggregate number of shares equal to \$20,000,000 shares of Common Stock of the Company, par value \$0.01 per share ( Common Shares ), and warrants ( Warrants ) to purchase up to an additional \$10,000,000 shares of Common Stock (the Common Shares, Warrants and the Common Stock issuable upon exercise of the Warrants, New Securities ).
  3. Pursuant to Section 7(a) of the Notes, the Investors will have certain anti-dilutive rights upon issuance of the New Securities proposed to be sold and issued (the Anti-Dilutive Rights ).
  4. The undersigned parties desire to permit the sale and issuance of the New Securities without triggering the Anti-Dilutive Rights.
  5. The undersigned Ingalls holds 2006 Notes representing at least a majority of the aggregate principal amount of the 2006 Notes outstanding as of the date hereof.
- NOW THEREFORE, the undersigned agree as follows:

1. Waiver. The Investors hereby waive all of their rights under Sections 4 and 7(a) of the Notes with respect to the sale, issuance and exercise of the New Securities.
2. Miscellaneous. Other than as specifically set forth herein, this Consent of Rights Upon Issuance of Other Securities shall not be construed as a consent to any future action or a waiver of any right or remedy on any future occasion. This Waiver of Rights Upon Issuance of Other Securities may be executed in one or more counterparts, all of which shall be considered one and the same waiver.

*[Signature Page Follows]*



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IN WITNESS WHEREOF, the undersigned have executed this Waiver of Rights Upon Issuance of Other Securities as of July 31, 2009.

ANTIGENICS INC.

By: /s/ Shalini Sharp  
Name: Shalini Sharp  
Title: CFO

**INVESTORS:**

INGALLS & SNYDER VALUE PARTNERS L.P.

By: /s/ Thomas O. Boucher Jr.  
Name: Thomas O. Boucher Jr.  
Title: General Partner

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**Exhibit 4.6**

ANTIGENICS INC.

Waiver of Rights Upon Issuance of Other Securities

RECITALS

1. Reference is made to the Senior Secured Convertible Notes issued on October 30, 2006 (together with any senior secured convertible notes issued in replacement or exchange thereof in accordance with the terms thereof and any senior secured convertible notes issued to pay interest, the Notes ), by Antigenics, Inc., a Delaware corporation (the Company ) to Ingalls & Snyder Value Partners L.P. ( Ingalls ) and Penrith LTD ( Perinth ) and together with Ingalls, the Investors ).
  2. Pursuant to an Agreement to be negotiated and executed within 30 days of the date hereof to be entered into between the Company and certain prospective investors, the Company will agree to sell and issue common shares, par value \$0.01 per share, ( Common Shares ) in exchange for up to \$12,000,000 in gross proceeds, and warrants ( Warrants ) to purchase up to the same number of additional shares of Common Stock (the Common Shares, Warrants and the Common Stock issuable upon exercise of the Warrants, New Securities ).
  3. Pursuant to Section 7(a) of the Notes, the Investors will have certain anti-dilutive rights upon issuance of the New Securities proposed to be sold and issued (the Anti-Dilutive Rights ).
  4. The undersigned parties desire to permit the sale and issuance of the New Securities without triggering the Anti-Dilutive Rights and adjust the Fixed Conversion Price (as defined in the Notes) from \$3.50 to \$3.00.
  5. The undersigned Ingalls holds 2006 Notes representing at least a majority of the aggregate principal amount of the 2006 Notes outstanding as of the date hereof.
- NOW THEREFORE, the undersigned agree as follows:

1. Waiver. The Investors hereby waive all of their rights under Sections 4 and 7(a) of the Notes with respect to the sale, issuance and exercise of the New Securities.
2. Amendment. The Company and the Investors hereby agree to amend Section 2(b)(ii) of the Notes such that Section 2(b)(ii) shall read as follows:  
**Fixed Conversion Price** means \$3.00 (also referred to as the **Initial Fixed Conversion Price** ), subject to adjustment as provided herein.
3. Miscellaneous. Other than as specifically set forth herein, this Consent of Rights Upon Issuance of Other Securities shall not be construed as a consent to any future

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action or a waiver of any right or remedy on any future occasion. This Waiver of Rights Upon Issuance of Other Securities may be executed in one or more counterparts, all of which shall be considered one and the same waiver.

*[Signature Page Follows]*

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IN WITNESS WHEREOF, the undersigned have executed this Waiver of Rights Upon Issuance of Other Securities as of August 3, 2009.

ANTIGENICS INC.

By: /s/ Shalini Sharp  
Name: Shalini Sharp  
Title: CFO

**INVESTORS:**

INGALLS & SNYDER VALUE PARTNERS L.P.

By: /s/ Thomas O. Boucher Jr.  
Name: Thomas O. Boucher Jr.  
Title: General Partner

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**Exhibit 10.1**

***Confidential***

**AMENDMENT NUMBER ONE**

**AGREEMENT**

This Amendment Number One (this Amendment 1 ) is effective as of July 2, 2009 by and between Antigenics Inc., a Delaware corporation, having its principle place of business at 3 Forbes Road, Lexington, Massachusetts 02421, USA (the Company ) and Garo Armen (the Executive ). Capitalized terms not otherwise defined herein shall have the meaning set forth in the Agreement (defined below).

**WITNESSETH**

WHEREAS, the parties have entered into an Agreement effective as December 1, 2005 setting forth employment terms (the Agreement ); and

WHEREAS, the parties now wish to amend the Agreement to reflect certain changes in the Company s Executive Change in Control Plan as set forth herein;

NOW, THEREFORE, the parties agree as follows:

1. Section 5(g)(i) of the Agreement is hereby deleted in its entirety and replaced with the following:  
(i) if a Change of Control occurs on the date of such Change in Control, fifty-percent (50%) of any (A) outstanding unvested stock options or (B) shares of unvested restricted stock of the Company, granted or issued to the Executive as of the date of the Change in Control shall become vested, exercisable and, in the case of shares of restricted stock, no longer subject to forfeiture, provided that the Executive is employed by the Company on the date of such Change in Control.
2. Section 5(g)(ii) of the Agreement is hereby deleted in its entirety and replaced with the following:  
(ii) if a Change of Control occurs and within twenty-four (24) months following such Change of Control, the Company terminates the Executive s employment other than for Cause, or the Executive terminates his employment for Good Reason, then, in lieu of any payments to or on behalf of the Executive under Section 5.d or 5.e hereof, the Company shall pay to the Executive in one lump sum an amount equal to (A) twenty-four (24) months Base Salary at the rate in effect on the date of termination, plus (B) two times the higher of (x) the Executive s target incentive bonus under the Executive Incentive Plan for the year in which the Executive s employment is terminated or (y) the actual incentive bonus paid to the Executive, if any, under the Executive Incentive Plan for the last full fiscal year preceding the year in which the Executive s employment is terminated; and shall also, until the conclusion of a period of twenty-four

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(24) months following the date of termination, pay the full premium cost of the Executive's participation in the Company's group medical and dental insurance plans, provided that the Executive is entitled to continue such participation under applicable law and plan terms. In addition, any (I) outstanding unvested stock options granted or issued to the Executive as of the date of the Change in Control shall become vested and shall be exercisable for ninety (90) days following termination of the Executive's employment and (II) shares of unvested restricted stock of the Company granted or issued to the Executive as of the date of the Change in Control shall become vested and no longer subject to forfeiture. The Company will also provide the Executive with an outplacement assistance benefit in the form of a lump-sum payment of \$15,000 plus an additional lump-sum payment in an amount sufficient, after giving effect to all federal, state and other taxes with respect to such additional payment, to make Executive whole for all taxes (including withholding taxes) on such outplacement assistance benefit. For the purpose of this Section 5.g alone, in addition to the definition provided in Section 5.e, Good Reason shall also mean the relocation of the Executive's principal office, without his prior consent, to a location more than thirty (30) miles from its location on the day prior to the Change in Control.

3. Section 6(a) of the Agreement is hereby deleted in its entirety and replaced with the following:

(a) Payment(s) by the Company and contributions to the cost of the Executive's continued participation in the Company's group health and dental plans that may be due the Executive in each case under the applicable termination provision of Section 5 shall constitute the entire obligation of the Company to the Executive. In order to receive any payments, benefits continuation, accelerated vesting of stock options or shares of restricted stock or any other benefits under Section 5.d or 5.e or 5.g or 5.h, the Executive must first execute a General Release of Claims in a form acceptable to the Company.

4. The parties acknowledge and agree that, except as set forth in this Amendment 1, the Agreement shall remain in full force and effect.

5. This Amendment 1 shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, U.S.A. irrespective of any conflicts of law principles thereof.

6. This Amendment 1 may be executed by the parties hereto in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute one and the same instrument. Each counterpart may consist of a number of copies hereof each signed by less than all, but together signed by all of the parties hereto.

[SIGNATURE PAGE FOLLOWS]

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*Confidential*

IN WITNESS WHEREOF, the parties each have caused this Amendment 1 to be executed by their respective duly authorized representative as of the date first set forth above.

ANTIGENICS INC., a Delaware corporation

By: /s/ Wadih Jordan

Name: Wadih Jordan

Title: Director

Executive

By: /s/ Garo Armen

Name: Garo Armen

---

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**Exhibit 10.2**

***Confidential***

**AMENDMENT NUMBER ONE**

**AGREEMENT**

This Amendment Number One (this Amendment 1 ) is effective as of July 2, 2009 by and between Antigenics Inc., a Delaware corporation, having its principle place of business at 3 Forbes Road, Lexington, Massachusetts 02421, USA (the Company ) and Shalini Sharp (the Executive ). Capitalized terms not otherwise defined herein shall have the meaning set forth in the Agreement (defined below).

**WITNESSETH**

WHEREAS, the parties have entered into an Agreement effective as February 20, 2007 setting forth employment terms (the Agreement ); and

WHEREAS, the parties now wish to amend the Agreement to reflect certain changes in the Company s Executive Change in Control Plan as set forth herein;

NOW, THEREFORE, the parties agree as follows:

1. Section 5(g)(i) of the Agreement is hereby deleted in its entirety and replaced with the following:

(i) If a Change of Control occurs on the date of such Change in Control, fifty-percent (50%) of any stock options or shares of restricted stock of the Company previously granted or issued to the Executive that are outstanding and unvested as of the date of the Change in Control shall become vested, exercisable and, in the case of shares of restricted stock, no longer subject to forfeiture, provided that the Executive is employed by the Company on the date of such Change in Control.

2. Section 5(g)(ii) of the Agreement is hereby deleted in its entirety and replaced with the following:

(ii) If a Change of Control occurs and within eighteen (18) months following such Change of Control, the Company terminates the Executive s employment other than for Cause, or the Executive terminates his/her employment as a result of a Compensation Reduction or for Good Reason (as defined herein), then, in lieu of any payments to or on behalf of the Executive under Section 5(d) or 5(e) or 5(f)(ii) hereof, the Company shall pay to the Executive in one lump sum an amount equal to (A) eighteen (18) months Base Salary at the rate in effect on the date of termination, plus (B) 150% of the higher of (x) the Executive s target incentive bonus under the Executive Incentive Plan for the year in which the Executive s employment is terminated or (y) the actual incentive bonus paid to the Executive, if any, under the Executive Incentive Plan for the last full fiscal year preceding the year in which the Executive s



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employment is terminated; and shall also, until the conclusion of a period of eighteen (18) months following the date of termination, pay the full premium cost of the Executive's participation in the Company's group medical and dental insurance plans, provided that the Executive is entitled to continue such participation under applicable law and plan terms. In addition, any (I) outstanding unvested options granted or issued to the Executive as of the date of the Change in Control shall become vested and shall be exercisable for ninety (90) days following termination of the Executive's employment and (II) shares of unvested restricted stock of the Company granted or issued to the Executive as of the date of the Change in Control shall become vested and no longer subject to forfeiture. The Company will also provide the Executive with an outplacement assistance benefit in the form of a lump-sum payment of \$15,000 plus an additional lump-sum payment in an amount sufficient, after giving effect to all federal, state and other taxes with respect to such additional payment, to make Executive whole for all taxes (including withholding taxes) on such outplacement assistance benefit.

3. The parties acknowledge and agree that, except as set forth in this Amendment 1, the Agreement shall remain in full force and effect.
4. This Amendment 1 shall be governed by and construed in accordance with the laws of the state of New York, irrespective of any conflicts of law principles thereof.
5. This Amendment 1 may be executed by the parties hereto in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute one and the same instrument. Each counterpart may consist of a number of copies hereof each signed by less than all, but together signed by all of the parties hereto.

[SIGNATURE PAGE FOLLOWS]

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*Confidential*

IN WITNESS WHEREOF, the parties each have caused this Amendment 1 to be executed by their respective duly authorized representative as of the date first set forth above.

ANTIGENICS INC., a Delaware corporation

By: /s/ Garo H. Armen  
Name: Garo H. Armen  
Title: Chairman and CEO

Executive

By: /s/ Shalini Sharp  
Name: Shalini Sharp

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**Exhibit 10.3**

***Confidential***

**AMENDMENT NUMBER ONE**

**AGREEMENT**

This Amendment Number One (this Amendment 1 ) is effective as of July 2, 2009 by and between Antigenics Inc., a Delaware corporation, having its principle place of business at 3 Forbes Road, Lexington, Massachusetts 02421, USA (the Company ) and Karen Valentine (the Executive ). Capitalized terms not otherwise defined herein shall have the meaning set forth in the Agreement (defined below).

**WITNESSETH**

WHEREAS, the parties have entered into an Agreement effective as September 16, 2008 setting forth employment terms (the Agreement ); and

WHEREAS, the parties now wish to amend the Agreement to reflect certain changes in the Company s Executive Change in Control Plan as set forth herein;

NOW, THEREFORE, the parties agree as follows:

1. Section 5(g)(i) of the Agreement is hereby deleted in its entirety and replaced with the following:

(i) If a Change of Control occurs on the date of such Change in Control, fifty-percent (50%) of any stock options or shares of restricted stock of the Company previously granted or issued to the Executive that are outstanding and unvested as of the date of the Change in Control shall become vested, exercisable and, in the case of shares of restricted stock, no longer subject to forfeiture, provided that the Executive is employed by the Company on the date of such Change in Control.

2. Section 5(g)(ii) of the Agreement is hereby deleted in its entirety and replaced with the following:

(ii) If a Change of Control occurs and within eighteen (18) months following such Change of Control, the Company terminates the Executive s employment other than for Cause, or the Executive terminates his/her employment as a result of a Compensation Reduction or for Good Reason (as defined herein), then, in lieu of any payments to or on behalf of the Executive under Section 5(d) or 5(e) hereof, the Company shall pay to the Executive in one lump sum an amount equal to (A) eighteen (18) months Base Salary at the rate in effect on the date of termination, plus (B) 150% of the higher of (x) the Executive s target incentive bonus under the Executive Incentive Plan for the year in which the Executive s employment is terminated or (y) the actual incentive bonus paid to the Executive, if any, under the Executive Incentive Plan for the last full fiscal year preceding the year in which the Executive s employment is

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terminated; and shall also, until the conclusion of a period of eighteen (18) months following the date of termination, pay the full premium cost of the Executive's participation in the Company's group medical and dental insurance plans, provided that the Executive is entitled to continue such participation under applicable law and plan terms. In addition, any (I) outstanding unvested options granted or issued to the Executive as of the date of the Change in Control shall become vested and shall be exercisable for ninety (90) days following termination of the Executive's employment and (II) shares of unvested restricted stock of the Company granted or issued to the Executive as of the date of the Change in Control shall become vested and no longer subject to forfeiture. The Company will also provide the Executive with an outplacement assistance benefit in the form of a lump-sum payment of \$15,000 plus an additional lump-sum payment in an amount sufficient, after giving effect to all federal, state and other taxes with respect to such additional payment, to make Executive whole for all taxes (including withholding taxes) on such outplacement assistance benefit.

3. The parties acknowledge and agree that, except as set forth in this Amendment 1, the Agreement shall remain in full force and effect.
4. This Amendment 1 shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, irrespective of any conflicts of law principles thereof.
5. This Amendment 1 may be executed by the parties hereto in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute one and the same instrument. Each counterpart may consist of a number of copies hereof each signed by less than all, but together signed by all of the parties hereto.

[SIGNATURE PAGE FOLLOWS]

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*Confidential*

IN WITNESS WHEREOF, the parties each have caused this Amendment 1 to be executed by their respective duly authorized representative as of the date first set forth above.

ANTIGENICS INC., a Delaware corporation

By: /s/ Garo H. Armen  
Name: Garo H. Armen  
Title: Chairman and CEO

Executive

By: /s/ Karen Valentine  
Name: Karen Valentine

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**Exhibit 10.4**

***Confidential***

**AMENDMENT NUMBER ONE**

**AGREEMENT**

This Amendment Number One (this Amendment 1 ) is effective as of July 2, 2009 by and between Antigenics Inc., a Delaware corporation, having its principle place of business at 3 Forbes Road, Lexington, Massachusetts 02421, USA (the Company ) and Kerry Wentworth (the Executive ). Capitalized terms not otherwise defined herein shall have the meaning set forth in the Agreement (defined below).

**WITNESSETH**

WHEREAS, the parties have entered into an Agreement effective as February 20, 2007 setting forth employment terms (the Agreement ); and

WHEREAS, the parties now wish to amend the Agreement to reflect certain changes in the Company s Executive Change in Control Plan as set forth herein;

NOW, THEREFORE, the parties agree as follows:

1. Section 5(g)(i) of the Agreement is hereby deleted in its entirety and replaced with the following:

(i) If a Change of Control occurs on the date of such Change in Control, fifty-percent (50%) of any stock options or shares of restricted stock of the Company previously granted or issued to the Executive that are outstanding and unvested as of the date of the Change in Control shall become vested, exercisable and, in the case of shares of restricted stock, no longer subject to forfeiture, provided that the Executive is employed by the Company on the date of such Change in Control.

2. Section 5(g)(ii) of the Agreement is hereby deleted in its entirety and replaced with the following:

(ii) If a Change of Control occurs and within eighteen (18) months following such Change of Control, the Company terminates the Executive s employment other than for Cause, or the Executive terminates his/her employment as a result of a Compensation Reduction or for Good Reason (as defined herein), then, in lieu of any payments to or on behalf of the Executive under Section 5(d) or 5(e) hereof, the Company shall pay to the Executive in one lump sum an amount equal to (A) eighteen (18) months Base Salary at the rate in effect on the date of termination, plus (B) 150% of the higher of (x) the Executive s target incentive bonus under the Executive Incentive Plan for the year in which the Executive s employment is terminated or (y) the actual incentive bonus paid to the Executive, if any, under the Executive Incentive Plan for the last full fiscal year preceding the year in which the Executive s employment is

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terminated; and shall also, until the conclusion of a period of eighteen (18) months following the date of termination, pay the full premium cost of the Executive's participation in the Company's group medical and dental insurance plans, provided that the Executive is entitled to continue such participation under applicable law and plan terms. In addition, any (I) outstanding unvested options granted or issued to the Executive as of the date of the Change in Control shall become vested and shall be exercisable for ninety (90) days following termination of the Executive's employment and (II) shares of unvested restricted stock of the Company granted or issued to the Executive as of the date of the Change in Control shall become vested and no longer subject to forfeiture. The Company will also provide the Executive with an outplacement assistance benefit in the form of a lump-sum payment of \$15,000 plus an additional lump-sum payment in an amount sufficient, after giving effect to all federal, state and other taxes with respect to such additional payment, to make Executive whole for all taxes (including withholding taxes) on such outplacement assistance benefit.

3. The parties acknowledge and agree that, except as set forth in this Amendment 1, the Agreement shall remain in full force and effect.
4. This Amendment 1 shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, irrespective of any conflicts of law principles thereof.
5. This Amendment 1 may be executed by the parties hereto in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute one and the same instrument. Each counterpart may consist of a number of copies hereof each signed by less than all, but together signed by all of the parties hereto.

[SIGNATURE PAGE FOLLOWS]

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*Confidential*

IN WITNESS WHEREOF, the parties each have caused this Amendment 1 to be executed by their respective duly authorized representative as of the date first set forth above.

ANTIGENICS INC., a Delaware corporation

By: /s/ Garo H. Armen  
Name: Garo H. Armen  
Title: Chairman and CEO

Executive

By: /s/ Kerry Wentworth  
Name: Kerry Wentworth



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**Exhibit 10.5**

**AMENDED AND RESTATED LICENSE AGREEMENT**

This Amended and Restated License Agreement (this Agreement ), effective as of the date of the last signature hereto (the Restated Effective Date ), is made by and between Antigenics, Inc., a Massachusetts corporation having offices at 3 Forbes Road, Lexington, MA 02421 (Antigenics ), Elan Pharma International Limited, a private company limited by shares organized under the laws of Ireland with offices at Monksland, Athlone, County Westmeath, Ireland (EPIL ) and Elan Pharmaceuticals, Inc., a Delaware corporation having an address at 800 Gateway Boulevard, South San Francisco, CA 94080, U.S.A. (EPI and together with EPIL, Elan ). Antigenics and Elan are each referred to herein as a Party and collectively, as the Parties .

**RECITALS**

A. Aquila Biopharmaceuticals, Inc., (Aquila ) predecessor in interest to Antigenics, Neuralab Limited (Neuralab ), predecessor in interest to EPIL, and EPI entered into a supply agreement effective November 23, 1999 regarding supply of purified saponins from the tree Quillaja saponaria for use as an immune adjuvant (the Supply Agreement ).

B. Aquila, Neuralab and EPI entered into a license agreement effective November 23, 1999 regarding use of such purified saponins for use as an immune adjuvant with vaccines and therapeutics for Alzheimer's disease (as amended April 4, 2002, the License Agreement ).

C. The Parties acknowledge and agree that Elan made certain [\*\*] pursuant to the Supply Agreement in its letters dated [\*\*],[\*\*], and [\*\*] (each a [\*\*] and collectively the [\*\*] ), that the Parties disagree regarding [\*\*] to [\*\*] such [\*\*] that if [\*\*] on Antigenics, Antigenics might not be able to timely satisfy such Demand Forecasts, that Elan believes that timely delivery of such Demand Forecasts is critical for Elan to meet the [\*\*] necessary for Elan's [\*\*], and that as a result of the foregoing circumstances, the Parties have been negotiating in good faith to transfer manufacturing technology from Antigenics to Elan and/or a Third Party Manufacturer as the mutually [\*\*] to the [\*\*]. The Parties also wish to provide for different rights and obligations during the Term (as defined below) and thereafter, also as provided in this Agreement.

D. Accordingly, the Parties now wish to enter into this Amended and Restated License and Supply Agreement (this Agreement ) which will, except as set forth herein, terminate that certain Supply Agreement and will supersede, and amend and restate the Supply

[\*\*] = Portions of this exhibit have been omitted pursuant to a confidential treatment request. An unpredicted version of this exhibit has been filed separately with the Commission.

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Agreement and the License Agreement (together with the Supply Agreement, the Previous Agreements ), in their entirety on the terms set forth herein. The aspects of the Previous Agreements that the Parties wish to carry forward have been incorporated into this Agreement.

NOW THEREFORE, in consideration of the foregoing premises, the following mutual promises and covenants and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

### **ARTICLE I**

#### **Definitions**

- 1.0 When used in this Agreement, each of the following terms shall have the meanings as set forth in this Article I.
- 1.1 Adjuvant means the compound or compounds comprising [\*\*] QS-21 isolated from the tree Quillaja saponaria, [\*\*] of [\*\*]. For purposes of defining Licensed Product as used in Article 3 of this Agreement, Adjuvant also means any compound or compounds that are [\*\*] of the foregoing [\*\*] by (i) any party who at any time prior to or after the Effective Date of this Agreement [\*\*] or otherwise directly or indirectly [\*\*] any (a) [\*\*], (b) [\*\*], (c) [\*\*] Antigenics or (d) [\*\*] (a-d collectively, Antigenics Related Property ); or (ii) any party whose [\*\*] of Antigenics Related Property, [\*\*] (including any [\*\*]) or [\*\*] directly or indirectly at any time prior to or after the Effective Date of this Agreement [\*\*] or otherwise [\*\*] any Antigenics Related Property (whether on behalf of such party or not).
- 1.2 Adjuvant Requirements means the amount of Adjuvant in bulk which Elan and its Sublicensees may require pursuant to the provisions hereof for their research and development, pre-clinical and human clinical testing of Licensed Products and, after Commercial Introduction, production of Licensed Products for commercial sales.
- 1.3 Affiliate means any corporation or other entity that controls, is controlled by, or is under common control with, a party hereto. For purposes of this Section 1.3, an entity shall be regarded as in control of another corporation or entity if it owns or directly or indirectly controls more than 50% of the voting securities or other ownership interest of the other corporation or entity.
- 1.4 cGLPs means the current Good Laboratory Practices for Finished Pharmaceuticals pursuant to 21 C.F.R.58 et seq., as amended from time to time.
- 1.5 cGMPs means the current Good Manufacturing Practices for Finished Pharmaceuticals pursuant to 21 C.F.R. 210 et seq., as amended from time to time.

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- 1.6 CMO means a contract manufacturing organization under consideration for selection as a Third Party Manufacturer.
- 1.7 Collaboration Agreement means the Research, Development and Commercialization Agreement by and among American Home Products Corporation acting through American Home Products Corporation's Wyeth-Ayerst Laboratories Division, and Neuralab Limited dated March 17, 2000, and amendments thereto.
- 1.8 Commercial Introduction means on a country-by-country basis the date of first commercial sale (other than for purposes of obtaining regulatory approval) of a Licensed Product by Elan or its Sublicensees in such country.
- 1.9 Control or Controlled means with respect to any material, item of information or intellectual property right, the possession, whether by ownership, license or otherwise, of the right to grant a license, sublicense or other right with respect thereto.
- 1.10 FDA means the United States Food and Drug Administration or any corresponding regulatory authority in the Licensed Territory.
- 1.11 Field of Use means the use of Licensed Product for the prevention or treatment of Alzheimer's disease.
- 1.12 Good Clinical Practice means such practices as are prescribed by the FDA's Good Clinical Practice Consolidated Guideline.
- 1.13 Know-how means materials, data, results, formulae, designs, specifications, methods, processes, improvements, techniques, ideas, discoveries, technical information, process information, clinical information and any other information, whether or not any of the foregoing is patentable, which is known to, and is Confidential Information and proprietary to, Antigenics or is Controlled by Antigenics, to the extent that any of the foregoing (i) is necessary or reasonably useful to practice the Licensed Patent Rights in the Field in accordance with this Agreement, or (ii) is otherwise necessary or reasonably useful for the use of Adjuvant in connection with the development, manufacture, use or sale of any Licensed Product; provided however, that the term Know-how shall not include (a) the [\*\*], or (b) any of the foregoing that is [\*\*] to [\*\*], except to the extent that [\*\*] thereunder. For the avoidance of doubt, Confidential Information contained in Antigenics' BMF constitutes Know-How hereunder.
- 1.14 Licensed Patent Rights means any and all patent applications and patents (including inventor's certificates and utility models) throughout the world, including any substitutions, extensions, reissues, reexaminations, renewals, divisions, continuations and continuations-in-part of the foregoing, Controlled by Antigenics (regardless of any

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royalty or other payments to a Third Party required of Antigenics), to the extent that any of the foregoing covers, in whole or in part, the development, manufacture, use, importation, offer for sale, or sale of Adjuvant in connection with the development, manufacture, use, importation, offer for sale or sale of any Licensed Product. The Licensed Patent Rights existing as of the Restated Effective Date are listed on Exhibit A attached and incorporated into this Agreement.

- 1.15 Licensed Product means any product comprising [\*\*] or an [\*\*] thereof (the [\*\*] comprising at [\*\*] from [\*\*] in combination with the Adjuvant. [\*\*] is an internal [\*\*] of [\*\*] of a [\*\*] termed [\*\*].
- 1.16 Licensed Territory means the world.
- 1.17 Manufacturing Improvements shall mean any development, enhancement, improvement, modification or derivative (whether or not patentable) to the Adjuvant manufacturing, quality control and purification process to the extent that any of the foregoing is necessary [\*\*] for the manufacture of Adjuvant, which improvements are first made, discovered, conceived, or reduced to practice by or on behalf of Elan or its Affiliates or Sublicensees at any time during the terms of the Prior Agreements or after the Restated Effective Date, provided however, that the term Manufacturing Improvements shall not include any of the foregoing that is [\*\*], except to the extent that [\*\*] thereunder.
- 1.18 Manufacturing Technology means materials, data, results, formulae, designs, specifications, methods, processes, improvements, techniques, ideas, discoveries, technical information, process information, clinical information and any other information, whether or not any of the foregoing is patentable, which is known to and is Confidential Information and proprietary to Antigenics or is Controlled by Antigenics to the extent that any of the foregoing is necessary [\*\*] for the manufacture of Adjuvant in accordance with the Specifications; provided however, that the term Manufacturing Technology shall not include any of the foregoing that is [\*\*].
- 1.19 Net Sales means the gross invoiced sales price of all Licensed Products sold by Elan or its Sublicensees or its distributors to Third Party end users, after deduction of the following items to the extent such items are incurred, taken or borne by the seller thereof and do not exceed reasonable and customary amounts in the market in which such sale occurred: (a) trade, cash or quantity discounts or rebates; (b) credits or allowances given or made for rejection or approved return of goods; (c) taxes or government charges, duties or tariffs (other than an income tax) levied on the sale, transportation or delivery of a Licensed Product. Sales between Elan and its Affiliates or Sublicensees or its distributors shall be excluded from the computation of Net Sales except where such

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Affiliates or Sublicensees are end users, but Net Sales shall include the subsequent final sales to Third Party end users by such Affiliates, Sublicensees, or distributors.

- 1.20 New Site means the manufacturing site of the selected Third Party Manufacturer.
- 1.21 Restated Effective Date shall mean the date set forth in the first paragraph of this Agreement
- 1.22 Specifications shall mean the product release specifications as defined in Exhibit B.
- 1.23 Sublicense shall mean an agreement or arrangement pursuant to which such a sublicense has been granted as defined in Section 2.1.1.
- 1.24 Sublicensee(s) means a third party granted a Sublicense, including without limitation, Wyeth.
- 1.25 Technology Transfer Events means the events involved in the transfer of Manufacturing Technology as set forth in Section 10.2.1.
- 1.26 Technology Transfer Package means all available technical and regulatory information regarding the Manufacturing Technology owned or Controlled by Antigenics or its Affiliates as set forth in Phase 1 of the Technology Transfer Plan.
- 1.27 Technology Transfer Plan means the written technology transfer plan attached hereto as Exhibit C.
- 1.28 Term is defined in Section 8.1.
- 1.29 Third Party means any party other than a Party, their respective Affiliates or a Sublicensee.
- 1.30 Third Party Manufacturer means a commercial entity designated by Elan to implement the Technology Transfer Package and manufacture Adjuvant in accordance with this Agreement, which commercial entity may be a CMO, other Third Party, Wyeth or Elan.
- 1.31 Valid Claim means a claim in an issued, unexpired patent in the Licensed Patent Rights, which has not been held invalid, unpatentable or unenforceable in an unappealed or unappealable decision of a court or other governmental body of competent jurisdiction, which has not been rendered unenforceable through disclaimer or otherwise, and which has not been lost through an interference proceeding.

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**ARTICLE II**

**Licenses**

2.1 Grant of License Rights to Elan. Antigenics hereby (i) restates and grants to Elan the exclusive license within the Licensed Territory to use and practice the Know-how and Licensed Patent Rights to develop, make, have made, use, sell, offer for sale, import, and have sold Licensed Products within the Field of Use; and (ii) hereby grants to Elan an exclusive license within the Licensed Territory to use and practice the Licensed Patent Rights, Know-how and Manufacturing Technology to make, have made and use Adjuvant solely to develop, make, have made, use, sell, offer for sale, import, and have sold Licensed Products within the Field of Use and for no other purpose. In no event shall Elan, its Sublicensees, or any Third Party Manufacturer acting at Elan's or its Sublicensees' instruction, practice the Licensed Patent Rights, Know-How, or Manufacturing Technology for purposes other than as set forth above, including without limitation, to (i) make or have made Adjuvant for products other than Licensed Products in the Field of Use, (ii) to make, have made or use any [\*\*] for any purpose or (iii) to [\*\*] or other activities ( [\*\*] ) with any compound that is [\*\*] of [\*\*], provided, however, the Parties agree that such [\*\*] are permitted solely for uses directly related to the [\*\*] required [\*\*] which [\*\*].

2.1.1 Elan Sublicenses. Elan shall have the right to grant sublicenses of its rights under this Agreement with respect to Licensed Products only as follows:

- (a) Elan may grant a sublicense to (i) a Third Party Manufacturer for purposes of manufacturing the Adjuvant for use in Licensed Products, and (ii) a third party for purposes of manufacturing the Licensed Products developed by or under continuing development by Elan; and
- (b) Elan may grant a sublicense to a third party that enters into a joint development, joint venture agreement or similar type of arrangement with Elan in connection with Licensed Products to be developed by Elan and the third party; and
- (c) Elan may grant a sublicense to a third party for purposes of marketing the Licensed Products where local law requires a local party to market the Licensed Products.

Elan shall promptly notify Antigenics of the execution of each Sublicense and shall provide Antigenics with a copy of the same. All such agreements shall constitute proprietary information of Elan and Antigenics shall maintain the confidentiality of such agreements in accordance with the terms and conditions of Article 7.

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2.1.2 Transfer of [\*\*], [\*\*] and [\*\*]. On an [\*\*] from [\*\*] during [\*\*], Antigenics shall [\*\*] to [\*\*] in writing any and all new (i) [\*\*] (a) that is [\*\*] the [\*\*] in the [\*\*] in accordance with this Agreement, or (b) that is otherwise necessary for the [\*\*] of [\*\*] in connection with the [\*\*] of any [\*\*], or (c) that is otherwise expressly required under this Agreement to be disclosed after the Restated Effective Date, and (ii) [\*\*] then existent, whether or not potentially patentable, and (iii) [\*\*] then existent.

2.2 Grant of License Rights to Antigenics. Elan hereby grants to Antigenics and its Affiliates a world-wide, royalty-free, fully paid up, perpetual, non-exclusive license to practice and use Manufacturing Improvements Controlled by Elan to make, have made, use, sell, offer for sale and import Adjuvant. To the extent that Elan subcontracts or sublicenses with its Affiliates or Third Parties, Elan shall use its best efforts to obtain the right under the intellectual property rights of such Affiliate or Third Party that constitute Manufacturing Improvements, with the right to grant sublicenses to Antigenics and its Affiliates (and such license shall be further sublicensable by Antigenics), to practice and use Manufacturing Improvements to make, have made, use, sell, offer for sale and import Adjuvant.

2.2.1 Antigenics Sublicenses. Antigenics shall have the right to grant sublicenses to Manufacturing Improvements to any of Antigenics Affiliates or licensees desirous of such sublicense subject to the remaining provisions of this Section 2.2.1. Antigenics right to grant sublicenses to Manufacturing Improvements not jointly owned by Antigenics shall be [\*\*] to (i) [\*\*] to Elan of [\*\*] by [\*\*] (ii) a [\*\*] of [\*\*] to [\*\*] of any [\*\*] by [\*\*].

2.2.2 Disclosure of Manufacturing Improvements. Elan shall promptly disclose all Manufacturing Improvements that are Controlled by Elan to Antigenics that may reasonably affect the yield, scale, cost, purity or efficiency of the manufacturing process, or the Specifications, provided, however, that in no event shall Elan be required to make any disclosure that contrary to law or in conflict with its contractual obligations to a third party.

### ARTICLE III

#### Payments

3.1 Technology Transfer Payments. As consideration for the transfer of Manufacturing Technology from Antigenics to Elan, Elan shall compensate Antigenics the non-refundable payments as set forth below in this Section 3.1. For the avoidance of doubt, the events and corresponding payment obligations referenced in this Section 3.1 are not necessarily in chronological order. For example, if item d) is achieved prior to item c), payment shall be owing for item d) notwithstanding the fact that item c) is still outstanding.

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- a) [\*\*] dollars (\$[\*\*]) to be paid within [\*\*] after execution of this Agreement;
- b) Reasonable consultancy costs to perform Consulting Services, not to exceed [\*\*] dollars (\$[\*\*]) [\*\*].
- c) [\*\*] dollars (\$[\*\*]) to be paid within [\*\*] after the transfer of the Technology Transfer Package is complete;
- d) [\*\*] dollars (\$[\*\*]) to be paid within [\*\*] after the earlier of (i) successful [\*\*] of the [\*\*] of [\*\*] by Elan or the Third Party Manufacturer, or (ii) the [\*\*] of the Restated Effective Date; provided, however that within such [\*\*] period [\*\*] has made commercially reasonable diligent efforts to [\*\*] its [\*\*] under Section [\*\*] and [\*\*].

3.2 Milestones. As further consideration for the rights and licenses granted to Elan, within [\*\*] after achievement of each of the milestones set forth below for each Licensed Product in the Field of Use, Elan will pay to Antigenics the milestone payments set forth below:

- (a) [\*\*] upon [\*\*] of the [\*\*] in the [\*\*] (or its equivalent).
- (b) [\*\*] upon [\*\*] of the [\*\*] in the [\*\*] (or its equivalent).
- (c) [\*\*] upon the [\*\*] (or equivalent [\*\*]) with [\*\*] or the equivalent [\*\*] in [\*\*]; and
- (d) [\*\*] upon [\*\*] of such [\*\*] (or equivalent [\*\*]) or the equivalent [\*\*] in [\*\*].

Elan shall promptly give Antigenics notice of the occurrence of each milestone. If any milestone is achieved with respect to the Licensed Product, and at such time any one or more of the previously listed milestones have not been achieved with respect to such Licensed Product, then at the time of the payment of the milestone payment for such achieved milestone, Elan shall pay to Antigenics the previously unpaid payments for such unmet milestones.

3.3 Royalties and Sublicense fees. Subject to other terms of this agreement, and as further consideration for the rights and licenses granted to Elan hereunder, Elan shall pay to Antigenics royalties and Sublicense fees as follows:

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- (a) (i) During the term of the Agreement, Elan will pay to Antigenics during each calendar year a royalty of [\*\*] percent ([\*\*]%) of Net Sales of Licensed Product until Net Sales of such Licensed Product during such calendar year reach [\*\*] dollars (\$[\*\*]); thereafter until the [\*\*] of such calendar year, Elan will pay to Antigenics a royalty equal to [\*\*] percent ([\*\*]%) of subsequent Net Sales of Licensed Product.
- (ii) Notwithstanding the foregoing, the royalty rate otherwise applicable under Section 3.3(a)(i) shall be reduced by [\*\*]% in the event the Licensed Product is not covered by a Valid Claim at the time of Net Sale.
- (iii) In addition, in consideration for the rights and licenses to the Manufacturing Technology, and Antigenics' agreement to provide expertise in connection therewith in accordance with this Agreement, Elan will pay to Antigenics during each calendar year a royalty of [\*\*] percent ([\*\*]%) of Net Sales of Licensed Product until Net Sales of such Product during such calendar year reach [\*\*] dollars (\$[\*\*]); thereafter until the end of such calendar year, Elan will pay to Antigenics a royalty equal to [\*\*] percent ([\*\*]%) of subsequent Net Sales of Licensed Product; provided however that [\*\*] shall the [\*\*] to [\*\*] under Sections [\*\*] and [\*\*] in any given calendar year [\*\*] the [\*\*] that [\*\*] above and, provided further, that [\*\*] shall the [\*\*] to [\*\*] in a given calendar year [\*\*] percent ([\*\*]%) of Net Sales of Licensed Product in the calendar year in which such royalties are due.
- Elan will make royalty payments on a country-by-country basis for the longer of (i) ten (10) years from first commercial sale of Licensed Product in such country; or (ii) if a Valid Patent for the Licensed Product is issued in that country, until the expiration of the last to expire of the Valid Patents.
- (b) In the event that Elan should enter into a Sublicense for Licensed Product, Elan will pay to Antigenics [\*\*] percent ([\*\*]%) of all Sublicense fees received by Elan from its Sublicensees for Licensed Products up until [\*\*] of the [\*\*], which shall be understood to include [\*\*] but to exclude all [\*\*]. For the sake and clarity and for purposes of this Section 3.3 (b), all amounts received after [\*\*] by Elan from Wyeth pursuant to Section [\*\*] (as amended) of the Collaboration Agreement for the Licensed Products shall be considered to be [\*\*]. Antigenics and Elan acknowledge that such payments received by Elan from Wyeth after [\*\*] will be [\*\*] percent ([\*\*]%) of the [\*\*] set forth in the original Section [\*\*] of the Collaboration Agreement (or [\*\*]% of the [\*\*] set forth in [\*\*] of the [\*\*] to the Collaboration Agreement dated [\*\*]), and Elan agrees that such payments shall be deemed to be attributable in their entirety to [\*\*] (each such payment to Elan by Wyeth a Wyeth Payment). In the event that Elan receives a Wyeth Payment, the amount payable by Elan to Antigenics under this Section 3.3(b) shall be [\*\*] percent ([\*\*] %) of such Wyeth Payment.

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3.4 Excluded Products. Notwithstanding any other provision of this Agreement, Elan shall not be obligated to pay Antigenics milestone, royalty or other types of payments with respect products developed or acquired by Elan within the Field of Use which do not constitute Licensed Products, including but not limited to, [\*\*] or [\*\*] without [\*\*] with [\*\*] other than [\*\*], and other [\*\*] of [\*\*]. If Licensed Products are used for [\*\*] to [\*\*] for use in [\*\*], such [\*\*] are not excluded.

### 3.5 Royalty Payments, Reports and Records

3.5.1 Commercial Introduction. Elan shall promptly give Antigenics notice of the occurrence of Commercial Introduction of the Licensed Products.

#### 3.5.2 Royalty Payments.

(a) Payments: Deduction of Taxes. After the date of the Commercial Introduction of the first Licensed Product, a royalty report and payment under this Agreement on Net Sales will be due and payable from Elan to Antigenics within [\*\*] after [\*\*] of each calendar year. Payments due under Section 3.3 (b) attributable to Sublicense fees shall be made at the end of the quarter when such license fees are payable. Elan will remit any such payment due to Antigenics under this Agreement by check payable to Antigenics. Any tax paid or required to be withheld by Elan on account of royalties payable to Antigenics under this Agreement shall be deducted from the amount of royalties otherwise due. Elan shall make applicable withholding payments due on behalf of Antigenics and shall promptly provide Antigenics with written documentation of any such taxes withheld and paid by Elan or its Sublicensees for the benefit of Antigenics. Notwithstanding the foregoing, the Parties acknowledge and agree that royalties owing to Antigenics under this Agreement may be paid without deduction for taxes once the appropriate withholding tax clearance is received from the relevant Irish tax authorities. Elan shall reasonably cooperate with Antigenics in seeking this clearance.

(b) Foreign Currency Conversion. For sales of any Licensed Product that occur in a currency other than United States dollars ( Foreign Currency Sales ), the quarterly royalty payment will be calculated as follows:

(A/B) X C = United States dollars royalty payment on Foreign Currency Sales, where

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A = foreign currency Net Sales per quarter

B = foreign exchange conversion rate, expressed in local currency per United States dollar (using as the applicable foreign exchange conversion rate the average of the rate published in the Wall Street Journal or any other mutually agreed-upon source for the last business day of each of the [\*\*] of the quarter); and

C = the royalty rate applicable to such Net Sales under Section 3.3.

3.5.3 Royalty Reports. After the date of Commercial Introduction of the first Licensed Product Elan shall render to Antigenics, together with the royalty payment due under Section 3.5.2 for a given calendar quarter, within [\*\*] of the end of such quarter, a written account for such calendar quarter showing (a) total gross sales and Net Sales, and the total gross royalty and license fee revenues paid to Elan by any Sublicensee(s) during such calendar quarter, and (b) a calculation of the royalty rate and royalties payable under Section 3.3 (including, in the case of foreign currency sales, the total foreign currency Net Sales during such calendar quarter, the applicable foreign exchange conversion rate(s) and the total United States dollar royalty payment amount).

3.5.4 Elan's Recordkeeping and Inspection. After the date of Commercial Introduction of the first Licensed Product, Elan shall keep for at least [\*\*] records of all sales of Licensed Products in sufficient detail to permit Antigenics to confirm the accuracy of Elan's royalty calculations. At the request of Antigenics no more frequently than [\*\*], upon at least [\*\*] prior written notice to Elan from Antigenics, and at the expense of Antigenics (except as otherwise provided below), Elan shall permit a nationally recognized, independent certified public accountant selected by Antigenics and acceptable to Elan to inspect, during regular business hours, any such Elan records for the then-preceding [\*\*] solely to the extent necessary to verify such calculations, provided that such accountant in advance has entered into a confidentiality agreement with Elan (substantially similar to the confidentiality provisions of this Agreement) limiting the disclosure of such information to authorized representatives of the Parties. Results of any such inspection shall be made available to both Parties. If such inspection reveals a deficiency in the calculation of royalties resulting in an underpayment to Antigenics, Elan shall promptly pay the difference owing, and in the event that the deficiency in the calculation of royalties results in an underpayment to Antigenics by [\*\*] ([\*\*]) or more, Elan shall pay all reasonable costs and expenses of such inspection.

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### **ARTICLE IV**

#### **Due Diligence**

4.1 **Maintenance of License.** In order to maintain the license granted pursuant to Section 2.1 with respect to a designated Licensed Product, Elan and its Sublicensees collectively, shall [\*\*] specifically related to the [\*\*] and [\*\*] of Licensed Products of [\*\*] than [\*\*]. If Elan shall fail to achieve the above objective and such failure shall remain unremedied for a period of [\*\*] after notice of such failure to Elan by Antigenics (the **Grace Period**), this license shall automatically terminate at the end of the Grace Period. Notwithstanding the foregoing, if such failure is a result of Elan not [\*\*] a [\*\*] to [\*\*] and reasonable evidence is submitted by Elan to Antigenics that [\*\*] can [\*\*] in a reasonable period of time, Elan may request that the Grace Period be extended for [\*\*] in the request. Antigenics shall not unreasonably withhold its consent to such extension but in no event shall the Grace Period exceed [\*\*]. Antigenics shall not unreasonably withhold its consent to [\*\*] in the [\*\*] requested in writing by Elan and supported by reasonable evidence of [\*\*] in the [\*\*] or [\*\*] that could have not have been reasonably anticipated or avoided. Notwithstanding the foregoing, Antigenics shall not have the right to terminate the license for failure of Elan to meet a goal if such failure is a result of (i) [\*\*] its [\*\*] hereunder, or (ii) an [\*\*] that the [\*\*] of the [\*\*] in [\*\*] of such [\*\*].

If Elan elects to stop development of Licensed Products, all license rights shall automatically terminate and Elan shall immediately cease, and shall instruct its Sublicensees, distributors, and Third Party Manufacturers to immediately cease any use of the Licensed Patent Rights, Manufacturing Technology and Know-how, and Elan shall return or destroy, and instruct each of its Sublicensees, distributors, and Third Party Manufacturers, to return or destroy, any Adjuvant in its possession or Control .

4.2 **Pre-Clinical and Clinical Programs.** Elan or its Sublicensees shall be solely responsible for the conduct of preclinical and human clinical testing, regulatory filings, applications and approvals, and expenses in connection with such clinical development plan. In connection with all of the foregoing:

- (a) **Antigenics Cooperation.** Antigenics shall cooperate with and assist Elan, its Affiliates and/or Sublicensees in the preparation and filing of information with respect to the Adjuvant for use in any Investigational New Drug Application, Biologics License Application or any other regulatory filings throughout the Licensed Territory with respect to the Licensed Product. Without limiting the generality of the foregoing, for purposes of supporting all pre-clinical and human clinical trials and all regulatory filings, applications and approvals on the part of

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Elan with respect to the Licensed Product, Antigenics hereby agrees that on an on-going basis during the Term: (i) Antigenics shall provide Elan with a complete copy of Antigenics biologics master file ( BMF ) (including all updated thereto) describing all Manufacturing Information, redacted to remove those portions which contain confidential information of Antigenics other licensees or partners, or portions relating to products other than [\*\*]; (ii) Antigenics shall permit Elan and its Sublicensees to cross- reference Antigenics BMF for the Adjuvant with the FDA for clinical trials conducted by Elan using the Adjuvant, and to use excerpts from Antigenics BMF for any purpose relating to any clinical trials or marketing applications for Licensed Products; (iii) to the extent not subject to the proprietary rights of Third Parties, Antigenics shall deliver to Elan a copy of Antigenics [\*\*] and (iv) an [\*\*], at Elan s request, shall [\*\*] to [\*\*] the progress of clinical trials of the Licensed Products. Elan will reimburse Antigenics for the foregoing assistance [\*\*], including but not limited to [\*\*], and [\*\*] subject to the prior approval of Elan.

- (b) Adverse Events Reporting. Elan shall conduct the human clinical trials in accordance with the Good Clinical Practice, reporting adverse events to the FDA. Elan agrees, subject to regulatory guidelines and restrictions, to provide Antigenics with all safety information developed during the course of its studies in humans on the Licensed Products. On an on-going basis during the Term and for the shorter of (i) [\*\*] after the expiration or termination of this Agreement or (ii) the term during which either Party has safety reporting responsibilities for the Licensed Products or Adjuvant, each Party agrees to provide the other Party with any written information in its possession and Control which likely related to adverse effects in humans associated with the Adjuvant or any products using the Adjuvant (including but not limited to Licensed Products), and all written information in its possession and Control of a reasonably material nature regarding the amelioration of such adverse events.
- (c) Elan s [\*\*] and Regulatory Reports. Elan shall provide Antigenics with a [\*\*] of the [\*\*] involving the Adjuvant and consider in good faith Antigenics comments on such [\*\*] involving the Adjuvant. Elan also agrees to provide Antigenics with a [\*\*] of the [\*\*] and to [\*\*] the [\*\*] in accordance with the [\*\*]. Elan shall prepare and deliver to Antigenics a copy of a [\*\*] to be used in connection with [\*\*] involving the Adjuvant. On [\*\*] basis, Elan will provide Antigenics with (i) a written report summarizing the clinical trials (including the number of people in such trials), regulatory filings, applications and approval with respect to any License Product that Elan or its Sublicensees (a) have made, sought or obtained in the prior [\*\*] period and (b) reasonably expect to make, seek or attempt to obtain in the ensuing [\*\*] period following the day of the report; and (ii) results of clinical trials conducted by Elan using the Adjuvant.

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Any and all such reports shall be Confidential Information of Elan, and Antigenics shall maintain the confidentiality of such Confidential Information in accordance with the terms and conditions Section 7, provided, however, that Elan grants permission to Antigenics to submit any safety data supplied by Elan relative to human subjects to the FDA and other relevant agencies solely for the purpose for inclusion in the Adjuvant biologics master file or comparable filing. Without limiting the generality of the foregoing, Antigenics warrants that it shall maintain confidential the [\*\*].

### **ARTICLE V**

#### **Representations and Warranties**

5.1 Elan represents and warrants to Antigenics as follows as of the Restated Effective Date:

- (a) Organization, Standing and Authority. EPIL is a company duly organized, validly existing and in good standing under the laws of Ireland and EPI is a corporation duly organized, validly existing and in good standing under the laws of the state of Delaware. Elan has all requisite corporate power to own and operate its properties and assets and to carry on its business as presently being conducted and as proposed to be conducted. Elan has, and will have on all relevant dates, all requisite legal and corporate power to execute and deliver this Agreement, and to carry out and perform its obligations under the terms of this Agreement.

The execution and delivery of this Agreement and the performance of the transactions contemplated hereby have been duly authorized by all appropriate Elan corporate action. The performance by Elan of any of terms and conditions of this Agreement on its part to be performed does not and will not constitute a breach or violation of any other agreement or understanding, written or oral, to which it is a party.

5.2 Antigenics represents and warrants to Elan as follows as of the Restated Effective Date:

- (a) Organization, Standing and Authority. Antigenics is a corporation duly organized, validly existing and in good standing under the laws of the state of Massachusetts. Antigenics has all requisite corporate power to own and operate its properties and assets and to carry on its business as presently being conducted and as proposed to be conducted. Antigenics has, and will have on all relevant dates, all requisite legal and corporate power to execute and deliver this Agreement.

The execution and delivery of this Agreement and the performance of the

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transactions contemplated hereby have been duly authorized by all appropriate Antigenics corporate action. The performance by Antigenics of any of the terms and conditions of this Agreement on its part to be performed does not and will not constitute a breach or violation of any other agreement or understanding, written or oral, to which it is a party. Antigenics has the full right and legal capacity to provide in the Licensed Territory all rights to the Know-how, Manufacturing Technology and Licensed Patent Rights in the Field of Use granted to Elan hereunder.

- (b) **Proceedings or Claims.** To Antigenics knowledge as of the Restated Effective Date, there are no adverse proceedings, claims or actions pending, or threatened, relating to the [\*\*]. Antigenics has the full right and legal capacity to disclose and deliver the [\*\*] to Elan without violating the rights of Third Parties.
- (c) **Specifications.** The Adjuvant previously supplied to Elan by Antigenics and currently used by Elan in [\*\*] for [\*\*] was manufactured in accordance with the Specifications or as otherwise agreed by the Parties and consistent with the BMF.

## **ARTICLE VI**

### **Liability**

- 6.1 **Indemnification by Elan.** During the term of this Agreement and thereafter, Elan shall indemnify and hold Antigenics and its Affiliates harmless against any liability, damages or loss from any claims, demands, suits, or other proceedings (each a Claim ) arising out of, based on or caused by Elan s or its Sublicensees or Third Party Manufacturers activities with respect to the Adjuvant or Licensed Products, except to the extent that such Claim is due to Antigenics gross negligence, willful misconduct, or failure to meet its obligations hereunder. Each Party shall promptly notify the other Party of any such Claim that comes to its attention. Antigenics shall permit Elan (directly or through its Affiliate) to control the investigation, preparation and defense thereof (including any compromise or settlement thereof and any appeal) and provide reasonable assistance to Elan, at Elan s expense, in that regard.
- 6.2 **Liability.** During the term of this Agreement and thereafter, each Party assumes full responsibility and liability for any injury, damage or expense which it or its employees, agents, and invitees incur and which arise from its manufacture, handling and use of the Adjuvant, Manufacturing Improvements or Licensed Products, except to the extent such injury, damage or expense is subject to and indemnification obligation hereunder.
- 6.3 **Indemnification by Antigenics.** During the term of this Agreement and thereafter, Antigenics will defend, indemnify and hold harmless Elan and its Affiliates against any and all Claims arising out of, based on or caused by activities of Antigenics or its sublicensees with respect to [\*\*], except to the extent that such Claim is due to Elan s gross negligence, willful misconduct or failure to meet its obligations hereunder.

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Each Party shall promptly notify the other Party of any such Claim that comes to its attention. Elan shall permit Antigenics (directly or through its Affiliate) to control the investigation, preparation and defense thereof (including any compromise or settlement thereof and any appeal) and provide reasonable assistance to Antigenics, at Antigenics' expense, in that regard.

### **ARTICLE VII**

#### **Confidentiality**

7.1 **Confidentiality.** The period of disclosure of confidential information (hereinafter referred to as Information or Confidential Information) under this Agreement, including but not limited to information regarding this Agreement, began on the effective date of the earliest of the Previous Agreements.

- (a) Upon the transmission and receipt of Information:
  - (i) A confidential relationship with respect to such information will immediately be established between Elan and Antigenics;
  - (ii) Elan and Antigenics will each use reasonable care (which shall be at least such care it uses with respect to its own Information) to prevent disclosure or release of the other Party's Information, including Information received from the other during the term of the Previous Agreements, to any Third Party, except with the other Party's prior written authorization and consent. Each Party will limit dissemination of Information to its [\*\*] and [\*\*] and [\*\*], and [\*\*] and [\*\*] in connection with [\*\*] (collectively, Permitted Third Parties), whose duties justify their need to know such Information, and then only on the basis of a clear understanding by those Permitted Third Parties of their obligation to maintain the proprietary and confidential status of such Information and to restrict the use of such Information solely to legitimate business purposes; and
  - (iii) Other than for the purposes contemplated by this Agreement, and except with written authorization and consent, neither Party will use the other Party's Information for its own benefit or for the benefit of others.
- (b) All information given or transmitted under the terms of this Agreement will be considered to be the transmitting party's Information, and will remain such, unless as to the item of Information, such Information: (i) was lawfully in the possession of the receiving Party prior to the date of disclosure;

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(ii) becomes public or available to the public otherwise than through any act or default of the receiving Party amounting to breach of this Agreement; (iii) has been lawfully obtained by the receiving Party from a Third Party in lawful possession of such Information and not under obligations of confidentiality with respect to such Information; (iv) was independently developed by the receiving Party without using the disclosing Party's Information; or (v) is required to be disclosed by the receiving Party to any governmental agency or court of competent jurisdiction, provided in such case that the receiving Party shall provide to the disclosing Party written notice and reasonable opportunity to object to such disclosure or to request confidential treatment thereof and shall reasonably cooperate in any such efforts by the disclosing Party.

(c) In order to be protected under this Agreement as Information/Confidential Information, such Information/Confidential Information disclosed by either Party must be plainly marked as CONFIDENTIAL (or, in the case of oral disclosure, confirmed within thirty (30) days in writing as being proprietary or confidential). However, the receiving Party is not released/relieved of its obligations under this Agreement with respect to such Information/Confidential Information that was not specifically marked confidential but that a reasonable person working in the industry would know that it is Information/Confidential Information.

(d) The obligations under Article 7 of this Agreement shall survive and continue for [\*\*] after expiration or termination of this Agreement. Upon expiration of Article 7 of this Agreement, all written or tangible Information acquired by either party hereunder shall be returned to the transmitting Party, except that one copy of the disclosed Information may be retained in each Party's legal department files solely for the purpose of ensuring compliance with its obligations herein.

7.2 Permitted Disclosures. Each Party may disclose the other Party's Information to the extent such disclosure is reasonably necessary in complying with applicable laws or regulations or order of a governmental agency or a court of competent jurisdiction, or, in the case of [\*\*] or preparing or [\*\*] with respect to [\*\*]; provided, however, that if a Party is required to make any disclosure of the other Party's Information furnished pursuant to this Agreement, it will give reasonable advance notice of such disclosure requirements to the other Party and, except to the extent inappropriate as in the case of patent applications, will use its commercially reasonable efforts to secure confidential treatment of such information required to be disclosed.

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**ARTICLE VIII**

**Term and Termination**

- 8.1 **Term.** This Agreement shall commence as of the Restated Effective Date and, unless sooner terminated as provided in this Article 8, shall expire on the date royalties and all other payments are no longer payable by Elan to Antigenics under this Agreement (the Term ). Upon expiration (but not early termination) the licenses granted to Elan under Section 2.1 shall become fully paid-up, irrevocable, perpetual royalty-free licenses.
- 8.2 **Material Breach.** Failure by either Party to comply with any of the material obligations contained in this Agreement shall entitle the other Party to give to the Party in default written notice specifying the nature of the default and requiring it to cure such default. If such default is not cured within [\*\*] after the receipt of such notice, the notifying Party shall be entitled, without prejudice to any of its other rights conferred on it by this Agreement and in addition to any other remedies available to it by law or in equity, to terminate this Agreement effective upon written notice to the other Party. The right of a Party to terminate this Agreement, as hereinabove provided, shall not be affected in any way by its waiver or failure to take action with respect to any previous default. In the event of a non-appealable or unappealed decision by a court of law, that Elan has materially breached this Agreement, or in the event Elan terminates this Agreement, Elan shall immediately cease, and shall instruct its Sublicensees, distributors, and Third Party Manufacturers to immediately cease any use of the Licensed Patent Rights, Manufacturing Technology and Know-how, and, unless otherwise elected in writing by Antigenics, Elan shall return or destroy, and instruct each of its Sublicensees, distributors, and Third Party Manufacturers, to return or destroy, any Adjuvant in its possession or Control.
- 8.3 **Accrued Rights, Surviving Obligations, Sublicensees.** Expiration or any termination of this Agreement for any reason shall be without prejudice to any rights which shall have accrued to the benefit of either Party prior to such expiration or termination. Such expiration or termination shall not relieve either Party from obligations which are expressly indicated to survive expiration or termination of this Agreement. Upon termination of this Agreement for any reason, any Sublicensee of Elan not then in default shall have the right to seek a license from Antigenics on the same financial terms set forth herein. Antigenics agrees to negotiate with such Sublicensee in good faith, but shall be under no obligation to grant such license.
- 8.4 **Termination by Elan.** Elan may terminate this Agreement [\*\*] by giving [\*\*] written notice to Antigenics, provided that upon such termination all rights to Know-how, Manufacturing Technology and Licensed Patent Rights shall revert to Antigenics.

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In such an event, Elan shall immediately [\*\*], and shall [\*\*] its [\*\*], and [\*\*] to immediately [\*\*] of the [\*\*] and [\*\*], and, unless otherwise elected in writing by Antigenics, Elan shall [\*\*] or [\*\*], and [\*\*] each of its [\*\*], and [\*\*], to [\*\*] or [\*\*], any Adjuvant then in its possession or Control.

**ARTICLE IX**

**Patents**

9.1 **Inventions.** Title to any Licensed Patent Rights will follow inventorship, which will in turn be determined in accordance with the United States laws of inventorship and written evidence of the Parties. Designation of inventors on any patent application is a matter of law and will be solely within the discretion of qualified patent counsel of Antigenics and Elan.

9.2 **Patent Prosecution Strategy.** Subject to the other terms of this Agreement:

- (a) **Antigenics Solely Owned Licensed Patent Rights.** During the Term, the filing, prosecution and maintenance of Licensed Patent Rights solely owned by Antigenics will be under the control of Antigenics, as its sole cost and expense.
- (b) **Jointly Owned Licensed Patent Rights.** During the Term, the filing, prosecution and maintenance of any Licensed Patent Rights jointly owned by the Parties will be under the control of the Party from whom the majority of the data underlying such Licensed Patent Rights arose (the **Controlling Party** ), and the Controlling Party is authorized to undertake such filings, prosecutions and maintenance at its sole cost and expense, using patent counsel reasonably satisfactory to the non-Controlling Party and with the reasonable cooperation of the non-Controlling Party and its employees, provided that: (i) the Controlling Party notifies the non-controlling Party reasonably prior to the filing of any such Licensed Patent Rights by the Controlling party and permits review of such proposed Licensed Patent Rights by the non-Controlling Party, (ii) the Controlling Party provides the non-Controlling Party promptly with copies of all communications received by the Controlling Party, (iii) the Controlling Party keeps the non-Controlling Party reasonably informed of the status of such Licensed Patent Rights, and (iv) the Controlling Party provides the non-Controlling Party notice at least [\*\*] in advance of taking or failing to take any action that would affect the scope or validity of any such Licensed Patent Rights (including but not limited to substantially narrowing or canceling any claim, abandoning any such Licensed patent Rights or not filing or perfecting the filing of any such Licensed Patent Rights in any country), with prior written notice of such proposed action or inaction so that the non-Controlling Party has a reasonable opportunity to review and make comments.

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Either Party may assign its rights to any jointly owned Licensed Patent Rights to the other Party, who will have the right in its discretion, to assume the prosecution and maintenance thereof at its sole expense and as the sole owner thereof.

- (c) Elan Solely Owned Inventions. The filing, prosecution and maintenance of patents directed to the Licensed Product or Manufacturing Improvements are solely owned by Elan and will be under the control of Elan, at its sole cost and expense. In the event Elan shall obtain title to a patent claim containing [\*\*] as [\*\*] of its [\*\*] ( [\*\*] Claim ), Elan shall not assert any such claim against Antigenics based on the making, using or selling of [\*\*] other than [\*\*] unless Elan has reasonable grounds to believe it will [\*\*] in the [\*\*] of a [\*\*] not [\*\*] as [\*\*] of its [\*\*] ( [\*\*] Claim ), and if Elan shall prevail on [\*\*] Claim but fail to prevail on [\*\*] claim, Elan shall not seek enforcement of any judgment thereon and shall dismiss said action on said [\*\*] Claim. Subject to payment to Elan as set forth in Section 2.2.1, Elan further agrees not to assert any such [\*\*] Claim against any other licensee of Licensed Patents of Antigenics based on such licensee making, using or selling of [\*\*] unless Elan has reasonable grounds to believe it will [\*\*] such licensee of Antigenics in the [\*\*] of [\*\*] Claim, provided that such licensee has through Antigenics [\*\*] into an [\*\*] to [\*\*] any other [\*\*] of [\*\*] any [\*\*] Claim as to which such licensee has obtained title. If Elan shall [\*\*] on [\*\*] Claim against such licensee but fail to prevail on an Adjuvant-Independent Claim, Elan shall not [\*\*] of [\*\*] thereon and shall [\*\*] said [\*\*] on said [\*\*] Claim.

- 9.3 Third Party Infringement. Either Party promptly shall notify the other Party in writing of any alleged infringement of the Licensed Patent Rights and of any available evidence thereof. The Parties shall consult as to a potential litigation strategy or strategies against any alleged infringer.

If the Parties commence and prosecute a suit jointly, Elan shall pay all associated attorney's fees and out-of-pocket litigation expenses. All monies recovered upon the final judgment or settlement of any such action shall be used (a) first, to reimburse the costs and expenses (including reasonable attorneys' fees and costs) of the parties, (b) second (to the extent that damages are awarded for lost sales or lost profits from the sale of Licensed Products), to Elan with Antigenics receiving the royalties that would have been payable to Antigenics on the sale of such Licensed Products, and (c) the remainder to be split between the Parties. If the Parties do not decide to jointly commence an action within [\*\*] of the notice specified above, or otherwise terminate the alleged infringement, Antigenics shall have the right, at its expense, to bring suit against the allegedly infringing party.

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- 9.4 **Trademarks.** Elan, at its expense, shall be responsible for the selection, registration and maintenance of all trademarks and tradenames that it employs in connection with Licensed Products. The terms Trademark or Tradename shall include, without limitation, the name or names of any Licensed Products, the design of the packaging of any Licensed Products, and the appearance of dosage forms of any Licensed Product. Elan shall own such Tradenames and Trademarks and shall retain ownership upon termination of this Agreement. Without the express written consent of Antigenics, Elan shall not sue and shall acquire no interest in the trademarks of Antigenics.

### **ARTICLE X**

#### **Manufacture and Supply**

- 10.1 **Selection of Third Party Manufacturer.** Antigenics shall continue to assist Elan in evaluating various manufacturers as a Third Party Manufacturer for the Adjuvant by providing the assistance, cooperation and deliverables set forth in this Article 10 and the Technology Transfer Plan hereto attached as Exhibit C. The Third Party Manufacturer shall be selected at Elan's sole discretion. Elan, alone or together with its Sublicensees, shall be sole parties to an agreement with such Third Party Manufacturer.
- 10.2 **Manufacturing Technology Transfer.** The Parties shall use [\*\*] efforts to complete the Manufacturing Technology transfer in accordance with the timelines set forth in this Article 10 and Exhibit C.
- 10.2.1 Antigenics shall use [\*\*] efforts to ensure timely transfer of Manufacturing Technology to Elan (directly or through its CMO, as directed by Elan in writing), and complete certain technology transfer events according to the following schedule:

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<b>Technology Transfer Event</b>	
Disclosure to Elan of [**] at the particular [**] s listed on Appendix D [**] to Elan.	<b>Due Date</b> [**] after requested by Elan
Assistance to Elan [**] of a [**] from those listed on Appendix D by [**] in [**] any [**] for the [**] of [**] between the [**], Antigenics and Elan and [**] or by [**] between the [**], Antigenics, Elan and [**].	[**] after the latter of (i) the Restated Effective Date or (ii) request from by Elan
At the request of Elan, and upon completion of any [**] as described above, Antigenics will provide [**] of the [**] ( [**] ) made by Antigenics, and the [**] from [**] by Elan execution of from those listed on Appendix D.	[**] after [**]
Delivery of all [**] within [**] of the Technology Transfer Plan to Elan.	[**] after the Restated Effective Date
10.2.2 In addition to Elan s rights to reference Antigenics BMF as set forth in Section 4.2(a), Elan shall also have the right to file and use its own BMF for any purpose relating to any clinical trials or marketing applications for Licensed Products, and, subject to Section 2.2 with respect to Manufacturing Improvements, shall provide and hereby provides Antigenics and its Affiliates, as well as its Third Party manufacturer, licensees and customers with an automatic, blanket right to cross-reference such BMF of Elan for all indications, and shall promptly cooperate with Antigenics and provide Antigenics with any necessary documentation to effectuate the foregoing. Elan shall use its [**] efforts to obtain similar rights for Antigenics from Elan s Sublicensees, Affiliates, and Third Party manufacturers, as applicable.	
10.2.3 During the Term of this Agreement, (i) Antigenics will [**] perform [**] of the Technology Transfer Plan, (ii) Antigenics will [**] assist in the [**] of the [**] at the [**], including, as [**] requested by Elan, [**] up to [**] at a [**] to facilitate [**], or at the [**] regarding the [**], provided that the obligations of Antigenics under this subsection (ii) shall not extend beyond [**] from the Restated Effective Date, (iii) Antigenics will [**] cooperate with regulatory authorities to assist Elan with [**] any [**] as a [**] of [**], and (iv) Antigenics will continue to provide assistance as [**] or [**] for Elan or a Third Party Manufacturer to [**] for the [**] and [**] of [**], including [**] any [**] as [**] requested by Elan in excess of the [**] meetings that it may be [**] in accordance with Section 10.2.3(ii) (provided that such [**] does not [**] with Antigenics [**]) (such services under	

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this Section 10.2.3 (iv) Consulting Services ), and Antigenics will [\*\*] cooperate with Elan s requests to seek [\*\*] from Antigenics [\*\*], and [\*\*],[\*\*] in coordination with Antigenics provided that such cooperation, [\*\*] does not [\*\*] with Antigenics [\*\*].

- 10.3 **Purchase and Supply Obligations.** From the Restated Effective Date subject to the provisions set forth in Sections 2.2, 3.1, 3.3, 10.1, 10.2.1 and Section 10.3.2, Elan shall have no further obligation to purchase Adjuvant from Antigenics (or its Affiliates or Third Party designee), and Antigenics (or its Affiliates or Third Party designee) shall have no further obligation to supply Adjuvant to Elan and its Sublicensees and, subject to the remaining provisions of this Agreement, Elan, its Sublicensees and/or selected Third Party Manufacturer shall have the right to manufacture its Adjuvant Requirements. Except as otherwise expressly set forth herein, including Section 10.3.1, the Parties hereby mutually agree that this Agreement will entirely supersede the Supply Agreement as of the Restated Effective Date.
- 10.3.1 The Parties hereby mutually agree to cancel, and hereby cancel [\*\*] pursuant to the [\*\*] and agree that neither Party shall have any obligations under Sections 2.4 or 2.5 of the Supply Agreement as of the Restated Effective Date. For the avoidance of doubt, the Parties agree that Elan s [\*\*] of [\*\*] for [\*\*] of [\*\*] for [\*\*] (the [\*\*] ) remains in effect and that the terms of the Supply Agreement applicable to [\*\*] shall survive.
- 10.3.2 In the event Antigenics shall fail to meet any of the Technology Transfer Events by the corresponding due dates set forth above in Section 10.2.1, except to the extent due to the [\*\*] or [\*\*] on the part of [\*\*] or [\*\*], and fails to remedy such failure within [\*\*] of receiving notice of such failure from Elan, then unless Antigenics shall demonstrate that Antigenics is willing and able to [\*\*] of [\*\*] of [\*\*] by [\*\*]:
- a) Notwithstanding the Parties [\*\*] with respect to [\*\*] to [\*\*], Elan may either [\*\*] its [\*\*] from a [\*\*] or [\*\*] or [\*\*] for its [\*\*] its [\*\*];
  - b) Elan shall have no obligation to [\*\*] any [\*\*] to Antigenics under Section [\*\*]; and
  - c) Antigenics shall [\*\*] Elan [\*\*] and [\*\*] cooperate with [\*\*] to [\*\*] as a [\*\*] of the [\*\*].
- 10.4 Subject to Article 2, Antigenics reserves the right to manufacture (or have manufactured) and supply QS-21 for itself, Affiliates and/or any Third Parties.

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- 10.5 On an ongoing basis as may be [\*\*] for the manufacture of Adjuvant for the development and commercialization of Licensed Products, and as may be [\*\*] requested by Elan and to the extent [\*\*], Antigenics shall use [\*\*] efforts to: (i) [\*\*] to a [\*\*] additional [\*\*] to [\*\*], including but not limited to [\*\*] to such [\*\*] by Antigenics pursuant to its written agreements with [\*\*], and (ii) [\*\*] or [\*\*] such [\*\*] and [\*\*] to [\*\*] relating to the [\*\*] of (i). This provision shall in no way be construed as an obligation on the part of Antigenics to renegotiate and contractual arrangements between Antigenics and [\*\*] or any [\*\*].
- 10.6 Each Party agrees during the Term of this Agreement to [\*\*] consider any [\*\*] request of the other Party to assist such requesting Party in [\*\*] from the [\*\*] of the other Party on terms and conditions similar to those given the non-requesting Party if such [\*\*] to the requesting Party would not interfere with the [\*\*] needs of the non-requesting party or its other licensees, sublicensees, or customers, as the case may be.

## **ARTICLE XI**

### **Recordkeeping and Inspection**

- 11.1 **Technical Records.** With respect to any Manufacture and supply of Adjuvant Requirements prior to the Restated Effective Date, Antigenics shall keep properly completed technical books and records, test data and reports as required under the Specifications and all applicable laws and regulations, including but not limited to cGLPs or cGMPs (as appropriate), and in any case shall maintain such technical information for at least [\*\*] from the [\*\*] of [\*\*] or longer if required under applicable laws and regulations (including but not limited to cGLPs and cGMPS, as applicable). During regular business hours and upon reasonable advance written request, Antigenics shall make any such technical information relating to [\*\*] of [\*\*] under the prior Supply Agreement available to Elan for inspection.
- 11.2 **Regulatory Inspections and Reporting.** Subject to any obligations of confidentiality Antigenics may have to one or more Third Parties, Antigenics shall provide Elan with copies of all correspondence with the FDA and other regulatory authorities of a compliance nature which may materially adversely impact the continued manufacture of Elan's Adjuvant Requirements in accordance with the terms and conditions of this Agreement.

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### ARTICLE XII

#### Miscellaneous Provisions

- 12.1 No Partnership. Nothing in this Agreement is intended or shall be deemed to constitute a partnership, distributorship, agency, employer-employee or joint venture relationship between the Parties. No Party shall incur any debts or make any commitments for the other, except to the extent, if at all, specifically provided herein.
- 12.2 Assignments. Neither Party shall assign any of its right or obligations hereunder or this Agreement except that either Party may do so: (a) to a Third Party ( Acquiring Party ) as incident to the merger, consolidation, reorganization or acquisition of stock or assets affecting all or substantially all of the assets of such Party relating to the subject matter of this Agreement; (b) to an Affiliate; (c) with the prior written consent of the other Party; or (d) as incident to a joint venture between Elan and a corporate entity. However, in the event that Antigenics makes such an assignment to an Acquiring Party, and such Acquiring Party is a [\*\*], then [\*\*] shall have no further obligations under [\*\*] to [\*\*]. As used herein, a [\*\*] shall mean a [\*\*] and/or [\*\*] in the [\*\*] or [\*\*]. This Agreement shall be binding upon the successors and permitted assigns of the Parties and the name of a Party appearing herein shall be deemed to include the names of such Party's successors and permitted assigns to the extent necessary to carry out the intent of this Agreement. Any assignment not in accordance with this Section 12.2 shall be void.
- 12.3 Further Actions. Each Party agrees to execute, acknowledge and deliver such further instruments, and to do all such acts, as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement. Without limiting the generality of the foregoing, Antigenics agrees to provide a letter to FDA authorizing Elan to cross reference Antigenics' BMF for the Adjuvant.
- 12.4 No Name or Trademark Rights. Except as otherwise provided herein, no right, express or implied, is granted by this Agreement to use in any manner the names of the Parties or any version or contraction thereof or any other trade name or trademark of Antigenics or Elan in connection with the performance of this Agreement.
- 12.5 Public Announcements. Except as may otherwise be required by applicable laws, rules or regulation or Security and Exchange Commission reporting requirements, neither Party shall issue any press release or make any other public announcement relating to this Agreement without the prior written consent of the other Party (not to be unreasonably withheld). In the event one Party requests the consent of the other Party with respect to any public disclosure, the other Party shall review and respond to such consent within [\*\*]. In addition and notwithstanding the foregoing, once any press release or other public announcement is approved for disclosure by the Parties, either Party hereto may

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make a subsequent public disclosure of the contents of such approved press release or other public announcement without any further notice to, or consent or review of, the other Party. Notwithstanding the provisions of Section 12.11 below, for purposes of this Section 12.5, and notices may be sent via email, if to Antigenics, to [ssharp@antigenics.com](mailto:ssharp@antigenics.com) with a copy to [kvalentine@antigenics.com](mailto:kvalentine@antigenics.com), and if to Elan, to [john.donahue@elan.com](mailto:john.donahue@elan.com).

- 12.6 **Force Majeure.** If any default or delay occurs which prevents or materially impairs a Party's performance and is due to a cause beyond the Party's reasonable control, including but not limited to any act of any god, flood, fire, explosion, earthquake, casualty, accident, war, terrorism, revolution, civil commotion, blockade or embargo, injunction, law, proclamation, order, regulation or governmental demand, the affected Party promptly shall notify the other Party in writing of such cause and shall exercise diligent efforts to resume performance under this Agreement as soon as possible. Neither Party shall be liable to the other Party for any loss or damage due to such cause. Neither Party may terminate this Agreement because of such default or delay, unless such event continues unabated for a period of [\*\*], in which case the Party disadvantaged by such default or delay may, at its option, terminate this Agreement upon written notice to the other Party.
- 12.7 **Entire Agreement of the Parties, Amendments.** This Agreement, including the exhibits attached hereto which are incorporated herein, constitutes and contains the entire understanding and agreement of the Parties and cancels and supersedes any and all prior negotiations, correspondence, understandings and agreements, whether verbal or written, between the Parties respecting the subject matter hereof. No waiver, modification or amendment or any provision of this Agreement shall be valid or effective unless made in writing and signed by a duly authorized officer of each of the Parties.
- 12.8 **Severability.** In the event that any of the provisions of this Agreement shall for any reason be held by any court or authority of competent jurisdiction to be invalid, illegal or unenforceable, such provision or provisions shall be validly reformed to as nearly as possible approximate the intent of the Parties and, if unenforceable, shall be divisible and deleted in such jurisdiction; elsewhere, this Agreement shall not be affected so long as the Parties are still able to realize the principal benefits bargained for in this Agreement.
- 12.9 **Captions.** The captions to this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement.
- 12.10 **Applicable Law.** This Agreement shall be governed by and interpreted in accordance with the laws of the State of Delaware applicable to agreements made and performed wholly within such state without regard to its principles of conflicts of laws.

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12.11 Notices and Deliveries. Any notice, requests, delivery, approval or consent required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been sufficiently given if delivered in person, transmitted by facsimile (with written confirmation to follow via United States first class mail) [\*\*] after being sent by United States certified mail to the Party to whom it is directed at its address shown below or such other address as such Party shall have last given by written notice to the other Party in accordance with this Section.

If to Antigenics, addressed to:

Antigenics Inc.

3 Forbes Road

Lexington, MA 02421

Attn: Chief Financial Officer

*With a copy to:*

Antigenics Inc.

3 Forbes Road

Lexington, MA 02421

Attn: Legal Department

If to Elan, addressed to:

Elan Pharmaceuticals, Inc.

800 Gateway Boulevard

South San Francisco, CA 94080

Attn: Chief IP Counsel

*With a copy to:*

Elan Pharma International Ltd.

Monksland, Athlone

County Westmeath, Ireland

Attn: Director

12.12 Counterparts. This Agreement may be executed simultaneously in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Execution and delivery of this Agreement by facsimile or electronic copies bearing the facsimile signatures of the Parties shall constitute a valid and binding execution and delivery of this Agreement by the signing Party, and such facsimile and/or electronic copies shall constitute original documents.

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12.13 Compliance with Laws. Elan and Antigenics each shall comply with all applicable laws in connection with its own performance under this Agreement. Without limiting the generality of the foregoing, Elan shall be responsible for compliance with all applicable product safety, product testing, product labeling, package marking, and product advertising laws and regulations, except with respect to efforts performed by Antigenics in which case Antigenics shall be responsible for its activities as governed by such laws and regulations.

12.14 Survival. The representations, warranties, covenants and agreements made herein shall survive any investigation made by a Party and shall be able to be relied fully on by the Parties. In addition, unless otherwise expressly noted herein, the following provisions shall survive expiration or termination of this Agreement: Articles 3 (in the event of early termination), 5, 6, 7, and 12 and Sections 2.1 (in the event of expiration only) 2.2 (first paragraph), 2.2.1, 3.6, 8.3, 9.2(c), 9.4, 10.2.2, 10.3 (first paragraph) and 11.1. In addition and for the avoidance of doubt, any payment obligations owing to Antigenics prior to the date of expiration or termination of this Agreement shall survive until fulfilled.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be signed by their respective corporate officers, duly authorized as of the dates written below.

### **Elan Pharma International Ltd.**

**By:** /s/ Shane Cooke

**Name:** Shane Cooke

**Title:** Director

**Date:** 14/9/09

### **Antigenics**

**By:** /s/ Shalini Sharp

**Name:** Shalini Sharp

**Title:** CFO

**Date:** 9/14/09

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For valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and in consideration of Antigenics executing and delivering the within agreement, EPI hereby unconditionally guaranties to Antigenics, its successors and assigns, full and prompt payment and performance of all of the obligations of EPIL in connections with the within Agreement. This guaranty shall operate as continuing, absolute and irrevocable. The liability of EPI hereunder should be primary, and EPI hereby waives all suretyship defenses.

**Elan Pharmaceuticals, Inc.**

**By:** /s/ John L. Donahue

**Name:** John L. Donahue

**Title:** Assistant Secretary

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**EXHIBIT A**

**Licensed Patent Rights**

U.S. Patent No. [\*\*], entitled [\*\*] inventors [\*\*], issued [\*\*] (filed [\*\*])

<u>Country</u>	<u>Serial Number</u>
[**]	[**]

U.S. Patent No. [\*\*], entitled, [\*\*] inventors [\*\*], issued [\*\*] (filed [\*\*])

<u>Country</u>	<u>Serial Number</u>
[**]	[**]

U.S. Patent No. [\*\*], entitled, [\*\*] inventors [\*\*], issued [\*\*] (filed [\*\*])

<u>Country</u>	<u>Serial Number</u>
[**]	[**]

U.S. Patent No. [\*\*], entitled, [\*\*] inventors [\*\*], issued [\*\*] (filed August 6, 1999)

<u>Country</u>	<u>Serial Number</u>
[**]	[**]

And any substitutions, extensions, reissues, reexaminations, renewals, divisions, continuations and continuations-in-part of the foregoing.

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**Table of Contents****EXHIBIT B****CERTIFICATE OF CONFORMANCE**

Product Name: QS-21

**PURITY ANALYSIS**

	<b>Assay</b>	<b>Specification</b>
1.0	[**]	[**] [**]
2.0	[**]	[**]
3.0	[**]	[**]
4.0	[**]	[**]
5.0	[**]	[**]
6.0	[**]	[**]

**IDENTITY**

	<b>Assay</b>	<b>Specification</b>
1.0	[**]	[**]
2.0	[**]	[**]
3.0	[**]	[**]
4.0	[**]	[**]

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**EXHIBIT C**

**Manufacturing Technology Transfer Plan**

**Phase 1: Transfer of Enabling Technology**

**1.1. Transfer of the Enabling Manufacturing Technology Package**

In accordance with the terms of this Agreement, Antigenics MA will transfer to Elan, [\*\*] and/or a Third Party Manufacturer, as Elan directs, information in the form of written documents regarding:

1. Manufacturing
2. Quality Control
3. QS21 Stability

These documents are detailed in Tables 1 through 4.

**1.1.1. Manufacturing**

Manufacturing Methods are outlined in Table 1. This includes all Master Batch Records (MBR) and Solution Lot Records (SLR) that define how the product is manufactured. The individual records define the equipment used, how the equipment is prepared, and any instrument parameters used in the purification of QS-21. Batch records define the methods used to support appropriate in-process testing.

A Process outline will be provided and contains a brief description, process flow diagram, role of each step and acceptance criteria for intermediates and final product.

The sourcing of the bark extract- Raw material is documented in [\*\*] and [\*\*] and alternate vendors for any materials will be defined in [\*\*] or [\*\*] documentation.

Raw materials specifications, current sourcing references and known alternatives to be located in individual [\*\*] documentation for the appropriate materials. A table of supplies and raw materials suppliers will be provided.

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### Table 1: Manufacturing Documentation Master Batch Records & Solution Lot records

Overall process description and flow diagram linking the following production batch records will be provided - see 1.1.1. A detailed equipment list is contained within each of the MBRs. Vendor information is referenced within [\*\*] documentation and documentation of current [\*\*] are contained within [\*\*].

Document Number	Document Title
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]

#### 1.1.2. Quality Control

The following Quality Control information will be provided as detailed in Table 2.

- i QC SOP s/Test Methods
- i In process control SOP s/Methods
- i Sampling methods / SOP s

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\*\*Available vendor methods - [\*\*] and [\*\*] will be provided; these detail primarily sample preparation. There are no [\*\*] performed for measuring [\*\*] in individual lots of QS-21. Toxicology data is contained within [\*\*] documentation.

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**Table of Contents****Table 2: Quality Control Documentation (continued)**

<b>Document Number</b>	<b>Document Title</b>
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***

**1.1.3. Stability**

The following stability documentation outlined in Table 3 and covering final QS-21 product and in-process stability evaluations will be provided:

**Table 3: Stability Documentation**

<b>Document/Part Number</b>	<b>Document Title</b>
***	***
***	***
***	***
***	***
***	***
***	***

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### **1.1.4. Regulatory Status**

Antigenics MA will provide Elan with the following documents exchanged with Regulatory Authorities with regard to [\*\*], redacted as appropriate to remove 3<sup>rd</sup> party information:

**Table 4: Regulatory Documentation - Submissions to [\*\*].**

Submission Number	Document Detail	Submission Date
[**]	[**]	[**]
[**]	[**]	[**]
[**]	[**]	[**]
[**]	[**]	[**]

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**Table 4: Regulatory Documentation (cont)**

Submission	Document Detail	Submission
Number		Date
[**]	[**]	[**]
[**]	[**]	[**]
[**]	[**]	[**]
[**]	[**]	[**]
[**]	[**]	[**]

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Table 4: Regulatory Documentation (cont)

Submission	Document Detail	Submission
Number		Date
[**]	[**]	[**]

Table 4: Regulatory Documentation (cont)

Submission	Document Detail	Submission
Number		Date
[**]	[**]	[**]
[**]	[**]	[**]
[**]		

Antigenics released a [\*\*] for the [\*\*] of [\*\*] of QS-21 to a number of [\*\*] and received [\*\*] responses to this [\*\*]. The names of the [\*\*] that [\*\*] to the [\*\*] are indicated in Exhibit D below. Elan has indicated its desire to perform an initial [\*\*] of [\*\*] of these [\*\*]. To further assist Elan with [\*\*] of a [\*\*], Antigenics will provide Elan with a copy of the [\*\*] as submitted, a copy of the [\*\*] responses and Antigenics summary document describing any follow up with the [\*\*]. Antigenics will cooperate further with Elan and will be [\*\*] for [\*\*] and/or [\*\*] with the Elan team and [\*\*]. This will be arranged by Elan/Antigenics and [\*\*] staff. Antigenics will arrange for [\*\*] of the [\*\*] with the [\*\*] such that the [\*\*] can be [\*\*].

**Phase 2: Regulatory Status**

Antigenics will provide Elan with the following documents exchanged with Regulatory Authorities with regard to [\*\*], redacted as appropriate to remove 3<sup>rd</sup> party information:

**Table 5: Regulatory Documentation - Submissions to [\*\*].**

Submission	Document Detail	Date
[**]	[**]	[**]
[**]	[**]	[**]
[**]	[**]	[**]
[**]	[**]	[**]
[**]	[**]	[**]

[\*\*]      [\*\*]  
[\*\*]      [\*\*]

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### **Phase 3: Supplemental Materials, Documentation and Ongoing Commitments**

Antigenics will provide QS21 working standard of [\*\*] to [\*\*] of [\*\*] of the transfer. This working standard is derived from a previously manufactured and released batch of QS21. In addition, Antigenics will provide documentation on the manufacture of the QS-21 standard.

Additional supplemental documentation will be provided by Antigenics MA promptly following signing of the Agreement. This documentation will include [\*\*] will describe [\*\*] to the current manufacturing process and quality control assays for QS-21. [\*\*] the documents referenced in the [\*\*] to be provided.

Antigenics will promptly provide ongoing regulatory updates to the BMF.

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**EXHIBIT D**

**POTENTIAL [\*\*] IDENTIFIED BY ANTIGENICS**

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**Exhibit 10.6**

**THIS NOTICE OF ASSIGNMENTS** is dated as of September 18, 2009

**TO:** Antigenics Inc. ( Antigenics )

**BY: ELAN PHARMA INTERNATIONAL LIMITED**, a private company limited by shares organized under the laws of Ireland with offices at Monksland, Athlone, County Westmeath ( **EPIL** ) and **ELAN PHARMACEUTICALS, INC.**, a Delaware corporation with offices at 800 Gateway Boulevard, South San Francisco, California 94080 ( **EPI** ).

**INTRODUCTION**

(A) EPIL, EPI and Antigenics are parties to that certain Amended and Restated License Agreement effective September 14, 2009 (the **Agreement** ).

(B) EPIL and EPI assigned their respective rights, obligations and liabilities pursuant to or under the Agreement to Crimagua Limited, an Irish private limited company ( **Crimagua** ) an affiliate of EPIL and EPI in accordance with that certain Asset Purchase Agreement, dated as of July 2, 2009, among EPIL, EPI, Neuralab Limited, Athena Neurosciences, Inc., Crimagua and Elan Corporation, plc (such agreement, as amended or modified from time to time, the **Internal Asset Purchase Agreement** and such assignment, the **Crimagua Assignment** ).

(C) Promptly following the Crimagua Assignment, Crimagua assigned its rights, obligations and liabilities pursuant to or under the Agreement to Janssen Alzheimer Immunotherapy, an Irish unlimited company ( **Janssen** ) and a subsidiary of Johnson & Johnson, in accordance with that certain Asset Purchase Agreement, dated as of July 2, 2009, among Janssen, Elan Corporation, plc, Janssen Pharmaceutical and the other parties identified therein (such agreement, as amended or modified from time to time, the **Janssen Asset Purchase Agreement** and such assignment, the **Janssen Assignment** and together with the Crimagua Assignment, the **Assignments** ).

**NOTICE OF ASSIGNMENTS**

EPIL and EPI hereby notify Antigenics of the Crimagua Assignment and the Janssen Assignment. The Assignments became effective as of September 17, 2009.

**EXECUTED and delivered on the date first written above.**

**ELAN PHARMACEUTICALS, INC.**

**By:** /s/ illegible

**ELAN PHARMA INTERNATIONAL LIMITED**

**By:** /s/ illegible

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**Exhibit 10.7**

**Contract No. 2**

Moscow

Date 09.07.2009

The Company, Antigenics, Inc., a Delaware, U.S.A. corporation, hereinafter referred to as the Seller in the person of Garo Armen, Chief Executive Officer, on the one part, and ISSI-Strategy LLC, a Russian corporation, hereinafter referred to as the Buyer, in the person of Alexey Shvetz, General Director,, on the other part, concluded the present Contract on the following:

**I. Subject of the Contract.**

1.1. The subject of this Contract (hereinafter the Contract) is a sale of pharmaceutical products (Oncophage vaccine basing on the registration certificate) hereinafter referred to as the Goods

1.2. The Seller shall deliver and the Buyer shall receive and pay for on the terms of the present Contract, in the quantity and at the prices for the unit of Goods, directly stipulated in the General Specification attached as Exhibit A of the Contract, which is the integral part of the present Contract.

1.3. Country of Origin: United States of America

1.4. The Seller shall deliver the Goods in the export pack, which will provide the Goods security from damages while transporting by any kind of transportation agreed to between the Seller and Buyer.

1.5. Product shall be supplied by air in accordance with the mandatory observance of temperature through the use of dry ice and other conditions of transportation necessary to transport such Goods. In the event of a breach by the Seller regarding the above requirements for delivery of the Goods, the Buyer may [\*\*] that the [\*\*] of shipped goods [\*\*], after which the Goods [\*\*] to [\*\*] without [\*\*] of [\*\*] and at the [\*\*] of the [\*\*]. Corresponding amendment should be made to the English version of the Contract.

1.6. The batch of Goods must have individual packaging. The marking of the individual package and the insert are to be printed in Russian language.

1.7. Each individual package shall contain the following information in Russian:

- selling company title and its trade mark

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- international non-proprietary name
- methods of application
- batch number
- storage conditions
- shelf-life
- production date

Each shipment shall be accompanied by packing list. Marking shall be clearly done with indelible paint both in English and in Russian, stating as follows:

- Point of destination
- Buyer's name and address
- Seller's name and address
- Contract No
- Name and quantity of goods
- Release date and validity period
- Gross weight
- Net weight
- Keep in dry place
- Handle with care



- Up

- Case No

- Storage temperature at -80 + or 20 degrees

1.8. Freight packages (boxes), which need special treatment, must have additional internationally accepted marking.

1.9. The Buyer has the right, in case of [\*\*] to the [\*\*], to [\*\*] to the [\*\*] will all the [\*\*] of the Goods to Buyer and [\*\*], including [\*\*] all at the [\*\*].

## **II. Prices and Terms of Payment.**

2.1. The total value of the Contract amounts is [\*\*].

2.2. The purchase prices for the Goods are set in accordance with Art.1.2 of the present Contract (prices are stipulated in the General Specification to the Contract attached as Exhibit A) and are understood to be [\*\*] as provided by Incoterms-2002 and the present Contract and any loss or damage thereafter shall be the responsibility of Buyer notwithstanding any other provision of this Contract. The prices shall stay firm and stable for a period of [\*\*] after the date of the Contract.

2.3. Except as provided here, the prices include the cost of [\*\*] and delivery on the

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mentioned terms. Buyer shall be responsible for payment of all value added taxes, customs fees and duties, custom broker services fees, and any others taxes fees and expenses payable in connection with the importation of Goods into Russia and the sale of Goods to customers within Russia.

2.4. Buyer shall pay Seller the price for each Good within [\*\*] (Business Day defined as any day that banks in Moscow, Russia and NY, USA are open) of receipt of [\*\*] or within [\*\*] of [\*\*] to the [\*\*], whichever comes first. Payment of the Seller's invoice in full is to be done by Buyer in USD by direct bank transfer to the Seller's bank account.

### **III. Basis of Delivery.**

3.1. The Seller delivers the Goods under the present Contract on [\*\*] terms understood and interpreted as provided by Incoterms-2002 and the present Contract.

3.2. The time and date of delivery is considered the time and date of delivery of the Goods to [\*\*].

3.3 Along with the shipped parcel should be sent following documentation:

- Air delivery note
- invoice
- Packing list
- Certificate of Quality Product
- Insurance certificate
- The certificate of analysis in English and Russian

3.4. The title for the Goods shall pass onto the Buyer at the [\*\*] of [\*\*] to [\*\*].

### **NOTIFICATION OF SHIPMENT**

3.5 Within [\*\*] after shipment of the goods the Seller shall advise the Buyer by telefax the following information:

- Date of shipment
- Contract No
- Waybill No

- Description of goods
- Total value of goods
- Number of cases and packages
- Gross weight
- Mode of transportation including courier information

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### **IV. Dates of Delivery. Acceptance of the Goods.**

4.1. Shipment. The Seller delivers the Products using a carrier selected by Seller for shipment to the Buyer. Seller shall be responsible for selecting and making all arrangements for a Carrier to ship the Products from Seller manufacturing facility.

The Seller delivers the Goods in separate consignments in time, to the quantities and in assortment range agreed upon by the parties.

4.2. The agreement in respect of issues mentioned in the article 4.1 shall be reached according to the following procedure. Products may be ordered on a patient by patient basis by use of an order for in a form and substance agreed to by the parties (the Product Order ). Each Product Order shall be for one batch of Product. The Product Order can be sent by the Buyer to the Seller by [\*\*], or other agreed means of [\*\*] communications, so long as an original of the Product Order is delivered to Seller within [\*\*] of the placement of the Product Order via [\*\*] or [\*\*] or any other agreed to means of [\*\*] communications. The [\*\*] shall require that, in order for Buyer to obtain any Product, the institution ultimately receiving the Product from Buyer shall obtain the biomaterials necessary to produce such Product from the applicable patient, and such biomaterials must be received by Seller in useable form. Product manufacture for each batch of Product shall begin when Seller receives both a copy of the Product Order and the required [\*\*] and Product manufacture shall be completed within [\*\*] after commencement. However, each party hereby acknowledges and agrees that if Seller determines at any time in [\*\*] that it cannot [\*\*] and [\*\*] the Product for any reason, Seller shall have [\*\*] to [\*\*] or any [\*\*] for failure to [\*\*] and [\*\*] the Product. This shall be explicitly specified in each Product Order.

4.3. Receipt of the Goods is made:

On a patient per patient basis as per the number of range of the Goods according to the Specification and packing lists as the quality - according to the quality, specified in the Certificate of Quality, given by the Seller.

### **V. Quality and Quantity of the Goods**

5.1. Quantity of the Goods will be determined for each batch as per the invoices made by the Seller .

5.2. The quality of the Goods must be in conformity with the standards of the manufacturer and must be certified by the Certificate of Quality of the manufacturer.

Seller warrants to Buyer that the Products delivered to it pursuant to this Agreement:

**[\*\*] = Portions of this exhibit have been omitted pursuant to a confidential treatment request. An unpredicted version of this exhibit has been filed separately with the Commission.**

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(a) are free from defects in material or workmanship and (b) shall conform to the Product specifications and to any technical conditions or standards provided by the certificate of analysis (EXHIBIT C)

5.3. The remaining shelf life of the Goods shall not be less than [\*\*] of the shelf life stipulated by technical conditions or standard for the Goods.

5.4. Delivery of the Goods outside of the requirements of Section 5.3 is allowed only by agreement in writing with the Buyer.

## **VI. Claims.**

6.1. Claims to the Seller may be made by the Buyer:

- as per breakage and defective Goods - no later than [\*\*] from the date of delivery of the Goods

- as per units quantity no later than [\*\*] from the date of delivery of the Goods as per the quantity within [\*\*] of delivery.

6.4. The Seller shall consider the claim and reply in essence of the claim within [\*\*] from the date of receipt of the claim

6.5. Making a claim as per the quality, the Buyer shall notify the Seller in writing of its quality claim. If the Seller agrees with the claim, the Buyer shall have [\*\*] for [\*\*] and shall have the right [\*\*] to [\*\*]. If the parties disagree, then a qualified independent third party shall resolve the dispute and the Buyer shall have the right [\*\*] to [\*\*] if such independent third party agrees with Buyer's quality claim.

6.6. All [\*\*] related to the [\*\*] and [\*\*] of the rejected Goods shall be [\*\*] by [\*\*] if the Goods are ultimately determined to be in non-conformance with the Contract; otherwise [\*\*] shall be [\*\*] by [\*\*].

## **VII. Sanctions.**

7.1. This Agreement shall be governed by the laws of [\*\*] without giving effect to any conflict or choice of laws principle or rule that might otherwise cause the law of some other jurisdiction to govern, and the Parties agree that the 1980 United Nations Convention on Contracts for the International Sale of Goods shall not apply to or affect any term of this Agreement.

7.2. In the case the delivery of Goods shall be impossible the Seller must inform immediately the Buyer and the Buyer shall have no payment obligation with respect to such undeliverable Goods.

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### **VIII. Force majeure.**

8.1 Neither Buyer nor Seller shall be liable for any delay or failure to perform its obligations under this Contract because of events beyond its reasonable control and which were not reasonably foreseeable at the time of signing this Contract, including but not limited to strikes, riots, war, fire, acts of God, acts of government, supplier delays, and breakdown or general unavailability of materials or transportation facilities. In the event that a party's non-performance extends for a period greater than [\*\*] as permitted by this section, the other party may terminate the Contract upon written notice to the non-performing party.

### **IX. Termination**

9.1 Either party may terminate the Contract in its entirety: (a) for cause upon the material breach of any obligation or responsibility by the other party which breach remains uncured for [\*\*] after written notice thereof; or (b) upon [\*\*] written notice, upon the bankruptcy, insolvency, or similar filing by or against the other party.

9.2 The Contract shall automatically terminate upon the termination or expiration of the [\*\*] dated as of [\*\*] ([\*\*]) between the Buyer and Seller.

9.3 The Buyer also shall have the right to terminate the Contract in the event the Seller has not delivered a quantity of the Goods pursuant to a Product Order, if the delay in delivery of such Goods exceeds [\*\*].

### **X. Arbitration.**

10.1. Any dispute, controversy or claim arising out of or in relation to this Agreement, including the validity, invalidity, breach or termination thereof, shall be resolved by arbitration in accordance with the [\*\*] at the [\*\*] in accordance with its rules. The number of arbitrators shall be three. The seat of the arbitration shall be [\*\*] in [\*\*]. The arbitral proceedings shall be conducted in English.

### **XI. Final Part.**

11.1. The present Contract comes into force from the date of its signing and is effective until the [\*\*] of such date, unless terminated earlier in accordance with the terms of this Contract, or extended by written agreement of both parties.

11.2. All charges, including bank commissions, taxes and customs expenses on the territory of the Seller related to the execution of the present Contract shall be paid by the

**[\*\*] = Portions of this exhibit have been omitted pursuant to a confidential treatment request. An unpredicted version of this exhibit has been filed separately with the Commission.**

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Seller. All charges, including bank commissions, taxes and customs expenses on the territory of the Buyer related to the execution of the present Contract shall be paid by the Buyer.

11.3. The receipt of export licenses, if needed, in the territory of the Seller, is the duty of the Seller. The receipt of the import licenses in the territory of the Buyer is the duty of the Buyer.

11.4. All alterations, addenda and appendixes to the present Contract are valid only if they are drawn up in writing and signed by authorized representatives of the parties. Other terms and conditions with respect to the sale of Goods between Buyer and Seller and the business arrangement with respect thereto may be as agreed to between the parties in writing and signed by authorized representatives of the parties.

11.5. Neither party may assign, delegate, or subcontract its rights or obligations under this Contract without the prior written consent of the other party; provided, however, that Seller may assign all or any part of this Contract without Buyer's consent to an Affiliate of Seller or to an entity that acquires substantially all of the business of Seller (or the portion of Seller's business that relates to the Goods) through a sale, merger, asset transfer, or other corporate transaction or enters into a licensing, joint venture, distribution, co-commercialization or partnering transaction with Seller involving such business. The parties acknowledge that any assignment of this Agreement, pursuant to a sale, merger, asset transfer, other corporate transaction, or otherwise, shall be an assignment of the corresponding rights and obligations contained herein.

11.6 Any notice or other communication required or permitted by the Contract shall be in writing in the English language and sent to the addresses and been deemed given each as set forth in Article 15.12 of the Distribution Agreement.

11.7. The original of the present Contract is drawn up and signed in 4 copies with parallel Russian and English texts. In case of any discrepancies between the Russian and English versions, English shall govern.

## **XII. Addresses and bank particulars of the Parties.**

### **The Seller:**

**Antigenics Inc.**

Legal address:

3 Forbes Road, Lexington, MA 02421, USA

### **Banking Details:**

Currency: United States Dollar (USD)

For Credit to: Antigenics Inc. DEL

Account #: [\*\*]

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Silicon Valley Bank, Santa Clara, CA

FRB SF: ABA #**[\*\*]**

Silicon Valley Bank, Santa Clara

3003 Tasman Drive

Santa Clara, CA 95054

**The Buyer:**

Legal address:

Suite 66, 3, Znamenskaya street, Krasnogorsk, Moscow region 143405, Russia

**Banking Details:**

SWIFT: SABRRUM3

Bank: Savings Bank of the Russian Federation

Srednerussky Head Office, Moscow,

Krasnogorsky Branch 7808

Currency: United States Dollar (USD)

Acc.No.: **[\*\*]**

Currency: Euro

Acc.No.: **[\*\*]**

**XIII. Signatures of the Parties.**

**by and on behalf of the BUYER:**

/s/ illegible

**by and on behalf of the SELLER:**

/s/ Garo H. Armen

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**EXHIBIT A**

General	A						
Specification No							
Contract No	2						
Date	09.07.2009						
Oncophage, solution for intra dermal injection 25	[**] vials	<b>Reg, No</b>	<b>Unit Price (per invoice) USD</b>	<b>Quantity</b>	<b>Amount</b>	<b>Weight/pack netto (kg)</b>	<b>Total</b>
		JICP-002472/08-030408	Invoice price	[**]	<b>USD</b>	[**] kg.	<b>weight netto (kg)</b>
µg/0.4 mL					Price per [**] units		[**] kg.
			\$[**]USD		[**]		for [**] packs-

**The Buyer:**

**XIII. Signatures of the Parties.**

**by and on behalf of the BUYER:**

/s/ illegible

**by and on behalf of the SELLER:**

/s/ Garo H. Armen

[\*\*] = Portions of this exhibit have been omitted pursuant to a confidential treatment request. An unpredicted version of this exhibit has been filed separately with the Commission.

**Table of Contents****EXHIBIT C****ANTIGENICS****3 Forbes Road, Lexington MA 02421*****CERTIFICATE OF ANALYSIS***

Product: Russian Commercial Renal Cell Carcinoma Autologous Heat Shock Protein (gp96)-Peptide Complex (HSPPC-96) in [\*\*], 25 µg Dose  
 Part/Item #: 26000  
 Item Specification#: IS-26000  
 Batch #: XX-XXX-XXX  
 Unique Patent Code #: 000000XXX  
 Site of Manufacture: Antigenics USA (Lexington, MA)  
 Date of Manufacture: DDMMYY  
 Storage Conditions: -80°C ± 20°C  
 Dose: Injection of 25 µg in 0.4mL

ATTRIBUTES	METHODS	SPECIFICATIONS	RESULTS
Appearance	[**]	[**]	
pH	[**]	[**]	
Identity	[**]	[**]	
Purity	[**]	[**]	
	[**]	[**]	
Strength	[**]	[**]	
Potency	[**]	[**]	
	[**]	[**]	
Safety	[**]	[**]	
	[**]	[**]	

\*Strength is based on the amount of [\*\*] that has an equivalent [\*\*] to the test article.

**Do not use after DDMMYY**

Quality Control Testing Results PASS\_\_\_\_\_

FAIL\_\_\_\_\_

Quality Control

Date

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Batch Disposition PASS\_\_\_\_\_ FAIL\_\_\_\_\_

Quality Assurance

Date

This Certificate of Analysis supersedes any previously issued Certificate of Analysis for this batch.

THIS DOCUMENT IS PROPRIETARY AND ITS CONTENTS ARE THE EXCLUSIVE PROPERTY OF ANTIGENICS, INC.

AN AUTHORIZED OFFICIAL COPY OF THIS DOCUMENT HAS THIS STATEMENT PRINTED IN RED. THIS

DOCUMENT MAY NOT BE REPRODUCED IN ANY FORM WITHOUT PRIOR WRITTEN PERMISSION FROM

ANTIGENICS INC.

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**Exhibit 31.1**

Certification Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended

I, Garo H. Armen, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Antigenics Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:
  - a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles;
  - c. evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and
5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):
  - a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial

information; and

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

Date: November 9, 2009

/s/ GARO H. ARMEN  
**Chief Executive Officer**

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**Exhibit 31.2**

Certification Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as amended

I, Shalini Sharp, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Antigenics Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:
  - a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles;
  - c. evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and
5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):
  - a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial

information; and

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

Date: November 9, 2009

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



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**Exhibit 32.1**

Certification

Pursuant to 18 U.S.C. Section 1350,

As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Quarterly Report on Form 10-Q of Antigenics Inc. (the "Company") for the quarterly period ended September 30, 2009 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned to his/her knowledge hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

- (i) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (ii) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ GARO H. ARMEN, Ph.D.  
**Garó H. Armen, Ph.D.**

**Chief Executive Officer**

/s/ SHALINI SHARP  
**Shalini Sharp**

**Chief Financial Officer**

Date: November 9, 2009

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

The foregoing certification is being furnished to the Securities and Exchange Commission as an exhibit to the Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2009 and should not be considered filed as part of the Quarterly Report on Form 10-Q.