

ROTH STEVEN  
Form 4  
December 08, 2009

**FORM 4** UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
ROTH STEVEN

2. Issuer Name and Ticker or Trading Symbol  
VORNADO REALTY TRUST  
[VNO]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)  
888 SEVENTH AVENUE  
(Street)

3. Date of Earliest Transaction  
(Month/Day/Year)  
12/07/2009

Director  10% Owner  
 Officer (give title below)  Other (specify below)  
Chairman

NEW YORK, NY 10019

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)  
 Form filed by One Reporting Person  
 Form filed by More than One Reporting Person

(City) (State) (Zip)

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V Amount (A) or (D) Price			
Common Shares	12/07/2009		M	1,530,704 A \$ 30.1638	2,873,103 (1)	D	
Common Shares	12/07/2009		F	1,114,451 D \$ 69.01	1,758,652 (1) (2)	D	
Common Shares					7,845	I	Held by foundation (3)
Common Shares					37,165	I	Held by spouse (4)
Common Shares					5,586,913	I	Held by partnership

Common Shares	1,540,102	I	(5) Held by grantor retained annuity trusts (6)
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Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

**Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.** SEC 1474 (9-02)

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned**  
(e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount of Underlying Securities (Instr. 3 and 4)		
				Code	V (A) (D)	Date Exercisable	Expiration Date	Title	Amount Number of Shares
Options (Right to Buy)	\$ 30.1638	12/07/2009		M	1,530,704	03/02/2001 03/02/2010	Common Shares	1,530,704	

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
ROTH STEVEN 888 SEVENTH AVENUE NEW YORK, NY 10019	X		Chairman	

## Signatures

/s/ Steven Roth 12/08/2009

\*\*Signature of Reporting Person

Date

## Explanation of Responses:

\* If the form is filed by more than one reporting person, see Instruction 4(b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

2,310 of these Common Shares were issued as restricted stock and remain unvested under the terms of the Vornado Realty Trust Omnibus (1) Share Plan, with each original grant vesting in equal portions over a five year period. These 2,310 Common Shares vest in January of 2010.

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- (2) 2,192 Common Shares were previously reported as indirectly beneficially owned but were distributed by Interstate Properties subsequent to the date of filing of Mr. Roth's immediately preceding Form 4.
- (3) These Common Shares are held by the Daryl and Steven Roth Foundation, a charitable foundation, over which Mr. Roth holds sole voting and investment power. Mr. Roth disclaims any pecuniary interest in these Common Shares.
- (4) These Common Shares are held by Mr. Roth's spouse. The filing of this Form 4 shall not be deemed an admission that Mr. Roth is the beneficial owner of the Common Shares.
- These Common Shares are held by Interstate Properties, a New Jersey general partnership of which Mr. Roth is a general partner. The filing of this Form 4 shall not be deemed an admission that Mr. Roth is the beneficial owner of these 5,586,913 Common Shares, except
- (5) to the extent of his pecuniary interest. The decline of 4,384 Common Shares held by Interstate Properties since Mr. Roth's immediately preceding Form 4 filing is attributable to a distribution by the partnership of 4,384 Common Shares with respect to which 2,192 were distributed to Mr. Roth, which amount did not exceed Mr. Roth's pecuniary interest in Common Shares held by Interstate Properties.
- (6) These Common Shares are held in grantor retained annuity trusts. The filing of this Form 4 shall not be deemed an admission that Mr. Roth is the beneficial owner of the Common Shares.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number. >(d)(1) Amended and Restated 1995 Stock Option Plan (incorporated by reference to Exhibit 10.24 of the registrant's quarterly report on Form 10-Q for the period ended July 30, 2005 as filed on September 8, 2005)(d)(2)\* Amended and Restated 1995 Stock Option Plan Form of Restricted Stock Unit Agreement and Notice of Restricted Stock Unit Grant (for use in connection with the Exchange Offer)(g) Not applicable(h) Not applicable

\* Previously filed with the Schedule TO filed with the Securities and Exchange Commission on December 16, 2008 and incorporated herein by reference.

\*\* Previously filed with Amendment No. 1 to the Schedule TO filed with the Securities and Exchange Commission on January 12, 2009 and incorporated herein by reference.

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 December 31, 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 8,548,000 shares. If such holder had exercised such conversion right on December 31, 2009, such holder would have owned approximately 9% 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 historically had low trading volume, and its public trading price has been volatile.***

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Between our initial public offering on February 4, 2000 and December 31, 2009, and for the year ended December 31, 2009, the closing price of our common stock has fluctuated between \$0.30 and \$52.63 per share

## Table of Contents

and \$0.30 and \$2.99 per share, respectively. The average daily trading volume for the year ended December 31, 2009 was approximately 1,925,000 shares, which is a significant increase from our average trading volume for the twelve months ended March 31, 2009 of 238,000 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; 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.***

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 December 31, 2009, we had approximately 89,754,000 shares of common stock outstanding. All of these shares are eligible for sale on The NASDAQ Capital Market, although certain of the shares are subject to sales volume and other limitations. We have filed registration statements to permit the sale of approximately 25,437,000 shares of common stock under our equity incentive plan and certain equity plans that we assumed in our 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, to permit the sale of 9,673,900 shares of common stock pursuant to a private placement agreement dated July 30, 2009 and to permit the sale of 8,552,632 shares of common stock pursuant to a private placement agreement dated August 3, 2009. As of December 31, 2009, an aggregate of 41,179,000 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 December 31, 2009, options to purchase 6,148,621 shares of our common stock with a weighted average exercise price per share of \$2.93 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 December 31, 2009, we have 200,029 nonvested shares outstanding.

***Our stock may be delisted from The NASDAQ Capital Market, which could affect its market price and liquidity.***

Our common stock is currently listed on The NASDAQ Capital Market under the symbol AGEN. In the event that we fail to satisfy any of the listing requirements, our common stock may be put under review or removed from the listing on The NASDAQ Capital Market.

On December 30, 2009, we were notified by the Staff indicating that we are not in compliance with the Bid Price Requirement because the bid price for our common stock had closed below the minimum \$1.00 per share



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**Table of Contents**

requirement for 30 consecutive business days. In accordance with Nasdaq Marketplace Rule 5810(c)(3)(A), we have been provided 180 calendar days, or until June 28, 2010, to regain compliance with the Bid Price Requirement. After the initial 180 calendar day period, we may be eligible for an additional 180 day compliance period to regain compliance with the Bid Price Requirement, assuming we continue to meet The NASDAQ Capital Market initial listing criteria set forth in Nasdaq Marketplace Rule 5505, excluding the Bid Price Requirement. To regain compliance with the minimum bid price continued listing requirement, the bid price of our common stock must close at \$1.00 per share or more for a minimum of ten consecutive business days. The Staff may, in its discretion, require our common stock to maintain a bid price of at least \$1.00 per share for a period in excess of ten consecutive business days before determining that we have demonstrated an ability to maintain long-term compliance.

If compliance is not demonstrated within the applicable compliance period, the Staff will notify us that our securities will be delisted from The NASDAQ Capital Market. However, we may appeal the Staff's determination to delist our securities to a Hearings Panel. During any appeal process, shares of our common stock would continue to trade on The NASDAQ Capital Market. There can be no assurance that we will meet the requirements for continued listing on The NASDAQ Capital Market or whether any appeal would be granted by the Hearings Panel.

*Because we are a 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. generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect all deficiencies or weaknesses in our financial reporting. While our management has concluded that there were no material weaknesses in our internal control over financial reporting as of December 31, 2009, our procedures are subject to the risk that our controls may become inadequate because of changes in conditions or as a result of a deterioration in compliance with such procedures. No assurance is given that our procedures and processes for detecting weaknesses in our internal control over financial reporting will be effective.

**Item 1B. *Unresolved Staff Comments***

We have received no written comments from the staff of the SEC regarding our periodic or current reports that (1) we believe are material, (2) were issued not less than 180 days before the end of our 2009 fiscal year, and (3) remain unresolved.

**Item 2. *Properties***

We maintain our corporate offices in Lexington, Massachusetts, in a 162,000 square foot facility under a lease agreement that terminates in August 2013. We have an option to renew this lease for two additional ten-year periods.

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**Table of Contents**

In addition, we lease approximately 40,000 square feet of laboratory, office, and manufacturing space in Framingham, Massachusetts under a lease agreement that terminates in September 2010. We have an option to renew the lease for two additional five-year periods. We have sublet this entire facility.

We also lease approximately 5,400 square feet in an office building in New York, New York. Our New York lease terminates in April 2012.

We believe substantially all of our property and equipment is in good condition and that we have sufficient capacity to meet our current operational needs. We do not anticipate experiencing significant difficulty in retaining occupancy of any of our manufacturing or office facilities and will do so through lease renewals prior to expiration or through replacing them with equivalent facilities.

**Item 3. *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 have appealed the Court's October 5, 2009 order. 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, claims and investigations that arise in the ordinary course of business such as, but not limited to, patent, employment, commercial and environmental matters, as well. While we currently believe that the ultimate outcome of any of these proceedings will not have a material adverse effect on our financial position, results of operations, or liquidity, litigation is subject to inherent uncertainty. Furthermore, litigation consumes both cash and management attention.

**Item 4. *Reserved***

**Table of Contents****PART II****Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

Our common stock is currently listed on The NASDAQ Capital Market under the symbol AGEN.

On December 30, 2009, we were notified by the Staff indicating that we are not in compliance with the Bid Price Requirement because the bid price for our common stock has closed below the minimum \$1.00 per share requirement for 30 consecutive business days. In accordance with Nasdaq Marketplace Rule 5810(c)(3)(A), we have been provided 180 calendar days, or until June 28, 2010, to regain compliance with the Bid Price Requirement. To regain compliance, with the minimum bid price continued listing requirement, the bid price of our common stock must close at \$1.00 per share or more for a minimum of ten consecutive business days. The Staff may, in its discretion, extend the timeline beyond the minimum ten consecutive business days.

The following table sets forth, for the periods indicated, the high and low sale prices per share of our common stock.

	High	Low
<b>2008</b>		
First Quarter	\$ 2.58	\$ 2.00
Second Quarter	3.90	1.56
Third Quarter	2.09	1.37
Fourth Quarter	1.63	0.39
<b>2009</b>		
First Quarter	0.60	0.19
Second Quarter	3.34	0.43
Third Quarter	3.11	1.46
Fourth Quarter	2.24	0.63

As of March 1, 2010, there were approximately 1,900 holders of record and approximately 26,200 beneficial holders of our common stock.

We have never paid cash dividends on our common stock, and we do not anticipate paying any cash dividends in the foreseeable future. We currently intend to retain future earnings, if any, for the future operation and expansion of our business. Any future payment of dividends on our common stock will be at the discretion of our Board of Directors and will depend upon, among other things, our earnings, financial condition, capital requirements, level of indebtedness, and other factors that our Board of Directors deems relevant.

**Stock Performance**

The following graph shows the cumulative total stockholder return on our common stock over the period from December 31, 2004 to December 31, 2009, as compared with that of the NASDAQ Stock Market (U.S. Companies) Index and the NASDAQ Biotechnology Index, based on an initial investment of \$100 in each on December 31, 2004. Total stockholder return is measured by dividing share price change plus dividends, if any, for each period by the share price at the beginning of the respective period, and assumes reinvestment of dividends.

This stock performance graph shall not be deemed filed with the SEC or subject to Section 18 of the Securities Exchange Act, nor shall it be deemed incorporated by reference in any of our filings under the Securities Act of 1933, as amended (the Securities Act).

**Table of Contents**

**COMPARISON OF CUMULATIVE TOTAL RETURN OF ANTIGENICS INC.,  
NASDAQ STOCK MARKET (U.S. COMPANIES) INDEX  
AND NASDAQ BIOTECHNOLOGY INDEX**

	12/31/2004	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009
Antigenics Inc.	100.00	47.04	18.08	20.16	4.74	6.32
NASDAQ Stock Market (U.S. Companies) Index	100.00	101.37	111.03	121.92	72.49	104.31
NASDAQ Biotechnology Index	100.00	102.84	103.89	108.65	94.93	109.77

***Recent Sales of Unregistered Securities***

The below listed payments relate to compensation to a third-party consultant, Raifarm Limited or its affiliates (collectively, Raifarm), for services rendered in relation to the registration and commercialization activities in Russia for Oncophage pursuant to a Master Services Agreement between us and Raifarm, as amended from time to time. The offer, issuance and delivery of the below listed shares of common stock to Raifarm in the manner contemplated by the Master Services Agreement did not require registration under Section 5 of the Securities Act because the transactions were exempted transactions under Section 4(2) of the Securities Act. This determination was based upon and assuming the accuracy of representations and warranties we obtained by Raifarm and compliance by Raifarm with the offering and transfer procedures and restrictions described in the Master Services Agreement and related documents with Raifarm.

	Title of Each Class of		
	Security	Amount of Securities	Nature of Transaction
September 2007	Common Stock, par value \$0.01	8,333	Shares issued for services rendered
Various dates, February - July, 2008	Common Stock, par value \$0.01	346,509	Shares issued for services rendered

**Table of Contents**

Information concerning our equity compensation plans is set forth in our Definitive Proxy Statement with respect to our 2010 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission no later than 120 days after the end of the fiscal year under the heading Equity Plans, which is incorporated herein by reference.

**Item 6. Selected Financial Data**

We have derived the consolidated balance sheet data set forth below as of December 31, 2009 and 2008, and the consolidated statement of operations data for each of the years in the three-year period ended December 31, 2009, from our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. 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 retrospective adoption of Financial Accounting Standards Board 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 470-20, *Debt - Debt with Conversion and Other Options*.

You should read the selected consolidated financial data in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations, our consolidated financial statements, and the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Given our history of incurring operating losses, management believes that it is more likely than not that any deferred tax assets will not be realized through future earnings. Therefore, no income tax benefit has been recognized in the consolidated statements of operations because of the loss before income taxes, and the need to recognize a valuation allowance on the portion of our deferred tax assets, which will not be offset by the reversal of deferred tax liabilities (see Note (1) below).

Changes in cash, cash equivalents, and short-term investments, total current assets, total assets, and stockholders' (deficit) equity in the periods presented below include the effects of the receipt of net proceeds from our debt offerings, equity offerings, the exercise of stock options and warrants, and employee stock purchases that totaled approximately \$18.7 million, \$46.9 million, \$4.6 million, \$25.4 million, and \$48.3 million in the years ended December 31, 2009, 2008, 2007, 2006, and 2005, respectively.

**Table of Contents**

	2009	For the Year Ended December 31,			2005
		2008	2007	2006	
		(In thousands, except per share data)			
		(As adjusted)			
<b>Consolidated Statement of Operations Data:</b>					
Revenue	\$ 3,334	\$ 2,651	\$ 5,552	\$ 692	\$ 630
Operating expenses:					
Research and development	(16,903)	(20,663)	(21,789)	(28,643)	(47,080)
General and administrative	(14,110)	(19,832)	(17,041)	(21,288)	(25,868)
Restructuring costs				(1,374)	(1,596)
Loss from operations	(27,679)	(37,844)	(33,278)	(50,613)	(73,914)
Non-operating income	2,568	12,356	1	141	1
Interest expense, net	(5,207)	(5,313)	(4,658)	(2,287)	(906)
Net loss (1)	(30,318)	(30,801)	(37,935)	(52,759)	(74,819)
Dividends on series A convertible preferred stock	(790)	(790)	(790)	(790)	(790)
Net loss attributable to common stockholders	\$ (31,108)	\$ (31,591)	\$ (38,725)	\$ (53,549)	\$ (75,609)
Net loss attributable to common stockholders per common share, basic and diluted	\$ (0.39)	\$ (0.50)	\$ (0.83)	\$ (1.17)	\$ (1.66)
Weighted average number of shares outstanding, basic and diluted	79,017	63,249	46,512	45,809	45,577
	2009	2008	December 31, 2007	2006	2005
			(In thousands)		
		(As adjusted)			
<b>Consolidated Balance Sheet Data:</b>					
Cash, cash equivalents, and short-term investments	\$ 30,065	\$ 34,463	\$ 18,679	\$ 40,095	\$ 61,748
Total current assets	31,533	35,486	20,782	42,298	66,962
Total assets	45,874	56,822	44,351	72,726	103,889
Total current liabilities	5,355	6,997	8,383	9,078	19,145
Long-term debt, less current portion	49,494	64,126	71,524	68,276	43,425
Stockholders' (deficit) equity	(16,975)	(20,330)	(41,370)	(10,563)	38,256

- (1) Given our history of incurring operating losses, no income tax benefit has been recognized in our consolidated statements of operations because of the loss before income taxes, and the need to recognize a valuation allowance on the portion of our deferred tax assets which will not be offset by the reversal of deferred tax liabilities.

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**Table of Contents**

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

**OVERVIEW**

We are currently researching and/or developing technologies and product candidates to treat cancers and infectious diseases. Since our inception in March 1994, our activities have primarily been associated with the development of our heat shock protein technology and our product, Oncophage® (vitespen), a patient-specific therapeutic cancer vaccine registered for use in Russia for the treatment of kidney cancer patients at intermediate risk for disease recurrence. 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 and 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, 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 December 31, 2009, we had an accumulated deficit of \$562.5 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 December 31, 2009, anticipated revenues, and the estimated proceeds from our license, supply, and collaborative agreements will be sufficient to satisfy our liquidity requirements into mid-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 selected 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, each of which will require additional capital.

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 \$2.00 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.

On August 3, 2009, we entered into another 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.

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.

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,

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## **Table of Contents**

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. After its review, the CHMP adopted a negative opinion and subsequently we withdrew our MAA. We are currently evaluating our options to determine whether and how to proceed with Oncophage in renal cell carcinoma.

In addition, we are exploring the steps necessary to seek approval of Oncophage in other markets directly 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 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 in the United States and potentially in other territories.

Our common stock is currently listed on The NASDAQ Capital Market under the symbol AGEN.

On December 30, 2009, we were notified by the Listing Qualifications Staff of NASDAQ (the Staff ) indicating that we are not in compliance with Nasdaq Marketplace Rule 5550(a)(2) (the Bid Price Requirement ) because the bid price for our common stock had closed below the minimum \$1.00 per share requirement for 30 consecutive business days. In accordance with Nasdaq Marketplace Rule 5810(c)(3)(A), we have been provided 180 calendar days, or until June 28, 2010, to regain compliance with the Bid Price Requirement. After the initial 180 calendar day period, we may be eligible for an additional 180 day compliance period to regain compliance with the Bid Price Requirement, assuming we continue to meet The NASDAQ Capital Market initial listing criteria set forth in Nasdaq Marketplace Rule 5505, excluding the Bid Price Requirement. To regain compliance with the minimum bid price continued listing requirement, the bid price of our common stock must close at \$1.00 per share or more for a minimum of ten consecutive business days. The Staff may, in its discretion, require our common stock to maintain a bid price of at least \$1.00 per share for a period in excess of ten consecutive business days before determining that we have demonstrated an ability to maintain long-term compliance.

## **Historical Results of Operations**

### ***Year Ended December 31, 2009 Compared to the Year Ended December 31, 2008***

*Revenue:* We generated revenue of \$3.3 million and \$2.7 million during the years ended December 31, 2009 and 2008, respectively. Revenue includes revenue earned on shipments of QS-21 to our QS-21 licensees, license fees, and royalties earned. In the years ended December 31, 2009 and 2008, we recorded \$1.5 million each period from the amortization of deferred revenue related to our QS-21 partnered programs.

*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, costs of consultants, and administrative costs. Research and development expense decreased 18% to \$16.9 million for the year ended December 31, 2009 from \$20.7 million for the year ended December 31, 2008. The decrease included declines of \$1.5 million for personnel related expenses and \$241,000 for facility related costs primarily due to cost containment efforts, and \$1.5 million for various outside services primarily related to the status of our Oncophage efforts in Russia and other territories.

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**Table of Contents**

*General and Administrative:* General and administrative expenses consist primarily of personnel costs, facility expenses, and professional fees. General and administrative expenses decreased 29% to \$14.1 million for the year ended December 31, 2009 from \$19.8 million for the year ended December 31, 2008. This decrease is largely attributable to declines of \$2.3 million for various outside services primarily relating to the status of our Oncophage efforts in Russia and other territories, \$1.5 million in personnel related expenses due to cost containment efforts, \$1.0 million in employee and director noncash share-based compensation expense and a \$332,000 decrease in our foreign currency exchange loss.

*Non-operating Income:* Non-operating income of \$2.6 million for the year ended December 31, 2009 consists primarily of a gain on the extinguishment of a portion of our 2005 Notes.

*Interest Expense:* Interest expense decreased to \$5.3 million for the year ended December 31, 2009 from \$6.3 million for the year ended December 31, 2008. This decrease is related to the repurchase of a portion of our 2005 Notes during the fourth quarter of 2008 and the second quarter of 2009. Interest on our 2006 Notes is payable semi-annually on December 30 and June 30 in cash or, at our option, in additional notes or a combination thereof. During the years ended December 31, 2009 and 2008, interest expense included \$2.4 million and \$2.2 million, respectively, paid in the form of additional 2006 Notes.

*Interest Income:* Interest income decreased 86% to \$137,000 for the year ended December 31, 2009 from \$966,000 for the year ended December 31, 2008. This decrease is primarily attributable to a decrease in our average cash, cash equivalents and short-term investments balance coupled with declining interest rates earned on our cash, cash equivalents, and short-term investments. Our average interest rate earned decreased from 2.4% for the year ended December 31, 2008 to 0.49% for the year ended December 31, 2009.

***Year Ended December 31, 2008 Compared to the Year Ended December 31, 2007***

*Revenue:* We generated revenue of \$2.7 million and \$5.6 million during the years ended December 31, 2008 and 2007, respectively. Revenue includes revenue earned on shipments of QS-21 to our QS-21 licensees, license fees, and royalties earned, and in 2007, \$2.0 million of revenue related to a milestone payment received from GlaxoSmithKline Biologicals SA ( GSK ) for the transfer of manufacturing technologies to GSK and \$1.0 million related to a milestone payment received from Elan Pharmaceuticals International Limited, ( Elan ) which initiated a Phase 2 study of their Alzheimer s disease product candidate that contains QS-21. In the years ended December 31, 2008 and 2007, we recorded \$1.5 million and \$877,000, respectively, from the amortization of deferred revenue from our QS-21 partnered programs.

*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 5% to \$20.7 million for the year ended December 31, 2008 from \$21.8 million for the year ended December 31, 2007. The decrease included declines of \$2.3 million in our clinical trial-related expenses and \$330,000 for personnel related expenses, partially offset by a \$1.5 million net increase in other expenses primarily relating to our efforts in Russia and other territories, which includes the fair market value of shares issued to non-employees for services rendered.

*General and Administrative:* General and administrative expenses consist primarily of personnel costs, facility expenses, and professional fees. General and administrative expenses increased 16% to \$19.8 million for the year ended December 31, 2008 from \$17.0 million for the year ended December 31, 2007. This increase is largely related to increases of \$2.3 million in professional fees, primarily relating to our efforts in Russia and other territories, which includes the fair market value of shares issued to non-employees for services rendered, and of \$1.1 million in employee and director noncash share-based compensation expense, partially offset by a \$578,000 net decrease in other expenses.

**Table of Contents**

*Non-operating Income:* Non-operating income of \$12.4 million for the year ended December 31, 2008 included a \$7.7 million gain on the repurchase of \$11.8 million principal amount of our 2005 Notes for \$2.9 million in November 2008 and income of \$4.6 million from the assignment of certain patent applications. The patent applications assigned did not relate to any products currently under development.

*Interest Expense:* Interest expense increased to \$6.3 million for the year ended December 31, 2008 from \$6.1 million for the year ended December 31, 2007 primarily related to the interest on our 2006 Notes payable semi-annually on December 30 and June 30 in cash or, at our option, in additional notes or a combination thereof. During the years ended December 31, 2008 and 2007, interest expense included \$2.2 million and \$2.1 million, respectively, paid in the form of additional 2006 Notes.

*Interest Income:* Interest income decreased 34% to \$966,000 for the year ended December 31, 2008 from \$1.5 million for the year ended December 31, 2007. This decrease is primarily attributable to a decrease in interest rates earned on our cash, cash equivalents, and short-term investments. Our average interest rate earned decreased from 5.3% for the year ended December 31, 2007 to 2.4% for the year ended December 31, 2008.

**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 2009, these research and development programs consisted largely of Oncophage and QS-21, as indicated in the following table (in thousands).

Research and Development Program	Product	Year Ended December 31,				Total
		2009	2008	2007	Prior to 2007	
Heat shock proteins for cancer	Oncophage	\$ 15,309	\$ 17,156	\$ 13,970	\$ 224,456	\$ 270,891
Heat shock proteins for infectious diseases	AG-702/707	262	1,377	2,005	14,066	17,710
Liposomal cancer treatments *	Aroplatin	196	865	3,005	11,567	15,633
Vaccine adjuvant **	QS-21	1,071	648	2,064	7,436	11,219
Other research and development programs		65	617	745	16,378	17,805
Total research and development expenses		\$ 16,903	\$ 20,663	\$ 21,789	\$ 273,903	\$ 333,258

\* 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 early-stage clinical development candidates and generally 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.

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## **Table of Contents**

### ***Product Development Portfolio***

#### ***Oncophage***

We started enrolling patients in our first clinical trial studying Oncophage at Memorial Sloan-Kettering Cancer Center in New York, New York in November 1997. To date, we have treated nearly 800 cancer patients with Oncophage in our clinical trials. Because Oncophage is a novel therapeutic cancer vaccine that is patient-specific, meaning it is derived from the patient's own tumor, it 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 I-Item 1A. Risk Factors of this Annual Report on Form 10-K.

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 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. 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 60 patients, and has expanded to include New York-Presbyterian Hospital/Columbia University Medical Center. Interim 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-established historical median survival of 6.5 months, and 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).

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 opened a subsequent protocol that continued 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, followed 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 ( $n = 362$ ;  $P < 0.05$ ; hazard ratio = 0.54).

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**Table of Contents**

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 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.

Our distributor has obtained an import/export license from the Russian Ministry of Industry and Trade, but prior to commercial launch we, our distributor, or other service providers, 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 will 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 verbally informed us at an oral hearing to anticipate a negative opinion on this MAA. After its review, the CHMP adopted a negative opinion and subsequently we withdrew our MAA. We do not know what impact, if any, this opinion will have on our Russian activities. We are currently evaluating our options to determine whether and how to proceed with Oncophage in renal cell carcinoma.

In addition, we are exploring the steps necessary to potentially 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.

*QS-21*

QS-21 is an adjuvant, or a substance added to a vaccine and other immunotherapeutic, that is intended to enhance the body's immune response to the antigen contained within the treatment. QS-21 is best known for its

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## **Table of Contents**

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 12,000 subjects in a variety of cancer indications, infectious diseases, and other disorders. These studies have been carried out by academic institutions and pharmaceutical companies 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 from us for use in vaccines to treat a variety of human diseases. Companies with QS-21 programs include GSK and JANSSEN Alzheimer's 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 January 16, 2009, we entered into an Amended and Restated Manufacturing Technology Transfer and Supply Agreement, under which GSK has the right to manufacture all of its requirements of commercial grade QS-21. 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. 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 had a commercial license for the use of QS-21 in the 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 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.

## **Liquidity and Capital Resources**

We have incurred annual operating losses since inception, and we had an accumulated deficit of \$562.5 million as of December 31, 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 December 31, 2009, we have raised aggregate net proceeds of \$494.8 million through the sale of common and preferred stock, the exercise of stock

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**Table of Contents**

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 December 31, 2009, we had debt outstanding of \$52.2 million in principal, including \$32.1 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 in the \$16 - \$18 million range for the year ending December 31, 2010. 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 December 31, 2009, anticipated revenues, and the estimated proceeds from our license, supply, and collaborative agreements will be sufficient to satisfy our liquidity requirements into mid-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 selected 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, each of which will require additional capital, as discussed above. Please see the Forward-Looking Statements section and the risks highlighted under Part I-Item 1A. Risk Factors of this Annual Report on Form 10-K.

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 clinical studies. Under these agreements, subject to the enrollment of patients and performance by the applicable institution of certain services, we have estimated our payments to be \$47.2 million over the term of the studies. Through December 31, 2009, we have expensed \$46.1 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 December 31, 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

**Table of Contents**

in numerous vaccines. These agreements grant exclusive worldwide rights in some fields of use and co-exclusive or non-exclusive rights in others. These agreements generally provide us with rights to manufacture and supply QS-21 to the collaborative partner or licensee and also call for royalties to be paid to us on future sales of licensed vaccines that include QS-21, which may or may not be achieved. Significant investment in manufacturing capacity could be required if we were to retain our manufacturing and supply rights.

Our cash, cash equivalents, and short-term investments at December 31, 2009 were \$30.1 million, a decrease of \$4.4 million from December 31, 2008.

During the year ended December 31, 2009, we raised net proceeds of \$18.6 million from private placements. 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 certain warrants issued to the investors, with the SEC within contractually specified time periods. We have filed registration statements covering all required shares. We 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 up to \$3.8 million.

During the year ended December 31, 2009, we repurchased \$1.0 million of our 2005 Notes for \$255,000. 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 years ended December 31, 2009 and 2008 was \$24.2 million and \$28.9 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 I-Item 1A. [Risk Factors](#) of this Annual Report on Form 10-K.

The table below summarizes our contractual obligations as of December 31, 2009 (in thousands).

	Total	Payments Due by Period				More than 5 Years
		Less than 1 Year	1 3 Years	3 5 Years		
Long-term debt (1)	\$ 59,348	\$ 1,251	\$ 58,097	\$	\$	
Operating leases	8,686	2,915	4,365	1,406		
Total	\$ 68,034	\$ 4,166	\$ 62,462	\$ 1,406	\$	

- (1) Assumes the 2006 Notes are not converted and are paid in 2011. In certain circumstances, the 2006 Notes could be called or converted before then. Also includes fixed interest payments, some of which may be paid in kind, and assumes that the 2005 Notes are not converted and are paid on February 1, 2012. In certain circumstances, the 2005 Notes could be converted before then. In addition, the holders of the 2005 Notes can require us to purchase debt from them at certain dates between 2012 and 2020. If the 2005 Notes are not converted and we are not required to purchase the debt, the 2005 Notes mature on February 1, 2025. If the 2005 Notes were outstanding until maturity, there would be additional interest payments of \$13.6 million for the period 2012 through 2025.

Effective July 19, 2002, we sublet part of our Framingham facility to GTC Biotherapeutics, Inc. and we have leased related leasehold improvements and equipment under agreements that were to expire on December 31, 2006. GTC exercised its option to extend this lease until September 2010. Under the terms of our original lease, we are obligated to pay our landlord approximately 7% of our rental income. Effective March 17, 2004, we sublet an

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## **Table of Contents**

additional part of our Framingham facility to PP Manufacturing, whose lease also expires in September 2010. We are contractually entitled to receive base rental payments of approximately \$885,000 in 2010. The collection of this rental income, however, is subject to uncertainty.

We are currently involved in certain legal proceedings as detailed in Item 3 above and Note 16 of the notes to our 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.

### **Inflation**

We believe that inflation has not had a material adverse effect on our business, results of operations, or financial condition to date.

### **Related Parties**

In March 1995, we entered into a consulting agreement with Dr. Pramod Srivastava, our scientific founder and a former member of our Board of Directors, and upon its expiration in March 2006, we entered into a new consulting agreement, effective March 28, 2006, with Dr. Srivastava. The agreement has an initial term ending March 31, 2011. In exchange for the timely performance of services, as defined in the agreement, Dr. Srivastava is entitled to receive compensation to be established by the Compensation Committee of the Antigenics Board of Directors. For the twelve-month period ending March 31, 2010, Dr. Srivastava will receive \$50,000. Dr. Srivastava is also eligible to receive an annual bonus and stock options at the discretion of the Compensation Committee of our Board of Directors. During the year ended December 31, 2009, we paid Dr. Srivastava an additional \$50,000 for his work related to our MAA submitted to the EMEA.

In February 1998, we entered into a research agreement with the University of Connecticut Health Center to fund research in Dr. Srivastava's laboratory at UConn. Dr. Srivastava is a member of the faculty of the University of Connecticut School of Medicine. Effective December 31, 2006, this agreement was terminated, and a termination fee of \$250,000 was paid to UConn in January 2007. The termination of this agreement did not affect our existing license rights under our license agreement with UConn.

On January 9, 2008, we entered into a private placement agreement (the "January 2008 private placement") that included (i) 8,708,717 shares of common stock, (ii) warrants to acquire up to 8,708,717 shares of common stock at \$3.00 per share, and (iii) unit warrants, which, if exercisable due to a triggering event as that term is defined in the applicable warrant, permit a holder to acquire up to 8,708,717 shares of common stock at \$3.00 per share and warrants to acquire up to an additional 8,708,717 shares of common stock at \$3.00 per share. In conjunction with this private placement, we sold 542,050 shares of common stock to Garo H. Armen, Ph.D., our Chairman and Chief Executive Officer, and 1,166,667 shares of common stock to Armen Partners LP. Garo H. Armen is the general partner of Armen Partners LP and owns a controlling interest therein. In addition to the common stock acquired by Garo H. Armen and Armen Partners LP, each acquired an equal number of both warrants and unit warrants. The unit warrants expired January 9, 2010.

### **Critical Accounting Policies and Estimates**

The SEC defines "critical accounting policies" as those that require the application of management's most difficult, subjective, or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods.

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities

## **Table of Contents**

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. We base those estimates on historical experience and on various assumptions that are believed to be reasonable under the circumstances. Actual results could differ from those estimates.

The following listing is not intended to be a comprehensive list of all of our accounting policies. Our significant accounting policies are described in Note 2 of the notes to our consolidated financial statements. In many cases, the accounting treatment of a particular transaction is dictated by U.S. generally accepted accounting principles, with no need for our judgment in its application. There are also areas in which our judgment in selecting an available alternative would not produce a materially different result. We have identified the following as our critical accounting policies.

### ***Revenue Recognition***

Revenue for services under research and development contracts are recognized as the services are performed, or as clinical trial materials are provided. Non-refundable milestone payments that represent the completion of a separate earnings process are recognized as revenue when earned. License fees and royalties are recognized as they are earned. Revenue recognized from collaborative agreements is based upon the provisions of Accounting Standards Codification ( ASC ) 605-25, *Revenue Recognition Multiple Element Arrangements*.

### ***Share-Based Compensation***

In accordance with the fair value recognition provisions of ASC 718, *Compensation Stock Compensation*, we recognize share-based compensation expense net of an estimated forfeiture rate and only recognize compensation expense for those share-based awards expected to vest. Compensation expense is recognized on a straight-line basis over the requisite service period of the award.

Stock options granted to certain non-employees have been accounted for based on the fair value method of accounting in accordance with ASC 505-50, *Equity Equity-Based Payments to Non-Employees*. As a result, the noncash charge to operations for non-employee options with vesting or other performance criteria is affected each reporting period, until the non-employee options vest, by changes in the fair value of our common stock. Effective January 1, 2006, under the provisions of ASC 505-50, the change in fair value of vested options issued to non-employees is reflected in the statement of operations each reporting period, until the options are exercised or expire.

Determining the appropriate fair value model and calculating the fair value of share-based awards requires the use of highly subjective assumptions, including the expected life of the share-based awards and stock price volatility. The assumptions used in calculating the fair value of share-based awards represent management's best estimates, but these estimates involve inherent uncertainties and the application of management judgment. As a result, if factors change and we use different assumptions, our share-based compensation expense could be materially different in the future. In addition, if our actual forfeiture rate is materially different from our estimate, the share-based compensation expense could be significantly different from what we have recorded in the current period. See Note 10 of the notes to our consolidated financial statements for a further discussion on share-based compensation.

### ***Fair Value Accounting Derivative Liability***

As a result of the adoption of certain guidance within ASC 815-40, *Derivatives and Hedging Contracts In Entity's Own Equity* as of January 1, 2009, the conversion feature embedded in our 2006 Notes is 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.

## **Table of Contents**

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. Our derivative liability is valued based on significant unobservable inputs.

### **Recent Accounting Pronouncements**

In June 2009, the Financial Accounting Standards Board ( FASB ) issued the 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 changed how we reference accounting standards, the adoption did not have an impact on our financial position, results of operations, or cash flows.

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 the effects of these activities 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 15 to our consolidated financial statements).

In May 2008, the FASB issued revised 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 14 to our 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 14 to our consolidated financial statements for additional information as to the effect of the adoption of this guidance.

In April 2009, the FASB issued revised guidance to require disclosures by publicly traded companies about the fair value of financial instruments for interim reporting periods 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 14 and 15 to our consolidated financial statements).

In May 2009, the FASB issued 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 required 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

**Table of Contents**

adoption of this guidance did not have an impact on our financial position or results of operations. In February 2010, the FASB revised this guidance and removed the requirement to disclose the date through which subsequent events are reviewed. We have performed an evaluation of subsequent events and determined we did not have any material recognizable or unrecognizable subsequent events.

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-deliverable 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 of this standard on future revenue arrangements that we may enter into.

**Table of Contents**

**Item 7A. *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. During the year ended December 31, 2009, there has been no material change with respect to our interest rate and foreign currency exposures or our approach toward those exposures. However, we are exploring possible commercialization of Oncophage outside of the U.S., which could result in increased foreign currency exposure.