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

FORM 10-Q

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

For the quarterly period ended March 31, 2008,

or

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

For transition period from _____.

Commission File Number: 001-31918

IDERA PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**04-3072298**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

167 Sidney Street
Cambridge, Massachusetts 02139
(Address of principal executive offices)

(617) 679-5500
(Registrant's telephone number, including area code)

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

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

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Common Stock, par value $.001 per share	**22,387,293**
Class	Outstanding as of April 30, 2008

IDERA PHARMACEUTICALS, INC.

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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements, other than statements of historical fact, included or incorporated in this report regarding our strategy, future operations, collaborations, intellectual property, financial position, future revenues, projected costs, prospects, plans, and objectives of management are forward-looking statements. The words "believes," "anticipates," "estimates," "plans," "expects," "intends," "may," "could," "should," "potential," 'likely," "projects," "continue," "will," and "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We cannot guarantee that we actually will achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. There are a number of important factors that could cause our actual results to differ materially from those indicated or implied by forward-looking statements. These important factors include those set forth below under Part II, Item 1A "Risk Factors." These factors and the other cautionary statements made in this Quarterly Report on Form 10-Q should be read as being applicable to all related forward-looking statements whenever they appear in this Quarterly Report on Form 10-Q. In addition, any forward-looking statements represent our estimates only as of the date that this Quarterly Report on Form 10-Q is filed with the SEC and should not be relied upon as representing our estimates as of any subsequent date. We do not assume any obligation to update any forward-looking statements. We disclaim any intention or obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

PART I — FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

IDERA PHARMACEUTICALS, INC.

CONDENSED BALANCE SHEETS
(UNAUDITED)

(in thousands, except per share amounts)	March 31, 2008	December 31, 2007
ASSETS		
Current assets:		
Cash and cash equivalents	$ 51,622	$ 12,588
Short-term investments	10,164	11,155
Receivables	483	628
Prepaid expenses and other current assets	737	656
Total current assets	63,006	25,027
Property and equipment, net	2,091	1,964
Non-current portion of prepaid expenses	104	104
Restricted cash	619	619
Total assets	$ 65,820	$ 27,714
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,404	$ 1,177
Accrued expenses	2,168	1,745
Current portion of capital lease	19	20
Current portion of note payable	—	266
Current portion of deferred revenue	22,726	5,911
Total current liabilities	26,317	9,119
Capital lease obligation, net of current portion	45	50
Note payable, net of current portion	—	877
Deferred revenue, net of current portion	28,804	9,874
Other liabilities	107	75
Total liabilities	55,273	19,995
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.01 par value,		
Authorized — 5,000 shares		
Series A convertible preferred stock,		
Designated — 1,500 shares,		
Issued and outstanding — 1 share at March 31, 2008 and December 31, 2007	—	—
Common stock, $0.001 par value,		
Authorized — 40,000 shares		
Issued and outstanding — 22,271 and 21,569 shares at March 31, 2008 and December 31, 2007, respectively	22	22
Additional paid-in capital	355,432	350,423
Accumulated deficit	(344,905)	(342,734)
Accumulated other comprehensive (loss) income	(2)	8
Total stockholders' equity	10,547	7,719
Total liabilities and stockholders' equity	$ 65,820	$ 27,714

The accompanying notes are an integral part of these financial statements.

IDERA PHARMACEUTICALS, INC.

CONDENSED STATEMENTS OF OPERATIONS

(UNAUDITED)

(in thousands, except per share amounts)	Three Months Ended March 31,	
	2008	2007
Alliance revenue	$ 4,772	$ 1,829
Operating expenses:		
Research and development	4,534	2,819
General and administrative	2,416	1,953
Total operating expenses	6,950	4,772
Loss from operations	(2,178)	(2,943)
Other income (expense):		
Investment income, net	406	477
Interest expense	(82)	(62)
Foreign currency exchange loss	(267)	—
Loss before income taxes	(2,121)	(2,528)
Income tax provision	(50)	—
Net loss	$ (2,171)	$ (2,528)
Basic and diluted net loss per common share (Note 13)	$ (0.10)	$ (0.12)
Shares used in computing basic and diluted net loss per common share	21,899	20,787

The accompanying notes are an integral part of these financial statements.

IDERA PHARMACEUTICALS, INC.

CONDENSED STATEMENTS OF CASH FLOWS

(UNAUDITED)

(in thousands)	Three Months Ended March 31,	
	2008	2007
Cash Flows From Operating Activities:		
Net loss	$ (2,171)	$ (2,528)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities -		
Gain on disposal of property and equipment	—	(3)
Stock-based compensation	659	345
Non-employee stock options	103	90
Depreciation and amortization	128	86
Issuance of common stock for services rendered	12	14
Changes in operating assets and liabilities -		
Accounts receivable	145	(174)
Prepaid expenses and other current assets	(81)	(49)
Accounts payable and accrued expenses	682	(88)
Deferred revenue	35,745	(1,693)
Net cash provided by (used in) operating activities	35,222	(4,000)
Cash Flows From Investing Activities:		
Purchase of available-for-sale securities	(7,071)	(26,206)
Proceeds from sale of available-for-sale securities	—	8,275
Proceeds from maturity of available-for-sale securities	8,045	1,500
Purchase of property and equipment	(249)	(874)
Net cash provided by (used in) investing activities	725	(17,305)
Cash Flow From Financing Activities:		
Proceeds from exercise of common stock options and warrants and employee stock purchases	4,236	192
Payments on note payable	(1,143)	—
Payments on capital lease	(6)	(1)
Net cash provided by financing activities	3,087	191
Net increase (decrease) in cash and cash equivalents	39,034	(21,114)
Cash and cash equivalents, beginning of period	12,588	24,596
Cash and cash equivalents, end of period	$ 51,622	$ 3,482
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 82	$ 65
Cash paid for income taxes	$ 50	$ 45
Supplemental disclosure of non-cash financing and investing activities:		
Conversion of 4% convertible subordinated notes into common stock	$ —	$ 5,033

The accompanying notes are an integral part of these financial statements.

IDERA PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS

MARCH 31, 2008

(UNAUDITED)

(1) (a) Organization

Idera Pharmaceuticals, Inc. ("Idera" or the "Company") is a biotechnology company engaged in the discovery and development of DNA- and RNA-based drug candidates targeted to Toll-Like Receptors, or TLRs, to treat infectious diseases, autoimmune diseases, cancer, and asthma and allergies, and for use as vaccine adjuvants. Drug candidates are compounds that the Company is developing and have not been approved for any commercial use. TLRs are specific receptors present in immune system cells that recognize the DNA or RNA of pathogens such as bacteria or viruses and initiate an immune response. Relying on its expertise in DNA and RNA chemistry, the Company has designed and created proprietary TLR agonists and antagonists to modulate immune responses. A TLR agonist is a compound that stimulates an immune response through the targeted TLR. A TLR antagonist is a compound that blocks activation of an immune response through the targeted TLR.

The Company is focused on developing TLR-targeted compounds for the potential treatment of infectious diseases, autoimmune diseases, and cancer. IMO-2125, a TLR9 agonist, is the Company's lead drug candidate for infectious diseases. At present, a Phase 1 clinical trial of IMO-2125 is underway in patients with chronic hepatitis C virus infection who have not responded to current standard of care therapy. The Company's infectious disease program also includes evaluation of RNA-based compounds that act as agonists of TLR7 and TLR8. The Company has evaluated these compounds in preclinical studies in human cell-based assays and *in vivo* in non-human primates and intends to further evaluate these compounds in preclinical models of infectious disease. In the Company's autoimmune disease program, it has identified DNA-based compounds that act as antagonists of TLR7 and TLR9. These compounds have been evaluated in various preclinical studies, including in mouse models of lupus and rheumatoid arthritis. The Company is conducting further preclinical studies to explore the potential of these novel compounds in treating multiple sclerosis and psoriasis. The Company's cancer treatment research program is focused on potential applications of TLR7 and TLR8 agonists. The Company intends to further evaluate these compounds in preclinical models of cancer.

In addition, Idera is collaborating with three pharmaceutical companies to advance the Company's TLR-targeted compounds in multiple disease areas. The Company is collaborating with Merck KGaA for cancer treatment excluding cancer vaccines, with Merck & Co. Inc., for vaccine adjuvants, and with Novartis International Pharmaceutical, Ltd., or Novartis, for treatment of asthma and allergies. Merck KGaA and Merck & Co. are not related.

The Company has incurred operating losses in all fiscal years except 2002 and had an accumulated deficit of $344.9 million at March 31, 2008. The Company may incur substantial operating losses in future periods. The Company does not expect to generate significant funds internally until it successfully completes development and obtains marketing approval for products, either alone or in collaborations with third parties, which the Company expects will take a number of years. In order to commercialize its therapeutic products, the Company needs to address a number of technological challenges and to comply with comprehensive regulatory requirements.

(b) Recently Adopted Accounting Pronouncement

In July 2007, the Emerging Issues Task Force ("EITF") issued EITF 07-3, "*Accounting for Nonrefundable Advance Payments for Goods or Services to be Used in Future Research and Development Activities*" ("EITF 07-3"). EITF 07-3 clarifies the accounting for nonrefundable advance payments for goods or services that will be used or

rendered for research and development activities. EITF 07-3 states that such payments should be capitalized and recognized as an expense as the goods are delivered or the related services are performed. If an entity does not expect the goods to be delivered or the services rendered, the capitalized advance payment should be charged to expense. The Company adopted EITF 07-3 on January 1, 2008. The adoption of EITF 07-3 did not have a material effect on the Company's financial statements.

In December 2007, the EITF issued EITF 07-1, "*Accounting for Collaborative ArrangementsRelated to the Development and Commercialization of Intellectual Property* " ("EITF 07-1"). EITF 07-1 defines collaborative arrangements and establishes reporting and disclosure requirements for transactions between participants in a collaborative arrangement and between participants in the arrangement and third parties. EITF 07-1 is effective for fiscal years beginning after December 15, 2008. The Company is currently evaluating the effect of EITF 07-1 on its financial statements.

(2) Unaudited Interim Financial Statements

The accompanying unaudited financial statements included herein have been prepared by the Company in accordance with generally accepted accounting principles for interim financial information and pursuant to the rules and regulations of the Securities and Exchange Commission. Accordingly, certain information and footnote disclosures normally included in financial statements prepared in accordance with United States generally accepted accounting principles have been condensed or omitted pursuant to such rules and regulations. In the opinion of management, all adjustments, consisting of normal recurring adjustments, considered necessary for a fair presentation of interim period results have been included. The Company believes that its disclosures are adequate to make the information presented not misleading. Interim results for the three-month period ended March 31, 2008 are not necessarily indicative of results that may be expected for the year ended December 31, 2008. For further information, refer to the financial statements and footnotes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, which was filed with the Securities and Exchange Commission on March 11, 2008.

(3) (a) Cash Equivalents and Investments

The Company considers all highly liquid investments with maturities of 90 days or less when purchased to be cash equivalents. Cash and cash equivalents at March 31, 2008 and December 31, 2007 consisted of cash and money market funds.

The Company accounts for investments in accordance with Statement of Financial Accounting Standards (SFAS) No. 115, "*Accounting for Certain Investments in Debt and Equity Securities"* (SFAS No. 115). Management determines the appropriate classification of marketable securities at the time of purchase. In accordance with SFAS No. 115, investments that the Company does not have the positive intent to hold to maturity are classified as "available-for-sale" and reported at fair market value. Unrealized gains and losses associated with available-for-sale investments are recorded in "Accumulated other comprehensive loss" on the accompanying balance sheets. The amortization of premiums and accretion of discounts, and any realized gains and losses and declines in value judged to be other than temporary, and interest and dividends for all available-for-sale securities are included in "Investment income, net" on the accompanying statements of operations. The Company had no "held-to-maturity" investments, as defined by SFAS No. 115, at March 31, 2008 and December 31, 2007. The cost of securities sold is based on the specific identification method.

The Company had no realized gains or losses from available-for-sale securities for the three-months ended March 31, 2008 and 2007. There were no losses or permanent declines in value included in "investment income, net" for any securities in the three months ended March 31, 2008 and 2007.

The Company had no long-term investments as of March 31, 2008 and December 31, 2007. Available-for-sale securities are classified as short-term regardless of their maturity date as the Company considers them available for

use to fund operations within one year of the balance sheet date. The Company's short-term available-for-sale investments at market value consisted of the following at March 31, 2008 and December 31, 2007:

(in thousands)	March 31, 2008	December 31, 2007
Certificates of deposit	$ 802	$ 2,801
Corporate bonds due in one year or less	3,026	1,653
Corporate bonds due in more than one year	1,005	—
Corporate notes due in one year or less	2,023	—
Corporate notes due in more than one year	1,005	—
Government bonds due in one year or less	2,303	6,701
Total	$ 10,164	$ 11,155

(3) (b) Fair Values of Assets and Liabilities

In September 2006, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 157, "Fair Value Measurements," effective for financial statements issued for fiscal years beginning after November 15, 2007. SFAS No. 157 replaces multiple existing definitions of fair value with a single definition, establishes a consistent framework for measuring fair value and expands financial statement disclosures regarding fair value measurements. This Statement applies only to fair value measurements that already are required or permitted by other accounting standards and does not require any new fair value measurements. The adoption of SFAS No. 157 in the first quarter of 2008 did not have a material impact on the Company's financial position or results of operations.

In accordance with the provisions of SFAS No. 157, the Company measures fair value at the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Statement prioritizes the assumptions that market participants would use in pricing the asset or liability (the "inputs") into a three-tier fair value hierarchy. This fair value hierarchy gives the highest priority (Level 1) to quoted prices in active markets for identical assets or liabilities and the lowest priority (Level 3) to unobservable inputs in which little or no market data exists, requiring companies to develop their own assumptions. Observable inputs that do not meet the criteria of Level 1, and include quoted prices for similar assets or liabilities in active markets or quoted prices for identical assets and liabilities in markets that are not active, are categorized as Level 2. Level 3 inputs are those that reflect the Company's estimates about the assumptions market participants would use in pricing the asset or liability, based on the best information available in the circumstances. Valuation techniques for assets and liabilities measured using Level 3 inputs may include unobservable inputs such as projections, estimates and management's interpretation of current market data. These unobservable Level 3 inputs are only utilized to the extent that observable inputs are not available or cost-effective to obtain.

The table below presents the assets and liabilities measured at fair value on a recurring basis at March 31, 2008 categorized by the level of inputs used in the valuation of each asset and liability.

(in thousands)	Total	Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Money market funds	$50,385	$ 50,385	$ —	$ —
Short-term investments	10,164	—	10,164	—
Total	$60,549	$ 50,385	$ 10,164	$ —
Liabilities	$ —	$ —	$ —	$ —
Total	$ —	$ —	$ —	$ —

The money market funds are classified as Level 1 since they are actively traded daily at $1.00 per share.

The fair value of short-term investments is generally determined from quoted market prices received from pricing services based upon quoted prices from active markets and/or other significant observable market transactions at fair value. Since these prices may not represent actual transactions of identical securities, they are classified as Level 2. Since all short-term investments are classified as available-for-sale securities, any gains or losses are recorded in other comprehensive gains or losses in the equity section of the balance sheet.

The Company also adopted the provisions of SFAS No. 159 "The Fair Value Option for Financial Assets and Financial Liabilities — Including an Amendment of FASB Statement No. 115" in the first quarter of 2008. This Statement allows companies to choose to measure eligible assets and liabilities at fair value with changes in value recognized in earnings. Fair value treatment may be elected either upon initial recognition of an eligible asset or liability or, for an existing asset or liability, if an event triggers a new basis of accounting. The Company did not elect to re-measure any of its existing financial assets or liabilities under the provisions of this Statement.

(4) Property and Equipment

At March 31, 2008 and December 31, 2007, net property and equipment at cost consists of the following:

(in thousands)	March 31, 2008	December 31, 2007
Leasehold improvements	$ 432	$ 430
Laboratory equipment and other	2,832	2,585
Total property and equipment, at cost	3,264	3,015
Less: Accumulated depreciation and amortization	1,173	1,051
Property and equipment, net	$ 2,091	$ 1,964

As of March 31, 2008 and December 31, 2007, laboratory equipment and other includes approximately $98,000 of office equipment financed under a capital lease with accumulated depreciation of approximately $24,000 and $19,000, respectively. Depreciation expense, which includes amortization of assets recorded under capital leases, was approximately $122,000 and $66,000 for the three months ended March 31, 2008 and 2007, respectively. In the three months ended March 31, 2007, the Company sold and wrote off unused furniture and obsolete software, computers and other equipment that had an aggregate cost of approximately $49,000 resulting in a gain of approximately $3,000.

(5) Restricted Cash

As part of the operating lease entered into by the Company in October 2006, the Company was required to restrict $619,000 of cash for a security deposit. These funds are held in certificates of deposit securing a line of credit for the lessor. The restricted cash is expected to be reduced by approximately $103,000 upon each of the second, third and fourth anniversaries of the lease commencement date of June 2007, subject to certain conditions.

(6) Note Payable

In June 2007, the Company executed a promissory note in the aggregate principal amount of $1.3 million (the "Note") in favor of General Electric Capital Corporation ("GE"). The Note was fully secured by specific laboratory, manufacturing, office and computer equipment and was subject to the terms of a master security agreement dated April 23, 2007 by and between the Company and GE. The Note bore interest at a fixed rate of 11% per annum, and

was payable in 48 consecutive monthly installments of principal and accrued interest, with the first installment having been paid out of the proceeds of the borrowing.

In March 2008, the Company paid approximately $1,189,000 to General Electric Capital Corporation as payment in full of all obligations outstanding under the Company's Note with GE. The payment represented approximately $1,121,000 of principal amount outstanding plus accrued interest through the date of payment of approximately $12,000 and a prepayment premium of approximately $56,000. The Note was cancelled in March 2008.

(7) 4% Convertible Notes Payable

In May 2005, the Company sold approximately $5,033,000 in aggregate principal amount of 4% convertible subordinated notes that were due April 30, 2008 (the "4% Notes"). In February 2007, the Company automatically converted these 4% Notes into 706,844 shares of the Company's common stock. In accordance with the terms of the 4% Notes and an agreement dated May 20, 2005, among the Company and the holders of the 4% Notes, the Company was entitled to exercise this right of automatic conversion because the volume-weighted average of the closing prices of the Company's common stock, for a period of ten consecutive trading days, exceeded $8.90 per share, which represented 125% of the conversion price of the 4% Notes. As of February 20, 2007, the 4% Notes were no longer considered outstanding and interest ceased to accrue. Holders of the 4% Notes were paid cash in lieu of any fractional shares and $61,000 in accrued interest through February 19, 2007.

The Company capitalized its financing costs associated with the sale of the 4% Notes and amortized them as interest expense through February 19, 2007. The unamortized balance of the deferred financing costs of $266,000 was reclassified to additional paid-in-capital in connection with the automatic conversion of the 4% Notes in the three months ended March 31, 2007.

(8) Comprehensive Loss

The following table includes the components of comprehensive loss for the three months ended March 31, 2008 and 2007.

(in thousands)	**March 31, 2008**	**March 31, 2007**
Net loss	$ (2,171)	$ (2,528)
Other comprehensive loss	(10)	(8)
Total comprehensive loss	$ (2,181)	$ (2,536)

Other comprehensive loss represents the net unrealized losses on available-for-sale investments.

(9) License Agreement with Merck KGaA

In December 2007, the Company entered into an exclusive, worldwide license agreement with Merck KGaA to research, develop and commercialize products containing the Company's TLR9 agonists for the treatment of cancer, excluding cancer vaccines, which agreement became effective February 4, 2008. Under the terms of the agreement, Idera granted Merck KGaA worldwide exclusive rights to its lead TLR9 agonists, IMO-2055 and IMO-2125, and to a specified number of novel, follow-on TLR9 agonists to be identified by Merck KGaA and the Company under a research collaboration, for use in the treatment, cure and/or delay of the onset or progression of cancer in humans. Under the terms of the agreement, in February 2008 Merck KGaA paid the Company a $40.0 million upfront license fee in Euros of which $39.7 million was received due to foreign currency exchange rates in effect at that time. The Company is recognizing the $40.0 million upfront payment paid under the collaboration as revenue over the expected period of the Company's continuing involvement. Merck KGaA also agreed to reimburse future development costs for certain of the Company's on-going IMO-2055 clinical trials, which will continue to be conducted by Idera; Merck KGaA agreed to pay up to EUR 264 million in development, regulatory approval, and commercial success milestone payments if products containing the Company's TLR9 agonist compounds are successfully developed and marketed

for treatment, cure and/or delay of the onset or progression of cancer in humans; and Merck KGaA agreed to pay royalties on net sales of products containing our TLR9 agonists that are marketed.

(10) Collaboration and License Agreement with Novartis International Pharmaceutical, Ltd.

In May 2005, the Company entered into a research collaboration and option agreement and a separate license, development and commercialization agreement with Novartis to discover, develop and potentially commercialize TLR9 agonists that are identified as potential treatments for asthma and allergies. The Company and Novartis agreed that the term of the research and collaboration phase would be two years commencing in May 2005. The Company initially was recognizing the $4.0 million upfront payment paid under the collaboration as revenue over the two-year term of the research collaboration. In February 2007, Novartis elected to extend the research collaboration by an additional year. As a result of such extension, Novartis paid the Company an additional $1.0 million in May 2007. In March 2008, the Company agreed to extend the research collaboration until December 31, 2008. The extension is anticipated to allow for the advancement of QAX935, a novel agonist of TLR9, into human clinical trials prior to the end of the research collaboration term. The Company amortizes the upfront payment and the extension payment over the expected research term.

(11) Stock-Based Compensation

The Company accounts for share-based payments to employees under SFAS No. 123R, *"Share-Based Payment*," (SFAS No. 123R). This statement requires the Company to recognize all share-based payments to employees in the financial statements based on their fair values. Under SFAS No. 123R, the Company is required to record compensation expense over an award's vesting period based on the award's fair value at the date of grant. The Company's policy is to charge the fair value of stock options as an expense on a straight-line basis over the vesting period. The Company included charges of $659,000 and $345,000 in its statements of operations for the three months ended March 31, 2008 and 2007, respectively, representing the stock compensation expense computed in accordance with SFAS No. 123R.

The Company's stock compensation plans include the 1995 Stock Option Plan, the 1995 Director Stock Option Plan, the 1995 Employee Stock Purchase Plan, the 1997 Stock Incentive Plan and the 2005 Stock Incentive Plan, all of which have been approved by the Company's stockholders. No additional options are being granted under the 1995 Stock Option Plan, the 1995 Director Stock Option Plan and the 1997 Stock Incentive Plan. In 2001, the Company also granted options to purchase shares of Common Stock pursuant to agreements that were not approved by stockholders.

The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model and expensed over the requisite service period on a straight-line basis. The following assumptions apply to the options granted for the three months ended March 31, 2008 and 2007:

	Three Months Ended March 31,	
	2008	2007
Average risk free interest rate	3.3%	4.7%
Expected dividend yield	—	—
Expected lives	5 years	6 years
Expected volatility	65.0%	70.6%
Weighted average grant date fair value of options granted during the period (per share)	$ 7.57	$ 4.91

The Company also awarded non-employee stock options to purchase 60,000 shares of common stock during the first quarter of 2008. These options had a Black-Scholes fair value of $710,000 at the time of grant based on a risk free interest rate of 3.9%, an expected life of 10 years, and an expected volatility of 95%. The fair value of the nonvested portion of the non-employee options will be remeasured each quarter in accordance with EITF No. 96-18, "*Accounting for Equity Instruments That Are Issued to Other than Employees for Acquiring, or in Conjunction with*

Selling, Goods or Services " (EITF No. 96-18). Approximately $103,000 and $90,000 was recorded as an expense for non-employee stock options in the three months ended March 31, 2008 and 2007, respectively.

(12) Alternative Minimum Tax

Merck KGaA paid the Company in February 2008 a $40.0 million upfront license fee in Euros of which $39.7 million was received due to foreign currency exchange rates in effect at that time. As of March 31, 2008, the Company made an estimated quarterly tax payment of $50,000 as a result of this payment generating income subject to the alternative minimum tax or AMT. The Company did not have income subject to AMT for the three months ended March 31, 2007.

(13) Net Loss per Common Share

Basic and diluted net loss per common share is computed using the weighted average number of shares of common stock outstanding during the period. For the three months ended March 31, 2008 and 2007, diluted net loss per share of common stock is the same as basic net loss per share of common stock, as the effects of the Company's potential common stock equivalents are antidilutive. Total antidilutive securities were 6,976,663 and 7,475,086 for the three months ended March 31, 2008 and 2007, respectively, and consist of stock options, warrants and convertible preferred stock. Net loss applicable to common stockholders is the same as net loss for the three months ended March 31, 2008 and 2007.

(14) Warrant Redemption

In January 2008, the Company sent notice to holders of the Company's warrants to purchase common stock that were issued in August 2004 with an expiration date of August 27, 2009 (the "August 2004 Warrants") that under the terms of the warrant agreement, it intended to redeem on March 31, 2008 any August 2004 Warrants not exercised as of that date for a redemption price of $0.08 per share of common stock underlying the August 2004 Warrants. The Company was entitled to exercise this redemption right because the closing price of the Company's common stock for twenty consecutive trading days ending December 20, 2007 was greater than $10.72 or 200% of the exercise price of the warrant. The August 2004 Warrants were exercisable by cash payment only and had an exercise price of $5.36 per share of common stock. Following such notice and through March 31, 2008, the Company received approximately $1,472,000 in proceeds from the exercise of August 2004 Warrants to purchase 274,650 shares of common stock. As of March 31, 2008, all August 2004 Warrants had been exercised.

(15) Related Party Transactions

During the three months ended March 31, 2008, the Company paid Dr. Robert W. Karr, a director of the Company, $47,000 for consulting services. The Company had no related party transactions in the three months ended March 31, 2007.

(16) Subsequent Event

In April 2008, the Company, under its collaboration agreement with Merck & Co., achieved a preclinical milestone with one of its novel TLR9 agonists used as an adjuvant in cancer vaccines. As a result, the Company is entitled to receive a $1.0 milestone payment from Merck & Co.

ITEM 2. *MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS*

GENERAL

We are engaged in the discovery and development of DNA- and RNA-based drug candidates targeted to Toll-Like Receptors, or TLRs, to treat infectious diseases, autoimmune diseases, cancer, and asthma and allergies, and for use as vaccine adjuvants. Drug candidates are compounds that we are developing and have not been approved for any commercial use. TLRs are specific receptors present in immune system cells that recognize the DNA or RNA of pathogens such as bacteria or viruses and initiate an immune response. Relying on our expertise in DNA and RNA chemistry, we have designed and created proprietary TLR agonists and antagonists to modulate immune responses. A TLR agonist is a compound that stimulates an immune response through the targeted TLR. A TLR antagonist is a compound that blocks activation of an immune response through the targeted TLR.

We are focused on developing TLR-targeted compounds for the potential treatment of infectious diseases, autoimmune diseases, and cancer. IMO-2125, a TLR9 agonist, is our lead drug candidate for infectious diseases. At present, we are conducting a Phase 1 clinical trial of IMO-2125 in patients with chronic hepatitis C virus infection who have not responded to current standard of care therapy. As part of our infectious disease program, we are also evaluating RNA-based compounds that act as agonists of TLR7 and TLR8. We have evaluated these compounds in preclinical studies in human cell-based assays and *in vivo* in non-human primates. We intend to further evaluate these compounds in preclinical models of infectious disease. In our autoimmune disease program, we have identified DNA-based compounds that act as antagonists of TLR7 and TLR9. We have evaluated these compounds in various preclinical studies, including in mouse models of lupus and rheumatoid arthritis. We are currently conducting further preclinical studies to explore the potential of these compounds in treating multiple sclerosis and psoriasis. Our cancer treatment research program is focused on potential applications of our TLR7 and TLR8 agonists. We intend to further evaluate these compounds in preclinical models of cancer.

In addition, we are collaborating with three pharmaceutical companies to advance our TLR-targeted compounds in multiple disease areas. We are collaborating with Merck KGaA to research, develop, and commercialize products containing our TLR9 agonists, including IMO-2055, for the treatment of cancer, excluding cancer vaccines. We are also collaborating with Merck & Co., Inc. for the use of our TLR7, 8 and 9 agonists in combination with Merck & Co.'s therapeutic and prophylactic vaccines in the areas of oncology, infectious diseases, and Alzheimer's disease and with Novartis International Pharmaceutical, Ltd., for the discovery, development, and commercialization of our TLR9 agonists for the treatment of asthma and allergy indications. Merck KGaA and Merck & Co. are not related.

As of March 31, 2008, we had an accumulated deficit of $344.9 million. We may incur substantial operating losses in future periods. We do not expect to generate significant funds until we successfully complete development and obtain marketing approval for products, either alone or in collaborations with third parties, which we expect will take a number of years. In order to commercialize our products, we need to address a number of technological challenges and to comply with comprehensive regulatory requirements. In 2008, we expect that our research and development expenses will be higher than our research and development expenses in 2007 as we expand our IMO-2125 development program and accelerate our early-stage programs on TLR antagonists and on agonists of TLR7 and TLR8.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

This management's discussion and analysis of financial condition and results of operations is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an

ongoing basis, management evaluates its estimates and judgments, including those related to revenue recognition. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We regard an accounting estimate or assumption underlying our financial statements as a "critical accounting estimate" where (i) the nature of the estimate or assumption is material due to the level of subjectivity and judgment necessary to account for highly uncertain matters or the susceptibility of such matters to change; and (ii) the impact of the estimates and assumptions on financial condition or operating performance is material.

Our significant accounting policies are described in Note 2 of the Notes to Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2007. Not all of these significant accounting policies, however, fit the definition of "critical accounting estimates." We believe that our accounting policies relating to revenue recognition and stock based compensation, as described under the caption "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies" in our Annual Report on Form 10-K for the year ended December 31, 2007, fit the definition of "critical accounting estimates and judgments."

RESULTS OF OPERATIONS

Three Months Ended March 31, 2008 and 2007

Revenue

Total alliance revenue increased by $2,943,000, or 161%, from $1,829,000 for the three months ended March 31, 2007 to $4,772,000 for the three months ended March 31, 2008. This increase was primarily due to $2,667,000 of license fees we recognized under our collaboration agreement with Merck KGaA, which became effective February 4, 2008. We are recognizing the $40.0 million upfront payment we received from Merck KGaA in February 2008 over the expected research term under the agreement. The increase is also attributable to reimbursed expenses of $103,000 related to conducting certain clinical trials under our collaboration agreement with Merck KGaA and increased reimbursed research costs of $301,000 under our collaboration agreement with Merck & Co. Revenue for both periods also includes $1,250,000 in license fee revenue recognized under our collaboration with Merck & Co. For the three months ended March 31, 2008, we recognized $309,000 in license fee revenue under our collaboration with Novartis compared to $297,000 recognized in the three months ended March 31, 2007.

Our revenues for both periods were comprised of revenue earned under various collaboration and licensing agreements for research and development, including reimbursement of internal and third-party expenses, and license fees, sublicense fees, and royalty payments.

Research and Development Expenses

Research and development expenses increased by $1,715,000, or 61%, from $2,819,000 for the three months ended March 31, 2007 to $4,534,000 for the three months ended March 31, 2008. The increase in research and development expenses in the three months ended March 31, 2008 compared to the three months ended March 31, 2007 was primarily due to increased non-clinical safety studies and clinical costs associated with IMO-2125, increased clinical costs associated with IMO-2055, a portion of which are reimbursed under our agreement with Merck KGaA, and increased research expenses under our Merck & Co. agreement, which are also reimbursed.

	Three Months Ended March 31, (In thousands)		Percentage Increase (Decrease)
	2008	2007	
IMO-2055 External Development Expense	$ 556	$ 375	48%
IMO-2125 External Development Expense	1,262	—	—
Other Drug Development Expense	1,024	1,183	(13%)
Basic Discovery Expense	1,692	1,261	34%
Total Research and Development Expense	$ 4,534	$ 2,819	61%

In the preceding table, research and development expense is set forth in the following four categories:

IMO-2055 External Development Expenses. These expenses include external expenses that we have incurred in connection with IMO-2055, our lead compound being developed for oncology applications. These external expenses reflect payments to independent contractors and vendors for drug development activities conducted after the initiation of IMO-2055 clinical trials and drug manufacturing and related costs but exclude internal costs such as payroll and overhead expenses. Since 2003, when we commenced clinical development of IMO-2055, we have incurred approximately $13.1 million in external expenses through March 31, 2008 in connection with IMO-2055. External development expenses for IMO2055 increased by $181,000, or 48%, from $375,000 for the three months ended March 31, 2007 to $556,000 for the three months ended March 31, 2008. The increase in IMO-2055 expenses for the three months ended March 31, 2008 compared to the same period in 2007 was primarily attributable to higher clinical trial expenses as we advanced our Phase 1b combination trial of IMO-2055 in patients with non-small cell lung cancer and preparations for data analysis and report preparation for our Phase 2 clinical trial of IMO-2055 in patients with metastatic or recurrent clear cell renal cancer. Under our collaboration agreement with Merck KGaA, we will be reimbursed approximately $0.1 million for the Phase 1b combination trial expenses incurred in the three months ended March 31, 2008.

In October 2004, we commenced patient recruitment for an open label, multi-center Phase 2 Stage A clinical trial of IMO-2055 as a monotherapy in patients with metastatic or recurrent clear cell renal cancer. Under the protocol for the trial, we sought to enroll a total of up to 92 patients in Stage A of the trial, 46 who had failed one prior therapy and 46 who were treatment-naïve. We closed enrollment in this trial on June 29, 2007. As of that date, we had enrolled 46 treatment-naïve patients and 45 patients who had failed one prior therapy. At present, the last patient has stopped receiving treatment in the trial and has entered the follow-up period. Data collection and preparations for the analysis are underway and we expect the data to be available in the third quarter of 2008. Once the final results are available, we expect to report them at an appropriate scientific meeting and under our collaboration with Merck KGaA, they will determine how to proceed with IMO-2055 in the treatment of metastatic or recurrent clear cell renal cancer.

In October 2005, we began patient recruitment in the Phase 1 portion of a clinical trial of IMO-2055 in combination with the chemotherapy agents gemcitabine and carboplatin in patients with refractory solid tumor cancers. The purpose of the Phase 1 portion of the trial, which was a single center, open label study, was to evaluate the safety of the chemotherapy combination. Three dose levels of IMO-2055 and three treatment schedules of IMO-2055 were investigated in this trial. We enrolled twenty-two patients in this trial and closed enrollment in July 2007. We reported interim data from 19 patients from this trial at the 12th World Conference on Lung Cancer in Seoul, Korea, in September 2007. The interim data suggested that it was feasible for the combination of IMO-2055, gemcitabine, and carboplatin to be administered in patients with advanced solid tumors. The only dose-limiting toxicities observed in these patients were common side effects observed with gemcitabine and carboplatin. In these 19 patients, the response rate, progression-free survival, and overall survival were 5%, 4.1 months, and 12.9 months, respectively. In the subset of eight patients with non-small cell lung cancer, the response rate, progression-free survival, and overall survival were 13%, 6.5 months and 12.9 months, respectively.

In December 2007, we initiated a Phase 1b trial of IMO-2055 in combination with Avastin and Tarceva in non-small cell lung cancer patients whose cancer had progressed during a prior course of standard therapy. The trial is designed to assess safety of the IMO-2055, Tarceva and Avastin combination and to determine the recommended dosage of IMO-2055 for potential use in a subsequent Phase 2 trial. Three dose levels of IMO-2055 are being investigated with standard dosages and schedules of Tarceva and Avastin. IMO-2055 is administered subcutaneously once a week, with each patient continuing to receive therapy until disease progression as determined by Response

Evaluation Criteria in Solid Tumors, or RECIST, or another protocol-specified stopping criterion is met. We are currently recruiting patients for the trial, which was designed with a target enrollment of up to 40 patients.

In 2007, we made plans to initiate a clinical trial in the U.S. to investigate IMO-2055 in combination with Erbitux, a recombinant, humanized antibody to epidermal growth factor receptor, and Camptosar, a cytotoxic, chemotherapeutic agent that inhibits topoisomerase I function, in patients with colorectal cancer. The Phase 1b trial is designed to evaluate multiple dose levels of IMO-2055 with established treatment regimens for Erbitux and Camptosar.

Under our agreement with Merck KGaA, we will complete the ongoing Phase 2 Stage A renal cell cancer trial and the Phase 1 refractory solid tumor chemotherapy combination trial. We also have agreed with Merck KGaA that we will continue to conduct on its behalf the on-going Phase 1b non-small cell lung cancer trial and that we may initiate the proposed Phase 1b colorectal cancer trial. Merck KGaA has agreed to reimburse us for the development costs associated with these two Phase 1b clinical trials incurred after February 4, 2008, which is the date our agreement with Merck KGaA became effective.

IMO-2125 External Development Expenses. These expenses include external expenses that we have incurred in connection with IMO-2125, our lead compound initially being developed for chronic hepatitis C virus infection. These external expenses reflect payments to independent contractors and vendors for drug development activities conducted after the initiation of the first IMO-2125 clinical trial but exclude internal costs such as payroll and overhead expenses. We commenced clinical development of IMO-2125 in May 2007 and since then we have incurred approximately $2.4 million in external development expenses through March 31, 2008 in connection with IMO-2125, including costs associated with the initiation of our Phase 1 clinical trial and related non-clinical studies and manufacturing process development.

In May 2007, we submitted an investigational new drug, or IND, application for IMO-2125 to the United States Food and Drug Administration, or FDA, and in September 2007, we initiated a Phase 1 study of IMO-2125 in patients with chronic hepatitis C virus infection who have not responded to the current standard of care treatment. We plan to enroll up to 40 patients in four cohorts at escalating IMO-2125 dose levels, with four weeks of treatment. Of the ten patients per cohort, eight will be randomized to receive IMO-2125 treatment and two will be randomized to receive placebo treatment. The trial is designed to assess the safety of IMO-2125 at each dose level. Secondary objectives include assessments of the effects of IMO-2125 on hepatitis C virus RNA levels and parameters of immune system activation. We anticipate interim results from this trial to be available in the first half of 2009.

Other Drug Development Expenses. These expenses include internal and external expenses associated with preclinical development of identified compounds in anticipation of advancing these compounds into clinical development in addition to internal costs associated with products in clinical development.

The internal and external expenses associated with preclinical compounds include payments to contract vendors for manufacturing and the related stability studies, preclinical studies including animal toxicology and pharmacology studies and professional fees, as well as payroll and overhead expenses. Expenses associated with products in clinical development include costs associated with our Hepatitis C Clinical Advisory Board, our Oncology Clinical Advisory Board, payroll and overhead expenses.

Other drug development expenses decreased by $159,000, or 13%, from $1,183,000 for the three months ended March 31, 2007 to $1,024,000 for the three months ended March 31, 2008. The decrease in the three months ended March 31, 2008 compared to the same period in 2007 was primarily due to pre-IND direct external expenses related to IMO-2125, which were included for the three months ended March 31, 2007 but not March 31, 2008 since costs incurred after the May 2007 submission of the IMO-2125 IND have been shown separately in the above table. The decrease in other drug development expenses during 2008 was offset, in part, by increased allocated costs associated with the move to our new facility during the second quarter of 2007.

Basic Discovery Expenses. These expenses include our internal and external expenses relating to the discovery and development of our TLR-targeted programs, including agonists and antagonists of TLRs 7, 8 and 9. These expenses reflect payments for laboratory supplies, external research, and professional fees, as well as payroll and overhead expenses. Basic discovery expenses increased by $431,000, or 34%, from $1,261,000 for the three months ended March 31, 2007 to $1,692,000 for the three months ended March 31, 2008. The increase for the three months ended March 31, 2008 compared to the same period in 2007 was primarily attributable to an increase in payroll expenses, in part, relating to expanding research under our Merck & Co. collaboration, an increase in compensation costs attributable, in part, to employee stock options and an increase in allocated costs associated with the move to our new facility during the second quarter of 2007.

We do not know if we will be successful in developing any drug candidate from our research and development programs. At this time, without knowing the results of our ongoing clinical trials and without an established plan for future clinical tests of drug candidates, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of, or the period, if any, in which material net cash inflows may commence from, any drug candidate from our research and development programs. Moreover, the clinical development any drug candidate from our research and development programs is subject to numerous risks and uncertainties associated with the duration and cost of clinical trials, which vary significantly over the life of a project as a result of unanticipated events arising during clinical development.

General and Administrative Expenses

General and administrative expenses increased by $463,000 or 24%, from $1,953,000 in the three months ended March 31, 2007 to $2,416,000 in the three months ended March 31, 2008. General and administrative expenses consisted primarily of salary expense, stock compensation expense, consulting fees and professional legal fees associated with our patent applications and maintenance, our regulatory filing requirements, and our business development initiatives.

The increase in general and administrative expenses in the three months ended March 31, 2008 compared to the three months ended March 31, 2007 was primarily due to higher compensation expense related to employee stock options and increased allocated costs associated with our new facility to which we moved during the second quarter of 2007. The increase in employee stock option cost during the three months ended March 31, 2008 is primarily attributable to options granted in the current quarter at a time when our stock price was higher than in other quarters. These increased expenses were offset, in part, by lower professional fees associated with marketing research.

Investment Income, net

Investment income decreased by approximately $71,000, or 15%, from $477,000 in the three months ended March 31, 2007 to $406,000 in the three months ended March 31, 2008. This decrease resulted from lower interest rates and lower average investment balances in the three months ended March 31, 2008. These decreases were offset by interest earned on higher average cash balances in the three months ended March 31, 2008.

Interest Expense

Interest expense increased by approximately $20,000, or 32%, from $62,000 in the three months ended March 31, 2007 to $82,000 in the three months ended March 31, 2008. The increase is due to interest and a prepayment premium associated with the note payable. We repaid the note payable in full in March 2008 and the note was cancelled. This increase was offset, in part, by the conversion of all our 4% notes, issued in May 2005, in the aggregate principal amount of approximately $5,033,000 into 706,844 shares of common stock on February 20, 2007.

Foreign Currency Exchange Loss

Foreign currency exchange loss was $267,000 in the three months ended March 31, 2008. There was no foreign currency exchange loss in the three months ended March 31, 2007. In February 2008, Merck KGaA paid us a $40,000,000 upfront license fee denominated in Euros. We received $39,733,000 U.S. dollars due to foreign currency exchange rates in effect at the time we received the payment, which resulted in the foreign currency exchange loss.

Income Tax Expense

For the three months ended March 31, 2008, we recorded approximately $50,000 as income tax expense as a result of income subject to the alternative minimum tax. We did not have income subject to the alternative minimum tax for the three months ended March 31, 2007.

Net Loss Applicable to Common Stockholders

As a result of the factors discussed above, our net loss applicable to common stockholders was $2,171,000 for the three months ended March 31, 2008 compared to $2,528,000 for the three months ended March 31, 2007. We have incurred losses of $84.7 million since January 1, 2001. We also incurred net losses of $260.2 million prior to December 31, 2000 during which time we were involved in the development of antisense technology. Since our inception, we had an accumulated deficit of $344.9 million through March 31, 2008. We may continue to incur substantial operating losses in the future.

LIQUIDITY AND CAPITAL RESOURCES

Sources of Liquidity

We require cash to fund our operating expenses, to make capital expenditures and to pay debt service. Historically, we have funded our cash requirements primarily through the following:

- equity and debt financing;
- license fees and research funding under collaborative and license agreements;
- interest income; and
- lease financings.

In January 2008, we sent notice to holders of our warrants to purchase common stock that were issued in August 2004 with an expiration date of August 27, 2009, or the August 2004 Warrants, that under the terms of the warrant agreement, we intended to redeem on March 31, 2008 any August 2004 Warrants not exercised as of that date for a redemption price of $0.08 per share of common stock underlying the August 2004 Warrants. We were entitled to exercise this redemption right because the closing price of our common stock for twenty consecutive trading days ending December 20, 2007 was greater than $10.72 or 200% of the exercise price of the warrant. The August 2004 Warrants were exercisable by cash payment only and had an exercise price of $5.36 per share of common stock. Following the January 2008 notice of redemption and through March 31, 2008, we received approximately $1,472,000 in proceeds from the exercise of August 2004 Warrants to purchase 274,650 shares of common stock. As of March 31, 2008, all August 2004 Warrants had been exercised.

In December 2007, we entered into an exclusive, worldwide license agreement with Merck KGaA to research, develop and commercialize products containing our TLR9 agonists for the treatment of cancer, excluding cancer vaccines. Under the terms of the agreement, in February 2008 Merck KGaA paid us a $40.0 million upfront license fee in Euros of which we received $39.7 million due to foreign currency exchange rates.

In June 2007, we executed a promissory note in the aggregate principal amount of $1.3 million in favor of General Electric Capital Corporation. The promissory note was secured by specific laboratory, manufacturing, office and computer equipment and was subject to the terms of a master security agreement between us and GE. The promissory note bore interest at a fixed rate of 11% per annum, and was payable in 48 consecutive monthly installments of principal and accrued interest, with the first installment having been paid out of the proceeds of the borrowing. In March 2008, we paid approximately $1.2 million to GE as payment in full of all obligations outstanding under our promissory note with GE. The payment represented approximately $1.1 million of principal amount outstanding plus accrued interest through the date of payment and a prepayment premium of approximately $0.1 million. The note has been cancelled.

Cash Flows

As of March 31, 2008, we had approximately $61.8 million in cash and cash equivalents and investments, a net increase of approximately $38.1 million from December 31, 2007. Operating activities provided $35.2 million of cash during the first quarter of 2008. The $35.2 million primarily reflects the $40.0 million upfront payment less the $0.3 million foreign currency exchange loss under our agreement with Merck KGaA offset, in part, by our $2.1 million net loss for the period, as adjusted for non-cash revenue and expenses, including depreciation and amortization, stock-based compensation, and changes in deferred revenue and our accounts receivable and payable.

The net cash provided by investing activities during the first quarter of 2008 of $0.7 million reflects our purchase of approximately $7.1 million in securities offset by the proceeds of approximately $8.0 million from securities that matured in the first quarter of 2008. The net cash used in investing activities also reflects our purchases of laboratory and computer equipment in the first quarter of 2008.

The net cash provided by financing activities during the first quarter of 2008 of $3.1 million reflects proceeds received from the exercise of stock options and warrants during the first quarter of 2008 offset by the repayment of our promissory note.

Funding Requirements

We have incurred operating losses in all fiscal years except 2002 and had an accumulated deficit of $344.9 million at March 31, 2008. We had cash, cash equivalents and short-term investments of $61.8 million at March 31, 2008. We believe that our existing cash, cash equivalents and short-term investments will be sufficient to fund our operations at least through March 31, 2010. We may incur substantial operating losses in future periods. These losses, among other things, have had and will continue to have an adverse effect on our stockholders' equity, total assets and working capital.

We have received no revenues from the sale of drugs. To date, almost all of our revenues have been from collaborative and license agreements. We have devoted substantially all of our efforts to research and development, including clinical trials, and we have not completed development of any drugs. Because of the numerous risks and uncertainties associated with developing drugs, we are unable to predict the extent of any future losses, whether or when any of our products will become commercially available, or when we will become profitable, if at all.

We do not expect to generate significant additional funds internally until we successfully complete development and obtain marketing approval for products, either alone or in collaboration with third parties, which we expect will take a number of years. In addition, we have no committed external sources of funds. Should we be unable to raise sufficient funds in the future, we may be required to significantly curtail our operating plans and possibly relinquish rights to portions of our technology or products. In addition, increases in expenses or delays in clinical development may adversely impact our cash position and require further cost reductions. No assurance can be given that we will be able to operate profitably on a consistent basis, or at all, in the future.

We believe that the key factors that will affect our internal and external sources of cash are:

- the success of our clinical and preclinical development programs;
- the success of our existing strategic collaborations with Merck KGaA, Merck & Co. and Novartis;
- the cost, timing and outcome of regulatory reviews; and
- our ability to enter into new strategic collaborations with biotechnology and pharmaceutical companies and the success of such collaborations.

Additional financing may not be available to us when we need it or may not be available to us on favorable terms. We could be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights to some of our technologies, drug candidates or drugs that we would otherwise pursue on our own. In addition, if we raise additional funds by issuing equity securities, our then existing stockholders will experience dilution. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends, and are likely to include rights that are senior to the holders of our common stock. Any additional debt financing or equity that we raise may contain terms, such as liquidation and other preferences, or liens or other restrictions on our assets, which are not favorable to us or our stockholders. The terms of any financing may adversely affect the holdings or the rights of existing stockholders. If we are unable to obtain adequate funding on a timely basis or at all, we may be required to significantly curtail one or more of our discovery or development programs.

Contractual Obligations

We have contractual obligations in the form of operating and capital leases. In March 2008, we paid approximately $1.2 million to General Electric Capital Corporation as payment in full of all obligations outstanding under our note with GE. The payment represented approximately $1.1 million of principal amount outstanding plus accrued interest through the date of payment and a prepayment premium. The note has been cancelled.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As of March 31, 2008, we had approximately $0.1 million of receivables denominated in Euros. We had no other assets and liabilities related to non-dollar-denominated currencies as of March 31, 2008.

We maintain investments in accordance with our investment policy. The primary objectives of our investment activities are to preserve principal, maintain proper liquidity to meet operating needs and maximize yields. 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 investments. We do not own derivative financial investment instruments in our investment portfolio.

Based on a hypothetical ten percent adverse movement in interest rates, the potential losses in future earnings, fair value of risk sensitive financial instruments, and cash flows are immaterial, although the actual effects may differ materially from the hypothetical analysis.

ITEM 4. CONTROLS AND PROCEDURES

(a) *Evaluation of Disclosure Controls and Procedures.* Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of period covered by this report. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2008, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

(b) *Changes in Internal Controls*. 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) occurred during the fiscal quarter ended March 31, 2008 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

IDERA PHARMACEUTICALS, INC.

PART II — OTHER INFORMATION

ITEM 1A. RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below in addition to the other information included or incorporated by reference in this quarterly report on Form 10-Q before purchasing our common stock. If any of the following risks actually occurs, our business, financial condition or results of operations would likely suffer, possibly materially. In that case, the trading price of our common stock could fall, and you may lose all or part of the money you paid to buy our common stock.

Risks Relating to Our Financial Results and Need for Financing

We have incurred substantial losses and expect to continue to incur losses. We will not be successful unless we reverse this trend.

We have incurred losses in every year since our inception, except for 2002 when our recognition of revenues under a license and collaboration agreement resulted in our reporting net income for that year. As of March 31, 2008, we had an accumulated deficit of $344.9 million. We have incurred losses of $84.7 million since January 1, 2001. We also incurred losses of $260.2 million prior to December 31, 2000 during which time we were primarily involved in the development of antisense technology. We may incur substantial operating losses in future periods. These losses, among other things, have had and will continue to have an adverse effect on our stockholders' equity, total assets and working capital.

We have never had any products of our own available for commercial sale and have received no revenues from the sale of drugs. To date, almost all of our revenues have been from collaborative and license agreements. We have devoted substantially all of our efforts to research and development, including clinical trials, and we have not completed development of any drugs. Because of the numerous risks and uncertainties associated with developing drugs, we are unable to predict the extent of any future losses, whether or when any of our products will become commercially available, or when we will become profitable, if at all.

We will need additional financing, which may be difficult to obtain. Our failure to obtain necessary financing or doing so on unattractive terms could adversely affect our research and development programs and other operations.

We will require substantial funds to conduct research and development, including preclinical testing and clinical trials of our drug candidates. We will also require substantial funds to conduct regulatory activities and to establish commercial manufacturing, marketing and sales capabilities. We believe that, based on our current operating plan, our existing cash, cash equivalents and short-term investments will be sufficient to fund our operations at least through March 31, 2010.

We will need to raise additional funds to operate our business beyond such time, including completing any on-going clinical trials involving IMO-2125 or other drug candidates we may develop. We believe that the key factors that will affect our ability to obtain additional funding are:

- the success of our clinical and preclinical development programs;
- the success of our existing strategic collaborations with Merck KGaA, Merck & Co. and Novartis;
- the cost, timing and outcome of regulatory reviews;

- the receptivity of the capital markets to financings by biotechnology companies; and
- our ability to enter into additional strategic collaborations with biotechnology and pharmaceutical companies and the success of such collaborations.

If we cannot obtain adequate funds, we may terminate, modify or delay preclinical or clinical trials of one or more of our drug candidates, fail to establish or delay the establishment of manufacturing, sale or marketing capabilities, or curtail research and development programs for new drug candidates.

Additional financing may not be available to us when we need it or may not be available to us on favorable terms. We could be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights to some of our technologies, drug candidates or drugs that we would otherwise pursue on our own. In addition, if we raise additional funds by issuing equity securities, our then existing stockholders will experience dilution. The terms of any financing may adversely affect the holdings or the rights of existing stockholders. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends, and are likely to include rights that are senior to the holders of our common stock. Any additional debt financing or equity that we raise may contain terms, such as liquidation and other preferences, or liens or other restrictions on our assets, which are not favorable to us or our stockholders. If we are unable to obtain adequate funding on a timely basis or at all, we may be required to significantly curtail one or more of our discovery or development programs. For example, we significantly curtailed expenditures on our research and development programs during 1999 and 2000 because we did not have sufficient funds available to advance these programs at planned levels.

Risks Relating to Our Business, Strategy and Industry

We are depending heavily on the success of our lead drug candidate for infectious diseases, IMO-2125, and our collaborative programs. If we or our collaborators are unable to successfully develop and commercialize our drug candidates, or experience significant delays in doing so, our business will be materially harmed.

We are investing a significant portion of our time and financial resources in the development of our clinical stage lead drug candidate for infectious diseases, IMO-2125. We anticipate that our ability to generate product revenues will depend heavily on the successful development and commercialization of IMO-2125 and other drug candidates including drug candidates being developed by our collaborators. The commercial success of these drug candidates will depend on several factors, including the following:

- acceptable safety profile during clinical trials;
- demonstration of statistically recognized efficacy in clinical trials;
- ability to combine IMO-2125 safely and successfully with other antiviral agents;
- receipt of marketing approvals from the FDA and equivalent foreign regulatory authorities;
- establishment of commercial manufacturing arrangements with third-party manufacturers;
- the successful commercial launch of the drug candidates, whether alone or in collaboration with other products;
- acceptance of the products by the medical community and third-party payors;
- competition from other companies and their therapies;
- successful protection of our intellectual property rights from competing products in the United States and abroad; and

- a continued acceptable safety and efficacy profile of our drug candidates following approval.

Our efforts to commercialize IMO-2125 are at an early stage, as we are currently conducting the initial Phase 1 safety clinical trial of this drug candidate in a defined patient population. If we are not successful in commercializing this or our other drug candidates, or are significantly delayed in doing so, our business will be materially harmed.

If our clinical trials are unsuccessful, or if they are delayed or terminated, we may not be able to develop and commercialize our products.

In order to obtain regulatory approvals for the commercial sale of our products, we are required to complete extensive clinical trials in humans to demonstrate the safety and efficacy of our drug candidates. Clinical trials are lengthy, complex and expensive processes with uncertain results. We may not be able to complete any clinical trial of a potential product within any specified time period. Moreover, clinical trials may not show our potential products to be both safe and efficacious. The FDA and other regulatory authorities may not approve any of our potential products for any indication. We may not be able to obtain authority from the FDA or other equivalent foreign regulatory agencies to complete these trials or commence and complete any other clinical trials.

The results from preclinical testing of a drug candidate that is under development may not be predictive of results that will be obtained in human clinical trials. In addition, the results of early human clinical trials may not be predictive of results that will be obtained in larger scale, advanced stage clinical trials. Furthermore, interim results of a clinical trial do not necessarily predict final results and failure of any of our clinical trials can occur at any stage of testing. Companies in the biotechnology and pharmaceutical industries, including companies with greater experience in preclinical testing and clinical trials than we have, have suffered significant setbacks in clinical trials, even after demonstrating promising results in earlier trials. For example in June 2007, Coley Pharmaceutical Group, which since has been acquired by Pfizer, Inc., discontinued four clinical trials in lung cancer for PF-3512676, its investigational TLR9 agonist compound, in combination with cytotoxic chemotherapy. In addition, in January 2007, Coley Pharmaceutical Group announced that it had suspended its development of a TLR9 agonist, Actilon ® , for hepatitis C virus infection. In July 2007, Anadys Pharmaceuticals, Inc. and its partner Novartis announced that they had decided to discontinue the development of ANA975, the investigational TLR7 agonist compound for hepatitis C virus infection. In March 2008, Dynavax Technologies announced that two investigational new drug applications for its proprietary TLR9 agonist, HEPLISAV, had been placed on clinical hold by the FDA.

There are to date few data on the long-term clinical safety of our lead compounds under conditions of prolonged use in humans, or on any long-term consequences subsequent to human use. Effects seen in preclinical studies, even if not observed in clinical trials, may result in limitations or restrictions on our clinical trials. We may experience numerous unforeseen events during, or as a result of, preclinical testing, nonclinical testing, or the clinical trial process that could delay or inhibit our ability to receive regulatory approval or to commercialize our products, including:

- regulators or Institutional Review Boards may not authorize us to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- nonclinical or clinical data may not be readily interpreted, which may lead to delays and/or misinterpretation;
- our nonclinical tests, including toxicology studies, or clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional nonclinical testing or clinical trials or we may abandon projects that we expect may not be promising;
- the rate of enrollment or retention of patients in our clinical trials may be less than expected;
- we might have to suspend or terminate our clinical trials if the participating patients experience serious adverse events or undesirable side effects or are exposed to unacceptable health risks;

- regulators or Institutional Review Boards may require that we hold, suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements, including any issues identified through inspections of manufacturing or clinical trial operations or clinical trial sites;
- regulators may hold or suspend our clinical trials while collecting supplemental information on, or clarification of, our clinical trials or other clinical trials, including trials conducted in other countries or trials conducted by other companies;
- we, along with our collaborators and subcontractors, may not employ, in any capacity, persons who have been debarred under the FDA's Application Integrity Policy. Employment of such debarred persons, even if inadvertently, may result in delays in the FDA's review or approval of our products, or the rejection of data developed with the involvement of such person(s);
- the cost of our clinical trials may be greater than we currently anticipate; and
- our products may not cause the desired effects or may cause undesirable side effects or our products may have other unexpected characteristics.

As an example, in 1997, after reviewing the results from the clinical trial of GEM91, a first generation antisense compound and our lead drug candidate at the time, we determined not to continue the development of GEM91 and suspended clinical trials of this drug candidate.

The rate of completion of clinical trials is dependent in part upon the rate of enrollment of patients. For example, in Stage A of our Phase 2 trial of IMO-2055 in renal cell cancer, enrollment was slower than projected due to the recent approval of two new therapies, Sutent ® and Nexavar ®, developed by other companies for treatment of the same patient populations. Patient accrual is a function of many factors, including:

- the size of the patient population;
- the proximity of patients to clinical sites;
- the eligibility criteria for the study;
- the nature of the study;
- the existence of competitive clinical trials; and
- the availability of alternative treatments.

We do not know whether clinical trials will begin as planned, will need to be restructured or will be completed on schedule, if at all. Significant clinical trial delays also could allow our competitors to bring products to market before we do and impair our ability to commercialize our products.

Delays in commencing clinical trials of potential products could increase our costs, delay any potential revenues and reduce the probability that a potential product will receive regulatory approval.

Our drug candidates and our collaborators' drug candidates will require preclinical and other nonclinical testing and extensive clinical trials prior to submission of any regulatory application for commercial sales. In 2007, we commenced a new Phase 1b clinical trial of IMO-2055 in oncology, and we commenced a Phase 1 clinical trial of IMO-2125 for chronic hepatitis C virus infection. In conducting clinical trials, we cannot be certain that any planned clinical trial will begin on time, if at all. Delays in commencing clinical trials of potential products could increase our

product development costs, delay any potential revenues and reduce the probability that a potential product will receive regulatory approval.

Commencing clinical trials may be delayed for a number of reasons, including delays in:

- manufacturing sufficient quantities of drug candidate that satisfy the required quality standards for use in clinical trials;
- demonstrating sufficient safety to obtain regulatory approval for conducting a clinical trial;
- reaching an agreement with any collaborators on all aspects of the clinical trial;
- reaching agreement with contract research organizations, if any, and clinical trial sites on all aspects of the clinical trial;
- resolving any objections from the FDA or any regulatory authority on an IND application or proposed clinical trial design;
- obtaining Institutional Review Board approval for conducting a clinical trial at a prospective site; and
- enrolling patients in order to commence the clinical trial.

The technologies on which we rely are unproven and may not result in any approved and marketable products.

Our technologies or therapeutic approaches are relatively new and unproven. We have focused our efforts on the research and development of RNA- and DNA-based compounds targeted to TLRs. Neither we nor any other company have obtained regulatory approval to market such compounds as therapeutic drugs, and no such products currently are being marketed. It is unknown whether the results of preclinical studies with TLR-targeted compounds will be indicative of results that may be obtained in clinical trials, and results we have obtained in the initial small-scale clinical trials we have conducted to date may not be predictive of results in subsequent large-scale trials. Further, the chemical and pharmacological properties of RNA- and DNA-based compounds targeted to TLRs may not be fully recognized in preclinical and small-scale clinical trials, and such compounds may interact with human biological systems in unforeseen, ineffective, or harmful ways that we have not yet identified. As a result of these factors, we may never succeed in obtaining a regulatory approval to market any product. Furthermore, the commercial success of any of our products for which we may obtain marketing approval from the FDA or other regulatory authorities will depend upon their acceptance by the medical community and third party payors as clinically useful, safe, and cost-effective. In addition, if products based upon TLR technology being developed by our competitors have negative clinical trial results or otherwise are viewed negatively, the perception of our TLR technology and market acceptance of our products could be impacted negatively. For example, we are pursuing an indication for treatment of chronic hepatitis C virus infection for IMO-2125 and commenced a Phase 1 clinical trial of IMO-2125 in patients with chronic hepatitis C virus infection in the third quarter of 2007. Pfizer, Inc. and Anadys Pharmaceuticals, Inc. each have performed early clinical trials of TLR-targeted compounds for the treatment of chronic hepatitis C virus infection, and both programs have been discontinued. We cannot be certain whether such discontinuations will negatively impact the perception of our TLR technology.

Our efforts to educate the medical community on our potentially unique approaches may require greater resources than would be typically required for products based on conventional technologies or therapeutic approaches. The safety, efficacy, convenience and cost-effectiveness of our products as compared to competitive products will also affect market acceptance.

We face substantial competition, which may result in others discovering, developing or commercializing drugs before or more successfully than us.

The biotechnology industry is highly competitive and characterized by rapid and significant technological change. We face, and will continue to face, intense competition from pharmaceutical and biotechnology companies, as well as academic and research institutions and government agencies. Some of these organizations are pursuing products based on technologies similar to our technologies. Other of these organizations have developed and are marketing products, or are pursuing other technological approaches designed to produce products, that are competitive with our drug candidates in the therapeutic effect these competitive products have on diseases targeted by our drug candidates. Our competitors may discover, develop or commercialize products or other novel technologies that are more effective, safer or less costly than any that we are developing. Our competitors may also obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours. As examples, the FDA recently approved drugs developed by other companies, Sutent ® and Nexavar ® , for use in renal cell cancer, which is the indication for which we are evaluating IMO-2055 monotherapy in our Phase 2 trial. Pfizer, Inc., is conducting clinical trials of PF-3512676, a TLR9 agonist for treating cancer. In addition, Dynavax Technologies Corporation has announced initiation of a clinical trial for its TLR9 agonist 1018 ISS for cancer. Both Pfizer, Inc., and Dynavax Technologies Corporation have clinical programs, either independently or with collaborators, in therapeutic fields other than cancer, such as asthma and allergy treatments and for use as vaccine adjuvants, that also potentially compete with our drug candidates.

Many of our competitors are substantially larger than we are and have greater capital resources, research and development staffs and facilities than we have. In addition, many of our competitors are more experienced than we are in drug discovery, development and commercialization, obtaining regulatory approvals and drug manufacturing and marketing.

We anticipate that the competition with our products and technologies will be based on a number of factors including product efficacy, safety, availability and price. The timing of market introduction of our products and competitive products will also affect competition among products. We expect the relative speed with which we can develop products, complete the clinical trials and approval processes and supply commercial quantities of the products to the market to be important competitive factors. Our competitive position will also depend upon our ability to attract and retain qualified personnel, to obtain patent protection or otherwise develop proprietary products or processes and protect our intellectual property, and to secure sufficient capital resources for the period between technological conception and commercial sales.

Competition for technical and management personnel is intense in our industry, and we may not be able to sustain our operations or grow if we are unable to attract and retain key personnel.

Our success is highly dependent on the retention of principal members of our technical and management staff, including Dr. Sudhir Agrawal. Dr. Agrawal serves as our Chief Executive Officer and Chief Scientific Officer. Dr. Agrawal has made significant contributions to the field of oligonucleotide-based drug candidates, and has led the discovery and development of our compounds targeted to TLRs. He is named as an inventor on over 380 patents and patent applications worldwide. Dr. Agrawal provides us leadership for management, research and development activities. The loss of Dr. Agrawal's services would be detrimental to our ongoing scientific progress and the execution of our business plan.

We are a party to an employment agreement with Dr. Agrawal that expires on October 19, 2010, but automatically extends annually for an additional year. This agreement may be terminated by us or Dr. Agrawal for any reason or no reason at any time upon notice to the other party. We do not carry key man life insurance for Dr. Agrawal.

Furthermore, our future growth will require hiring a number of qualified technical and management personnel. Accordingly, recruiting and retaining such personnel in the future will be critical to our success. There is intense competition from other companies and research and academic institutions for qualified personnel in the areas of our activities. If we are not able to continue to attract and retain, on acceptable terms, the qualified personnel necessary for the continued development of our business, we may not be able to sustain our operations or growth.

Regulatory Risks

We may not be able to obtain marketing approval for products resulting from our development efforts.

All of the drug candidates that we are developing or may develop in the future will require additional research and development, extensive preclinical studies and clinical trials, and regulatory approval prior to any commercial sales. This process is lengthy, often taking a number of years, is uncertain, and is expensive. Since our inception, we have conducted clinical trials of a number of compounds. Currently, we are conducting clinical trials of IMO-2125 and IMO-2055.

We may need to address a number of technological challenges in order to complete development of our products. Moreover, these products may not be effective in treating any disease or may prove to have undesirable or unintended side effects, unintended alteration of the immune system over time, toxicities or other characteristics that may preclude our obtaining regulatory approval or prevent or limit commercial use.

We are subject to comprehensive regulatory requirements, which are costly and time consuming to comply with; if we fail to comply with these requirements, we could be subject to adverse consequences and penalties.

The testing, manufacturing, labeling, advertising, promotion, export and marketing of our products are subject to extensive regulation by governmental authorities in Europe, the United States and elsewhere throughout the world.

In general, submission of materials requesting permission to conduct clinical trials may not result in authorization by the FDA or any equivalent foreign regulatory agency to commence clinical trials. Further, permission to continue ongoing trials may be withdrawn by the FDA or other regulatory agencies at any time after initiation, based on new information available after the initial authorization to commence clinical trials. In addition, submission of an application for marketing approval to the relevant regulatory agency following completion of clinical trials may not result in the regulatory agency approving the application if applicable regulatory criteria are not satisfied, and may result in the regulatory agency requiring additional testing or information.

Any regulatory approval of a product may contain limitations on the indicated uses for which the product may be marketed or requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the product. Any product for which we obtain marketing approval, along with the facilities at which the product is manufactured, any post-approval clinical data and any advertising and promotional activities for the product will be subject to continual review and periodic inspections by the FDA and other regulatory agencies.

Both before and after approval is obtained, violations of regulatory requirements may result in:

- the regulatory agency’s delay in approving, or refusal to approve, an application for marketing of a product;
- restrictions on our products or the manufacturing of our products;
- withdrawal of our products from the market;
- warning letters;
- voluntary or mandatory recall;
- fines;
- suspension or withdrawal of regulatory approvals;
- product seizure;

- refusal to permit the import or export of our products;
- injunctions or the imposition of civil penalties; and
- criminal penalties.

We have only limited experience in regulatory affairs and our products are based on new technologies; these factors may affect our ability or the time we require to obtain necessary regulatory approvals.

We have only limited experience in filing the applications necessary to gain regulatory approvals. Moreover, the products that result from our research and development programs will likely be based on new technologies and new therapeutic approaches that have not been extensively tested in humans. The regulatory requirements governing these types of products may be more rigorous than for conventional drugs. As a result, we may experience a longer regulatory process in connection with obtaining regulatory approvals of any product that we develop.

Risks Relating to Collaborators

We need to establish additional collaborative relationships in order to succeed.

If we do not reach agreements with additional collaborators in the future, we may fail to meet our business objectives. We believe collaborations can provide us with expertise and resources. If we cannot enter into additional collaboration agreements, we may not be able to obtain the expertise and resources necessary to achieve our business objectives. We face, and will continue to face, significant competition in seeking appropriate collaborators. Moreover, collaboration arrangements are complex and time consuming to negotiate, document and implement. We may not be successful in our efforts to establish and implement collaborations or other alternative arrangements. The terms of any collaborations or other arrangements that we establish, if any, may not be favorable to us.

The failure of these collaborative relationships could delay our drug development or impair commercialization of our products and could materially harm our business and might accelerate our need for additional capital.

Any collaboration that we enter into may not be successful. The success of our collaboration arrangements, if any, will depend heavily on the efforts and activities of our collaborators. Possible future collaborations have risks, including the following:

- disputes may arise in the future with respect to the ownership of rights to technology developed with future collaborators;
- disagreements with future collaborators could delay or terminate the research, development or commercialization of products, or result in litigation or arbitration;
- future collaboration agreements are likely to be for fixed terms and subject to termination by our collaborators in the event of a material breach or lack of scientific progress by us;
- future collaborators are likely to have the first right to maintain or defend our intellectual property rights and, although we would likely have the right to assume the maintenance and defense of our intellectual property rights if our collaborators do not, our ability to do so may be compromised by our collaborators' acts or omissions;
- future collaborators may utilize our intellectual property rights in such a way as to invite litigation that could jeopardize or invalidate our intellectual property rights or expose us to potential liability;

- future collaborators may change the focus of their development and commercialization efforts. Pharmaceutical and biotechnology companies historically have re-evaluated their priorities following mergers and consolidations, which have been common in recent years in these industries. The ability of our products to reach their potential could be limited if future collaborators decrease or fail to increase spending relating to such products;
- future collaborators may underfund or not commit sufficient resources to the testing, marketing, distribution or development of our products; and
- future collaborators may develop alternative products either on their own or in collaboration with others, or encounter conflicts of interest or changes in business strategy or other business issues, which could adversely affect their willingness or ability to fulfill their obligations to us.

Given these risks, it is possible that any collaborative arrangements into which we enter may not be successful.

Our existing collaborations and any collaborations we enter into in the future may not be successful.

An important element of our business strategy includes entering into strategic collaborations with corporate collaborators, primarily large pharmaceutical companies, for the development, commercialization, marketing and distribution of some of our drug candidates. In December 2007, we entered into an exclusive, worldwide license agreement with Merck KGaA to research, develop, and commercialize products containing our TLR9 agonists for treatment of cancer, excluding cancer vaccines. In December 2006, we entered into an exclusive license and research collaboration with Merck & Co. to research, develop, and commercialize vaccine products containing our TLR7, 8, and 9 agonists in the fields of cancer, infectious diseases, and Alzheimer's disease. In May 2005, we entered into a collaboration with Novartis to discover, develop and potentially commercialize TLR9 agonists that are identified as potential treatments for asthma and allergies. The failure of these collaborations or any others we enter into in the future could delay our drug development or impair commercialization of our products and could materially harm our business and might accelerate our need for additional capital.

The success of our collaboration arrangements, if any, will depend heavily on the efforts and activities of our collaborators. Our existing collaborations have risks, including the following:

- our collaborators control the development of the drug candidates being developed with our technologies and compounds including the timing of development;
- our collaborators may control the public release of information regarding the developments, and we may not be able to make announcements or data presentations on a schedule favorable to us;
- disputes may arise in the future with respect to the ownership of rights to technology developed with our collaborators;
- disagreements with our collaborators could delay or terminate the research, development or commercialization of products, or result in litigation or arbitration;
- we may have difficulty enforcing the contracts if any of our collaborators fail to perform;
- our collaborators may terminate their collaborations with us, which could make it difficult for us to attract new collaborators or adversely affect the perception of us in the business or financial communities;
- our collaboration agreements are likely to be for fixed terms and subject to termination by our collaborators in the event of a material breach or lack of scientific progress by us;

- our collaborators may have the first right to maintain or defend our intellectual property rights and, although we would likely have the right to assume the maintenance and defense of our intellectual property rights if our collaborators do not, our ability to do so may be compromised by our collaborators' acts or omissions;
- our collaborators may utilize our intellectual property rights in such a way as to invite litigation that could jeopardize or invalidate our intellectual property rights or expose us to potential liability;
- our collaborators may change the focus of their development and commercialization efforts. Pharmaceutical and biotechnology companies historically have re-evaluated their priorities following mergers and consolidations, which have been common in recent years in these industries. The ability of our products to reach their potential could be limited if our collaborators decrease or fail to increase spending relating to such products;
- our collaborators may underfund or not commit sufficient resources to the testing, marketing, distribution or development of our products; and
- our collaborators may develop alternative products either on their own or in collaboration with others, or encounter conflicts of interest or changes in business strategy or other business issues, which could adversely affect their willingness or ability to fulfill their obligations to us.

Collaborations with pharmaceutical companies and other third parties often are terminated or allowed to expire by the other party. Such terminations or expirations may adversely affect us financially and could harm our business reputation in the event we elect to pursue collaborations that ultimately expire or are terminated in such a manner.

Risks Relating to Intellectual Property

If we are unable to obtain patent protection for our discoveries, the value of our technology and products will be adversely affected.

Our patent positions, and those of other drug discovery companies, are generally uncertain and involve complex legal, scientific and factual questions. Our ability to develop and commercialize drugs depends in significant part on our ability to:

- obtain patents;
- obtain licenses to the proprietary rights of others on commercially reasonable terms;
- operate without infringing upon the proprietary rights of others;
- prevent others from infringing on our proprietary rights; and
- protect trade secrets.

We do not know whether any of our patent applications or those patent applications that we license will result in the issuance of any patents. Our issued patents and those that may be issued in the future, or those licensed to us, may be challenged, invalidated or circumvented, and the rights granted thereunder may not provide us proprietary protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies or duplicate any technology developed by us. Because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any of our products can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thus reducing any advantage provided by the patent.

Because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in the scientific literature often lag behind actual discoveries, neither we nor our licensors can be certain that we or they were the first to make the inventions claimed in issued patents or pending patent applications, or that we or they were the first to file for protection of the inventions set forth in these patent applications.

Third parties may own or control patents or patent applications and require us to seek licenses, which could increase our development and commercialization costs, or prevent us from developing or marketing products.

We may not have rights under some patents or patent applications related to our products. Third parties may own or control these patents and patent applications in the United States and abroad. Therefore, in some cases, to develop, manufacture, sell or import some of our products, 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 under patents that might issue from United States and foreign patent applications. In such an event, we 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 develop, manufacture, sell or import these products.

We may lose our rights to patents, patent applications or technologies of third parties if our licenses from these third parties are terminated. In such an event, we might not be able to develop or commercialize products covered by the licenses.

Currently, we have not in-licensed any patents or patent applications related to our TLR-targeted drug candidate programs. However in the field of antisense technology we are party to five royalty-bearing license agreements under which we have acquired rights to patents, patent applications and technology of third parties. Under these licenses we are obligated to pay royalties on net sales by us of products or processes covered by a valid claim of a patent or patent application licensed to us. We also are required in some cases to pay a specified percentage of any sublicense income that we may receive. These licenses impose various commercialization, sublicensing, insurance and other obligations on us.

Our failure to comply with these requirements could result in termination of the licenses. These licenses generally will otherwise remain in effect until the expiration of all valid claims of the patents covered by such licenses or upon earlier termination by the parties. The issued patents covered by these licenses expire at various dates ranging from 2014 to 2022. If one or more of these licenses is terminated, we may be delayed in our efforts, or be unable, to develop and market the products that are covered by the applicable license or licenses.

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

There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the biotechnology industry. We may become a party to various types of patent litigation or other proceedings regarding intellectual property rights from time to time even under circumstances where we are not practicing and do not intend to practice any of the intellectual property involved in the proceedings. For instance, in 2002, 2003, and 2005, we became involved in interference proceedings declared by the United States Patent and Trademark Office for certain of our antisense and ribozyme patents. All of these interferences have since been resolved. We are neither practicing nor intending to practice the intellectual property that is associated with any of these interference proceedings.

The cost to us of any patent litigation or other proceeding even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the cost of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. If any patent litigation or other proceeding is resolved against us, we or our collaborators may be enjoined from developing, manufacturing, selling or importing our drugs

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 license 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 compete in the marketplace. Patent litigation and other proceedings may also absorb significant management time.

Risks Relating to Product Manufacturing, Marketing and Sales and Reliance on Third Parties

Because we have limited manufacturing experience, facilities or infrastructure, we are dependent on third-party manufacturers to manufacture products for us. If we cannot rely on third-party manufacturers, we will be required to incur significant costs and devote significant efforts to establish our own manufacturing facilities and capabilities.

We have limited manufacturing experience and no manufacturing facilities, infrastructure or clinical or commercial scale manufacturing capabilities. In order to continue to develop our products, apply for regulatory approvals and ultimately commercialize products, we need to develop, contract for or otherwise arrange for the necessary manufacturing capabilities.

We currently rely upon third parties to produce material for nonclinical and clinical testing purposes and expect to continue to do so in the future. We also expect to rely upon third parties to produce materials that may be required for the commercial production of our products. Our current and anticipated future dependence upon others for the manufacture of our drug candidates may adversely affect our future profit margins and our ability to develop drug candidates and commercialize any drug candidates on a timely and competitive basis. We currently do not have any long term supply contracts and rely on only one contract manufacturer.

There are a limited number of manufacturers that operate under the FDA's current good manufacturing practices, or cGMP, regulations capable of manufacturing our products. As a result, we may have difficulty finding manufacturers for our products with adequate capacity for our needs. If we are unable to arrange for third party manufacturing of our products on a timely basis, or to do so on commercially reasonable terms, we may not be able to complete development of our products or market them.

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 and quality assurance;
- the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control;
- the possibility of termination or nonrenewal of the agreement by the third party, based on its own business priorities, at a time that is costly or inconvenient for us;
- the potential that third party manufacturers will develop know-how owned by such third party in connection with the production of our products that is necessary for the manufacture of our products; and
- reliance upon third party manufacturers to assist us in preventing inadvertent disclosure or theft of our proprietary knowledge.

Additionally, contract manufacturers may not be able to manufacture our TLR-targeted drug candidates at a cost or in quantities necessary to make them commercially viable. To date, our third-party manufacturers have met our manufacturing requirements, but we cannot be assured that they will continue to do so. Furthermore, changes in the manufacturing process or procedure, including a change in the location where the drug is manufactured or a change

of a third-party manufacturer, may require prior FDA review and approval in accordance with the FDA's cGMP regulations. There are comparable foreign requirements. This review may be costly and time-consuming and could delay or prevent the launch of a product. The FDA or similar foreign regulatory agencies at any time may also implement new standards, or change their interpretation and enforcement of existing standards for manufacture, packaging or testing of products. If we or our contract manufacturers are unable to comply, we or they may be subject to regulatory action, civil actions or penalties.

We have no experience selling, marketing or distributing products and no internal capability to do so.

If we receive regulatory approval to commence commercial sales of any of our products, we will face competition with respect to commercial sales, marketing and distribution. These are areas in which we have no experience. To market any of our products directly, we would need to develop a marketing and sales force with technical expertise and with supporting distribution capability. In particular, we would need to recruit a large number of experienced marketing and sales personnel. Alternatively, we could engage a pharmaceutical or other healthcare company with an existing distribution system and direct sales force to assist us. However, to the extent we entered into such arrangements, we would be dependent on the efforts of third parties. If we are unable to establish sales and distribution capabilities, whether internally or in reliance on third parties, our business would suffer materially.

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

We do not have the ability to independently conduct the clinical trials required to obtain regulatory approval for our products. We depend on independent clinical investigators, contract research organizations and other third party service providers in the conduct of the clinical trials of our products and expect to continue to do so. We have contracted with contract research organizations to manage our current Phase 1 clinical trial of IMO-2125 in patients with chronic hepatitis C virus infection. We rely heavily on these parties for successful execution of our clinical trials, but do not control many aspects of their activities. We are responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with standards, commonly referred to as good clinical practices, for conducting, recording and reporting clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements. Third parties may not complete activities on schedule or may not conduct our clinical trials in accordance with regulatory requirements or our stated protocols. The failure of these third parties to carry out their obligations could delay or prevent the development, approval and commercialization of our products. If we seek to conduct any of these activities ourselves in the future, we will need to recruit appropriately trained personnel and add to our infrastructure.

The commercial success of any drug candidates that we may develop will depend upon the degree of market acceptance by physicians, patients, third party payors and others in the medical community.

Any products that we ultimately bring to the market, if they receive marketing approval, may not gain market acceptance by physicians, patients, third party payors and others in the medical community. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenue and we may not become profitable. The degree of market acceptance of our drug candidates, if approved for commercial sale, will depend on a number of factors, including:

- the prevalence and severity of any side effects, including any limitations or warnings contained in the product's approved labeling;
- the efficacy and potential advantages over alternative treatments;
- the ability to offer our drug candidates for sale at competitive prices;
- relative convenience and ease of administration;

- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support and the timing of market introduction of competitive products; and
- publicity concerning our products or competing products and treatments.

Even if a potential product displays a favorable efficacy and safety profile, market acceptance of the product will not be known until after it is launched. Our efforts to educate the medical community and third party payors on the benefits of our drug candidates may require significant resources and may never be successful. Such efforts to educate the marketplace may require more resources than are required by conventional technologies marketed by our competitors.

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

Most patients rely on Medicare, Medicaid, private health insurers, and other third party payors to pay for their medical needs, including any drugs we may market. If third party payors do not provide adequate coverage or reimbursement for any products that we may develop, our revenues and prospects for profitability will suffer. Congress enacted a limited prescription drug benefit for Medicare recipients in the Medicare Prescription Drug and Modernization Act of 2003. While the program established by this statute may increase demand for our products, if we participate in this program, our prices will be negotiated with drug procurement organizations for Medicare beneficiaries and are likely to be lower than we might otherwise obtain. Non-Medicare third party drug procurement organizations may also base the price they are willing to pay on the rate paid by drug procurement organizations for Medicare beneficiaries.

A primary trend in the United States healthcare industry is toward cost containment. In addition, in some foreign countries, particularly the countries of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take six months or longer after the receipt of regulatory marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost effectiveness of our drug candidates or products to other available therapies. The conduct of such a clinical trial could be expensive and result in delays in commercialization of our products. These further clinical trials would require additional time, resources and expenses. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our prospects for generating revenue, if any, could be adversely affected and our business may suffer.

Third party payors are challenging the prices charged for medical products and services, and many third party payors limit reimbursement for newly-approved healthcare products. In particular, third party payors may limit the indications for which they will reimburse patients who use any products that we may develop. Cost control initiatives could decrease the price we might establish for products that we may develop, which would result in lower product revenues to us.

We face a risk of product liability claims and may not be able to obtain insurance.

Our business exposes us to the risk of product liability claims that is inherent in the manufacturing, testing and marketing of human therapeutic drugs. We face an inherent risk of product liability exposure related to the testing of our drug candidates in human clinical trials and will face an even greater risk if we commercially sell any products. Regardless of merit or eventual outcome, liability claims and product recalls may result in:

- decreased demand for our drug candidates and products;

- damage to our reputation;
- regulatory investigations that could require costly recalls or product modifications;
- withdrawal of clinical trial participants;
- costs to defend related litigation;
- substantial monetary awards to trial participants or patients, including awards that substantially exceed our product liability insurance, which we would then have to pay using other sources, if available, and would damage our ability to obtain liability insurance at reasonable costs, or at all, in the future;
- loss of revenue;
- the diversion of management's attention away from managing our business; and
- the inability to commercialize any products that we may develop.

Although we have product liability and clinical trial liability insurance that we believe is adequate, this insurance is subject to deductibles and coverage limitations. We may not be able to obtain or maintain adequate protection against potential liabilities. If we are unable to obtain insurance at acceptable cost or otherwise protect against potential product liability claims, we will be exposed to significant liabilities, which may materially and adversely affect our business and financial position. These liabilities could prevent or interfere with our commercialization efforts.

Risks Relating to an Investment in Our Common Stock

Our corporate governance structure, including provisions in our certificate of incorporation and by-laws, our stockholder rights plan and Delaware law, may prevent a change in control or management that stockholders may consider desirable

Section 203 of the Delaware General Corporation Law and our certificate of incorporation, by-laws, and stockholder rights plan contain provisions that might enable our management to resist a takeover of our company or discourage a third party from attempting to take over our company. These provisions include:

- a classified board of directors,
- limitations on the removal of directors,
- limitations on stockholder proposals at meetings of stockholders,
- the inability of stockholders to act by written consent or to call special meetings, and
- the ability of our board of directors to designate the terms of and issue new series of preferred stock without stockholder approval.

In addition, Section 203 of the Delaware General Corporation Law imposes restrictions on our ability to engage in business combinations and other specified transactions with significant stockholders. These provisions could have the effect of delaying, deferring, or preventing a change in control of us or a change in our management that stockholders may consider favorable or beneficial. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors and take other corporate actions. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock.

Our stock price has been and may in the future be extremely volatile. In addition, because an active trading market for our common stock has not developed, our investors' ability to trade our common stock may be limited. As a result, investors may lose all or a significant portion of their investment.

Our stock price has been volatile. During the period from January 1, 2007 to March 31, 2008, the closing sales price of our common stock ranged from a high of $13.29 per share to a low of $5.28 per share. The stock market has also experienced significant price and volume fluctuations, and the market prices of biotechnology companies in particular have been highly volatile, often for reasons that have been unrelated to the operating performance of particular companies. The market price for our common stock may be influenced by many factors, including:

- results of clinical trials of our drug candidates or those of our competitors;
- the regulatory status of our drug candidates;
- failure of any of our drug candidates, if approved, to achieve commercial success;
- the success of competitive products or technologies;
- regulatory developments in the United States and foreign countries;
- our success in entering into collaborative agreements;
- developments or disputes concerning patents or other proprietary rights;
- the departure of key personnel;
- variations in our financial results or those of companies that are perceived to be similar to us;
- our cash resources;
- the terms of any financing conducted by us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors and issuance of new or changed securities analysts' reports or recommendations; and
- general economic, industry and market conditions.

In addition, our common stock has historically been traded at low volume levels and may continue to trade at low volume levels. As a result, any large purchase or sale of our common stock could have a significant impact on the price of our common stock and it may be difficult for investors to sell our common stock in the market without depressing the market price for the common stock or at all.

As a result of the foregoing, investors may not be able to resell their shares at or above the price they paid for such shares. Investors in our common stock must be willing to bear the risk of fluctuations in the price of our common stock and the risk that the value of their investment in our stock could decline.

ITEM 6. EXHIBITS.

The list of Exhibits filed as part of this Quarterly Report on Form 10-Q are set forth on the Exhibit Index immediately preceding such Exhibits, and is incorporated herein by this reference.

SIGNATURES

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

IDERA PHARMACEUTICALS, INC

Date: May 12, 2008

/s/ Sudhir Agrawal
Sudhir Agrawal
Chief Executive Officer, Chief Scientific Officer and Director
(Principal Executive Officer)

Date: May 12, 2008

/s/ Louis J. Arcudi, III
Louis J. Arcudi, III
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit Index

Exhibit No.	
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14 and 15d-14, as adopted pursuant to Section 302 of Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14 and 15d-14, as adopted pursuant to Section 302 of Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

EXHIBIT 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO EXCHANGE ACT RULES 13a-14 AND 15d-14, AS ADOPTED PURSUANT TO SECTION 302 OF SARBANES-OXLEY ACT OF 2002

I, Sudhir Agrawal, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Idera Pharmaceuticals, 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 15(d)-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 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.

/s/ SUDHIR AGRAWAL
Sudhir Agrawal
Chief Executive Officer

Dated: May 12, 2008

EXHIBIT 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO EXCHANGE ACT RULES 13a-14 AND 15d-14, AS ADOPTED PURSUANT TO SECTION 302 OF SARBANES-OXLEY ACT OF 2002

I, Louis J. Arcudi, III certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Idera Pharmaceuticals, 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 15(d)-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 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.

/s/ LOUIS J. ARCUDI, III
Louis J. Arcudi, III
Chief Financial Officer

Dated: May 12, 2008

EXHIBIT 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER 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 Idera Pharmaceuticals, Inc. (the "Company") for the period ended March 31, 2008 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Sudhir Agrawal, Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

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

/s/ SUDHIR AGRAWAL
Sudhir Agrawal
Chief Executive Officer

Date: May 12, 2008

EXHIBIT 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER 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 Idera Pharmaceuticals, Inc. (the "Company") for the period ended March 31, 2008 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Louis J. Arcudi, Chief Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

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

/s/ Louis J. Arcudi, III
Louis J. Arcudi, III
Chief Financial Officer

Date: May 12, 2008