INTROGEN THERAPEUTICS INC
Form 10-Q
November 10, 2008

Table of Contents

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

Form 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2008.

or

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

For the transition period from to .

Commission file number 000-21291

Introgen Therapeutics, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**74-2704230**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification Number)*

301 Congress Avenue, Suite 1850
Austin, Texas 78701
(Address of principal executive offices, including zip code)
(512) 708-9310
(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 þ No o

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 o	Accelerated filer þ	Non-accelerated filer o	Smaller reporting company o

(Do not check if a smaller reporting company)

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

As of November 5, 2008, the registrant had 44,142,172 shares of its common stock, $0.001 par value per share, issued and outstanding.

INTROGEN THERAPEUTICS, INC.
QUARTERLY REPORT ON FORM 10-Q
TABLE OF CONTENTS

	PAGE NO.
PART I. FINANCIAL INFORMATION	
Item 1. Consolidated Financial Statements	3
Condensed Consolidated Balance Sheets as of December 31, 2007 and September 30, 2008 (unaudited)	3
Condensed Consolidated Statements of Operations for the Three and Nine Months Ended September 30, 2007 (unaudited) and September 30, 2008 (unaudited)	4
Condensed Consolidated Statements of Cash Flows for the Nine Months Ended September 30, 2007 (unaudited) and September 30, 2008 (unaudited)	5
Notes to Condensed Consolidated Financial Statements (unaudited)	6
Item 2. Management s Discussion and Analysis of Financial Condition and Results of Operations	11
Item 3. Quantitative and Qualitative Disclosures About Market Risk	47
Item 4. Controls and Procedures	48
PART II. OTHER INFORMATION	
Item 1. Legal Proceedings	49
Item 1A. Risk Factors	49
Item 2. Unregistered Sales of Equity Securities and Use of Proceeds	65
Item 3. Defaults Upon Senior Securities	65
Item 4. Submission of Matters to a Vote of Security Holders	65
Item 5. Other Information	65
Item 6. Exhibits	65
Signatures	66
Exhibits	66
EX-3.2	
EX-31.1	
EX-32.1	

Table of Contents

PART I
FINANCIAL INFORMATION

Item 1. Financial Statements

INTROGEN THERAPEUTICS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(Amounts in thousands, except per share amounts)

	December 31, 2007	September 30, 2008 (Unaudited)
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 11,320	$ 6,294
Short-term investments	3,585	
Total cash, cash equivalents and short-term investments	14,905	6,294
Marketable securities	10,165	
Prepaid expense and other current assets	706	388
Total current assets	25,776	6,682
Property and equipment, net of accumulated depreciation of $14,994 and $15,740	4,442	3,858
Other assets	265	245
Total assets	$ 30,483	$ 10,785
LIABILITIES AND STOCKHOLDERS EQUITY (DEFICIT)		
Current Liabilities:		
Accounts payable	$ 1,813	$ 2,582
Accrued liabilities and other	4,225	2,589
Deferred revenue and other	616	709
Current portion of notes payable	586	517
Total current liabilities	7,240	6,397
Notes payable, net of current portion	7,155	6,897
Deferred revenue and other, long-term	79	
Total liabilities	14,474	13,294
Non-controlling and minority interests in consolidated subsidiaries	6	2
Commitments and Contingencies		
Stockholders Equity (Deficit):		
Preferred stock, $.001 par value per share; 5,000 shares authorized; 4,900 shares issuable; zero Series A shares issued and outstanding in 2007 and 2008, respectively	44	44

Common stock, $.001 par value per share; 100,000 shares authorized; shares issued and outstanding of 44,004 in 2007 and 44,142 in 2008		
Additional paid-in capital	211,558	214,946
Accumulated deficit	(202,715)	(217,437)
Accumulated other comprehensive gain (loss)	7,116	(64)
Total stockholders equity (deficit)	16,003	(2,511)
Total liabilities and stockholders equity	$ 30,483	$ 10,785

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

Table of Contents

INTROGEN THERAPEUTICS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Amounts in thousands, except per share amounts)
(UNAUDITED)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2007	2008	2007	2008
Contract services, grant and other revenue	$ 139	$ 331	$ 543	$ 638
Operating costs and expense:				
Research and development, including share-based compensation of $180 and $136 for the three months ended September 30, 2007 and 2008 and $799 and $454 for the nine months ended September 30, 2007 and 2008	5,074	3,784	13,012	12,620
General and administrative, including share-based compensation of $946 and $983 for the three months ended September 30, 2007 and 2008 and $3,086 and $2,848 for the nine months ended September 30, 2007 and 2008	2,980	2,699	9,780	7,720
Total operating costs and expense	8,054	6,483	22,792	20,340
Loss from operations	(7,915)	(6,152)	(22,249)	(19,702)
Interest income	281	26	1,096	186
Interest expense	(169)	(155)	(514)	(480)
Realized gain on sale of marketable securities				4,388
Other income	257	306	755	882
Loss before non-controlling and minority interests in consolidated subsidiaries	(7,546)	(5,975)	(20,912)	(14,726)
Non-controlling and minority interests in consolidated subsidiaries				4
Net loss	$ (7,546)	$ (5,975)	$ (20,912)	$ (14,722)
Net loss per share, basic and diluted	$ (0.17)	$ (0.14)	$ (0.48)	$ (0.33)
Shares used in computing basic and diluted net loss per share	43,845	44,089	43,768	44,037

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

Table of Contents

INTROGEN THERAPEUTICS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in thousands)
(UNAUDITED)

	Nine Months Ended September 30,	
	2007	**2008**
Cash flows from operating activities:		
Net loss	$ (20,912)	$ (14,722)
Adjustments to reconcile net loss to net cash used in operating activities:		
Non-controlling interests in consolidated subsidiaries		(4)
Depreciation	788	746
Share-based compensation	3,885	3,302
Gain on sale of marketable securities		(4,388)
Changes in operating assets and liabilities:		
(Increase) decrease in other assets	172	338
Increase (decrease) in accounts payable	(821)	769
Increase (decrease) in accrued liabilities and other	117	(1,437)
Increase (decrease) in deferred revenue and other	(633)	14
Net cash used in operating activities	(17,404)	(15,382)
Cash flows from investing activities:		
Purchases of property and equipment	(52)	(167)
Purchases of short-term investments	(29,589)	
Maturities of short-term investments	32,852	3,585
Proceeds from sale of marketable securities		7,429
Net cash provided by investing activities	3,211	10,847
Cash flows from financing activities:		
Payment of offering costs related to sale of common stock	(1,571)	(200)
Proceeds from exercise of options for common stock	145	86
Proceeds from notes payable	157	158
Principal payments under notes payable	(704)	(484)
Net cash used in financing activities	(1,973)	(440)
Effect of exchange rate changes on cash	(8)	(51)
Net decrease in cash	(16,174)	(5,026)
Cash and cash equivalents, beginning of period	25,578	11,320
Cash and cash equivalents, end of period	$ 9,404	$ 6,294
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 491	$ 461

Supplemental disclosure of non-cash investing and financing activities:		
Non-cash unrealized gain (loss) on marketable securities	$ 9,205	$ (2,736)
Issuance of common stock in connection with the grant of stock	$ 210	$

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

Table of Contents

INTROGEN THERAPEUTICS, INC. AND SUBSIDIARIES
UNAUDITED NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. Business of the Company and Liquidity

We are a biopharmaceutical company focused on the discovery, development and commercialization of targeted molecular therapies for the treatment of cancer and other diseases. We are developing product candidates to treat a wide range of cancers using tumor suppressors, cytokines and other targeted molecular therapies. These agents are designed to increase production of normal cancer-fighting proteins that act to overpower cancerous cells, stimulate immune activity and enhance conventional cancer therapies.

In June 2008, Gendux Molecular Limited, our wholly-owned subsidiary based in Ireland, submitted a Marketing Authorization Application (MAA) to the European Medicines Evaluation Agency (EMEA) requesting marketing approval for ADVEXIN therapy to treat recurrent, refractory head and neck cancer. EMEA has accepted this MAA for review.

In June 2008, we submitted a Biologics License Application (BLA) to the U.S. Food and Drug Administration (FDA) requesting marketing approval for ADVEXIN therapy to treat recurrent, refractory head and neck cancer. In September 2008, the FDA notified us that this BLA was not sufficiently complete and would not be filed at that time. We are in the process of appealing the FDA s refusal to file decision and anticipate a response to our appeal from the FDA sometime before the end of 2008.

We have not yet generated any significant revenue from unaffiliated third parties nor is there any assurance of future product revenue. We earn minimal revenue from contract services activities, grants and interest income, as well as rent from the lease of a portion of our facilities to The University of Texas M. D. Anderson Cancer Center. Our ability to generate revenue from the commercial sale of our products in the near future is uncertain. We may never generate revenue from the commercial sale of our products.

Our research and development activities and pursuit of marketing approval by regulatory agencies for our product candidates involve a high degree of risk and uncertainty. Our ability to successfully develop, manufacture and market our proprietary products is dependent upon many factors. These factors include, but are not limited to, the need for and the ability to obtain additional financing, the reliance on collaborative research and development arrangements with corporate and academic affiliates and the ability to develop manufacturing, sales and marketing experience. Additional factors include uncertainties as to patents and proprietary technologies, competitive technologies, technological change and risk of obsolescence, development of products, competition, government regulations and regulatory approval, and product liability exposure. As a result of these factors and the related uncertainties, there can be no assurance of our future success.

2. Going Concern

We need to obtain additional cash to continue our operations. If we are unable to raise additional funds for working capital, we will substantially consume all of our cash and cash equivalents on hand at September 30, 2008, plus the amounts we may earn subsequently from contract services, grants and/or interest income in the future, sometime during the quarter ending March 31, 2009 and will likely be unable to continue as a going concern at that time. Unforeseen circumstances could cause us to consume cash more rapidly than expected and shorten the period during which the resources currently available to us can fund our operations.

We may be able to obtain additional cash through public or private equity offerings, debt financings, corporate collaborations, licensing arrangements, sales of certain of our assets (such as real estate) or other means. However, there can be no assurances that additional financing will be available when needed or on terms favorable to us or our stockholders. If we raise additional capital by issuing equity securities, our stockholders will experience dilution. If we raise funds through debt financings, we may become subject to restrictive covenants. If we raise additional funds through collaboration and licensing arrangements, we may be required to transfer to other parties rights to our technologies or product candidates, or grant licenses on terms not favorable to us.

Table of Contents

In July 2008, we reduced our staff by approximately 20 positions primarily associated with ADVEXIN therapy development and regulatory submission programs that have achieved the milestones discussed in various sections of this document. In the event we cannot obtain additional cash, we may have to further reduce the scope of our operations and related cash needs to a level that may extend the period of time during which we can rely on existing resources to conduct our business activities. Such adjustments in the scope of our operations could include further reduction in the number of our personnel and perhaps delaying or discontinuing certain product and service development activities critical to achieving our business objectives. In particular, such actions could adversely affect our ability to continue pursuing regulatory approval to market ADVEXIN therapy at our desired pace, to continue development of other new product candidates and to pursue the ITS business plan.

The efforts described above could be unsuccessful. In that event, we would likely be unable to continue as a going concern.

3. Basis of Presentation and Significant Accounting Policies

The accompanying condensed consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (GAAP) for interim financial information and pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). The condensed consolidated balance sheet at December 31, 2007 has been derived from the audited consolidated financial statements at that date but does not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements.

These unaudited, interim financial statements do not include all of the information and footnotes required under GAAP for complete financial statements. In management s opinion, all accounting entries considered necessary for a fair presentation have been made in preparing these financial statements, and such entries are normal in nature. Operating results for the three and nine month periods ended September 30, 2008 are not necessarily indicative of the results that may be expected for the entire fiscal year.

Our critical accounting policies and recently issued accounting pronouncements of significance to us are described in our most recent annual report on Form 10-K for the year ended December 31, 2007, filed with the Securities and Exchange Commission on March 17, 2008. There have been no changes in those items since that time that would have a material effect on our financial statements. As noted in that annual report, Statement of Financial Accounting Standards No. 157, Fair Value Measurements, and Statement of Financial Accounting Standards No. 159, The Fair Value Option for Financial Assets and Financial Liabilities, were effective for us on January 1, 2008. Our adoption of those standards had no material effect on our financial statements.

These financial statements include the accounts of Introgen Therapeutics, Inc. and its consolidated subsidiaries (collectively referred to as Introgen). We account for Introgen Therapeutic, Inc. s investment in subsidiaries in accordance with the relevant provisions of GAAP. Accordingly, the subsidiaries accounts are included in these consolidated financial statements. We record a non-controlling interest for the portion of those subsidiaries we do not own to the extent such non-controlling interest constitutes a liability in our financial statements. If those subsidiaries have an accumulated net loss, the minority interest is zero.

4. Consolidated Subsidiaries

Introgen Technical Services, Inc.

In June 2008, we formed Introgen Technical Services, Inc. (ITS) as a wholly-owned subsidiary. We anticipate ITS will pursue the following objectives:

Assume responsibility for producing investigative materials for our clinical trials;

Produce and provide us commercial supplies of products for which we may receive marketing approval from the appropriate regulatory agencies; and

Pursue contract production, process development and manufacturing services for third parties.

Table of Contents

The development of the ITS business is based upon the expertise we have developed in the areas of manufacturing and process development and the availability of our manufacturing facilities, practices and processes that can accommodate and support our providing services to third parties in compliance with the U.S. Food and Drug Administration s Current Good Manufacturing Practice requirements. The operations of ITS to date are not material to our financial statements.

Introgen Research Institute, Inc.

During the nine months ended September 30, 2007, we purchased 49% of the outstanding stock of Introgen Research Institute, Inc. for $10,000. The other 51% of IRI is owned by our corporate Secretary, who is also an Introgen stockholder.

We have contractual relationships with IRI under which we may perform research and development services for them in the future. For the three and nine months ended September 30, 2008, we recorded grant income of zero and $56,000, respectively, related to grants held by IRI. For the three and nine months ended September 30, 2007, we recorded grant income of zero and $213,000, respectively, related to grants held by IRI.

The amount of grant funding, if any, available to IRI and us to perform research and development is dependent upon many factors, including the availability of grants from government agencies, performance of the work and incurring the costs contemplated by the grants, our success in obtaining additional grants in the future and our compliance with statutes and regulations governing such grants.

5. Other Comprehensive Income or Loss

Other comprehensive income or loss is included as a component of stockholders equity and is composed of (1) foreign currency translation adjustments and (2) unrealized gains and losses on investments designated as available-for-sale securities. Other comprehensive income (loss) is calculated as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2007	2008	2007	2008
Net loss	$ (7,546)	$ (5,975)	$ (20,912)	$ (14,722)
Foreign currency translation adjustments	6	(75)	(8)	(51)
Unrealized gain (loss) on marketable securities	(3,530)		9,205	
Total comprehensive income (loss)	$ (11,070)	$ (6,050)	$ (11,715)	$ (14,773)

During the nine months ended September 30, 2008, we sold all the shares of Silence Therapeutics plc we owned for their quoted market value on the Alternative Investment Market of the London Stock Exchange on the date of the sale. We received net proceeds of approximately $7.4 million from this sale. We purchased these shares for approximately $3.0 million in July 2005. These shares were presented as marketable securities in our financial statements in previous periods. This sale resulted in the recognition of a gain of $4.4 million, which is recorded as a realized gain on sale of marketable securities. As a result of this sale, the unrealized gain on marketable securities has been realized and is no longer a component of other comprehensive income (loss).

6. Share-Based Compensation

We issued the following number of shares of common stock as a result of exercises of stock options granted from our stock option plans:

Three Months Ended September 30,		Nine Months Ended September 30,	
2007	2008	2007	2008
	118,000	206,723	138,073

Table of Contents

7. Business Development Services Agreement with a Related Party

We have an agreement with a member of our Board of Directors under which he will provide certain business development services to us in connection with potential co-development, collaborative, marketing partnership or certain other potential strategic transactions. In consideration for his services, upon the consummation of such a transaction, we will pay him a fee equal to one-half of one percent (0.5%) of certain monetary benefits received by our stockholders or us. The maximum fee he can receive is $3,000,000. The fee we pay him will be reduced by expenses or other expenditures made or contemplated under such a transaction.

This fee is not payable for funding we receive that we are expected to expend for research and development programs, full-time equivalent payments to employees, loans, collaborative programs, business partnerships or strategic transactions, or otherwise. Transactions between our affiliates and us, whether now existing or created in the future, are excluded from this agreement. This agreement may be terminated at any time by written notice from us or this board member. In the event of such termination, the fee shall be paid with respect to a transaction produced through services performed by this board member before termination if the transaction is closed within two years after the date of termination of the agreement

8. Mortgage Note Payable

We have a mortgage note payable to a bank related to our facilities. The principal balance outstanding under this note at September 30, 2008, is $6.9 million, of which $225,000 is in current portion of notes payable and $6.7 million is in non-current notes payable.

This note originated in November 1998. We make monthly principal and interest payments on this note based on a 25 year amortization schedule, which is the basis upon which current and non-current balance portions of this note are determined. This note has an eleven year term such that it matures in November 2009 at which time the then outstanding principal balance of approximately $6.6 million is due. If we are unable enter into a transaction to refinance that balance to extend the period of time over which it can be paid or relieve ourselves of that note obligation (such as through a sale of our real estate), we could be in default on the note when it matures and the lender could then exercise its rights with regard to our primary facility that is collateral for this note, which could include us losing the right to use that facility through foreclosure or other actions by the lender.

9. Offering of Our Common Stock

In August 2008, we entered into a sales agreement with a placement agent to sell up to 6 million shares of our common stock in one or more, at-the-market offerings from time to time. Even though this agreement remains in place, if our common stock is delisted from NASDAQ as discussed below, the terms of the agreement preclude us from selling shares of our common stock under the agreement until such time as our listing on NASDAQ is restored. We may apply to transfer the listing of our common stock from the NASDAQ Global Market to the NASDAQ Capital Market if we are able to satisfy the listing qualifications of the NASDAQ Capital Market and our application is accepted by NASDAQ. However, the sales agreement includes various conditions to the placement agent s obligations, which if not satisfied, may prevent us from selling shares of our common stock under the agreement notwithstanding any such transfer. For example, one of the closing conditions is that we shall have not experienced a material adverse change. The impact of a transfer to the NASDAQ Capital Market is unknown and we may experience difficulty or be unable to sell our common stock under the sales agreement.

Each time we desire to sell shares under this agreement, we will notify the placement agent of the parameters under which we desire the shares be sold, including:

The number of shares we want to sell;

The time period during which we want the sales to occur;

Any limitation we want on the number of shares that may be sold in any one day; and

Any minimum price below which sales may not be made.

The placement agent is required to use its commercially reasonable efforts consistent with its customary trading and sales practices to sell these shares, but is under no obligation to us if it is unable to sell the shares. We are

Table of Contents

obligated to pay the placement agent a commission of 7% of the gross proceeds from any sales of the shares under the sales agreement. We or the placement agent may terminate this agreement at any time.

We will sell these shares under our previously filed registration statement on Form S-3 (File No. 333-140424) and related prospectus and prospectus supplement.

10. Listing on The NASDAQ Stock Market

In July 2008, The NASDAQ Stock Market (NASDAQ) notified us that we do not comply with the minimum $50,000,000 market value of listed securities nor the alternative requirement of a minimum $50,000,000 in total assets and total revenue required for continued listing on The NASDAQ Global Market set forth in the NASDAQ Marketplace Rules 4450(b)(1)(A) and 4450(b)(1)(B), respectively, and we may be subject to delisting from the Nasdaq Global Market if we failed to demonstrate compliance with the NASDAQ Marketplace Rules by August 29, 2008. We received a Staff Determination Letter from NASDAQ on September 4, 2008 informing us that we had not regained compliance by August 29, 2008. We appealed this initial delisting determination to a hearing conducted by a NASDAQ Listing Qualifications Panel, or the Panel, on October 16, 2008. The Panel has not yet rendered a decision regarding our appeal, and our common stock remains listed on the NASDAQ Global Market pending the decision of the Panel and any exception it may grant us. In the event of an unfavorable determination by the Panel, we would alternatively apply to have our common stock transferred to the NASDAQ Capital Market, as long as we satisfy the requirements for continued inclusion on the NASDAQ Capital Market set forth in the NASDAQ Marketplace Rules. There can be no assurance that the Panel will grant our request for continued listing on The NASDAQ Global Market, nor can there be assurance that our shares will alternatively be approved for listing on the NASDAQ Capital Market. We believe that we do not currently comply with the minimum listing requirements for The NASDAQ Capital Market. On September 29, 2008, NASDAQ notified us that for the last 30 consecutive business days, our bid price for our common stock had closed below the minimum $1.00 required for continued listing on The NASDAQ Global Market as set forth in Marketplace Rule 4450(a)(5). In accordance with NASDAQ Marketplace Rules, we will have one hundred eighty (180) days, to regain compliance with the minimum bid price requirement by maintaining a closing bid price of $1.00 per share or higher for a minimum of 10 consecutive business days. On October 16, 2008, NASDAQ announced that they had suspended the enforcement of Marketplace Rule 4450(a)(5) until January 19, 2009, and as a result, the period during which we have to regain compliance has been extended to July 1, 2009. If we are unsuccessful in meeting the minimum bid requirement on or before July 1, 2009, NASDAQ will notify us that our common stock will be delisted from the NASDAQ Global Market. If we receive such a notice, we may appeal NASDAQ s determination to delist our common stock or, alternatively, we may apply to transfer our common stock to the NASDAQ Capital Market, provided that we satisfy all criteria for initial listing on the NASDAQ Capital Market, other than compliance with the minimum bid price requirement. If such application to the NASDAQ Capital Market is approved, then we will have an additional 180-day compliance period in order to regain compliance with the minimum bid price requirement while listed on the NASDAQ Capital Market.

11. Agreement With a Third-Party Advisor

In November 2008, we entered into an agreement with a third-party to assist us in exploring strategic alternatives for the Company. For those services, we will pay that advisor:

A retainer fee of $150,000, and

A success fee, net of the retainer fee and subject to a maximum of $5 million, of:

- 3% of the transaction value in the case of a sale of the Company, or
- 6% of the transaction value in the case of a sale of the assets of the Company.

No success fee is payable in the event of a transaction between the Company and:

Governmental entities in the State of Texas, including, without limitation, a State university; or

Any entity owned in whole or in part by an affiliate of the Company, as defined.

Table of Contents

In a situation where the company receives payments over time, the success fee shall be payable at the time that each such payment is actually received by the Company or its stockholders. No success fee is due if the cash consideration from a transaction is insufficient to pay that fee.

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

The following discussion and analysis should be read in conjunction with our Condensed Consolidated Financial Statements and the related notes thereto included in this Quarterly Report on Form 10-Q and the other documents we have filed with the Securities and Exchange Commission. In addition to historical information, this report and the following discussion and analysis contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These statements address our future operations, financial condition, business strategies and other prospective items and include, among other subjects, matters concerning our expectations regarding:

The sufficiency of our existing cash and cash equivalents and cash generated from operations and access to additional cash and working capital through sales of common or preferred stock or the issuance of debt;

Our ability to continue pursuing our business objectives and corporate mission considering the cash and other resources available to us;

Various regulatory applications, procedures and approvals relating to our product candidates, including but not limited to our expectations regarding the timing of such applications, procedures and approvals;

The growth of our operations, business and revenues and the growth rate of our costs and expenses;

Future increases in our research and development, sales and marketing and general and administrative expenses;

Better efficacy of our product candidates through the use of biomarkers ;

Application of our research and development expertise to other diseases that result from cellular dysfunction and uncontrolled cell growth; and

The development and conduct of the business of our subsidiaries.

The uncertainty of domestic and international economies and specifically, the effect of those conditions on the worldwide capital markets.

The words believe, expect, anticipate and other similar expressions generally identify forward-looking statements. These forward-looking statements are based on our current expectations and entail various risks and uncertainties. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements. These forward-looking statements are subject to certain risks and uncertainties that could cause our actual results to differ materially from those reflected in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this report, and in particular, the risks discussed under the heading Risk Factors in Part II, Item 1A of this report and those discussed in other documents we file with the Securities and Exchange Commission.

Overview

Introgen Therapeutics, Inc. was incorporated in Delaware in 1993. We are a biopharmaceutical company focused on the discovery, development and commercialization of targeted molecular therapies for the treatment of cancer and other diseases. We are developing product candidates to treat a wide range of cancers using tumor suppressors, cytokines and other targeted molecular therapies. These agents are designed to increase production of normal cancer-fighting proteins that act to overpower cancerous cells, stimulate immune activity and enhance conventional

cancer therapies.

Our primary approach to the treatment of cancers is to deliver targeted molecular therapies that increase production of normal cancer-fighting proteins to induce apoptosis, restore cell cycle or cell growth control and alter

Table of Contents

gene regulation, including the regulation of angiogenic and immune factors to reduce cancer growth. Our products work by acting as templates for the transient *in vivo* production of proteins that have pharmacological properties. The resultant proteins engage disease-related molecular targets or receptors to produce specific therapeutic effects.

We believe the use of targeted molecular therapies to induce the production of biopharmaceutical proteins represents a new approach for treating many cancers while avoiding the toxic side effects common to traditional therapies. We have developed significant expertise in developing targeted therapies that may be used to treat disease and in using what we believe are safe and effective delivery systems to transport these agents to the cancer cells. We believe we will be able to treat a number of cancers in a way that kills cancer cells without harming normal cells.

Our lead product candidate, ADVEXIN® therapy, combines the p53 tumor suppressor with a non-replicating, non-integrating, adenoviral delivery system we have developed and extensively tested. The p53 molecule is one of the most potent members of a group of naturally-occurring tumor suppressors, which act to kill cancer cells, arrest cancer growth and protect cells from becoming cancerous. We are developing other product candidates for the treatment of cancer using other molecules and delivery systems, such as the mda-7 and FUS1 tumor suppressors.

We believe our research and development expertise gained from our targeted molecular therapies for cancer is also applicable to other diseases that, like cancer, result from cellular dysfunction and uncontrolled cell growth. As a result, we are conducting research in collaboration with medical institutions to understand the safety and effectiveness of our targeted molecular therapy product candidates in the treatment of other diseases.

We typically license the technologies on which our products are based from third parties. These licenses generally grant us exclusive rights for pre-clinical and clinical development, manufacturing, marketing and commercialization of product candidates based on those technologies.

Our product research and development efforts include pre-clinical activities as well as the conduct of Phase 1, 2 and 3 clinical trials. We rely on third parties to treat patients in their facilities during these clinical trials. We produce ADVEXIN therapy and other product candidates in manufacturing facilities we own and operate using production methods we developed. We hold a number of patents or patents pending on certain product candidates and manufacturing processes used to produce certain product candidates.

We have not yet generated any significant revenue from unaffiliated third parties nor is there any assurance of future product revenue. We earn minimal revenue from contract services activities, grants and interest income, as well as rent from the lease of a portion of our facilities to The University of Texas M. D. Anderson Cancer Center. Our ability to generate revenue from the commercial sale of our products in the near future is uncertain. We may never generate revenue from the commercial sale of our products.

We need to obtain additional cash to continue our operations. If we are unable to raise additional funds for working capital, we will substantially consume all of our cash and cash equivalents on hand at September 30, 2008, plus the amounts we may earn subsequently from contract services, grants and/or interest income in the future, sometime during the quarter ending March 31, 2009 and will likely be unable to continue as a going concern at that time. Unforeseen circumstances could cause us to consume cash more rapidly than expected and shorten the period during which the resources currently available to us can fund our operations.

We may be able to obtain additional cash through public or private equity offerings, debt financings, corporate collaborations, licensing arrangements, sales of certain of our assets (such as real estate) or other means. However, there can be no assurances that additional financing will be available when needed or on terms favorable to us or our stockholders. If we raise additional capital by issuing equity securities, our stockholders will experience dilution. If we raise funds through debt financings, we may become subject to restrictive covenants. If we raise additional funds through collaboration and licensing arrangements, we may be required to transfer to other parties rights to our technologies or product candidates, or grant licenses on terms not favorable to us.

In July 2008, we reduced our staff by approximately 20 positions primarily associated with ADVEXIN therapy development and regulatory submission programs that have achieved the milestones discussed in various sections of this document. In the event we cannot obtain additional cash, we may have to further reduce the scope of our operations and related cash needs to a level that may extend the period of time during which we can rely on existing resources to conduct our business activities. Such adjustments in the scope of our operations could include further reduction in the number of our personnel and perhaps delaying or discontinuing certain product and service

12

Table of Contents

development activities critical to achieving our business objectives. In particular, such actions could adversely affect our ability to continue pursuing regulatory approval to market ADVEXIN therapy at our desired pace, to continue development of other new product candidates and to pursue the ITS business plan.

The efforts described above could be unsuccessful. In that event, we would likely be unable to continue as a going concern.

Our principal executive offices are located at 301 Congress Avenue, Suite 1850, Austin, Texas 78701. Our telephone number is (512) 708-9310. Our Internet website address is www.introgen.com.

Introgen s Approach

Our primary approach for the treatment of cancers is to deliver targeted molecular therapies that increase production of normal cancer-fighting proteins. The resultant proteins engage disease-related molecular targets or receptors to produce specific therapeutic effects. We believe we are able to treat a number of cancers in a way that kills cancer cells without harming normal cells.

Most cancers are amenable to local treatment, such as surgery and radiation, which are administered far more often than systemic cancer treatments. Our locally delivered product candidates, such as ADVEXIN therapy and INGN 241 therapy, deposit therapeutic molecules at high concentrations directly into a patient s cancerous tumor by hypodermic syringe. We have systemic formulations for intravenous use in those cases for which a systemic therapy may be indicated and have applied ADVEXIN therapy using a nanoparticle formulation system to deliver our tumor suppressors.

We initially focused on advanced cancers lacking effective treatments and in which local tumor growth control, where the tumor stops growing or shrinks, is likely to lead to measurable benefit. We have expanded our focus to include earlier stage cancers and pre-malignancies. We believe our clinical trials have shown our therapies can be used alone and in combination with conventional treatments such as surgery, radiation therapy and chemotherapy.

Introgen s Strategy

Our objective is to be a leader in the development of targeted molecular tumor suppressor therapies and other products for the treatment of cancer and other diseases that, like cancer, result from cellular dysfunction and uncontrolled cell growth. To accomplish this objective, we are pursuing the following strategies:

Develop and Commercialize ADVEXIN Therapy, INGN 241, INGN 225 and INGN 401 for Multiple Cancer Indications. We plan to continue our development programs to commercialize several of our product candidates in multiple cancer indications, including:

- ADVEXIN therapy, using the p53 tumor suppressor;
- INGN 241, using the mda-7 tumor suppressor (also known as interleukin 24 or IL-24);
- INGN 225, using the p53 tumor suppressor as a highly specific cancer immunotherapy; and
- INGN 401 systemic nanoparticle therapy, using the FUS-1 tumor suppressor.

Develop Our Portfolio of Targeted Molecular Therapies and Other Drug Products. Utilizing our research, clinical, regulatory and manufacturing expertise, we are evaluating development of additional molecular therapies for various cancers, including:

- INGN 234, an oral rinse or mouthwash formulation containing the p53 tumor suppressor;
- INGN 402 and 403, using nanoparticle formulations for systemic delivery of the p53 and mda-7 tumor suppressors; and
- INGN 007, a replication-competent viral therapy.

Develop a Systemic Nanoparticle Administration Platform. Early pre-clinical and clinical studies with these new nanoparticle drugs have demonstrated a good safety profile and promising anti-cancer activity. In

Table of Contents

addition to FUS-1, we incorporate the p53 tumor suppressor and the mda-7 tumor suppressor in these nanoparticle formulations. We also have in-licensed technologies for systemic nanoparticle delivery of DNA, siRNA, miRNA, proteins, peptides and polypeptides.

Develop the Topical Use of Tumor Suppressors. We plan to continue developing topical product candidates for the treatment or prevention of oral and dermal cancers, specifically INGN 234 referred to above. We believe these treatments are a logical extension of our loco-regional delivery of cancer therapies and represent attractive product candidates since pre-malignant and malignant cells can be exposed to natural, biological tumor suppressors and DNA repairing agents. We are conducting this program in support of our Oral Care Alliance with Colgate-Palmolive.

Establish Targeted Sales and Marketing Capabilities. The oncology market can be effectively addressed by a small, focused sales force because it is characterized by a concentration of specialists in cancer centers and oncology clinics. We believe we can address this market by a combination of building a direct sales force as part of the ADVEXIN therapy commercialization process and pursuing marketing and distribution agreements with corporate partners for ADVEXIN therapy as well as additional products.

Expand Our Market Focus to Non-Cancer Indications. We plan to leverage our scientific, research and process competencies in molecular therapy and vector development to pursue targeted molecular therapies for a variety of other diseases and conditions. While our primary emphasis at this time is on cancer, we believe these therapies could hold promise for diseases such as cardiovascular disease and rheumatoid arthritis, which, like cancer, result from cellular dysfunction or uncontrolled cell growth.

Build Upon Our CGMP Manufacturing and Process Development Capabilities. We own and operate manufacturing facilities, including a commercial-scale, validated manufacturing facility designed to comply with the FDA s Current Good Manufacturing Practice requirements, commonly known as CGMP requirements. The recent formation of Introgen Technical Services (ITS) as a separate business unit will allow us to focus on opportunities to conduct process development and contract manufacturing services for third party customers using these capabilities. We believe the market for these services can be significant and can serve as a profitable business activity for us.

We have an established process for evaluating new drug candidates and advancing them from pre-clinical to clinical development. We have identified and licensed multiple technologies, which we intend to combine with our adenoviral and non-viral vector systems and which we believe are attractive development targets for the treatment of various cancers. We intend to evaluate additional opportunities to in-license or acquire new technologies.

Product Development Overview

ADVEXIN Therapy (p53)

Regulatory Filings for Marketing Approval for Treatment of Head and Neck Cancer

ADVEXIN therapy is our lead product candidate. It combines the p53 tumor suppressor with a non-replicating, non-integrating adenoviral delivery system we have developed and extensively tested. The p53 molecule is one of the most potent members of a group of naturally-occurring tumor suppressors, which act to kill cancer cells, arrest cancer cell growth and protect cells from becoming cancerous. ADVEXIN therapy represents a new class of tumor suppressor cancer therapy. If approved, ADVEXIN would be the first tumor suppressor therapy approved in the United States or Europe.

In June 2008, Gendux Molecular Limited, our wholly-owned subsidiary based in Ireland, submitted a Marketing Authorization Application (MAA) to the European Medicines Evaluation Agency (EMEA) requesting marketing approval for ADVEXIN therapy to treat recurrent, refractory head and neck cancer. EMEA has accepted this MAA for review.

In June 2008, we submitted a BLA to the FDA requesting marketing approval for ADVEXIN therapy to treat recurrent, refractory head and neck cancer. In September 2008, the FDA notified us that this BLA was not

14

Table of Contents

sufficiently complete and would not be filed at that time. We are in the process of appealing the FDA s refusal to file decision and anticipate a response to our appeal from the FDA sometime before the end of 2008.

The ADVEXIN therapy BLA for recurrent or refractory Squamous Cell Carcinoma of the Head and Neck (SCCHN) contains a proforma product package insert describing indicated usage in patients with certain p53 biomarker profiles. The p53 biomarker profiles appear to identify the majority of the recurrent SCCHN population, and we believe the p53 biomarker profiles identify a majority the of the overall solid tumor population.

After submission of the ADVEXIN therapy BLA, FDA notified Introgen of the discontinuation of the program s current Fast Track designation for SCCHN and simultaneously invited us to request future Fast Track designation for ADVEXIN therapy development programs, which we plan to pursue with additional Fast Track designation requests in patients with p53 biomarker profiles in multiple cancer indications with unmet medical needs. The FDA has advised Introgen that the pending ADVEXIN BLA is unaffected by the Fast Track designation discussion.

ADVEXIN therapy for head and neck cancer has been designated an Orphan Drug under the Orphan Drug Act. This designation may give us up to seven years of marketing exclusivity for ADVEXIN therapy for this indication if approved by the FDA.

Our submission of a BLA to the FDA and an MAA to the EMEA for ADVEXIN therapy is based on the results of pivotal Phase 2 and 3 clinical trials evaluating survival, tumor response and safety in patients with recurrent, refractory end-stage, squamous cell carcinoma of the head and neck. These trials incorporated common diagnostic tests to identify patients most likely to benefit from ADVEXIN treatment based upon pre-treatment tissue analyses to determine p53 profile status.

The Phase 3 Statistical Analysis Plan was finalized with input from the FDA. We have followed advice from the FDA in accelerating our Phase 3 safety analysis and performing an efficacy analysis for this study. An independent Data Safety Monitory Board review in 2006 noted no safety issues with the Phase 3 study.

In submitting our BLA for ADVEXIN therapy, we were able to rely on an agreement with the FDA that biomarker evaluations as described in its Critical Path Initiative, which permits new product evaluation on the basis of specifically targeted (i.e., by prognostic or biologic parameters) clinical trials and/or patient populations, can be used in the ADVEXIN therapy approval process in addition to our original Phase 3 protocol determination to assess a patient s mutation status and other Personalized Medicine characteristics. This initiative encourages sponsors to examine novel approaches to define tumor responses that correlate with clinical benefit. Our Phase 3 statistical analysis plan and clinical protocols describe assessments of p53 biomarker profiles based not only on p53 mutational gene sequence evaluations but also on p53protein levels as determined by prospectively identified immunohistochemistry procedures. We have employed several biomarker and response criteria to evaluate ADVEXIN therapy efficacy. By using new clinical data and new analyses of those data, we hope to more specifically target recurrent head and neck cancer in patients using indicators known as biomarkers, as discussed further below under ADVEXIN Therapy as a Targeted Molecular Therapy. We believe this Personalized Medicine approach will improve efficacy by identifying the patients most likely to benefit from ADVEXIN therapy.

Clinical Trials For Treatment of Head and Neck Cancer

Our Phase 3 multicenter, randomized, comparative trial enrolled 123 patients with recurrent squamous cell carcinoma of the head and neck whose cancers were refractory to platinum or taxane chemotherapy. Patients were randomized to receive ADVEXIN therapy or methotrexate as monotherapy. Recurrent, refractory (end-stage) head and neck cancer is aggressive with a poor prognosis, making it unethical to treat patients with placebo as an additional comparator.

The primary efficacy endpoint was survival. The secondary efficacy endpoint was tumor response. Study populations consisted of the p53 biomarker population and the intent to treat population. All endpoints and populations were prospectively designated before unblinding the Phase 3 database and officially amended with the FDA prior to starting the Phase 3 analysis.

Table of Contents

Study results compared the patients as a whole for the entire intent-to-treat (ITT) population and for patients based upon tumor p53 biomarker profiles positive or negative for ADVEXIN therapy efficacy. Biomarkers for p53 have been shown to be excellent predictors of efficacy following ADVEXIN therapy and define a group of patients who may benefit more from ADVEXIN therapy than from methotrexate treatment. The prospectively identified p53 biomarker profiles in the Phase 3 study confirmed results obtained from earlier hypothesis generating analyses of biomarker profiles data from Phase 2 study data.

Biomarker analyses were conducted with pre-treatment samples on a completely blinded basis by an independent laboratory unaware of the clinical results. A total of 67 patients (i.e. n=67), which is over half of the study patients, had pre-treatment tissue samples available for testing. The identification of patients according to the predictive p53 profiles yielded statistically significant findings with regard to efficacy.

Using statistical analysis, the clinical characteristics of the ITT and biomarker populations demonstrated that the samples are representative of the entire treatment population in demographics and disease characteristics. Routine, readily available, immunohistochemistry (IHC) and gene sequencing tests were performed to determine patients tumor p53 profiles that were either positive or negative for ADVEXIN therapy efficacy. These routine tests are available from many clinical testing facilities to detect p53 abnormalities associated with the majority of solid tumors. Notable study results included the following:

The survival results in the p53 molecular biomarker population met the study s overall objective by demonstrating the clinical benefit of ADVEXIN therapy in comparison to methotrexate. In the tumor p53 positive profile patients, ADVEXIN therapy treatment had a higher median survival compared to methotrexate (ADVEXIN therapy 7.2 months vs. methotrexate 4.3 months). There was a statistically significant difference in survival outcomes by Cox regression analysis for patients treated with ADXEXIN versus methotrexate based upon p53 biomarker profiles. There was a statistically significant treatment effect by tumor p53 profile interaction in terms of overall survival ($p = 0.0215$) and 6 month survival ($p = 0.0039$). Specifically for overall survival, the hazard ratio for the interaction was 0.249 (95% CI 0.076-0.815), indicating that for patients with a favorable tumor p53 profile, there was significantly increased survival for treatment with ADVEXIN. The hazard ratio for the main effect of treatment (2.941, 95% CI 1.057-8.183) revealed that for patients with an unfavorable tumor p53 profile, there was increased survival for methotrexate ($p = 0.0388$). For six month survival, the hazard ratio for the interaction was 0.100 (95% CI 0.0214-0.477), indicating that for patients with a favorable tumor p53 profile, there was an even stronger significantly increased survival for treatment with ADVEXIN. The hazard ratio for the main effect of treatment (4.333, 95% CI 1.195-15.715) again revealed that for patients with an unfavorable tumor p53 profile, there was increased survival for methotrexate treatment ($p = 0.0257$). (Note: The p-value is a measure of probability that a difference between groups during an experiment happened by chance. The lower the p-value, the more likely it is that the difference between groups was caused by treatment and tumor p53 profile effects rather than by chance.)

A complementary statistical analysis evaluating the percentage of patients surviving at six months also demonstrated the clinical benefit of ADVEXIN therapy in comparison to methotrexate for patients with tumor p53 profiles positive for ADVEXIN therapy efficacy. At the six month survival endpoint, 67% of ADVEXIN therapy treated patients were alive compared to only 39% of the methotrexate treated patients. This difference was statistically significant ($p = 0.0365$).

There was a statistically significant increase in survival for ADVEXIN therapy treated patients with positive tumor p53 profiles compared to patients without these profiles (median survival 7.2 months vs. 2.7 months; $p < 0.0001$). The p53 profiles predictive of ADVEXIN treatment effects were retained as an independent prognostic factor for survival in Cox Proportional Hazard Multivariate Analysis of known prognostic variables, with a significantly decreased risk of death for patients with favorable ADVEXIN efficacy profiles (HR 0.15, 95% CI, (0.06, 0.39), $p = 0.0001$) compared to patients with unfavorable profiles. In contrast, the p53 profiles predictive of ADVEXIN survival effects did not predict methotrexate survival outcomes and there was no statistical difference between the median survivals of methotrexate treated patients with favorable vs.

unfavorable tumor p53 profiles for ADVEXIN treatment effects.

With respect to tumor response, similar benefits for ADVEXIN therapy in comparison to methotrexate in the molecular biomarker population were observed for this parameter of treatment efficacy that was also observed for the survival outcomes. In the Phase 3 study, there was a statistically significant increase in

Table of Contents

tumor responses for ADVEXIN treated patients with favorable p53 efficacy profiles compared to those with unfavorable profiles (favorable 71% (n=17/24) vs. unfavorable 18% (2/11); p = 0.0088). In contrast, the p53 profiles predictive of ADVEXIN efficacy did not predict methotrexate response outcomes. Opposite to ADVEXIN therapy, methotrexate responders had a lower percentage of favorable p53 profiles and a higher proportion of responders with unfavorable p53 profiles (favorable 50% (n=11/22) vs. unfavorable 83% (5/6). The interaction of tumor response, treatment and p53 biomarker profiles was statistically significant by logistic regression analysis (p = 0.0069) and indicates that p53 gene therapy and methotrexate tumor responses were associated with different and complimentary groups of recurrent SCCHN patients.

The results of the statistical analyses for survival and tumor response are in agreement with each other and demonstrate the superior efficacy of ADVEXIN therapy compared to methotrexate in patients with tumor p53 profiles positive for ADVEXIN therapy efficacy.

Another result of the study shows that ADVEXIN therapy and methotrexate have significant clinical benefits in different groups of patients. These patients could easily be identified by their predictive tumor p53 profiles.

Based on the finding that ADVEXIN therapy and methotrexate demonstrate activity in complementary groups of patients, it is expected that the median survivals for the overall intent-to-treat ADVEXIN therapy and methotrexate populations should be similar and without a statistically significant difference. This was observed in the Phase 3 study (median survival for ADVEXIN therapy 4.4 months vs. methotrexate of 6.1 months; p = 0.236). The results demonstrate the importance of evaluating biomarker populations as opposed to the intent-to-treat groups that do not account for the underlying and identifiable molecular indicators of ADVEXIN therapy activity that can identify which patients will benefit from ADVEXIN therapy.

In this Phase 3 study, ADVEXIN therapy had a superior safety profile compared to methotrexate. The side effects more common for methotrexate (inflammation of mouth, pneumonia and low blood counts) were potentially more clinically significant than the generally more self-limiting side effects from ADVEXIN therapy (fever, chills, and injection site discomfort or pain).

The results presented above are based upon employing ≥ 20% staining tumor cells as the criterion for elevated p53 protein expression in the p53 biomarker profiles. This criterion complements results we previously presented in our Form 10Q as of June 30, 2008, which were based upon ≥ 50% tumor staining. We have performed the analyses under both criteria for scientific and regulatory purposes and have provided both sets of data for regulatory filings. The findings show essentially the same results with little or no practical difference in outcome or clinical application because the majority of patients with ≥ 20% staining were also found to have ≥ 50% tumor staining.

These findings demonstrate the benefits of ADVEXIN therapy in comparison to methotrexate for patients with tumor p53 biomarker profiles positive for ADVEXIN therapy. The clinical application of these biomarkers may allow physicians to select individualized ADVEXIN therapy based upon a patient s tumor p53 profile determined by routine diagnostic tests.

Regulatory Filings for Marketing Approval for Treatment of Li-Fraumeni Syndrome

The EMEA Committee for Orphan Medicinal Products granted ADVEXIN therapy an Orphan Medicinal Product Designation in Europe for the treatment of Li-Fraumeni Syndrome. This designation has been ratified by the European Commission. The Orphan Medicinal Product Designation in Europe confers a number of regulatory benefits to ADVEXIN therapy, including access to protocol assistance, reduced regulatory fees and a ten-year period of marketing exclusivity from the date of marketing authorization by the European Commission. Li-Fraumeni Syndrome is an inherited cancer characterized by inherited mutations in the p53 tumor suppressor.

We have submitted, and the EMEA has accepted for review, a Marketing Authorization Application for the use of ADVEXIN therapy for treatment of Li-Fraumeni Syndrome cancers under the EMEA s Exceptional Circumstances Approval rules for breakthrough therapies. Under these rules, approval, if granted by the EMEA, will be based on clinical results from the use of ADVEXIN therapy in Li-Fraumeni Syndrome cancers and also from results of other

trials with ADVEXIN therapy in a wide variety of non-inherited solid tumors that share the p53 biomarker abnormality, which characterizes Li-Fraumeni Syndrome cancers. We have received review questions from the EMEA in response to this application and believe we can fully address these questions in a timely manner.

Table of Contents

The EMEA s Exceptional Circumstances Approval provisions are designed to facilitate access to needed treatments for certain Orphan Medicinal Products. A Marketing Authorization Application filed with the EMEA under these provisions can be reviewed on an expedited basis. This Exceptional Circumstance registration approach is designed by EMEA to be more streamlined than EMEA s Conditional Approval procedures, which are similar to the FDA s Accelerated Approval regulations.

An audit and inspection of Introgen s facilities and production processes was performed by a European Union Qualified Person (QP) during 2007. This inspection resulted in the QP concluding that ADVEXIN therapy has been manufactured at this site in accordance with the standards of Good Manufacturing Practices in place in the EU for Investigation Medicinal Products (IMPs). This inspection covered all aspects of ADVEXIN therapy manufacture, including production and purification, aseptic filling, labeling, and testing of raw materials, intermediates, and final product, and all quality systems in place for these aspects.

Our manufacturing facilities were audited in July 2008 by representatives of the Irish Medicines Board on behalf of the EMEA. The purpose of the inspection was to assess the compliance of our facilities and GMP systems with the requirements of the EC Guide to GMP with a view to issue a Manufacturing Authorization in relation to our Marketing Authorization Application to the EMEA for our ADVEXIN therapy product. We are in the process of evaluating the audit findings and expect to have all observations resolved by the end of 2008.

There is no assurance we will receive approval from the FDA and/or the EMEA to market ADVEXIN therapy for recurrent head and neck cancer or Li-Fraumeni syndrome. In particular, there is no assurance we can successfully appeal the FDA s notification that our BLA requesting marketing approval for ADVEXIN therapy to treat recurrent, refractory head and neck cancer was not sufficiently complete and would not be filed. We may encounter unforeseen delays in the regulatory process due to additional information requirements from regulatory authorities, unintentional omissions in our applications, additional government regulation or other delays in the review process. We may update our expectations regarding these regulatory milestones from time to time to reflect new information as it becomes available to us.

ADVEXIN Therapy as a Targeted Molecular Therapy

As noted above, we identified a set of predictive indicators, commonly referred to as biomarkers, associated with high response rates and increased survival in our clinical trials of ADVEXIN therapy in patients with recurrent head and neck cancer. We believe these biomarkers support the use of ADVEXIN therapy as a targeted molecular therapy.

The FDA, the National Cancer Institute (NCI), and the Centers for Medicare & Medicaid Services are undertaking the Oncology Biomarker Qualification Initiative to expedite the development of novel cancer treatments that reflect the Personalized Medicine approach. These agencies define biomarkers as clinical or biological indicators of disease or therapeutic effects, which can be measured through dynamic imaging tests, laboratory tests on blood or tissue samples as well as by clinically defined parameters. This initiative was developed to employ biomarkers as a way of speeding the development and evaluation of new cancer therapies. The identification of predictive indicators of ADVEXIN therapy activity is responsive to these initiatives by predicting the patient populations most likely to benefit from a specific cancer therapy.

We have compiled molecular biomarker data from several of our clinical studies in patients with head and neck, lung, prostate and Li-Fraumeni Syndrome cancers. Some of these studies are described in more detail in preceding and subsequent paragraphs.

The targeted molecular therapy provided by ADVEXIN therapy is evidenced by its use to successfully treat a Li-Fraumeni Syndrome cancer patient on a compassionate use basis under a protocol authorized by the FDA. Li-Fraumeni Syndrome cancer patients have inherited defects in the p53 tumor suppressor that is the target of ADVEXIN therapy. Our treatment of a tumor in a Li-Fraumeni Syndrome cancer patient with ADVEXIN therapy led to improvement of tumor-related symptoms and resulted in a complete response in the treated lesion as determined by positron emission tomography (PET) computerized tomography (CT) scans. PET-CT scans measure the metabolic activity of tumors and are being increasingly utilized in the management of cancer patients because they provide more sensitive assessments of treatment effects compared to conventional CT and magnetic resonance imaging scans.

Table of Contents

This Li-Fraumeni Syndrome study defined important biomarkers to guide the administration of ADVEXIN therapy to patients with other cancers who display p53 pathway abnormalities. Our molecular analysis of biopsies of the Li-Fraumeni Syndrome tumor before and after treatment identified key markers of p53 pathway abnormalities that are used to predict and evaluate the effects of ADVEXIN therapy. These markers included detection of abnormal levels of p53 protein that identify aberrant p53 pathways and the induction of molecular markers of tumor growth control and tumor cell death that validate ADVEXIN therapy s mechanisms of action. We believe these biomarkers can be used to identify patients most likely to benefit from ADVEXIN therapy.

Other ADVEXIN Therapy Activities

We performed a Phase 2 clinical trial of ADVEXIN therapy combined with neoadjuvant chemotherapy and surgery in women with locally advanced breast cancer. The results of this study were published in the journal *Cancer.* Objective clinical responses were seen following the combined therapy in 100% of the patients with a median of 80% reduction in tumor size. Following tumor shrinkage, complete tumor removal by subsequent surgery was achieved in 100% of the patients. At a median follow-up of 37 months (range, 30-41 months), four patients (30%) developed systemic recurrence and two patients died. The estimated breast cancer-specific survival rate at three years was 84%. There was no increase in systemic toxicity. Neoadjuvant treatments are administered prior to surgery and represent a novel and increasingly applied approach to making surgical tumor resections less invasive, improving outcomes and facilitating breast conservation.

We completed a Phase 2 clinical trial of ADVEXIN therapy administered as a complement to radiation therapy in non-small cell lung cancer. In the 19 patients who participated in the trial, combined ADVEXIN therapy and radiation treatment resulted in 63% biopsy-proven complete responses at three months, which is approximately four times the expected rate using radiotherapy alone. The results of this study were published in *Clinical Cancer Research.*

We performed a Phase 1/early Phase 2 clinical trial of ADVEXIN therapy for the treatment of advanced, unresectable, squamous cell esophageal cancer. Results of this trial in patients with esophageal cancer refractory to chemotherapy and radiation indicate three of the ten patients treated, or 30%, had negative biopsies after receiving ADVEXIN therapy. The median survival of the patients treated with ADVEXIN therapy was approximately twelve months, which compared favorably to historical controls in which a median survival of less than ten months was observed for patients who did not respond to standard treatments. This clinical trial was performed at Chiba University in Japan.

We have completed other clinical trials of ADVEXIN therapy, including Phase 1 studies in prostate cancer and bronchoalveolar carcinoma. To date, clinical investigators at sites in North America, Europe and Japan have treated over 600 patients with ADVEXIN therapy, establishing a large safety database. Findings from several of our clinical trials have been published in *Clinical Cancer Research* and *Proceedings of the American Society for Clinical Oncology* as well as presented at numerous conferences, including the San Antonio Breast Cancer Conference and various meetings of the ASCO, ASGT and the American Association for Cancer Research.

A growing body of data suggests ADVEXIN therapy demonstrates clinical activity in a variety of cancer indications. Safety data from our clinical trials suggest this activity may be achieved without the treatment-limiting side effects frequently associated with many other cancer therapies.

Our clinical trials indicate ADVEXIN therapy is well tolerated as a monotherapy. The addition of ADVEXIN therapy to standard chemotherapy, surgery or radiation does not appear to increase the frequency or severity of side effects normally associated with these treatment regimens.

Pre-clinical studies have provided insight into the molecular pathways by which the p53 tumor suppressor, the active component of ADVEXIN therapy, kills tumor cells. These studies were undertaken to provide additional molecular data supporting the activity observed during the clinical development of ADVEXIN therapy and to provide additional information regarding the specific pathways, including anti-angiogenesis or the reduction of blood vessels supplying the tumor, that mediate the observed clinical effects of ADVEXIN therapy. The studies were conducted by our collaborators at Okayama University in Japan, The University of Texas M. D. Anderson Cancer Center and other academic institutions and were published in *Molecular Cancer Therapeutics* and other scientific journals.

Table of Contents

Other data suggest the enhanced therapeutic effects of a combination of ADVEXIN therapy and Erbitux® therapy in an animal model of human non-small cell lung cancer. Other pre-clinical studies conducted by our collaborators at Wayne State University, the Karmanos Cancer Institute located in Detroit, Michigan and the University of California-Irvine, as published in *The Laryngoscope*, show that the combination of ADVEXIN therapy and docetaxel resulted in increased levels of programmed cell death in head and neck tumor cells.

We hold a worldwide, exclusive license to a family of patent applications directed to combination therapy using ADVEXIN therapy with inhibitors of epidermal growth factor receptors (EGFR inhibitors) such as Erbitux®, Vectibix®, Tarceva® and Iressa®. We licensed this family of patents from M. D. Anderson Cancer Center. This important technology is based on the discovery by scientists at M. D. Anderson Cancer Center that p53 therapies (which is the basis for our ADVEXIN therapy) and mda7 therapies (which is the basis for our INGN 241 product candidate discussed below) can work synergistically with inhibitors of epidermal growth factor receptors to arrest tumor growth. Preclinical studies have shown that this therapeutic approach results in a greater level of cancer cell death than when either therapy is used alone.

We hold the worldwide rights for pre-clinical and clinical development, manufacturing, marketing and commercialization of ADVEXIN therapy.

INGN 241 (mda-7)

INGN 241 uses the mda-7 tumor suppressor, that we believe, like the p53 tumor suppressor, has broad potential to induce apoptosis or cell death in many types of cancer. We have combined the mda-7 tumor suppressor with our adenoviral delivery system to form INGN 241. Our pre-clinical trials have shown the protein produced by INGN 241 suppresses the growth of many cancer cells, including those of the breast, lung, ovaries, colon, prostate and the central nervous system, while not affecting the growth of normal cells. Because INGN 241 kills cancer cells even if other tumor suppressors, including p53, are not functioning properly, it appears mda-7 functions via a novel mechanism of tumor suppression.

We have completed a Phase 1/early Phase 2 clinical trial using INGN 241 to evaluate safety, mechanism of action and efficacy in approximately 22 patients with solid tumors. This trial indicated that in patients with solid tumors, INGN 241 was well tolerated, was biologically active and displayed minimal toxicity associated with its use. Although INGN 241 was administered directly to tumors, evidence of distant biologic activity was observed, suggesting this therapy may have utility in treating primary tumors as well as metastatic disease. We are conducting a Phase 2 clinical trial using INGN 241 in patients with metastatic melanoma. We are also conducting a Phase 3 clinical trial using INGN 241 in combination with radiation therapy for solid tumors.

Data from our Phase 1/early Phase 2 clinical trial of INGN 241 in patients with solid tumors demonstrated that direct injection of INGN 241 induced programmed cell death in 100% of the tumors treated, even in patients who had failed prior therapy with other anti-cancer drugs. Clinical responses were observed in 44% of the treated lesions, including complete and partial responses in two patients with melanoma. Patients treated with INGN 241 had increases in a subset of T-cells that help to destroy cancer cells, which is consistent with the role of the mda-7 protein as a member of the interleukin family of immune stimulating proteins.

We have conducted pre-clinical work indicating that in addition to its known activity as a tumor suppressor, the protein produced by mda-7 may also stimulate the body s immune system to kill metastatic tumor cells and to protect the body against cancer, thereby offering the potential of providing an added advantage in treating various cancers because it may attack cancer using two different mechanisms. Because the mda-7 tumor suppressor may act as a cytokine, or immune system modulator, it is also known as interleukin 24, or IL-24. The mda-7 molecule may also work as a radiation sensitizer to make several types of human cancer cells more susceptible to radiation therapy. We have seen evidence of this effect in pre-clinical and clinical settings.

We have identified the molecular pathways by which mda-7, the active component of INGN 241, induces growth arrest and programmed cell death or apoptosis in cancer cells. Pre-clinical studies using lung cancer cells have demonstrated the mda-7 protein binds to a critical cellular enzyme known as PKR. The binding of mda-7 to PKR is essential for the anti-cancer activity of INGN 241. The identification of this binding partner demonstrates a significant advancement in understanding how this therapeutic can be effective against cancer. Additional studies have identified bystander killing of pancreatic cancer cells by the mda-7 protein. Bystander killing involves the killing of neighboring

tumor cells by the mda-7 protein released from adjacent INGN 241-treated tumor cells.

Table of Contents

Pre-clinical data indicate the combination of INGN 241 and Velcade® (Bortezeamib), marketed by Millennium Pharmaceuticals, Inc., can result in increased tumor cell killing in human ovarian cancer cells. These data showed that co-administration of INGN 241 and Velcade®, a known protein degradation inhibitor, further elevated mda-7 protein levels and caused a significant increase in killing of ovarian cancer cells. These findings are published in *Cancer Gene Therapy*.

Pre-clinical data indicate INGN 241 works synergistically with celecoxib, marketed by Pfizer as Celebrex®, to inhibit the growth and increase killing of breast cancer cells. The combination of celecoxib and INGN 241 showed greater than additive increases in cell death compared with either therapy alone and also resulted in the suppression of tumor cell growth.

Pre-clinical data indicate INGN 241 and bevacizumab, marketed by Roche Holding AG and Genentech, Inc. (Genentech) as Avastin®, each inhibit tumor angiogenesis through distinct mechanisms in models of lung cancer. Study results demonstrate the combination of INGN 241 and Avastin® significantly increases anti-tumor activity compared with either agent used separately. We have observed synergistic activity resulting in a positive therapeutic effect in the treatment of lung cancer in laboratory animals following the combination of the two agents. In contrast, treatment with Avastin® alone demonstrated only minor tumor regression in those animals. These findings have been published in *Molecular Therapy*, the journal of the American Society of Gene Therapy.

Pre-clinical data indicate the combination of INGN 241 and Tarceva®, marketed by Genentech, more significantly inhibits tumor cell growth than Tarceva® administered alone. The preclinical data suggest the two agents work in concert to inhibit activity of the epidermal growth factor receptor, a potent driver for cell growth in many types of cancer.

Our pre-clinical work indicates INGN 241 effectively kills cancer cells that are resistant to cisplatin, one of the most commonly used chemotherapeutic agents. These pre-clinical studies identified a novel defect in a protein degradation pathway in the cisplatin-resistant cells. This defect enhances the activity of INGN 241, suggesting that INGN 241 may have particular utility in treating cancers that do not respond to cisplatin. We have also observed that INGN 241 can restore cisplatin sensitivity to certain cancer cells that have become cisplatin-resistant.

In pre-clinical studies, we have observed the expression of mda-7 in ovarian cancer cells activates a cell death or apoptotic pathway regulated by the Fas signaling system, a key signaling system in immune regulation, apoptosis and drug resistance. This activation resulted in significant increases in apoptosis and inhibition of cancer cell proliferation that were specific to cancer cells. These effects were not observed in normal ovarian tissue, supporting previous data showing a cancer-selective effect of INGN 241.

We have published preclinical data describing how an important tumor survival pathway impacts the anticancer activity of INGN 241. Inhibition of this pathway, known as NF-kB, enhanced the tumor killing effects of INGN 241 in cell culture and in preclinical models of human tumors. Researchers at Introgen and The University of Texas M. D. Anderson Cancer Center conducted theses studies. The data appear in the publication *Molecular Cancer Therapeutics*.

We have published preclinical data demonstrating that vitamin E succinate (VES) enhances the cytotoxic effects of INGN 241 in ovarian cancer cells. VES is a derivative of Vitamin E that has demonstrated potent antitumor activity in cell and animal models of cancer. Researchers at Introgen and The University of Texas M. D. Anderson Cancer Center collaborated on the studies. The results appear in the publication *Cancer Letters*.

We have published the results of a pre-clinical study indicating INGN 241 may suppress the growth *in vivo* of non-small cell lung cancer through apoptosis in combination with anti-angiogenesis. The data demonstrate INGN 241 can inhibit production of the VEGF protein, a potent inducer of angiogenesis, within lung cancer cells, which in turn inhibits tumor angiogenesis, a key requirement for tumor growth.

Pre-clinical work has demonstrated administration of INGN 241 results in the development of systemic immune responses against tumor cells and suggests INGN 241 could be used as a novel cancer molecular immunotherapy. In pre-clinical studies, implantation of INGN 241-treated tumor cells into mice resulted in significant inhibition of tumor growth. Significantly, mice immunized with INGN 241-treated cells showed inhibition of tumor growth after a subsequent challenge with additional tumor cells.

We have conducted pre-clinical studies with INGN 241 in breast cancer cell lines as a single agent, as well as in combination with radiation therapy, with chemotherapy (Taxotere® or Adriamycin®), with the hormone inhibitor

21

Table of Contents

Tamoxifen® and with Herceptin®, a biologic cancer therapy. In all settings, INGN 241 reduced cell growth and increased programmed tumor cell death (apoptosis). This effect was enhanced when combined with drugs currently used to treat breast cancer. In animal models of breast cancer, treatment with INGN 241 alone or in combination with radiation therapy resulted in significant decreases in tumor growth. In particular, our pre-clinical studies have shown treatment with a combination of INGN 241 plus Herceptin® induces cell death in Her-2/neu positive breast cancer cells at a rate greater than that seen with either agent alone. In these studies, it was also noted while Herceptin® exhibited no activity on Her-2/neu negative cells, INGN 241 did induce cell death in these cells.

Pre-clinical studies indicate the mda-7 protein released from cells treated with INGN 241 can kill nearby, untreated breast cancer cells resulting in additional therapeutic effect. This bystander effect occurs when the therapeutic protein binds to certain receptors on nearby cancer cells. We believe this bystander effect is significant because it could indicate the number of cancer cells INGN 241 can kill is greater than the number of cells that take up this novel investigational cancer therapy.

Pre-clinical studies have demonstrated that INGN 241 can induce human lung cancer cells to undergo apoptosis, or programmed cell death, through the synergistic action of INGN 241 and a class of tumor-targeted drugs known as heat shock protein 90 (Hsp90) inhibitors. We have observed the combination of INGN 241 and two Hsp90 inhibitors can result in the enhancement of cell death in lung cancer cells. This combination treatment inhibited tumor cell movement, suggesting an anti-metastatic effect.

Findings and results arising from our development of INGN 241 have also been published in the *Journal of Leukocyte Biology*, *Cancer Gene Therapy*, *Cancer Research*, *Molecular Therapy*, *Oncogene*, *Surgery*, and *International Immunopharmacolgy.* Data from this work have also been presented at the annual San Antonio Breast Cancer Symposium.

We have exclusive licenses from Columbia University and The University of Texas M. D. Anderson Cancer Center to mda-7 tumor suppressor technology for our therapeutic applications. The technology licensed from M. D. Anderson Cancer Center was developed pursuant to sponsored and collaborative research programs over the past several years. Pre-clinical studies regarding the active component of INGN 241 have included research at The University of Texas M. D. Anderson Cancer Center and Columbia University. We have an exclusive license to a family of patent applications covering methods and compositions of the mda-7 tumor suppressor with several types of currently available therapies, including conventional chemotherapies, vascular endothelial growth factor inhibitors, such as Avastin® (bevacizumab), non- steroidal anti-inflammatory drugs, which include COX-2 inhibitors such as Celebrex®, (celecoxib) and proteasome inhibitors, which can increase therapeutic functionality, such as Velcade® (bortezemib).

INGN 225 (p53 molecular immunotherapy)

We are developing INGN 225 using the p53 tumor suppressor in a different manner to create a molecular immunotherapy for cancer that stimulates a particular type of immune system cell known as a dendritic cell. Research published in *Current Opinion in Drug Discovery & Development* concluded that the p53 tumor suppressor can be used with a patient s isolated dendritic cells as an antigen delivery and immune enhancing therapeutic strategy. Pre-clinical testing has shown that the immune system can recognize and kill tumors after treatment with dendritic cells stimulated by the p53 tumor suppressor, which suggests a molecular immunotherapy consisting of dendritic cells stimulated by p53 could have broad utility as a treatment for progression of tumors.

Moffitt Cancer Center is conducting a Phase 2 randomized, controlled study of INGN 225 involving as many as 80 patients with metastatic, small-cell lung cancer. Mutations in the p53 tumor suppressor occur in approximately 90 percent of the patients with this disease such that this patient population is well-suited for testing the clinical efficacy of INGN 225. One of the patients in this trial treated solely with INGN 225 had a significant reduction in the size of metastatic liver tumors. The National Institutes of Health National Cancer Institute awarded to Moffitt Cancer Center a grant of approximately $1.3 million to fund this trial. We have the right to, and expect we will, use the clinical data generated from this study as part of our INGN 225 commercial development efforts.

We have completed a Phase 1/2 clinical trial in collaboration with the Moffitt Cancer Center at the University of South Florida in patients with small cell lung cancer. We are also conducting a Phase 1/2 trial in patients with breast cancer in collaboration with the University of Nebraska. In this trial, INGN 225 was administered after the patients have been treated with standard chemotherapy.

22

Table of Contents

The results from the Phase 1/2 trial in patients with extensive-stage small cell lung cancer who were previously treated with chemotherapy demonstrated a 45 percent response rate in patients with platinum-resistant small-cell lung cancer who received chemotherapy following INGN 225. The historical response rate is generally less than 15 percent in these patients. Among the 43 patients evaluable for survival following INGN 225 treatment, survival was also improved compared to historical controls.

INGN 234 (p53 topical)

We are developing INGN 234 for the prevention of oral cancers and the treatment of oral leukoplakia. We conducted a Phase 1 clinical trial in which p53 was administered in an oral mouthwash formulation to prevent precancerous oral lesions from developing into cancerous lesions.

We are conducting pre-clinical work on other topical administrations of tumor suppressors to control or prevent oral or dermal cancers. We are investigating multiple delivery platforms, including both viral and non-viral approaches. We are also investigating combining delivery of our therapies with rinses, patches, ointments and enhancing polymers. We believe the opportunity exists to develop non-toxic treatments for pre-malignant and malignant cells that can be easily exposed to natural biological tumor suppressor and DNA repairing molecules.

We have an alliance agreement with Colgate-Palmolive to develop and potentially market oral healthcare products. See Part I, Item 2. Management s Discussion and Analysis of Financial Condition and Results of Operation Business and Collaborative Arrangements Alliance with Colgate-Palmolive Company below for further discussion of this alliance agreement.

INGN 401 (FUS-1)

INGN 401 uses systemically administered nanoparticles to express the tumor suppressor FUS-1. We exclusively license the FUS-1 technology from M. D. Anderson Cancer Center.

A Phase 1/early Phase 2 clinical trial is in process at M. D. Anderson Cancer Center testing INGN 401 in patients with advanced non-small cell lung cancer who have been treated previously with chemotherapy. INGN 401 was successfully delivered into the tumors of stage IV lung cancer patients and was found to be active in patients metastatic non-small cell lung cancer tumors. This finding is the first clinical demonstration that a gene can be injected intravenously and be taken up and expressed at high levels in cancer cells at distant sites.

The interim results of this clinical trial were presented by the M. D. Anderson Cancer Center investigators at the 2007 annual meeting of the American Association of Cancer Research. This clinical trial consists of patients first treated with front line cisplatin combination chemotherapy, which failed to halt their disease. They received INGN 401 as a second line therapy. Blinded analysis of pre- and post-treatment tumor biopsies demonstrated a high level of FUS-1 expression after therapy. At this time, the median survival time for the 21 patients in this study was 10.3 months which compares favorably to the six to seven month median survival time for patients receiving conventional second line therapy. Tumor responses were observed in 24% (n=5/21) of the treated patients. Stable disease was observed in three responding patients and reductions in tumor size were observed in two additional patients. No significant drug-related toxicity has been observed with respect to INGN 401. The clinical trial continues and no maximum tolerated dose has been established.

Pre-clinical data suggests that INGN 401 may have utility as a monotherapy in lung cancer. We have observed significant inhibition of tumor growth in lung cancer animal models following INGN 401 monotherapy treatment when compared with untreated animals.

Pre-clinical data suggests that a combination of ADVEXIN therapy and INGN 401, administered intravenously in nanoparticle formulations, is capable of significantly shrinking metastatic tumors in models of human lung cancer. The data indicates that while ADVEXIN therapy and INGN 401 are each effective as a monotherapy, more powerful results were observed when the treatments were combined. The data also indicates that the nanoparticle treatments had no demonstrable adverse effects on normal cells.

INGN 401 has demonstrated synergistic activity with gefitinib (Iressa®), a novel class of anti-cancer agents that decrease tumor growth by inhibiting growth factor receptors that promote tumor proliferation. While gefitinib can produce dramatic responses in a small subset of lung cancer patients, most lung cancers are refractory to its effects. The data indicate nanoparticle delivery of INGN 401 can synergize with Gefitinib in killing lung tumor cells resistant to gefitinib alone. Furthermore, in gefitinib-sensitive tumors, INGN 401 delivery significantly enhanced anti-cancer

activity.

Table of Contents

Data and findings from our work to develop INGN 401 have been published in *Cancer Gene Therapy* and *Cancer Research.* We are working with investigators at MDACC to design a pivotal clinical trial for INGN 401.

INGN 402 and INGN 403 (nanoparticle formulations of p53 and mda-7, respectively)

We are developing two nanoparticle formulations for systemic delivery. INGN 402 contains the p53 tumor suppressor and INGN 403 contains the mda-7 tumor suppressor, also known as interleukin 24 (IL-24). Early studies with these new nanoparticle drug candidates have demonstrated a good safety profile and promising anti-cancer activity in murine lung tumor models. Data from the mda-7 nanoparticle studies was published in *DNA and Cell Biology* and presented at the annual meetings of the ASGT and ASCO.

INGN 007 (oncolytic viral therapy)

We are developing INGN 007, a replication-competent viral therapy, which is also called an oncolytic virus, in which viruses bind directly to cancer cells, replicate in those cells, and cause those cancer cells to die. Pre-clinical testing in animal models indicates INGN 007 over-expresses a molecule that allows the vector to saturate the entire tumor. This testing has demonstrated that INGN 007 has a favorable safety profile and significantly inhibits tumor growth. Findings from this work to develop INGN 007 have been published in *Cancer Research* and were presented at a meeting of ASCO. We are developing this replication-competent viral therapy through our strategic collaboration with VirRx. The FDA has approved our Investigational New Drug application for INGN 007 in solid tumors.

Other Research and Development Programs

We are conducting a number of pre-clinical and research programs involving a variety of targeted therapies for the treatment of cancer. These programs involve molecules that act through diverse mechanisms to inhibit the growth of or kill cancer cells.

We license from M. D. Anderson Cancer Center a group of molecules known as the 3p21.3 family. Pre-clinical research performed on these molecules by collaborators at The University of Texas Southwestern Medical Center and M. D. Anderson Cancer Center suggests that the 3p21.3 family plays a critical role in the suppression of tumor growth in lung and other cancers. This family of molecules includes the FUS-1 tumor suppressor we are testing as INGN 401 and the NPRL2 gene. We are working with M. D. Anderson Cancer Center to further evaluate other 3p21.3 family molecules as clinically relevant therapeutics.

The NPRL2 gene is believed to be important in the genesis of multiple types of cancer, including lung cancer and renal cell cancer. Preclinical data with the NPRL2 tumor suppressor gene demonstrated that systemic treatment using NPRL2 nanoparticles in combination with cisplatin resulted in a 90% inhibition of tumor growth in human lung cancer cells compared to control treatments. The ability to use a biomarker assay for NPRL2 to identify patients who might not experience significant benefit from treatment with cisplatin alone could represent an important advance in cancer treatment. Development of NPRL2 systemic nanoparticles may help patients whose tumors are resistant to cisplatin by re-sensitizing tumors to this commonly used therapy. Study results involving the NPRL2 treatment have been published in *Cancer Research*, a biomedical journal, and *Cancer Wise*, an electronic publication of M. D. Anderson Cancer Center.

We are evaluating additional molecules, including BAK, which hold promise as therapeutic candidates. BAK is a pro-apoptotic molecule that kills cancer cells. We are working with our collaborators at M. D. Anderson Cancer Center to identify and develop both viral and non-viral vectors containing this therapeutic molecule. We have exclusive rights to use the BAK molecule under a license with Genentech, Inc.

We believe our research and development expertise gained from our molecular therapies for cancer is also applicable to other diseases that, like cancer, result from cellular dysfunction and uncontrolled cell growth. As a result, we are conducting research in collaboration with medical institutions to understand the safety and effectiveness of our molecular therapy product candidates in the treatment of other diseases.

Introgen Enabling Technologies

We have a portfolio of technologies, referred to as enabling technologies, for administering targeted molecular products to patients and for enhancing the effects of these products. We plan to utilize these technologies to develop

Table of Contents

additional products to treat cancer and other diseases which, like cancer, result from cellular dysfunction and uncontrolled cell growth.

Nanoscale Viral Delivery Systems

We have demonstrated that ADVEXIN therapy and INGN 241, which use our adenoviral vector system, enter tumor cells and express their proteins despite the body s natural immune response to the adenoviral vector. While the adenoviral vector system used appears to be appropriate for the treatment of cancer by local administration, we have developed a number of additional systems that utilize modified adenoviral vectors for delivery. These systems also may be applicable to indications where activity of the therapeutic molecule for disease treatment is required for longer periods of time or where systemic administration may be necessary.

Nanoparticle Systemic Delivery Platform

We hold an exclusive, worldwide license to a portfolio of patents from M. D. Anderson Cancer Center focused on the delivery of biologically active proteins, polypeptides and peptides using novel nanoparticle delivery complexes. These systemically-delivered nanoparticles are applicable to a wide variety of bioactive protein-derived molecules. This technology is directed to specially designed nanoparticles that carry and deliver therapeutic bioactive proteins, polypeptides and peptides to targeted cells, such as cancer cells.

These nanoparticle formulations have certain therapeutic advantages. While peptides alone may be rapidly removed from circulation, requiring frequent administration and high doses, our nanoparticle-polypeptide formulations can increase therapeutic activity and protect against rapid degradation normally associated with peptide therapy. Our peptide nanoparticles can include special targeting molecules to further enhance cellular uptake and to improve therapeutic efficacy. We believe these formulations can be expected to have a systemic effect.

We have licensed and are developing a non-viral, nanoparticle delivery platform as a complementary delivery technology for certain types of cancers, or clinical indications, particularly those that require systemic administration. We are using this technology in INGN 401, INGN 402 and INGN 403.

Data published in *DNA and Cell Biology* highlight the potential utility of combining our nanoparticle delivery system with the mda-7 tumor suppressor for the treatment of lung cancer. This data demonstrate that combining this innovative delivery system with the mda-7 tumor suppressor results in potent anti-cancer effects and systemic tumor growth inhibition in an animal model of lung cancer. We believe combining potent anti-cancer tumor suppressors, such as mda-7 or p53, with our nanoparticle delivery system could allow development of clinical strategies to attack metastatic cancers.

Replicating Viral Delivery Systems

Through our strategic collaboration with VirRx, we are developing replication-competent viral therapies, also known as oncolytic viruses, in which viruses bind directly to cancer cells, replicate in those cells, and cause those cancer cells to die. This technology forms the basis for our INGN 007 product development. We anticipate pursuing clinical confirmation as to whether this self-amplifying delivery system can complement our existing adenoviral delivery system, which is replication disabled, in selected therapeutic scenarios, in applications beyond INGN 007.

Additional Enabling Technologies

Our research and licensing activities include a number of additional technologies that expand our capabilities. These activities include the following:

Multi-Molecule Vector System. This technology is designed to combine multiple therapeutic molecules with a vector. This approach has the potential for use with both viral and non-viral delivery systems to allow the activity of more than one molecular therapy at a time for disease treatment.

Pro-Apoptotic Molecule Delivery System. This technology is designed to allow the activity of pro-apoptotic, or apoptosis-inducing, molecules during treatment only, while temporarily suppressing the ability of the apoptotic molecule to kill producer cells during production. This system could facilitate more efficient production of pro-apoptotic agents.

Table of Contents

Tissue-Specific Targeting Systems. This technology is designed to promote the activity of the therapeutic molecule in only those cells which have been affected by the disease being targeted. It is intended to be applied to both viral and non-viral vectors.

Manufacturing and Process Development

Background

Commercialization of a targeted molecular therapy product requires process methodologies, formulations and quality release assays to produce high quality materials at a large scale. We believe the expertise we have developed in the areas of manufacturing and process development represents a competitive advantage. We have developed scale-up methodologies for both upstream and downstream production processes, formulations that are safe and stable, and product release assays that support product quality control.

We own and operate manufacturing facilities, including a commercial-scale, validated manufacturing facility designed to comply with the FDA s Current Good Manufacturing Practice requirements, commonly known as CGMP requirements. We have produced numerous batches of ADVEXIN therapy clinical material for use in our Phase 1, 2 and 3 clinical trials. The design and processes of the facility used for ADVEXIN therapy production have been reviewed with the FDA. We plan to use our facilities for the market launch of ADVEXIN therapy.

We also use our facilities to produce INGN 241 and other investigative materials for use in clinical trials of those product candidates. From time to time, as requirements for our own products allow, we also manufacture pre-clinical and clinical materials for outside parties for a fee under contract services arrangements.

As a result of an audit and inspection by a European Union Qualified Person (QP), we are certified with the Medicines and Healthcare Products Regulatory Agency (MHRA) that our facilities and production processes are compliant with European Good Manufacturing Practices for the manufacture and testing of ADVEXIN therapy. The MHRA is the competent authority in the UK and is a component of the EMEA.

Our manufacturing facilities were audited in July 2008 by representatives of the Irish Medicines Board on behalf of the EMEA. The purpose of the inspection was to assess the compliance of our facilities and GMP systems with the requirements of the EC Guide to GMP with a view to issue a Manufacturing Authorization in relation to our Marketing Authorization Application to the EMEA for our ADVEXIN therapy product. We are in the process of evaluating the audit findings and expect to have all observations resolved by the end of 2008.

Introgen Technical Services

In June 2008, we formed Introgen Technical Services, Inc. (ITS), a wholly-owned subsidiary. Using the manufacturing and process development resources and capabilities described above as a foundation, we anticipate ITS will pursue the following objectives:

Assume responsibility for producing investigative materials for our clinical trials;

Produce and provide us commercial supplies of products for which we may receive marketing approval from the appropriate regulatory agencies; and

Pursue contract production, process development and manufacturing services for third parties.

We anticipate ITS will assume responsibility for overseeing and managing the resources used in our manufacturing activities, including employing and managing the personnel involved with those processes and operating the facilities we currently use in our manufacturing operations. Introgen intends to retain ownership of intellectual property that facilitates these manufacturing and process development activities but may grant ITS a non-exclusive license to use that intellectual property to support Introgen s needs and to pursue other ITS business objectives.

Our manufacturing capabilities have allowed us to build sufficient supplies of clinical materials to meet our needs for the foreseeable future. We believe this accomplishment offers us the opportunity to leverage our

Table of Contents

manufacturing expertise and assets to potentially create incremental revenue from the production of biologics and other compounds for third-parties who do not possess their own in-house capabilities to meet their needs for these products. Accordingly, ITS will actively market our manufacturing capabilities as a service we can provide to others.

While ITS is a wholly-owned subsidiary, we anticipate ITS will make royalty payments to Introgen in consideration for the use of the intellectual property, processes and practices developed by Introgen. We may also pursue financing to facilitate ITS growth in a manner that results in ITS issuing its own securities to third-party investors.

Business and Collaborative Arrangements

Alliance with The Texas A&M University System

In June 2008, The Texas A&M University System (A&M System) and Introgen formed an alliance (The Alliance) to address opportunities for process development and production of therapeutics, vaccines, delivery systems and devices for human and veterinary applications for biopharmaceutical industry, academic research and government clients, including the bio-defense and public health sectors. The Alliance will initially include the use of Introgen s two GMP facilities in Houston, Texas.

Key objectives and activities of The Alliance will include:

Production of therapeutics, vaccines and delivery systems for human and veterinary applications.

Development of new methods, standards and intellectual properties to advance healthcare research regulation of new healthcare technologies.

Collaboration with non-profit and government institutions to enhance research, educational, technical training and economic development goals.

Promotion of academic collaborations with an expanding number of universities in Texas and worldwide.

Working cooperatively to develop new research and manufacturing opportunities with prospective partners and clients in government, academic and commercial sectors.

Creation of new commercial enterprises or development of new business combinations to pursue alliance objectives.

Alliance with Colgate-Palmolive Company

We have an alliance agreement with Colgate-Palmolive to develop and potentially market oral healthcare products. We are conducting research and development activities involving specialized formulations of our molecular therapies (such as p53, mda-7 and FUS-1) targeted at precancerous conditions of the oral cavity and at oral cancer. The objective is to market these formulations as oral healthcare products. The alliance agreement excludes certain of our cancer product candidates, including ADVEXIN therapy, INGN 241, INGN 225 and INGN 401.

In connection with the alliance agreement, Colgate-Palmolive purchased shares of our common stock. They agreed to vote these shares and any other shares of our capital stock they own in favor of corporate actions approved by our Board of Directors. This voting agreement is subject to suspension or termination upon certain events specified in the common stock purchase agreement.

Colgate-Palmolive has a first right to negotiate development, manufacturing, marketing and distribution rights with us for specifically designed oral healthcare products for use in the human oral cavity that may result from these research and development activities. We agreed to use commercially reasonable efforts to develop one or more

Table of Contents

specialized oral formulations through completion of Phase 2 clinical trials within the seven-year term of the alliance agreement. We can terminate our development efforts earlier under certain circumstances, including if the prospects for these products do not warrant further investment, or if we expend $15.0 million in this effort. In calculating the amount of our expenditures on these efforts, we may include grant funding received by us or our collaborators for work performed by third parties (e.g., universities and other institutions) that is directly related to program activities, as specified in the alliance agreement. The term of the alliance agreement continues to November 2012, unless earlier terminated by the parties as provided in the alliance agreement.

VirRx, Inc.

We are working with VirRx to investigate other vector technologies, specifically replication-competent viral therapies, for delivering products into targeted cells. These technologies form the basis for our INGN 007 product candidate. We own approximately 49% of the outstanding common stock of VirRx.

Under a collaboration and license agreement with VirRx, we are required to make additional milestone stock purchases, either for cash or through the issuance of our common stock, upon the completion of Phase 1, 2 and 3 clinical trials involving technologies licensed under this agreement. We are required to make a $5.0 million cash milestone payment to VirRx, for which we will receive no VirRx stock, upon approval by the FDA of a BLA for the first collaboration product based on these technologies. To the extent we have already made cash milestone payments, we may receive a credit of 50% of the Phase 2 clinical trial milestone payments and 25% of the Phase 3 clinical trial milestone payments against this $5.0 million cash milestone payment.

The additional milestone stock purchases and cash payments are not anticipated to be required in the near future. We may unilaterally terminate this collaboration and license agreement with 90 days prior notice, which would also terminate the requirement for us to make any additional stock purchases.

Academic and Other Collaborations

Academic collaboration agreements have been a cost-effective way of expanding our intellectual property portfolio, generating data necessary for regulatory submissions, accessing industry expertise and finding new technology in-license candidates, all without building a large internal scientific and administrative infrastructure.

The University of Texas M. D. Anderson Cancer Center

Many of our core technologies were developed by scientists at M. D. Anderson Cancer Center in Houston, Texas, one of the largest academic cancer centers in the world. We sponsor research conducted at M. D. Anderson Cancer Center to further the development of technologies that have potential commercial viability. Through these sponsored research agreements, we have access to M. D. Anderson Cancer Center s resources and expertise for the development of our technology. In addition, we have the right to include certain patentable inventions arising from these sponsored research agreements under our exclusive license with M. D. Anderson Cancer Center.

We have license agreements with The Board of Regents of The University of Texas System and M. D. Anderson Cancer Center, a component institution of The University of Texas System, whereby we have exclusive, worldwide licenses to make, use and sell certain technology. Under the terms of the license, we will pay M. D. Anderson Cancer Center a royalty based on net sales by us or our affiliates or by sublicense agreement of products incorporating any of such technologies. We are obligated by the license agreements to reimburse any of M. D. Anderson Cancer Center s costs that may be incurred in connection with obtaining patents related to the licensed technologies.

Our strategy for product development is designed to take advantage of the significant multidisciplinary resources available at M. D. Anderson Cancer Center. Through these efforts, we have licensed numerous technologies and patents over the past several years that we believe could hold promise for development into commercial products.

National Cancer Institute

We have multiple cooperative research and development agreements, or CRADA, with the NCI. Under one of these agreements, the NCI will conduct a Phase 2 clinical study to treat cancer patients with genetically engineered therapies targeted to abnormal p53 pathways. This clinical study will combine our p53 formulations with a novel p53 targeted treatment developed by investigators at the NCI. This agreement continues until March 2012 and is terminable earlier upon the mutual consent of the parties. We are paying the NCI approximately $19,000 per quarter through March 2009 to support their technical, statistical and administrative activities under this CRADA.

Table of Contents

Under another CRADA, the NCI agreed to sponsor and conduct pre-clinical and human clinical trials to evaluate the effectiveness and potential superiority to other treatments of ADVEXIN therapy against a range of designated cancers, including breast cancer, ovarian cancer, bladder cancer and brain cancer. To date, the NCI has conducted numerous Phase 1 clinical trials for ADVEXIN therapy. The NCI provided most of the funding for these activities. We supplied the NCI with ADVEXIN therapy product to be administered in these trials. We have exclusive rights to all pre-clinical and clinical data accumulated under the CRADA. The CRADA has a flexible duration, but is terminable upon the mutual consent of the parties or upon 30 days notice of either party.

Research and License Agreements for mda-7 Tumor Suppressor Programs

We have exclusive licenses from Columbia University and M. D. Anderson Cancer Center to mda-7 tumor suppressor related technology for our therapeutic applications. The technology licensed from M. D. Anderson Cancer Center was developed pursuant to sponsored and collaborative research programs over the past several years. The agreement is effective until the last to expire of the subject patents. It is terminable upon the breach or insolvency of either party. Under the sublicense agreement, we have agreed to make additional payments to Columbia University upon the achievement of development milestones, as well as royalty payments on product sales.

Moffitt Cancer Center

We are collaborating with the H. Lee Moffitt Cancer Center and Research Institute to advance our INGN 225 molecular cancer immunotherapy program. Moffitt Cancer Center has conducted pre-clinical research with us and has completed a Phase1/2 clinical trial in patients with small cell lung cancer. The National Institutes of Health National Cancer Institute awarded Moffitt Cancer Center a grant of approximately $1.3 million to conduct a Phase 2 clinical trial of INGN 225, which is open and enrolling patients. We have the right to, and expect we will, use the clinical data generated from this study as part of our INGN 225 commercial development efforts.

Marketing and Sales

We are focusing our current product development and commercialization efforts on the oncology market. This market is characterized by its concentration of specialists in relatively few major cancer centers, which we believe can be effectively addressed by a small, focused sales force. As possible regulatory approval of one or more of our product candidates for commercial sale approaches, we will address the methods of sales and marketing available to us. We will continue to evaluate the merits of building our own direct sales force, pursuing marketing and distribution arrangements with corporate partners or some combination of both.

Patents and Intellectual Property

Our Portfolio

Our success will depend in part on our ability to develop and maintain proprietary aspects of our technology. To this end, we have an intellectual property program directed at developing proprietary rights in technology that we believe may be important to our success. We also rely on a licensing program to ensure continued strong technology development and technology transfer from companies and research institutions with whom we work. We have entered into a number of exclusive license agreements or options with companies and institutions, including M. D. Anderson Cancer Center, Sidney Kimmel Cancer Center, Sanofi-Aventis, Columbia University, VirRx and Genentech. In addition to patents, we rely on trade secrets and proprietary know-how, which we seek to protect, in part, through confidentiality and proprietary information agreements.

We currently own or have an exclusive license to a large number of issued and pending United States and foreign patents and patent applications. Currently, the last to expire patents key to our ADVEXIN therapy expire in 2020. We have applications pending that could extend our coverage for our ADVEXIN therapy beyond these dates. Patents key to our INGN 241 product, using the mda-7 tumor suppressor, expire in the time frame of 2013 to 2016, although we have pending patent cases that could extend our protection beyond these expiration dates. The exclusive licenses that give us rights on the patents, and applications that such licenses cover, will expire no earlier than the life of any patent covered under the license.

Adenoviral p53 Compositions and Therapies

In developing our patent portfolio, we have focused our efforts in part on seeking protection for our potential products and how they will be used in the clinical trials. Arising out of our independent development programs and work with M. D. Anderson Cancer Center, we currently have an exclusive license to a number of United States and

corresponding international patents and patent applications directed to adenoviruses that contain p53, referred to as adenoviral p53, adenoviral p53 DNA, adenoviral p53 pharmaceutical compositions, the production of adenoviral p53 compositions and the use of such compositions in various cancer therapies and protocols.

Table of Contents

We have exclusively licensed from Sanofi-Aventis patent applications directed to adenoviral p53 and its clinical applications. We have an exclusive license to a United States patent application and corresponding international applications directed to the use of the p53 tumor suppressor in the treatment of cancer patients whose tumors express a normal p53 protein.

Combination Therapy with Tumor Suppressors, including p53 and mda-7/IL24

Our portfolio development includes seeking protection for clinical therapeutic strategies that combine the use of either the p53 tumor suppressor or the mda-7/IL-24 tumor suppressor with traditional cancer therapies. In this regard, also arising out of our work with M. D. Anderson Cancer Center, we have an exclusive license to a number of issued United States patents and applications with corresponding international patents and applications directed to cancer therapy using either the p53 tumor suppressor or the mda-7/IL-24 tumor suppressor in combination with conventional radiotherapy and/or other anti-cancer compounds. Such compounds include:

DNA-damaging agents and conventional chemotherapies;

Immunotherapeutics (e.g., Herceptin®);

COX-2 inhibitors (e.g., celecoxib);

Hsp90 inhibitors;

Proteasome inhibitors;

VEGF inhibitors (e.g., Avastin®); and

EGFr inhibitors (e.g., Tarceva®, Iressa®).

These United States patents and applications and corresponding international patents and applications concern the therapeutic application of the p53 tumor suppressor or the mda-7/IL-24 tumor suppressor before, during or after treatment with radiotherapy or other anti-cancer compounds.

To further extend our portfolio as it relates to combinatorial anti-cancer therapy, we have licensed from Aventis a United States patent and corresponding international patents and applications directed to therapy using the p53 tumor suppressor together with taxanes such as Taxol® or Taxotere®. We have exclusively licensed a United States patent application and corresponding international applications directed to the use of the p53 tumor suppressor in combination with surgical intervention in cancer therapy.

Adenovirus Production, Purification and Formulation

Another focus of our research has involved the development of procedures for the commercial-scale production of our potential adenoviral-based products, including that of ADVEXIN therapy. We own various issued United States patents and related European patents, as well as a number of pending United States applications and corresponding international applications directed to highly purified adenoviral compositions, commercial-scale processes for producing adenoviral-based compositions having a high level of purity and storage-stable formulations. These patents and patent applications include procedures for preparing commercial quantities of recombinant adenovirus products and include procedures applicable to the p53 tumor suppressor, as well as any of our other potential products.

We have licensed from Sanofi-Aventis in the p53 field a United States patent and corresponding international applications directed to processes for the production of purified adenoviruses, which are useful for our product applications. With respect to storage-stable formulations, we were issued a United States patent directed to compositions and methods concerning improved, storage-stable adenovirus formulations. This patent is not limited to our ADVEXIN therapy product candidate and may eventually replace formulations currently in use.

Other Tumor Suppressors

We either own or have exclusively licensed rights in a number of other patents and applications directed to compositions and clinical applications of various tumor suppressors other than p53, including the mda-7, BAK, and the 3p21.3 family (FUS-1). We have exclusively licensed or optioned rights in a number of issued United States

patents covering the use of the mda-7 and BAK tumor suppressors.

Other Therapeutic, Composition and Process Technologies

We own or have exclusively licensed a number of United States and international patent applications on a range of additional technologies. These licenses include various applications and patents relating to p53, combination

Table of Contents

therapy with 2-methoxyestradiol, anti-proliferative factor technologies, retroviral delivery systems, stimulation of anti-p53 and screening and product assurance technologies.

We have exclusively licensed a number of United States and international applications directed to various improved vector applications employing more than one molecular therapy for disease treatment, as well as applications directed to the delivery of molecular therapies for disease treatment without the use of a vector, or non-viral therapy. For example, a United States patent, exclusively licensed to us, was issued that is directed to adenoviruses that exhibit tissue specific replication. We have exclusive rights in an issued United States patent and corresponding international applications directed to a low toxicity analogue of IL-24, also called F42K. We also have been issued exclusively licensed patents in Europe directed to our nanoparticle delivery system for delivering tumor suppressor genes.

Trade Secrets

We rely on trade secrets law to protect technology where we believe patent protection is not appropriate or obtainable. Trade secrets are difficult to protect. We generally require employees, academic collaborators and consultants to enter into confidentiality agreements covering our trade secrets and other confidential information. Despite these measures, we may not be able to adequately protect our trade secrets or other proprietary information.

We are a party to various license agreements that give us rights to use specified technologies in our research and development processes. If we are not able to continue to license this technology on commercially reasonable terms, our product development and research may be delayed. In the case of technologies we have licensed, we may not have the ability to make the final decisions on how the patent application process is managed, and accordingly may be unable to exercise the same degree of control over this intellectual property as we exercise over our internally developed technology.

Our research collaborators and scientific advisors have rights to publish data and information in which we have rights. If we cannot maintain the confidentiality of our technology and other confidential information in connection with our collaborations, then our ability to receive patent protection or protect our proprietary information will be diminished.

Financial Overview

Since our inception in 1993, we have used our resources primarily to conduct research and development activities for ADVEXIN therapy and, to a lesser extent, for other product candidates. At September 30, 2008, we had an accumulated deficit of $217.4 million. We anticipate we will incur losses in the future that may be greater than losses incurred in prior periods. At September 30, 2008, we had cash and cash equivalents of $6.3 million.

Going Concern

We need to obtain additional cash to continue our operations. If we are unable to raise additional funds for working capital, we will substantially consume all of our cash and cash equivalents on hand at September 30, 2008, plus the amounts we may earn subsequently from contract services, grants and/or interest income in the future, sometime during the quarter ending March 31, 2009 and will likely be unable to continue as a going concern at that time. Unforeseen circumstances could cause us to consume cash more rapidly than expected and shorten the period during which the resources currently available to us can fund our operations.

We may be able to obtain additional cash through public or private equity offerings, debt financings, corporate collaborations, licensing arrangements, sales of certain of our assets (such as real estate) or other means. However, there can be no assurances that additional financing will be available when needed or on terms favorable to us or our stockholders. If we raise additional capital by issuing equity securities, our stockholders will experience dilution. If we raise funds through debt financings, we may become subject to restrictive covenants. If we raise additional funds through collaboration and licensing arrangements, we may be required to transfer to other parties rights to our technologies or product candidates, or grant licenses on terms not favorable to us.

In July 2008, we reduced our staff by approximately 20 positions primarily associated with ADVEXIN therapy development and regulatory submission programs that have achieved the milestones discussed in various sections of this document. In the event we cannot obtain additional cash, we may have to further reduce the scope of our operations and related cash needs to a level that may extend the period of time during which we can rely on existing resources to conduct our business activities. Such adjustments in the scope of our operations could include further

31

Table of Contents

reduction in the number of our personnel and perhaps delaying or discontinuing certain product and service development activities critical to achieving our business objectives. In particular, such actions could adversely affect our ability to continue pursuing regulatory approval to market ADVEXIN therapy at our desired pace, to continue development of other new product candidates and to pursue the ITS business plan.

The efforts described above could be unsuccessful. In that event, we would likely be unable to continue as a going concern.

Cash Sources and Uses

We have used cash primarily as follows (in thousands):

	Nine Months Ended September 30,	
	2007	**2008**
Operating activities	$ 17,404	$ 15,382
Purchases of property and equipment	52	167
Principal payments on notes payable	704	484
Payment of offering costs related to previous sales of common stock	1,571	200

We have received cash primarily as follows (in thousands):

	Nine Months Ended September 30,	
	2007	**2008**
Proceeds from sale of marketable securities	$	$ 7,429
Proceeds from notes payable	157	158
Proceeds from stock option exercises	145	86

We expect to incur substantial additional operating expenses and losses during the foreseeable future as our research, development, pre-clinical testing and clinical trial activities continue and as we evolve our operations and systems to support commercialization of our product candidates. These losses, among other things, have caused and may cause our total assets, stockholders equity and working capital to decrease.

In January 2008, we sold all the shares of Silence Therapeutics plc we owned for their quoted market value on the Alternative Investment Market of the London Stock Exchange on the date of the sale. We received net proceeds of approximately $7.4 million from this sale. We purchased these shares for approximately $3.0 million in July 2005. These shares were presented as marketable securities in our financial statements at December 31, 2007.

Reduction in Staff

In July 2008, we reduced our staff by approximately 20 positions primarily associated with ADVEXIN therapy development and regulatory submission programs that have achieved the milestones discussed in various sections above. We re-allocated the approximately 50 remaining personnel to focus on future regulatory review and commercial activities related to ADVEXIN therapy and our other technologies and to pursue our ITS business plan. About half of those remaining personnel will continue as Introgen employees and the others have become ITS employees.

Listing on NASDAQ Stock Market

In July 2008, The NASDAQ Stock Market (NASDAQ) notified us that we do not comply with the minimum $50,000,000 market value of listed securities nor the alternative requirement of a minimum $50,000,000 in total assets and total revenue required for continued listing on The NASDAQ Global Market set forth in the NASDAQ Marketplace Rules 4450(b)(1)(A) and 4450(b)(1)(B), respectively, and we may be subject to delisting from the Nasdaq Global Market if we failed to demonstrate compliance with the NASDAQ Marketplace Rules by August 29, 2008. We received a Staff Determination Letter from NASDAQ on September 4, 2008 informing us that we had not regained compliance by August 29, 2008. We appealed this initial delisting determination to a hearing conducted by a NASDAQ Listing Qualifications Panel, or the Panel, on October 16, 2008. The Panel has not yet

Table of Contents

rendered a decision regarding our appeal, and our common stock remains listed on the NASDAQ Global Market pending the decision of the Panel and any exception it may grant us. In the event of an unfavorable determination by the Panel, we would alternatively apply to have our common stock transferred to the NASDAQ Capital Market, as long as we satisfy the requirements for continued inclusion on the NASDAQ Capital Market set forth in the NASDAQ Marketplace Rules. There can be no assurance that the Panel will grant our request for continued listing on The NASDAQ Global Market, nor can there be assurance that our shares will alternatively be approved for listing on the NASDAQ Capital Market. We believe that we do not currently comply with the minimum listing requirements for The NASDAQ Capital Market.

On September 29, 2008, NASDAQ notified us that for the last 30 consecutive business days, our bid price for our common stock had closed below the minimum $1.00 required for continued listing on The NASDAQ Global Market as set forth in Marketplace Rule 4450(a)(5). In accordance with NASDAQ Marketplace Rules, we will have one hundred eighty (180) days, to regain compliance with the minimum bid price requirement by maintaining a closing bid price of $1.00 per share or higher for a minimum of 10 consecutive business days. On October 16, 2008, NASDAQ announced that they had suspended the enforcement of Marketplace Rule 4450(a)(5) until January 19, 2009, and as a result, the period during which we have to regain compliance has been extended to July 1, 2009. If we are unsuccessful in meeting the minimum bid requirement on or before July 1, 2009, NASDAQ will notify us that our common stock will be delisted from the NASDAQ Global Market. If we receive such a notice, we may appeal NASDAQ s determination to delist our common stock or, alternatively, we may apply to transfer our common stock to the NASDAQ Capital Market, provided that we satisfy all criteria for initial listing on the NASDAQ Capital Market, other than compliance with the minimum bid price requirement. If such application to the NASDAQ Capital Market is approved, then we will have an additional 180-day compliance period in order to regain compliance with the minimum bid price requirement while listed on the NASDAQ Capital Market.

Agreement With a Third-Party Advisor

In November 2008, we entered into an agreement with Torreya Partners, LLC to assist us in exploring strategic alternatives for the Company. For those services, we will pay Torreya Partners, LLC:

A retainer fee of $150,000, and

A success fee, net of the retainer fee and subject to a maximum of $5 million, of:

- 3% of the transaction value in the case of a sale of the Company, or
- 6% of the transaction value in the case of a sale of the assets of the Company.

No success fee is payable in the event of a transaction between the Company and:

Governmental entities in the State of Texas, including, without limitation, a State university; or

Any entity owned in whole or in part by an affiliate of the Company, as defined.

In a situation where the company receives payments over time, the success fee shall be payable at the time that each such payment is actually received by the Company or its stockholders. No success fee is due if the cash consideration from a transaction is insufficient to pay that fee.

Offering of Our Common Stock

In August 2008, we entered into a sales agreement with Cantor Fitzgerald & Co., as placement agent, to sell up to 6 million shares of our common stock in one or more, at-the-market offerings from time to time. Even though this agreement remains in place, if our common stock is delisted from NASDAQ as discussed above, the terms of the agreement preclude us from selling shares of our common stock under the agreement until such time as our listing on NASDAQ is restored. We may apply to transfer the listing of our common stock from the NASDAQ Global Market to the NASDAQ Capital Market if we are able to satisfy the listing qualifications of the NASDAQ Capital Market and our application is accepted by NASDAQ. However, the sales agreement includes various conditions to the placement agent s obligations, which if not satisfied, may prevent us from selling shares of our common stock under the agreement notwithstanding any such transfer. For example, one of the closing conditions is that we shall

Table of Contents

have not experienced a material adverse change. The impact of a transfer to the NASDAQ Capital Market is unknown and we may experience difficulty or be unable to sell our common stock under the sales agreement.

Each time we desire to sell shares under this agreement, we will notify the placement agent of the parameters under which we desire the shares be sold, including:

The number of shares we want to sell;

The time period during which we want the sales to occur;

Any limitation we want on the number of shares that may be sold in any one day; and

Any minimum price below which sales may not be made.

The placement agent is required to use its commercially reasonable efforts consistent with its customary trading and sales practices to sell these shares, but is under no obligation to us if it is unable to sell the shares. We are obligated to pay the placement agent a commission of 7% of the gross proceeds from any sales of the shares under the sales agreement. We or the placement agent may terminate this agreement at any time.

Any shares we sell under this agreement will be sold under our previously filed registration statement on Form S-3 (File No. 333-140424) and related prospectus and prospectus supplement.

Stock Options

From time to time, we grant options to purchase our common stock to our directors, officers, employees and other service providers in recognition of their contribution to achieving our corporate objectives and as an incentive for their future contributions to us. These options typically vest under the following general terms:

Options issued to members of our Board of Directors vest monthly over 12 months.

Options issued to our Chief Executive Officer vest 100% on the date of grant.

Options issued to other persons vest over four years at the rate of 25% per year on each annual anniversary of the grant date.

Our outstanding stock options have an exercise price equal to the market price of our common stock on their date of grant. At September 30, 2008, we had options outstanding to purchase the following numbers of shares of our common stock:

Vested Options	Unvested Options	Total Options	Range of Exercise Prices Per Share
6,753,095	3,541,498	10,294,593	$0.52 to $8.94

We issued the following number of shares of common stock as a result of exercises of stock options granted from our stock option plans:

Three Months Ended September 30,		Nine Months Ended September 30,	
2007	2008	2007	2008
	118,000	206,723	138,073

Stock Purchase Warrants

From time to time, we issue stock purchase warrants, generally to investors or placement agents, in connection with sales of our common stock. As of September 30, 2008, we have fully vested warrants outstanding to purchase an aggregate of 713,945 shares of our common stock at prices ranging from $4.75 per share to $8.00 per share. These warrants expire on various dates through December 2015.

In June 2008, warrants to purchase 686,087 shares of our common stock at $4.60 per share expired unexercised.

Table of Contents

Agreement With Board Member

We have a business development agreement with a member of our Board of Directors under which he will provide certain business development services to us in connection with potential co-development, collaborative, marketing partnership or certain other potential strategic transactions. In consideration for his services, upon the consummation of such a transaction, we will pay him a fee equal to one-half of one percent (0.5%) of certain monetary benefits received by our stockholders or us. The maximum fee he can receive is $3,000,000. The fee we pay him will be reduced by expenses or other expenditures made or contemplated under such a transaction.

This fee is not payable for funding we receive that we are expected to expend for research and development programs, full time equivalent payments to employees, loans, collaborative programs, business partnerships or strategic transactions, or otherwise. Transactions between our affiliates and us, whether now existing or created in the future, are excluded from this agreement. This agreement may be terminated at any time by written notice from us or this board member. In the event of such termination, the fee shall be paid with respect to a transaction produced through services performed by this board member before termination if the transaction is closed within two years after the date of termination of the agreement.

Critical Accounting Policies and Recently Issued Accounting Pronouncements

Our critical accounting policies and recently issued accounting pronouncements of significance to us are described in our most recent annual report on Form 10-K for the year ended December 31, 2007, filed with the Securities and Exchange Commission on March 17, 2008. There have been no material changes in these items since that time. As noted in that annual report, Statement of Financial Accounting Standards No. 157, Fair Value Measurements, and Statement of Financial Accounting Standards No. 159, The Fair Value Option for Financial Assets and Financial Liabilities, were effective for us on January 1, 2008. Our adoption of those standards has no material effect on our financial statements.

Results of Operations

Research and Development of Our Product Candidates and Technologies

Our operations consist primarily of the research and development of our product candidates and technologies described above in Part I, Item 2. Management s Discussion and Analysis of Financial Condition and Results of Operations Product Development Overview. Our research and development expense includes, but is not limited to, expense related to personnel, facilities and equipment, pre-clinical research, clinical trials, manufacturing of materials for use in clinical trials, conducting data analysis and conducting regulatory documentation submissions to the FDA. Our research and development expense can be divided between programs in the pre-clinical stage and programs in the clinical stage, and general research and development expense attributable to all programs. We manage our business by tracking research and development expense in these categories in lieu of tracking research and development expense on a project-by-project basis. Tables setting forth the amount of research and development expense we have incurred in each of these categories are presented below under Comparison of Three Months Ended September 30, 2008 and September 30, 2007 and Comparison of Nine Months Ended September 30, 2008 and September 30, 2007.

To commercialize our product candidates, we must obtain certain regulatory approvals. Satisfaction of regulatory requirements typically takes many years and involves compliance with requirements covering pre-clinical research, clinical trials, manufacturing, quality control, labeling and promotion of drugs for human use. To obtain regulatory approvals, we must, among other requirements, complete clinical trials and other work demonstrating our product candidates are safe and effective for a particular cancer type or other disease. The FDA, EMEA and other similar agencies throughout the world have substantial discretion over the work we must perform to obtain regulatory approval.

The likelihood that a product candidate will be commercially successful may be affected by a variety of factors, including, among others, the quality of the product candidate, the validity of the target and disease indication, early clinical data, competition, manufacturing capability and commercial viability. Because of the discretion of the FDA, EMEA and similar agencies throughout the world, as well as the foregoing factors, we cannot predict with reasonable accuracy:

The future expense we will incur developing these product candidates;

When we will complete our work in developing these product candidates;

When, if ever, we will earn significant revenue from approved products that might result from these product development programs.

Table of Contents

For a discussion of the risks and uncertainties associated with developing our products, as well as the risks and uncertainties associated with potential commercialization of our product candidates, see Part II, Item 1A. Risk Factors, and particularly the risk factors entitled:

If we are unable to commercialize ADVEXIN therapy in various markets for multiple indications, particularly for the treatment of recurrent head and neck cancer, our business will be harmed ;

If we fail to comply with FDA, EMEA or other foreign regulatory authority requirements or encounter delays or difficulties in clinical trials for our product candidates, we may not obtain regulatory approval of some or all of our product candidates on a timely basis, if at all ;

Even if our products are approved by regulatory authorities, if we fail to comply with ongoing regulatory requirements, or if we experience unanticipated problems with our products, these products could be subject to restrictions or withdrawal from the market ;

Failure to comply with foreign regulatory requirements governing human clinical trials and marketing approval for drugs could prevent us from selling our products in foreign markets, which may adversely affect our operating results and financial conditions ;

If we continue to incur operating losses for a period longer than we anticipate and fail to obtain the capital necessary to fund our operations, we will be unable to advance our development program and complete our clinical trials ;

If we cannot maintain our existing corporate and academic arrangements and enter into new arrangements, we may be unable to develop products effectively, or at all ;

If we are not able to create effective collaborative marketing relationships, we may be unable to market our products successfully or in a cost-effective manner ; and

Even if we receive regulatory approval to market our ADVEXIN therapy, INGN 241, INGN 225 or other product candidates, we may not be able to commercialize them profitably.

Manufacturing and Process Development Services

As discussed above under Manufacturing and Process Development , we formed Introgen Technical Services, Inc. in June 2008 as a wholly-owned subsidiary to provide production, manufacturing and process development services to us and to third parties. To expand these services to third parties, we may create, through ITS, a marketing and sales activity we do not currently have that targets those potential customers. We may have to implement, through ITS, additional operating policies, practices and procedures we do not currently have, including possible additional production capacity and new business systems. We may have to raise capital, which may not be available to us, to support ITS operations.

Operating Expenses and Financing Sources

We expect our operating expenses discussed below to increase in the future as we continue to pursue the objectives of our research and development programs, work to commercialize our product candidates and pursue services to third parties through ITS. If we are successful in receiving approval from regulatory agencies to sell one or more of our product candidates and as we grow our ITS activities, we expect to incur expenses in the future that we have not incurred in the past, such as product manufacturing costs, sales and marketing expenses and costs associated with implementing new business practices, processes and systems. We may also require additional production capacity. If we are able to sell one or more of our product candidates and/or sell services to third parties through ITS, we may receive revenue in the future that we have not received in the past.

Comparison of Three Months Ended September 30, 2008 and September 30, 2007

The following comparisons are for the three months ended September 30, 2008 and September 30, 2007. References to the 2008 period refer to the three months ended September 30, 2008 and references to the 2007 period

refer to the three months ended September 30, 2007. All dollar amounts in the tables are in thousands unless noted otherwise.

Table of Contents

Contract Services, Grant and Other Revenue

	Three Months Ended September 30,	
	2007	2008
Contract services, grant and other revenue	$ 139	$ 331
Percent increase (decrease) from previous period	N/A	138%

The change in contract services, grant and other revenue for the 2008 period compared to the 2007 period was a result of increased contract manufacturing process development and product production services revenue for work we performed for third parties as a result of our efforts to expand our offering of these services.

Research and Development Expense

	Three Months Ended September 30,	
	2007	2008
Pre-clinical stage programs expense	$ 474	$ 225
Clinical stage programs expense	3,683	3,174
General research and development expense	917	385
Total research and development expense	$ 5,074	$ 3,784
Percent increase (decrease) in total from previous period	N/A	(25)%

Research and development expense included share-based compensation expense of $136,000 for the 2008 period and $180,000 for the 2007 period.

We experienced a reduction in research and development expense in the 2008 period compared to the 2007 period due to:

Decreased costs of manufacturing supplies of clinical materials as our manufacturing activities in earlier periods provided us with adequate quantities of clinical materials to conduct our clinical trials for the foreseeable future such that we were able to reduce such manufacturing activities in the 2008 period;

Decreased clinical and regulatory expenses related to the preparation of filings with the FDA and EMEA as we completed those initial filings related to ADVEXIN therapy during the quarter ended June 30, 2008;

A reduction in staff in the 2008 period of approximately 20 positions primarily associated with ADVEXIN therapy development and regulatory submission programs that have achieved the milestones for which these positions were required; and

Ongoing programs to reduce our operating expenses.

General and Administrative Expense

	Three Months Ended September 30,	
	2007	2008
General and administrative expense	$ 2,980	$ 2,699
Percent increase (decrease) from previous period	N/A	(9)%

General and administrative expense included share-based compensation expense of $983,000 for the 2008 period and $946,000 for the 2007 period.

The change in the 2008 period compared to the 2007 period was a result of:

The termination of the consulting agreement between EJ Financial and us effective December 31, 2007; and

Ongoing programs to reduce our operating expenses.

which were offset by:

Increased legal and professional fees incurred with respect to certain matters arising during the normal course of our business;

Table of Contents

Increased share-based compensation expense, which is discussed further below under Share-Based Compensation Expense.

Share-Based Compensation Expense

	Three Months Ended September 30,	
	2007	2008
Share-based compensation expense	$ 1,126	$ 1,119
Percent increase (decrease) from previous period	N/A	(1)%

The 2008 period compared to the 2007 period was substantially unchanged due to no material changes in our overall stock options profile.

Interest Income

	Three Months Ended September 30,	
	2007	2008
Interest income	$ 281	$ 26
Percent increase (decrease) from previous period	N/A	(91)%

The change in the 2008 period compared to the 2007 period was a result of:

A lower overall average balance of cash, cash equivalents and short-term investments in the 2008 period compared to the 2007 period as a result of the 2007 period being shortly after our sales of common stock in November 2006 and December 2006 for which there were no similar transactions subsequent to those dates; and

Generally lower interest rates during the 2008 period compared to the 2007 period;

which were partially offset by

Earnings on the proceeds received from the sale of marketable securities in the 2008 period as further discussed in the Financial Overview section above.

Interest Expense

	Three Months Ended September 30,	
	2007	2008
Interest expense	$ 169	$ 155
Percent increase (decrease) from previous period	N/A	(8)%

This expense decreased for the 2008 period compared to the 2007 period due to reductions in the total principal balance outstanding under notes payable on which we are paying interest as a result of normal debt service payments.

Other Income

	Three Months Ended September 30,	
	2007	2008
Other income	$ 257	$ 306
Percent increase (decrease) from previous period	N/A	19%

The dollar amount of other income was generally comparable between the 2008 and 2007 periods, which is consistent with the nature of our activities that generate other income. The percentage variations in this income is not material to our business due to the relatively low dollar amounts involved. This income is earned primarily from our sublease of space to M. D. Anderson Cancer Center and other miscellaneous activities.

Table of Contents

Comparison of Nine Months Ended September 30, 2008 and September 30, 2007

The following comparisons are for the nine months ended September 30, 2008 and September 30, 2007. References to the 2008 period refer to the nine months ended September 30, 2008 and references to the 2007 period refer to the nine months ended September 30, 2007. All dollar amounts in the tables are in thousands unless noted otherwise.

Contract Services, Grant and Other Revenue

	Nine Months Ended September 30,	
	2007	**2008**
Contract services, grant and other revenue	$ 543	$ 638
Percent increase (decrease) from previous period	N/A	17%

The change in contract services, grant and other revenue for the 2008 period compared to the 2007 period was a result of:

- Increased contract services revenue for research work and manufacturing process development and product production we performed for third parties as a result of our efforts to expand our offering of these services;

which was offset by:

- Decreased research activity funded by federal grants as the work under these grants approached completion and had yet been fully supplemented by activity and funding under new grants;

Research and Development Expense

	Six Months Ended September 30,	
	2007	**2008**
Pre-clinical stage programs expense	$ 1,137	$ 938
Clinical stage programs expense	9,359	9,745
General research and development expense	2,516	1,937
Total research and development expense	$ 13,012	$ 12,620
Percent increase (decrease) in total from previous period	N/A	(3)%

Research and development expense included share-based compensation expense of $454,000 for the 2008 period and $799,000 for the 2007 period.

We experienced a reduction in research and development expense in the 2008 period compared to the 2007 period due to:

- Decreased share-based compensation expense which is discussed further below under Share-Based Compensation Expense;

- Decreased costs of manufacturing supplies of clinical materials as our manufacturing activities in earlier periods provided us with adequate quantities of clinical materials to conduct our clinical trials for the foreseeable future such that we were able to reduce such manufacturing activities in the 2008 period;

- Decreased clinical and regulatory expenses related to the preparation of filings with the FDA and EMEA as we completed those initial filings related to ADVEXIN therapy during the 2008 period;

- A reduction in staff in the 2008 period primarily associated with ADVEXIN therapy development and regulatory submission programs that have achieved the milestones toward which these positions were required; and

Ongoing programs to reduce our operating expenses.

Table of Contents

which was offset by:

The effect on the 2007 period of reaching an agreement with a third party during that period that resulted in us not having to pay certain of their invoices that were previously included in our accounts payable that in turn reduced operating expenses for that period..

General and Administrative Expense

	Nine Months Ended September 30,	
	2007	2008
General and administrative expense	$ 9,780	$ 7,720
Percent increase (decrease) from previous period	N/A	(21)%

General and administrative expense included share-based compensation expense of $2.8 million for the 2008 period and $3.1 million for the 2007 period.

The change in the 2008 period compared to the 2007 period was a result of:

Decreased legal fees incurred with respect to certain matters arising during the normal course of our business;

The termination of the consulting agreement between EJ Financial and us effective December 31, 2007;

Cash compensation paid to our Board of Directors in connection with a grant of restricted stock to them during the 2007 period for which there was no similar grant during the 2008 period;

Ongoing programs to reduce our operating expenses; and

Decreased share-based compensation expense, which is discussed further below under Share-Based Compensation Expense.

Share-Based Compensation Expense

	Nine Months Ended September 30,	
	2007	2008
Share-based compensation expense	$ 3,885	$ 3,302
Percent increase (decrease) from previous period	N/A	(15)%

The change in the 2008 period compared to the 2007 period was primarily a result of:

A grant of restricted stock to our Board of Directors during the 2007 period for which there was no similar grant during the 2008 period;

The forfeiture of stock options resulting from normal employee attrition and reductions in staff; and

Variances in the risk-free interest rate, the volatility of our stock price and other factors considered in our determination of share-based compensation expense using the Black-Scholes option pricing model.

Interest Income

	Nine Months Ended September 30,	
	2007	2008
Interest income	$ 1,096	$ 186
Percent increase (decrease) from previous period	N/A	(83)%

The change in the 2008 period compared to the 2007 period was a result of:

A lower overall average balance of cash, cash equivalents and short-term investments in the 2008 period compared to the 2007 period as a result of the 2007 period being shortly after our sales of common stock in

40

Table of Contents

November 2006 and December 2006 for which there were no similar transactions subsequent to those dates; and

Generally lower interest rates during the 2008 period compared to the 2007 period;

which were partially offset by

Earnings on the proceeds received from the sale of marketable securities in the 2008 period as further discussed in the Financial Overview section above.

Interest Expense

	Nine Months Ended September 30,	
	2007	2008
Interest expense	$ 514	$ 480
Percent increase (decrease) from previous period	N/A	(7)%

This expense decreased for the 2008 period compared to the 2007 period due to reductions in the total principal balance outstanding under notes payable on which we are paying interest as a result of normal debt service payments.

Realized Gain on Sale of Marketable Securities

	Nine Months Ended September 30,	
	2007	2008
Realized gain on sale of marketable securities	$	$ 4,388
Percent increase (decrease) from previous period	N/A	100%

The change in the 2008 period compared to the 2007 period was a result of our sale of all the shares we owned of Silence Therapeutics as further discussed in the Financial Overview section above.

Other Income

	Nine Months Ended September 30,	
	2007	2008
Other income	$ 755	$ 882
Percent increase (decrease) from previous period	N/A	17%

The dollar amount of other income was generally comparable between the 2008 and 2007 periods, which is consistent with the nature of our activities that generate other income. The percentage variations in this income is not material to our business due to the relatively low dollar amounts involved. This income is earned primarily from our sublease of space to M. D. Anderson Cancer Center and other miscellaneous activities.

Liquidity and Capital Resources

In the following discussion of liquidity and capital resources, references to the 2008 period refer to the nine months ended September 30, 2008 and references to the 2007 period refer to the nine months ended September 30, 2007. All dollar amounts are in thousands unless noted otherwise.

We expect to focus our future activities primarily in the following areas:

Conducting Phase 3 and other clinical trials, conducting data analysis related to those trials, preparing regulatory documentation submissions to the FDA, producing ADVEXIN therapy and other clinical materials for use in our clinical trials and conducting pre-marketing activities for ADVEXIN therapy. We expect to continue our research and development of various other targeted molecular therapy technologies. If ADVEXIN therapy or any of our other product candidates are approved for commercial sale by the FDA, we expect to conduct activities supporting the marketing, sales, production and distribution of those products, either ourselves or in collaboration with other parties.

Table of Contents

Developing through ITS a business to provide production, manufacturing and process development services to Introgen and to third parties. We expect ITS will assume responsibility for producing investigative materials for Introgen s clinical trials, will produce and provide Introgen commercial supplies of products for which we may receive marketing approval from the appropriate regulatory agencies and will pursue contract production, process development and manufacturing services for third parties.

Going Concern

We need to obtain additional cash to continue our operations. If we are unable to raise additional funds for working capital, we will substantially consume all of our cash and cash equivalents on hand at September 30, 2008, plus the amounts we may earn subsequently from contract services, grants and/or interest income in the future, sometime during the quarter ending March 31, 2009 and will likely be unable to continue as a going concern at that time. Unforeseen circumstances could cause us to consume cash more rapidly than expected and shorten the period during which the resources currently available to us can fund our operations.

We may be able to obtain additional cash through public or private equity offerings, debt financings, corporate collaborations, licensing arrangements, sales of certain of our assets (such as real estate) or other means. However, there can be no assurances that additional financing will be available when needed or on terms favorable to us or our stockholders. If we raise additional capital by issuing equity securities, our stockholders will experience dilution. If we raise funds through debt financings, we may become subject to restrictive covenants. If we raise additional funds through collaboration and licensing arrangements, we may be required to transfer to other parties rights to our technologies or product candidates, or grant licenses on terms not favorable to us.

In July 2008, we reduced our staff by approximately 20 positions primarily associated with ADVEXIN therapy development and regulatory submission programs that have achieved the milestones discussed in various sections of this document. In the event we cannot obtain additional cash, we may have to further reduce the scope of our operations and related cash needs to a level that may extend the period of time during which we can rely on existing resources to conduct our business activities. Such adjustments in the scope of our operations could include further reduction in the number of our personnel and perhaps delaying or discontinuing certain product and service development activities critical to achieving our business objectives. In particular, such actions could adversely affect our ability to continue pursuing regulatory approval to market ADVEXIN therapy at our desired pace, to continue development of other new product candidates and to pursue the ITS business plan.

The efforts described above could be unsuccessful. In that event, we would likely be unable to continue as a going concern.

Funds on Hand and Consumed

We have incurred annual operating losses since our inception. At September 30, 2008, we had an accumulated deficit of $217.4 million.

Our cash equivalents and short-term investments are generally comparable financial instruments, with short-term investments having original maturity dates in excess of three months. At December 31, 2007, our marketable securities consisted of issued share capital of other public companies and were classified as available-for-sale. Our balances are as follows:

	December 31, 2007	September 30, 2008
Cash and cash equivalents	$ 11,320	$ 6,294
Short-term investments	3,585	
Total cash, cash equivalents and short-term investments	14,905	6,294
Marketable securities	10,165	
Total cash, cash equivalents, short-term investments and marketable securities	$ 25,070	$ 6,294

In January 2008, we sold all of our marketable securities we held at December 31, 2007, at their quoted market value for net cash proceeds of approximately $7.4 million.

Table of Contents

The change in our cash and cash equivalents, exclusive of short-term investments and marketable securities, consisted of the following amounts, the details of which are presented in our condensed consolidated statements of cash flows in Item 1. Financial Statements above:

	Nine Months Ended September 30,	
	2007	2008
Net cash (used in) operating activities	$(17,404)	$(15,382)
Net cash provided by investing activities	$ 3,211	$ 10,847
Net cash (used in) financing activities	$ (1,973)	$ (440)

From inception through September 30, 2008, we have financed our operations primarily from the following sources, the amounts of which are presented net of related expenses paid in cash (in millions):

Equity sales in December 2003, December 2004, November 2006 and December 2006 through registered direct offerings under a shelf registration filed with the SEC	$69.1
Collaborative research and development payments from Aventis Pharmaceutical Products, Inc, which is now Sanofi-Aventis, (Aventis) from 1994 to 2000	49.7
Private equity sales to Aventis from 1994 to 1999	39.4
Initial public offering in October 2000	32.2
Private equity sales to various other parties	29.9
Contract services, grants, interest and other income	31.8
Equity sales to Colgate-Palmolive under a shelf registration filed with the SEC and pursuant to an alliance agreement entered into in November 2005	19.6
Mortgage financing from banks for our facilities	9.9
Sales of ADVEXIN therapy product to Aventis for use in later-stage clinical trials from 1997 to 2000	7.5
Sale of shares of shares of Silence Therapeutics plc in January 2008	7.4
Leases and notes payable from commercial lessors and lenders to acquire equipment pledged as collateral for those leases and notes	6.6

Net Cash Used in Operating Activities

	Nine Months Ended September 30,	
	2007	2008
Net cash used in operating activities	$(17,404)	($15,382)

The net cash we used in our operating activities relates to the following items:

Net loss - The net loss reported in our statement of operations includes certain expenses that do not involve the use of cash. The following table illustrates the portion of our net loss for which we use cash:

	Nine Months Ended September 30,	
	2007	2008
Net loss	$ (20,912)	$ (14,722)
Less expenses not requiring the use of cash:		
Non-controlling interests in income of consolidated subsidiary		(4)
Depreciation	788	746
Share-based compensation	3,885	3,302
Gain on sale of marketable securities		(4,388)

Portion of net loss for which we use cash	$ (16,239)	$ (15,066)
Percent decrease from previous period	N/A	(7)%

See Comparison of Nine Months Ended September 30, 2008 and September 30, 2007 above for a discussion of the changes in the components of our net loss.

Accounts payable and accrued liabilities Changes in these accounts arise primarily from variations in the timing of payments to vendors and employees that arise in the ordinary course of business. This timing is a function of:

Table of Contents

Variations in our general business activities;

The nature of vendors to whom we have obligations;

The nature of payment terms we receive from vendors;

The timing of when we receive invoices from vendors;

The timing of when we elect to make payments to vendors based on our available cash balances and cash flow needs; and

The timing of our regularly scheduled paydays for our employees relative to the end of our accounting periods.

The changes in our accounts payable and accrued liabilities for the 2008 and 2007 periods are related to one or more of the above items, with no single component of those aggregate changes being material to our business as a whole.

Deferred revenue and other - These accounts relate to:

Cash payments for contract manufacturing, process development and product production services work received in advance of completing the work to which the payments relate, which increases our deferred revenue. This deferred revenue decreases, with no effect on cash, as we complete the work and recognize the related revenue; and

Rental income we receive from the sublease of laboratory space to third parties under leases that have variable monthly rent amounts over the term of the lease. We recognize this income on a straight-line basis over the term of the lease. Cash payments received in excess of rental income recognized is recorded as deferred revenue. This deferred revenue decreases, with no effect on cash, when the cash payments we receive are less than the rental income recognized on a straight-line basis.

The changes in deferred revenue and other for the 2008 and 2007 periods are related to one or more of the above items, with no single component of those aggregate changes being material to our business as a whole. In addition to the above items, we experienced a larger increase in deferred revenue and other collectively in the 2008 period compared to the 2007 period due to increased contract services for manufacturing process development and product production we performed for third parties as a result of our active efforts to expand our offering of these services for which revenue is deferred until substantial completion of the work;

Other assets Other assets decreased in the 2008 period and the 2007 period. Changes in other assets vary in direction and amount based on the timing of and dollars involved in transactions related to items such as prepaid expenses, grant funding receivable and deposits. The aggregate changes in other assets during the 2008 and 2007 periods resulted from such activities that arose during the normal course of our business, with no component of those aggregate changes being material to our business as a whole.

Depreciation is an expense in our net loss that does not use cash. This expense decreased in the 2008 period compared to the 2007 period due to the absence of significant property and equipment acquisitions during the 2008 and 2007 periods and our use of declining balance depreciation methods that results in decreasing depreciation charges over the life of an asset.

Share-based compensation is an expense in our net loss that does not use cash. See Share-Based Compensation Expense above for a discussion of the changes in this expense between periods.

The gain on sale of marketable securities in the 2008 period resulted from the sale of the shares we owned in Silence Therapeutics as discussed further under Investment in Silence Therapeutics plc in the Financial Overview section above.

Net Cash Provided by Investing Activities

	Nine Months Ended September 30,

	2007	2008
Net cash provided by investing activities	$ 3,211	$ 10,847

Table of Contents

The change in the 2008 period compared to the 2007 period was primarily due to:

The sale of our marketable securities for net cash proceeds of approximately $7.4 million in the 2008 period; and

A higher amount of equipment purchases to support our business being necessary in the 2008 period compared to the 2007 period;

which was offset by:

A lower level of net activity in sales of short-term investments in the 2008 period compared to the 2007 period arising from (1) normal variations in the amount and timing of purchases and sales of short-term investments based on our operating needs for cash and cash equivalents and (2) the availability of cash from sales of our common stock;

We have no obligations at this time to purchase significant amounts of additional property or equipment, but our needs may change. It may be necessary for us to purchase larger amounts of property and equipment to support our clinical programs, other research, development and manufacturing activities and the development of our contract services business through ITS. We may need to obtain debt or lease financing to facilitate such purchases. If that financing is not available, we may need to use our existing resources to fund those purchases, which could result in a reduction in the cash and cash equivalents available to fund operating activities.

Net Cash Used in Financing Activities

	Nine Months Ended September 30,	
	2007	**2008**
Net cash used in financing activities	$ (1,973)	$ (440)

The change in the 2008 period compared to the 2007 period was primarily due to:

The payment during the 2007 period of approximately $1.6 million of fees payable to a placement agent that were accrued as of December 31, 2006, which were for the placement agent s work supporting the sale of our common stock in November 2006 and December 2006; and

A decrease in proceeds from exercise of options for common stock in the 2008 period compared to the 2007 period, which is activity that can vary based upon the discretionary actions of the individuals holding such options; which were offset by:

A decrease in the payment of mortgage loan and equipment notes principal in the 2008 period compared to the 2007 period as equipment notes balances were paid in full through normal schedule payments.

Debt Service, Lease and Other Contractual Obligations

We have fixed debt service obligations under notes payable for which the liability is reflected on our balance sheet. We used the proceeds from these notes payable to finance facilities and equipment. Aggregate payments due under these obligations are as follows (in thousands):

Total debt service payments for October 1, 2008 through December 31, 2008	$ 274
Total debt service payments due during the year ending December 31:	
2009	1,011
2010	881
2011	760
2012	735
2013	735
Thereafter	8,167

Total debt service payments	12,563
Less portion representing interest	(5,149)
Total principal balance at September 30, 2008	$ 7,414
Principal balance presented on the September 30, 2008 balance sheet as liabilities in these categories:	
Current portion of notes payable	$ 517
Notes payable, net of current portion	6,897
Total principal balance at September 30, 2008	$ 7,414