Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

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

For the quarterly period ended September 30, 2011

OR

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

For the transition period from to

COMMISSION FILE NUMBER 000-52008

LUNA INNOVATIONS INCORPORATED
(Exact name of registrant as specified in its charter)

Delaware	**54-1560050**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification Number)**

One Riverside Circle, Suite 400
Roanoke, VA 24016
(Address of Principal Executive Offices)

(540) 769-8400
(Registrant's Telephone Number, Including Area Code)

(Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). ☒ Yes ☐ No

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

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

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

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. ☒ Yes ☐ No

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: As of November 7, 2011, there were 13,795,199 shares of the registrant's common stock outstanding.

CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This Quarterly Report on Form 10-Q, including the sections entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Quantitative and Qualitative Disclosure About Market Risk" under Items 2 and 3, respectively, of Part I of this report, and the section entitled "Risk Factors" under Item 1A of Part II of this report, may contain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended. All statements other than statements of historical fact are "forward-looking statements" for purposes of these statutes, including those relating to future events or our future financial performance. In some cases, you can identify these forward looking statements by words such as "intends," "will," "plans," "anticipates," "expects," "may," "might," "estimates," "believes," "should," "projects," "predicts," "potential" or "continue," or the negative of those words and other comparable words, and other words or terms of similar meaning in connection with any discussion of future operating or financial performance. Similarly, statements that describe our management transition, business strategy, goals, prospects, opportunities, outlook, objectives, plans or intentions are also forward-looking statements. These statements are only predictions and may relate to, but are not limited to, expectations of future operating results or financial performance, capital expenditures, introduction of new products, regulatory compliance and plans for growth and future operations, as well as assumptions relating to the foregoing.

These statements are based on current expectations and assumptions regarding future events and business performance and involve known and unknown risks, uncertainties and other factors that may cause actual events or results to be materially different from any future events or results expressed or implied by these statements. These factors include those set forth in the following discussion and within Item 1A "Risk Factors" of this Quarterly Report on Form 10-Q and elsewhere within this report.

You should not place undue reliance on these forward-looking statements, which apply only as of the date of this Quarterly Report on Form 10-Q. You should carefully review the risk factors described in other documents that we file from time to time with the U.S. Securities and Exchange Commission, or SEC. Except as required by applicable law, including the rules and regulations of the SEC, we do not plan to publicly update or revise any forward-looking statements, whether as a result of any new information, future events or otherwise, other than through the filing of periodic reports in accordance with the Securities Exchange Act of 1934, as amended.

LUNA INNOVATIONS INCORPORATED
QUARTERLY REPORT ON FORM 10-Q
FOR THE QUARTER ENDED SEPTEMBER 30, 2011

TABLE OF CONTENTS

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Luna Innovations Incorporated
Condensed Consolidated Balance Sheets

	September 30, 2011 (unaudited)	December 31, 2010
Assets		
Current assets		
Cash and cash equivalents	$ 6,833,450	$ 7,216,580
Accounts receivable, net	7,908,792	7,669,625
Inventory, net	3,570,266	3,106,600
Prepaid expenses	849,090	665,210
Other current assets	35,717	45,348
Total current assets	19,197,315	18,703,363
Property and equipment, net	3,010,999	3,204,670
Intangible assets, net	652,050	664,418
Other assets	246,835	303,210
Total assets	$ 23,107,199	$ 22,875,661
Liabilities and stockholders' equity		
Liabilities:		
Current Liabilities		
Line of credit	$ —	$ 2,500,000
Current portion of long term debt obligation	1,500,000	1,195,784
Current portion of capital lease obligation	50,192	2,194
Accounts payable	1,860,793	2,008,183
Accrued liabilities	3,515,097	3,549,604
Deferred credits	1,408,562	1,392,602
Total current liabilities	8,334,644	10,648,367
Long-term debt obligation	4,000,000	2,611,609
Long-term lease obligation	196,033	—
Total liabilities	12,530,677	13,259,976
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value $ 0.001, 1,321,514 shares authorized, issued and outstanding at September 30, 2011 and December 31, 2010	1,322	1,322
Common stock, par value $ 0.001, 100,000,000 shares authorized, 13,699,379 and 13,449,345 shares issued and outstanding at September 30, 2011 and December 31, 2010, respectively	13,835	13,526
Additional paid-in capital	58,776,258	56,681,756
Accumulated deficit	(48,214,893)	(47,080,919)
Total stockholders' equity	10,576,522	9,615,685
Total liabilities and stockholders' equity	$ 23,107,199	$ 22,875,661

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

Luna Innovations Incorporated
Condensed Consolidated Statements of Operations

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2011	2010	2011	2010
	(unaudited)		(unaudited)	
Revenues:				
Technology development revenues	$ 6,161,826	$ 5,027,024	$17,406,515	$16,929,621
Product and license revenues	2,681,184	3,558,118	10,058,709	8,539,953
Total revenues	8,843,010	8,585,142	27,465,224	25,469,574
Cost of revenues:				
Technology development costs	3,630,163	3,534,089	11,910,771	11,559,351
Product and license costs	1,719,039	1,613,499	5,059,507	4,332,600
Total cost of revenues	5,349,202	5,147,588	16,970,278	15,891,951
Gross Profit	3,493,808	3,437,554	10,494,946	9,577,623
Operating expense:				
Selling, general and administrative	2,303,325	3,383,121	9,340,545	10,044,549
Research, development, and engineering	877,741	307,777	1,950,275	1,249,385
Reorganization expense	—	53,597	—	161,801
Total operating expense	3,181,066	3,744,495	11,290,820	11,455,735
Operating income / (loss)	312,742	(306,941)	(795,874)	(1,878,112)
Other income/(expense):				
Other income/(expense)	21,953	10,000	57,793	(5,477)
Interest expense	(91,908)	(124,756)	(290,634)	(352,282)
Total other income/(expense)	(69,955)	(114,756)	(232,841)	(357,759)
Income/ (loss) before income taxes	242,787	(421,697)	(1,028,715)	(2,235,871)
Income tax expense	287	1,817	10,307	1,817
Net income / (loss)	242,500	(423,514)	(1,039,022)	(2,237,688)
Preferred stock dividend	20,616	93,000	94,952	267,633
Net income / (loss) attributable to common stockholders	$ 221,884	$ (516,514)	$ (1,133,974)	$ (2,505,321)
Net income / (loss) per share:				
Basic	$ 0.02	$ (0.04)	$ (0.08)	$ (0.19)
Diluted	$ 0.01	$ (0.04)	$ (0.08)	$ (0.19)
Weighted average shares:				
Basic	13,669,724	13,188,913	13,598,249	12,890,752
Diluted	15,898,639	13,188,913	13,598,249	12,890,752

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

Luna Innovations Incorporated
Condensed Consolidated Statements of Cash Flows

	Nine months ended September 30, 2011	2010 (unaudited)
Cash flows provided by / (used in) operating activities		
Net loss	$(1,039,022)	$(2,237,688)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation and amortization	1,042,700	953,630
Share-based compensation	1,737,220	2,616,024
Warrant expense	41,752	149,850
Change in assets and liabilities:		
Accounts receivable	(239,167)	625,016
Inventory	(463,666)	(140,220)
Other current assets	(174,249)	736,834
Other assets	56,375	71,029
Accounts payable and accrued expenses	(223,648)	(3,417,135)
Deferred credits	(174,040)	316,332
Net cash provided by/(used in) operating activities	564,255	(326,328)
Cash flows used in investing activities		
Acquisition of property and equipment	(289,777)	(50,540)
Intangible property costs	(272,741)	(152,404)
Net cash used in investing activities	(562,518)	(202,944)
Cash flows provided by (used in) financing activities		
Payments on capital lease obligations	(30,115)	(4,000)
Proceeds from debt obligations	6,000,000	2,500,000
Payment of debt obligations	(6,617,393)	(842,699)
Proceeds from the exercise of options and warrants	262,641	799,397
Net cash (used in) / provided by financing activities	(384,867)	2,452,698
Net change in cash	(383,130)	1,923,426
Cash and cash equivalents—beginning of period	7,216,580	5,228,802
Cash and cash equivalents—end of period	$ 6,833,450	$ 7,152,228
Supplemental disclosure of cash flow information		
Cash paid for interest	$ 184,229	$ 266,775
Common stock issued in litigation settlement (1,247,330 shares)	$ —	$ 4,565,227
Installment note issued in litigation settlement	$ —	$ 5,000,000
Preferred stock issued in exchange of notes (1,321,514 shares)	$ —	$ 4,836,742
Warrants issued in exchange of notes payable (356,000 warrants)	$ —	$ 1,261,879
Common stock issued in settlement of other claims (25,000 shares)	$ —	$ 91,500
Dividend on preferred stock, 59,469 and 57,046 shares of common stock issuable at September 30, 2011 and 2010 respectively	$ 94,952	$ 267,633
Property and equipment financed by capital leases	$ 274,145	$ —
Cash paid for income taxes	$ 10,307	$ —

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

Luna Innovations Incorporated
Notes to Unaudited Condensed Consolidated Financial Statements

1. Basis of Presentation and Significant Accounting Policies

Nature of Operations

Luna Innovations Incorporated ("we," "Luna Innovations" or the "Company") is incorporated in the State of Delaware and headquartered in Roanoke, Virginia. We are engaged in the research, development and commercialization of innovative technologies in the areas of (i) test & measurement, sensing, and instrumentation products; (ii) secure computing and communications; and (iii) health care. We are organized into two main groups, which work closely together to turn ideas into products: our Technology Development segment, and our Product and License segment. Our business model is designed to accelerate the process of bringing new and innovative technologies to market.

Although we had positive earnings for the quarter ended September 30, 2011, we have a history of net losses from 2005 through the nine months ended September 30, 2011, attributable to our operations and other charges. We have historically managed our liquidity through cost reduction initiatives, debt financings and capital markets transactions. While we experienced positive cash flow from operations in the nine months ended September 30, 2011, our overall cash flow was negative during that period.

Since the second half of 2008, the increased turmoil in the U.S. and global capital markets and a global slowdown of economic growth created a substantially more difficult business environment. Our ability to access the capital markets may be limited. Economic and market conditions may not improve significantly during the remainder of 2011 and could get worse.

Although there can be no guarantees, we believe that our current cash balance, in addition to the funds available to us under the Credit Facilities described in Note 3 below, will provide adequate liquidity for us to meet our working capital needs over the next twelve months.

Unaudited Interim Financial Information

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and with the instructions to Form 10-Q and Article 10 of Regulation S-X of the Securities Exchange Act of 1934. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for audited financial statements. The unaudited condensed consolidated financial statements have been prepared on the same basis as the annual financial statements and in the opinion of management reflect all adjustments, consisting of only normal recurring accruals considered necessary to present fairly our financial position at September 30, 2011, results of operations for the three and nine months ended September 30, 2011 and 2010, and cash flows for the nine months ended September 30, 2011 and 2010. The results of operations for the nine months ended September 30, 2011 are not necessarily indicative of the results that may be expected for the year ending December 31, 2011.

The consolidated interim financial statements, including our significant accounting policies, should be read in conjunction with the audited Consolidated Financial Statements and the notes thereto for the year ended December 31, 2010, included in the Company's Annual Report on Form 10-K as filed with the Securities and Exchange Commission on March 31, 2011. As used herein, the terms "Luna", the "Company", "we", "our" and "us" mean Luna Innovations Incorporated and its consolidated subsidiaries.

Consolidation Policy

Our consolidated financial statements are prepared in accordance with U.S. GAAP and include the accounts of the Company, our wholly owned subsidiaries and other entities in which we have a controlling financial interest. We eliminate from our financial results all significant intercompany transactions. We do not have any investments in entities we believe are variable interest entities for which we are the primary beneficiary.

Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market in an orderly transaction between marketplace participants. Various valuation approaches can be used to determine fair value, each requiring different valuation inputs. The following hierarchy classifies the inputs used to determine fair value into three levels:

- Level 1—Quoted prices for identical instruments in active markets
- Level 2—Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets

- Level 3—Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable

The carrying values of cash and cash equivalents, contract receivables and accounts payable approximate fair value because of the short-term nature of these instruments. The carrying value of our debt approximates fair value, as we consider the floating interest rate on our credit facilities with Silicon Valley Bank to be at market. Certain nonfinancial assets and liabilities are measured at fair value on a nonrecurring basis in accordance with U.S. GAAP. This includes items such as nonfinancial assets and liabilities initially measured at fair value in a business combination and nonfinancial long-lived asset groups measured at fair value for an impairment assessment. In general, nonfinancial assets including intangible assets and property and equipment are measured at fair value when there is an indication of impairment and are recorded at fair value only when any impairment is recognized.

Use of Estimates

The preparation of our consolidated financial statements in accordance with U.S. GAAP requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities in our consolidated financial statements and accompanying notes. Although these estimates are based on our knowledge of current events and actions we may undertake in the future, actual results may differ from such estimates and assumptions.

Net Loss per Share

Basic per share data is computed by dividing loss available to common stockholders by the weighted average number of shares outstanding during the period. Diluted per share data is computed by dividing net income available to common stockholders by the weighted average shares outstanding during the period increased to include, if dilutive, the number of additional common share equivalents that would have been outstanding if potential common shares had been issued using the treasury stock method. Diluted per share data would also include the potential common share equivalents relating to convertible securities by application of the if-converted method.

For the three months ended September 30, 2011 we had a total of 6,975,633 common stock equivalents (which include conversion of preferred stock, outstanding warrants and stock options). Of these, 2,228,916 were dilutive and 4,746,717 were anti dilutive. For the nine months ended September 30, 2011 we had a total of 6,683,070 common stock equivalents (which include conversion of preferred stock, outstanding warrants and stock options) all of which are anti-dilutive.

For the three and nine months ended September 30, 2010 we had a total of 4,697,348 and 4,655,463, respectively, common stock equivalents (which include conversion of preferred stock, outstanding warrants and stock options) all of which are anti-dilutive.

Stock-Based Compensation

We recognize stock-based compensation expense based upon the fair value of the underlying equity award on the date of the grant. We have elected to use the Black-Scholes option pricing model to value any awards granted. We amortize stock-based compensation for such awards on a straight-line basis over the related service period of the awards taking into account the effects of the employees' expected exercise and post-vesting employment termination behavior. To compute the volatility used in this model we use the historical volatility of our common stock over the expected life of options granted, or the period since our initial public offering if less than the expected life of the options. The risk-free interest rate is based on U.S. Treasury interest rates, the terms of which are consistent with the expected life of the stock options. The expected life and estimated post employment termination behavior is based upon historical experience of homogeneous groups within our company. We also assume an expected dividend yield of zero for all periods, as we have never paid a dividend on our common stock and do not have any plans to do so in the future.

The fair value of each option granted is estimated as of the grant date using the Black-Scholes option pricing model with the following assumptions:

	Nine months ended September 30, 2011	Nine months ended September 30, 2010
Risk-free interest rate	2.29 – 2.81%	2.09 – 3.22%
Expected life of options (in years)	7.5	7.5
Expected stock price volatility	111%	117%

A summary of the activity for our 2003 Stock Plan and 2006 Equity Incentive Plan is presented below for the period indicated:

	Options Outstanding				Options Exercisable		
	Number of Shares	Price per Share Range	Weighted Aver Price	Aggregate Intrinsic Value (1)	Number of Shares	Weighted Aver Price	Aggregate Intrinsic Value (1)
Balance, December 31, 2010	4,716,439	$ 0.35 - $ 7.08	$ 2.35	$1,632,396	2,904,435	$ 2.20	$1,233,778
Granted	687,100	$ 1.80 - 2.17	$ 2.10				
Exercised	(205,463)	$ 0.35 - 1.77	$ 0.72				
Canceled	(405,672)	$ 0.35 - 7.08	$ 3.94				
Balance, September 30, 2011	4,792,404	$ 0.35 - 6.74	$ 2.25	$ 809,497	3,140,652	$ 2.20	$ 723,822

(1) The intrinsic value of an option represents the amount by which the market value of the stock exceeds the exercise price of the option of in-the-money options only. The aggregate intrinsic value is based on the closing price at the end of each quarter of our Common Stock on the NASDAQ Capital Market.

At September 30, 2011, the outstanding stock options to purchase an aggregate of 4,792,404 shares had a weighted average remaining contractual term of 6.9 years, and the exercisable stock options to purchase an aggregate of 3,140,652 shares had a weighted average remaining contractual term of 6.0 years.

For the three months ended September 30, 2011 and 2010, we recognized approximately $462,073 and $853,009, respectively, in stock-based compensation expense, and for the nine months ended September 30, 2011 and 2010, we recognized $1,737,220 and $2,616,024, respectively, in stock-based compensation expense. We expect to recognize approximately $3.4 million in stock-based compensation expense over the remaining requisite service period of five years for stock options outstanding as of September 30, 2011.

Intangible Assets and Other Long Lived Assets

Long-lived assets and certain identifiable intangibles are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset might not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the asset exceeds the fair market value of the asset. Assets to be disposed of are reported at the lower of the carrying amount or fair market value, less cost to sell.

Recent Accounting Pronouncements

May 2011, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2011-04, “Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs”. The ASU attempts to clarify the FASB’s intent about the application of existing fair value measurement requirements and changes certain principles or requirements for measuring fair value or for disclosing information about fair value measurements. The ASU’s amendments will result in common fair value measurement and disclosure requirements in U.S. GAAP and IFRSs and are effective for the first interim or annual period beginning on or after December 15, 2011. The adoption of this ASU by the Company, effective January 1, 2012, is presentation and disclosure related and therefore will not have an effect on our consolidated financial position or results of operations.

In June 2011, the FASB issued ASU No. 2011-05, “Presentation of Comprehensive Income”. The ASU addresses the presentation of comprehensive income and provides entities with the option to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. The provisions of this ASU, which are effective for the first interim or annual period beginning on or after December 15, 2011, do not change the items that must be reported in other comprehensive income, when an item of other comprehensive income must be reclassified to net income, the presentation of the tax effects on other comprehensive income or how earnings per share is calculated or presented. Since this ASU addresses financial statement presentation only, its adoption, effective January 1, 2012, will not impact our consolidated financial position or results of operations.

In September 2011, the FASB issued ASU No. 2011-08, Intangibles-Goodwill and Other (Topic 350) – Testing Goodwill for Impairment. ASU 2011-08 provides companies with a new option to determine whether or not it is necessary to apply the traditional two-step quantitative goodwill impairment test in ASC 350, Intangibles – Goodwill and Other. Under ASU 2011-08

companies are no longer required to calculate the fair value of a reporting unit unless it determines, on the basis of qualitative information, that it is more likely than not (i.e., greater than 50%) that the fair value of a reporting unit is less than its carrying amount. ASU 2011-08 is effective for periods ending after December 15, 2011; however, early adoption is permitted for periods ending after September 15, 2011. We do not anticipate the adoption to have a material impact on our consolidated financial statements.

2. Inventory

Inventory consists of finished goods, work-in-process and parts valued at the lower of cost (determined on the first-in, first-out basis) or market. We provide reserves for estimated obsolescence or unmarketable inventory equal to the difference between the cost of the inventory and the estimated market value based upon assumptions about future demand and market conditions.

Components of inventory are as follows:

	September 30, 2011	December 31, 2010
Finished goods	$ 762,660	$ 476,375
Work-in-process	214,590	222,623
Parts	2,699,086	2,468,958
	3,676,336	3,167,956
Less: Inventory reserves	106,070	61,356
Total inventory, net	$3,570,266	$3,106,600

3. Debt

Silicon Valley Bank Credit Facilities

On February 18, 2010, we entered into a Loan and Security Agreement with Silicon Valley Bank ("SVB") to provide us with a revolving credit facility that provided us with borrowing capacity of up to $5.0 million, subject to a percentage of our outstanding eligible accounts receivable, at a floating annual interest rate equal to the greater of (a) 6% or (b) SVB's prime rate then in effect plus 2%. The credit facility was originally scheduled to mature on February 17, 2011, but it was amended to extend the maturity date until May 18, 2011 and to revise the calculation of eligible borrowing base and add certain financial covenants relating to our adjusted EBITDA.

On May 18, 2011, we entered into a Second Loan Modification Agreement (the "Second Loan Modification Agreement") with SVB. Under the Second Loan Modification Agreement, SVB made a term loan to us in the amount of $6.0 million (the "Term Loan"). The Term Loan is to be repaid by us in 48 monthly installments, plus accrued interest payable monthly in arrears, and unless earlier terminated, matures on the earlier of either May 1, 2015 or the event of a default under the loan agreement. The Term Loan carries a floating annual interest rate equal to SVB's prime rate then in effect plus 2%.

We may prepay amounts due under the Term Loan for a fee equal to (i) $120,000, if such prepayment is made on or before May 18, 2012; (ii) $60,000, if such prepayment is made after May 18, 2012, but on or before May 18, 2013; or (iii) zero, if such prepayment is made after May 18, 2013.

In addition to the terms and conditions of the Term Loan, the Second Loan Modification Agreement reduces our maximum borrowing capacity under the revolving credit facility (the "Line of Credit" and together with the Term Loan the "Credit Facilities") from $5.0 million to $1.0 million and extends its maturity date until May 18, 2012.

As modified by the Second Loan Modification Agreement, the annual interest rate on the Line of Credit has been reduced to SVB's prime rate plus 1.25%, payable monthly in arrears, and the amount of the unused Line of Credit fee has been reduced from one-half of one percent (0.50%), payable quarterly, to one-quarter of one percent (0.25%), payable monthly. We may terminate the Line of Credit for a termination fee of $10,000, which fee would not be payable in the event that the Line of Credit is replaced by another loan facility with SVB.

Amounts due under the Credit Facilities are secured by substantially all of our assets, including intellectual property, personal property and bank accounts.

The Credit Facilities require us to observe a number of financial and operational covenants, including maintenance of a specified liquidity ratio, achievement of certain adjusted EBITDA targets, protection and registration of intellectual property rights, and certain customary negative covenants. As of September 30, 2011, we were in compliance with all covenants.

In addition, the Credit Facilities contain customary events of default, including nonpayment of principal, interest or other amounts, violation of covenants, material adverse change, an event of default under any subordinated debt documents, incorrectness of representations and warranties in any material respect, bankruptcy, judgments in excess of a threshold amount, and violations of other agreements in excess of a threshold amount. If any event of default occurs SVB may declare due immediately all borrowings under the Credit Facilities and foreclose on the collateral. Furthermore, an event of default under the Credit Facilities would result in an increase in the interest rate on any amounts outstanding.

The balance under the Term Loan at September 30, 2011 was $5,500,000 of which $4,000,000 was classified as long-term and $1,500,000 was classified as short-term. No amounts were outstanding under the Line of Credit at September 30, 2011.

Repayment of Hansen Note

In January 2010, we issued a promissory note (the "Hansen Note") to Hansen Medical, Inc. ("Hansen") in the original principal amount of $5.0 million. The Hansen Note was payable in quarterly installments over four years and accrued interest at 8.5% per annum.

As part of the Second Loan Modification Agreement with SVB described above, we and Hansen entered into an Amendment to Secured Promissory Note and Payoff Letter (the "Payoff Letter").

Under the terms of the Payoff Letter, we and Hansen agreed upon a final payoff in the amount of approximately $3 million as payment in full for all principal and accrued interest under the Hansen Note, which represented a $190,000 discount from the then outstanding balance, which discount will be amortized into income over the remaining life of the Company's Development and Supply Agreement with Hansen. On May 23, 2011, we repaid the Hansen Note in full. Upon receipt of this final payment, the Security Agreement and the Patent and Trademark Security Agreement, each dated as of January 12, 2010, by and between us and Hansen, became of no further force and effect, and all security interest in our assets held by Hansen as collateral for our obligations under the Hansen Note were terminated and released.

4. Capital Stock and Additional Paid-in Capital

The following details our equity transactions during the nine months ended September 30, 2011:

	Preferred Stock		Common Stock		Additional Paid-in Capital
	Shares	$	Shares	$	$
Balances, December 31, 2010	1,321,514	$1,322	13,449,345	$13,526	$56,681,756
Exercise of stock options and warrants	—	—	139,641	140	168,073
Stock-based compensation	—	—	51,648	52	1,737,220
Stock dividends to Carilion Clinic(1)	—	—	—	59	94,893
Issuance of Common Stock, other (2)	—	—	58,745	58	94,316
Balances, September 30, 2011	1,321,514	1,322	13,699,379	13,835	58,776,258

(1) The stock dividends payable in connection with Carilion Clinic's Series A Preferred Stock will be issued subsequent to September 30, 2011. For the period from January 12, 2010, the original issue date of the Series A Preferred Stock, through September 30, 2011, the Series A Preferred Stock issued to Carilion has accrued approximately $455,583 in dividends. The accrued and unpaid dividends as of September 30, 2011 will be paid by the issuance of 136,338 shares of the company's common stock.

(2) During the nine months ended September 30, 2011, we issued shares of common stock to three former or current directors in lieu of cash fees for meeting attendance.

5. Operating Segments

Our operations are divided into two operating segments—"Technology Development" and "Product and License".

The Technology Development segment provides applied research to customers in our areas of focus. Our engineers and scientists collaborate with our network of government, academic and industry experts to identify technologies and ideas with promising market potential. We then compete to win fee-for-service contracts from government agencies and industrial customers who seek innovative solutions to practical problems that require new technology. The Technology Development segment derives its revenue primarily from services.

The Product and License segment derives its revenue from product sales, funded product development and technology licenses.

Through September 30, 2011, our Chief Executive Officer and his direct reports collectively represented our chief operating decision maker, and they evaluated segment performance based primarily on revenue and operating income or loss. The accounting policies of our segments are the same as those described in the summary of significant accounting policies (see Note 1 to our Financial Statements, "Organization and Summary of Significant Accounting Policies," presented in our Annual Report on Form 10-K as filed with the Securities and Exchange Commission on March 31, 2011).

The table below presents revenues and operating income/ (loss) for reportable segments:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2011	2010	2011	2010
	(unaudited)		(unaudited)	
Revenues:				
Technology development revenues	$6,161,826	$5,027,024	$17,406,515	$16,929,621
Product and license revenues	2,681,184	3,558,118	10,058,709	8,539,953
Total revenues	$8,843,010	$8,585,142	$27,465,224	$25,469,574
Technology development operating income/(loss)	$ 548,027	$ (750,549)	$ (996,831)	$ (1,460,599)
Product and license operating income/(loss)	(235,285)	443,608	200,957	(417,513)
Total operating income/(loss)	$ 312,742	$ (306,941)	$ (795,874)	$ (1,878,112)
Depreciation, technology development	$ 170,833	$ 153,165	$ 477,774	$ 529,909
Depreciation, product and license	$ 78,098	$ 108,410	$ 279,819	$ 267,306
Amortization, technology development	$ 57,303	$ 29,323	$ 179,802	$ 103,969
Amortization, product and license	$ 26,197	$ 20,754	$ 105,305	$ 52,446

The table below presents assets for reportable segments:

	September 30, 2011	December 31, 2010
Total segment assets:		
Technology development	$16,101,140	$14,839,358
Product and license	7,006,059	8,036,303
Total	$23,107,199	$22,875,661
Property plant and equipment, and intangible assets, Technology development	$ 2,513,821	$ 2,509,863
Property plant and equipment, and intangible assets, Product and license	$ 1,149,228	$ 1,359,225

There are no material inter-segment revenues for any period presented.

The United States Government accounted for approximately 70% and 63% of total consolidated revenues for the three months ended September 30, 2011 and 2010, respectively and 64% and 68% of total consolidated revenues for the nine months ended September 30, 2011 and 2010, respectively.

International revenues (customers outside the United States) accounted for approximately 6% and 10% of total consolidated revenues for the three months ended September 30, 2011 and 2010, respectively and 12% and 10% for the nine months ended September 30, 2011 and 2010, respectively.

6. Contingencies and Guarantees

We are from time to time involved in certain legal proceedings in the ordinary course of conducting our business. While the ultimate liability pursuant to these actions cannot currently be determined, we believe these legal proceedings will not have a material adverse effect on our financial position or results of operations.

In August 2010, we executed a non-cancelable $1.8 million purchase order for multiple shipments of tunable lasers to be delivered over an 18-month period beginning in October 2010. At September 30, 2011, approximately $0.2 million of this commitment remained. In September 2011 we executed a non-cancelable $1.2 million purchase order for multiple shipments of tunable lasers to be delivered over a 12-month period subsequent to the completion of the purchase order executed in August 2010.

We have entered into indemnification agreements with our officers and directors, to the extent permitted by law, pursuant to which we have agreed to reimburse the officers and directors for legal expenses in the event of litigation and regulatory matters. The terms of these indemnification agreements provide for no limitation to the maximum potential future payments. We have a directors and officers insurance policy that may, in certain instances, mitigate the potential liability and payments.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes to those statements included elsewhere in this report. In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results and timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those discussed under "Risk factors" and elsewhere in this report.

Overview

We research, develop and commercialize innovative technologies in three primary areas of focus: (i) test & measurement, sensing and instrumentation; (ii) secure computing and communications; and (iii) healthcare.

Our business model is designed to accelerate the process of bringing new and innovative products to market. We use our in-house technical expertise across a range of technologies to perform applied research services on government-funded projects and also for corporate customers in the fiber-optic sensing area. We continue to invest in product development and commercialization, which we anticipate will lead to increased product sales growth.

We are organized into two business segments, our Technology Development segment and our Product and License segment. Our Technology Development segment, which includes our secure computing and communications group that we refer to as SCC, performs applied research for government-funded projects and represented approximately 70% and 59% of our total revenues for the three months ended September 30, 2011 and 2010, respectively. Most of the government funding in the part of our Technology Development segment outside of SCC is derived from the Small Business Innovation Research, or SBIR, program coordinated by the U.S. Small Business Administration, or SBA. Our SBIR research is focused on technological areas with commercial potential, and we strive to commercialize any resulting scientific advancements. Our SCC group provides innovative solutions designed to secure critical technologies within U.S. government systems, including the protection of deployed hardware and software systems and the communications between them. SCC both conducts applied research and provides services to the government in this area. SCC's revenue is primarily derived from non-SBIR U.S. government contracts and purchase orders. Our Technology Development segment also performs applied research in the areas of sensing and materials.

Our Product and License segment focuses on fiber-optic test and measurement, sensing and instrumentation products and also conducts applied research in the fiber-optic sensing area for both corporate and government customers. The Product and License segment also commercializes healthcare products. Our Product and License segment revenues represented approximately 30% and 41% of our total revenues for the three months ended September 30, 2011 and 2010, respectively.

We generate revenues through technology development services provided under contractual arrangements, product sales, product development under contractual relationships and license fees. Our Technology Development segment revenues have historically accounted for a large portion of our total revenues, and we expect that they will continue to represent a significant portion of our total revenues for the foreseeable future. Our Technology Development segment revenues increased from $5.0 million in the three months ended September 30, 2010 to $6.2 million in the three months ended September 30, 2011, due primarily to the completion of four short-term contracts in our SCC group, as well as increased activity in our optical systems group.

Within the Technology Development segment, we have historically had a backlog of contracts for which work has been scheduled, but for which a specified portion of work has not yet been completed. We define backlog as the dollar amount of obligations payable to us under negotiated contracts upon completion of a specified portion of work that has not yet been completed,

exclusive of revenues previously recognized for work already performed under these contracts, if any. Total backlog includes funded backlog, which is the amount for which money has been directly authorized by the U.S. Congress and for which a purchase order has been received by a commercial customer, and unfunded backlog, representing firm orders for which funding has not yet been appropriated. Indefinite delivery and quantity contracts and unexercised options are not reported in total backlog. The approximate value of our Technology Development backlog was $24.5 million and $29.6 million at September 30, 2011 and 2010 respectively.

Revenues from product sales currently represent a smaller portion of our total revenues, and, historically, we have derived most of these revenues from the sales of our sensing systems and products that make use of light-transmitting optical fibers, or fiber optics. We continue to invest in product development and commercialization, which we anticipate will lead to increased product sales growth. Although we have been successful in licensing certain technology in past years, we do not expect license revenues to represent a significant portion of future revenues. Over time, however, we do intend to gradually increase such revenues. In the near term, we expect revenues from product sales and product development to be primarily in areas associated with our fiber optic instrumentation and test and measurement and sensing platforms. In the long term, we expect that revenues from product sales will represent a larger portion of our total revenues and that as we develop and commercialize new products, these revenues will reflect a broader and more diversified mix of products.

We expect to incur increasing expenses as we expand our business, including expenses for research and development, sales and marketing and manufacturing capabilities. We may also grow our business in part through acquisitions of additional companies and complementary technologies, which could cause us to incur transaction expenses, amortization or write-offs of intangible assets and other acquisition-related expenses. As a result, we expect to incur net losses for the foreseeable future, and these losses could be substantial.

The slowing of the worldwide economy and tightening of the financial markets since the second half of 2008 has reduced the financial capacities of our customers and possibly our potential customers, thereby slowing spending on the products and services we provide. We believe that recent declines in our backlog activity have resulted from broad economic factors affecting the test and measurement industry as a whole. The outlook for the economy for the remainder of 2011 and beyond remains uncertain.

Description of Our Revenues, Costs and Expenses

Revenues

We generate revenues from technology development, product sales and commercial product development and licensing activities. We derive Technology Development segment revenues from providing research and development services to third parties, including government entities, academic institutions and corporations, and from achieving milestones established by some of these contracts and in collaboration agreements. In general, we complete contracted research over periods ranging from six months to three years, and recognize these revenues over the life of the contract as costs are incurred or upon the achievement of certain milestones built into the contracts. Our Technology Development segment revenues represented approximately 70% and 59% of our total revenues for the three months ended September 30, 2011 and 2010, respectively and 63% and 66% of our total revenues for the nine months ended September 30, 2011 and 2010, respectively.

Our Product and License segment revenues reflect amounts that we receive from sales of our products or development of products for third parties, as well as fees paid to us in connection with licenses or sublicenses of certain patents and other intellectual property, and represented approximately 30% and 41% of our total revenues for the three months ended September 30, 2011 and 2010, respectively and 37% and 34% of our total revenues for the nine months ended September 30, 2011 and 2010, respectively.

Cost of Revenues

Cost of revenues associated with Technology Development segment revenues consists of costs associated with performing the related research activities including direct labor, amounts paid to subcontractors and overhead allocated to Technology Development segment activities.

Cost of revenues associated with our Product and License segment revenues consists of license fees for use of certain technologies; product manufacturing costs including all direct material and direct labor costs; amounts paid to our contract manufacturers; manufacturing, shipping and handling; provisions for product warranties; and inventory obsolescence, as well as overhead allocated to each of these activities.

Operating Expense

Operating expense consists of selling, general and administrative expenses, as well as expenses related to research, development and engineering, depreciation of fixed assets and amortization of intangible assets. These expenses also include compensation for employees in executive and operational functions including certain non-cash charges related to expenses from option grants, facilities costs, professional fees, salaries, commissions, travel expense and related benefits of personnel engaged in sales, product management and marketing activities; costs of marketing programs and promotional materials; salaries, bonuses and related benefits of personnel engaged in our own research and development beyond the scope and activities of our Technology Development segment; product development activities not provided under contracts with third parties; and overhead costs related to these activities.

Interest Income/Expense

Interest expense is composed of interest paid under our bank loans and, previously, the convertible promissory note issued to Hansen Medical, Inc., as well as interest accrued on our capital lease obligations. Interest income includes amounts earned on our cash deposits with financial institutions.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make estimates, assumptions and judgments that affect the amounts reported in our financial statements and the accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or judgments. Our critical accounting policies are described in the Management's Discussion and Analysis section and the notes to our audited consolidated financial statements previously included in our Annual Report on Form 10-K for the period ended December 31, 2010, as filed with the Securities and Exchange Commission on March 31, 2011. There have been no material changes to the descriptions therein.

Results of Operations

Three Months Ended September 30, 2011 Compared to Three Months Ended September 30, 2010

Revenues

	Three months ended September 30,			
	2011	2010	Change	
Revenues:				
Technology development revenues	$ 6,161,826	$ 5,027,024	$1,134,802	23%
Product and license revenues	2,681,184	3,558,118	(876,934)	(25)%
Total revenues	8,843,010	8,585,142	257,868	3%

Our Technology Development segment revenues increased $1.1 million primarily due to an increase in our SCC group of $0.6 million driven by four short duration contracts won and completed during the third quarter of 2011, and an increase in revenue from our optical systems group of $0.4 million driven by larger value Phase II contracts awarded over the past twelve months.

Our Product and License segment revenues declined primarily due to a decrease in the demand for fiber optic test and measurement equipment in the third quarter, reflecting what we believe to be an overall weakening of the economy. Our product sales declined significantly in the fourth quarter of 2009 and started to recover as 2010 progressed and through the first quarter of this year. Bookings activities began to decline during the second quarter of 2011 and continued to be lower during the third quarter.

Accordingly, sales of our fiber optic test and measurement equipment declined $0.9 million, partially offset by an increase in product development revenues of $0.2 million due to a greater level of activities associated with medical shape sensing development on our commercial development contracts.

Cost of Revenues

	Three months ended September 30,			
	2011	2010	Change	
Cost of revenues:				
Technology development costs	$ 3,630,163	$ 3,534,089	$ 96,074	3%
Product and license costs	1,719,039	1,613,499	105,540	7%
Total cost of revenues	$ 5,349,202	$ 5,147,588	$201,614	4%
Gross Profit	$ 3,493,808	$ 3,437,554	$ 56,254	2%

The cost of our Technology Development segment revenues grew by a lesser rate than the Technology Development segment revenues, as the direct labor required to complete the short-term incremental contracts received in our SCC group during the quarter was less than the typical cost of our technology development contracts. In addition, during the early part of the third quarter, the SCC group experienced a gap in funding of its largest programs. During this time, the group worked largely on internal research projects, resulting in a shift in expense reported from cost of revenues to operating expenses. Overall direct labor within the Technology Development segment declined $0.2 million, offset by a $0.3 million increase in subcontractor costs for the third quarter of 2011 versus the same period in 2010.

The increase in cost of revenues in our Product and License segment was due primarily to our work on commercial development, which increased $0.4 million, primarily on the Hansen Medical, Inc. ("Hansen") development work. Costs for the Hansen development project increased at a higher rate than the associated revenue as the amendment to our contract entered into previously in 2011 provided for lower billing rates to Hansen on the work.

Operating Expense

	Three months ended September 30,			
	2011	2010	Change	
Operating expense:				
Selling, general and administrative	$ 2,303,325	$ 3,383,121	$(1,079,796)	(32)%
Research, development, and engineering	877,741	307,777	569,964	185%
Reorganization expense	—	53,597	(53,597)	(100)%
Total operating expense	$ 3,181,066	$ 3,744,495	$ (563,429)	(15)%

Our selling, general and administrative costs, decreased 32% during the third quarter of 2011 versus the same period in 2010. The decrease during the quarter was primarily driven by reductions in our stock compensation expense, as a significant amount of options became fully vested, our legal fees and our other consulting and professional fees.

Research, development, and engineering increased during the third quarter of 2011 versus the same period in 2010 due to our SCC group working on internal research projects during the quarter as noted above in the discussion of cost of revenues.

Interest Income (Expense)

Interest expense for the three months ended September 30, 2011 was approximately $92,000 compared to interest expense of approximately $125,000 during the same period in 2010. The monthly average loan balance during the third quarter of 2011 was $5.7 million compared to $7.2 million for the same period in 2010. The lower average loan balance along with our lower average interest rate under the Silicon Valley Bank ("SVB") credit facilities accounted for this decrease.

Nine Months Ended September 30, 2011 Compared to Nine Months Ended September 30, 2010

Revenues

	Nine months ended September 30,			
	2011	2010	Change	
Revenues:				
Technology development revenues	$17,406,515	$16,929,621	$ 476,894	3%
Product and license revenues	10,058,709	8,539,953	1,518,756	18%
Total revenues	$27,465,224	$25,469,574	$1,995,650	8%

Revenues in our Technology Development segment increased in the first nine months of 2011 versus the same period in 2010 due to increased revenue in our optical systems group of $1.2 million from the receipt of a several high value contracts during 2011, partially offset by a decrease in our SCC group of $0.6 million due to a gap between this group's completion of a large contract during the second quarter of 2011 and the beginning of another large contract in the third quarter of 2011.

Our Product and License segment revenues improved above 2010 levels for the first nine months of 2011 as compared to the same period in 2010, due primarily to sales of fiber optic test and measurement products of $1.1 million, attributable principally to strong sales in the first quarter of 2011. As noted above sales activities declined in the most recent quarter. We also had an increase in our commercial development revenues for the first nine months of 2011 versus the same period in 2010 of $0.5 million.

Cost of Revenues

	Nine months ended September 30, 2011	2010	Change	
Cost of revenues:				
Technology development costs	$11,910,771	$11,559,351	$ 351,420	3%
Product and license costs	5,059,507	4,332,600	726,907	17%
Total cost of revenues	$16,970,278	$15,891,951	$1,078,327	7%
Gross Profit	$10,494,946	$ 9,577,623	$ 917,323	10%

The Technology Development segment's cost of revenues increased $0.4 million during the nine months ended September 30, 2011 as compared to the same period in the prior year primarily due to the increase of $0.2 million in additional tools purchased by our SCC group in support of new contract research.

The costs of revenues in our Product and Licence segment increased $0.5 million during the nine months ended September 30, 2011 versus the same period in 2010 due to incremental development work performed on the Hansen and Intuitive Surgical projects. In addition, cost of revenues increased $0.2 million due to higher volume sales of fiber optic test and measurement equipment.

The growth in our Product and License segment was able to also translate into higher gross profits. Revenues from our Product and License segment typically carry a higher gross margin percentage than revenues from our Technology Development segment.

Operating Expense

	Nine months ended September 30, 2011	2010	Change	
Operating expense:				
Selling, general and administrative	$ 9,340,545	$10,044,549	$(704,004)	(7)%
Research, development, and engineering	1,950,275	1,249,385	700,890	56%
Reorganization expense	—	161,801	(161,801)	(100)%
Total operating expense	$11,290,820	$11,455,735	$(164,915)	(1)%

Our selling, general and administrative expense decreased primarily from a decrease of approximately $0.9 million in our stock based compensation expense, as a significant number of prior option grants became fully vested during the period as a result of which no further compensation expense is recorded.

Research, development, and engineering increased due partially to costs incurred by our SCC group for internal research and development versus those funded by customer contracts, in addition to the costs associated with development of our new ODiSI product.

Interest Income (Expense)

Interest expense for the nine months ended September 30, 2011 was approximately $291,000 compared to interest expense of approximately $352,000 during the same period in 2010. The monthly average loan balance for the first nine months of 2011 was $5.9 million compared to $6.6 million for the same period in 2010. The lower average loan balance along with our lower average interest rate under the SVB credit facilities accounted for this decrease.

Liquidity and Capital Resources

At September 30, 2011, our total cash and cash equivalents were approximately $6.8 million.

We have a term loan with SVB which at September 30, 2011 had a balance of $5,500,000 and also a revolving line of credit of up to $1.0 million. No amounts were outstanding under the line of credit and the full borrowing capacity of $1.0 million remained available.

We believe that our current cash balance, combined with the funds available to us under the line of credit with SVB, provide adequate liquidity for us to meet our working capital needs over the next twelve months.

Discussion of Cash Flows

Recent Activity

	Nine months ended September 30, 2011	2010	Change
Net cash provided by / (used in) operating activities	$ 564,255	$ (326,328)	$ 890,583
Net cash used in investing activities	(562,518)	(202,944)	(359,574)
Net cash (used in) / provided by financing activities	(384,867)	2,452,698	(2,837,565)
Net change in cash	$(383,130)	$1,923,426	$(2,306,556)

Our improvement in cash provided by operations of $0.9 million for the nine months ended September 30, 2011 versus the same period in 2010, is a combination of our increase in gross margin of $1.1 million for the nine months ended September 30, 2011 versus the same period in 2010, and our ongoing focus on cost management on the operations level, showing a decrease of $0.2 million for the nine months ended September 30, 2011 versus the same period in 2010.

Our cash used in investing activities is composed of purchases of equipment and costs associated with certain intangible assets. During the nine months ended September 30, 2011, we made $290,000 in equipment purchases, compared to $51,000 during the same period of the prior year, and we incurred $273,000 in costs associated with certain intangible assets associated with our fiber optic platform, compared to only $152,000 in such costs during the same period of the prior year.

Net cash used in financing activities during the nine months ended September 30, 2011 included the refinancing of our debt with SVB, scheduled payments of principal on a previous promissory note to Hansen, and the final repayment of the Hansen note, which in the aggregate resulted in net cash outflows of $0.6 million. During the nine months ended September 30, 2010, we borrowed under the SVB loan facility and made payments on the Hansen note, resulting in aggregate net cash inflows of $1.7 million. We also received $0.3 million from the exercise of stock options during the nine months ended September 30, 2011, as compared to $0.8 million during the same period of the prior year.

Off-Balance Sheet Arrangements

We have no material off-balance sheet arrangements as defined in Regulation S-K Item 303(a) (4) (ii).

ITEM 3. *QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK*

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. We do not hold or issue financial instruments for trading purposes or have any derivative financial instruments. Our exposure to market risk is limited to interest rate fluctuations due to changes in the general level of United States interest rates.

Interest Rate Risk

We do not use derivative financial instruments as a hedge against interest rate fluctuations, and, as a result, interest income earned on our cash and cash equivalents and short-term investments is subject to changes in interest rates. However, we believe that the impact of these fluctuations does not have a material effect on our financial position due to the immediately available liquidity or short-term nature of these financial instruments.

We are exposed to interest rate fluctuations as a result of our revolving line of credit and our term loan with SVB, each of which has a variable rate. We do not currently use derivative instruments to alter the interest rate characteristics of any of our debt. As of September 30, 2011, the interest rate on the line of credit was 5.5% and the interest rate on the term loan was 6%. Based on the principal amount of $5.5 million outstanding under the term loan as of September 30, 2011, a change in the interest rate by one percentage point for one year would result in a change in our annual interest expense of approximately $48,000.

Although we believe that these measures are indicative of our sensitivity to interest rate changes, they do not adjust for potential changes in our credit quality, composition of our balance sheet and other business developments that could affect our interest rate exposure. Accordingly, no assurances can be given that actual results would not differ materially from the potential outcome simulated by this estimate.

Foreign Currency Exchange Rate Risk

As of September 30, 2011, all payments made under our research contracts have been denominated in United States dollars. Our product sales to foreign customers are also generally denominated in U.S. dollars, and we generally do not receive payments in foreign currency. As such, we are not directly exposed to currency gains or losses resulting from fluctuations in foreign exchange rates.

ITEM 4. *CONTROLS AND PROCEDURES*

Evaluation of Disclosure Controls and Procedures

We maintain "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which are controls and other procedures that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. In addition, the design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a control system, misstatements due to error or fraud may occur and not be detected.

Under the supervision and with the participation of our management, including our principal executive officer and our principal financial officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report. Based on this evaluation, our principal executive officer and our principal financial officer have concluded that, as of September 30, 2011, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the quarter ended September 30, 2011 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. *LEGAL PROCEEDINGS*

None.

ITEM 1A. *RISK FACTORS*

You should carefully consider the risks described below before deciding whether to invest in our common stock. The risks described below are not the only ones we face. Additional risks not presently known to us or that we currently believe are immaterial may also impair our business operations and financial results. If any of the following risks actually occurs, our business, financial condition or results of operations could be adversely affected. In such case, the trading price of our common stock could decline and you could lose all or part of your investment. Our filings with the Securities and Exchange Commission also contain forward-looking statements that involve risks or uncertainties. Our actual results could differ materially from those anticipated or contemplated by these forward-looking statements as a result of a number of factors, including the risks we face described below, as well as other variables that could affect our operating results. Past financial performance should not be considered to be a reliable indicator of future performance, and investors should not use historical trends to anticipate results or trends in future periods.

RISKS RELATING TO OUR BUSINESS GENERALLY

We rely and will continue to rely on contracts and grants awarded under the SBIR program for a significant portion of our revenues. A finding by the SBA that we no longer qualify to receive SBIR awards could adversely affect our business.

We compete as a small business for some of our government contracts. As described above, our revenues derived from the SBIR program account for a significant portion of our consolidated total revenues, and contract research, including SBIR contracts, will remain a significant portion of our consolidated total revenues for the foreseeable future.

We may not continue to qualify to participate in the SBIR program or to receive new SBIR awards from federal agencies. In order to qualify for SBIR contracts and grants, we must meet certain size and ownership eligibility criteria. These eligibility criteria are applied as of the time of the award of a contract or grant. A company can be declared ineligible for a contract award as a result of a size challenge filed with the SBA by a competitor or a federal agency.

In order to be eligible for SBIR contracts and grants, we must be 51% owned and controlled by individuals who are U.S. citizens or permanent resident aliens. In the event our institutional ownership significantly increases, either because of increased buying by institutions or selling by individuals, we could lose eligibility for new SBIR contracts, public contracts, grants and other awards that are set aside for small businesses, including SBIR grants.

Additionally, in order to be eligible for SBIR contracts and grants, the number of our employees, including those of any entities that are considered to be affiliated with us, cannot exceed 500. As of September 30, 2011, we had approximately 189 employees. In determining whether we are affiliated with any other entity, the SBA will analyze whether another entity controls or has the power to control us. Carilion Clinic is our largest institutional stockholder. We understand that the SBA is in the process of performing a formal size determination that will focus on whether or not Carilion is our affiliate. Although we do not believe that Carilion has the power to control our company, we cannot assure you that the SBA will interpret its regulations in our favor on this question. Under its regulations, the SBA may conclude that a stockholder that is large compared to others has the power to control us and is our affiliate. If the SBA were to make a determination that we are affiliated with Carilion, we would exceed the size limitations, as Carilion has over 500 employees. In that case, we would lose eligibility for new SBIR grants and other SBA contracts, public contracts, grants and other awards that are set aside for small businesses based on the criterion of number of employees, and the relevant government agency would have the discretion to suspend performance on existing SBIR grants.

In addition, it is possible that the sale of a substantial amount of common stock in the future by our founder, Dr. Kent Murphy, could negatively affect the interpretation of SBA regulations against us on this question of affiliation, as well as possibly result in an increase in our institutional ownership. We have agreed with Dr. Murphy that he is not allowed to sell his stock, except pursuant to a registered offering on Form S-3 subject to certain conditions.

Moreover, as we grow our business, it is foreseeable that we will eventually exceed the SBIR size limitations, in which case we may be required to seek alternative sources of revenues or capital.

A decline in government research contract awards or government funding for existing or future government research contracts, including SBIR contracts, could adversely affect our revenues, cash flows and ability to fund our growth.

Technology development revenue, which consists primarily of government-funded research, accounted for approximately 70% and 59% respectively, of our consolidated total revenues for the three months ended September 30, 2011 and 2010 and 63% and 66% respectively, of our consolidated total revenues for the nine months ended September 30, 2011 and 2010, respectively. As a result, we are vulnerable to adverse changes in our revenues and cash flows if a significant number of our research contracts and subcontracts were to be simultaneously delayed or canceled for budgetary, performance or other reasons. For example, the U.S. government may cancel these contracts at any time without cause and without penalty or may change its requirements, programs or contract budget, any of which could reduce our revenues and cash flows from U.S. government research contracts. Our revenues and cash flows from U.S. government research contracts and subcontracts could also be reduced by declines or other changes in U.S. defense, homeland security and other federal agency budgets. In addition, we compete as a small business for some of these contracts, and in order to maintain our eligibility to compete as a small business, we, together with any affiliates, must continue to meet size and revenue limitations established by the U.S. government.

Our contract research customer base includes government agencies, corporations and academic institutions. Our customers are not obligated to extend their agreements with us and may elect not to do so. Also, our customers' priorities regarding funding for certain projects may change and funding resources may no longer be available at previous levels.

In addition to contract cancellations and changes in agency budgets, our future financial results may be adversely affected by curtailment of or restrictions on the U.S. government's use of contract research providers, including curtailment due to government budget reductions and related fiscal matters or any legislation or resolution limiting the number or amount of awards we may receive. These or other factors could cause U.S. defense and other federal agencies to conduct research internally rather than through commercial research organizations or direct awards to other organizations, to reduce their overall contract research requirements or to exercise their rights to terminate contracts. Alternatively, the U.S. government may discontinue the SBIR program or its funding altogether. Any of these actions could limit our ability to obtain new contract awards and adversely affect our revenues, cash flows and ability to fund our growth.

Our failure to attract, train and retain skilled employees or members of our senior management and to obtain necessary security clearances for such persons or maintain a facility security clearance would adversely affect our business and operating results.

The availability of highly trained and skilled technical and professional personnel is critical to our future growth and profitability. Competition for scientists, engineers, technicians and professional personnel is intense and our competitors aggressively recruit key employees. In the past, we have experienced difficulties in recruiting and hiring these personnel as a result of the tight labor market in certain fields. Any difficulty in hiring or retaining qualified employees, combined with our growth strategy and future needs for additional experienced personnel, particularly in highly specialized areas such as nanomaterial manufacturing and fiber optic sensing technologies, may make it more difficult to meet all of our needs for these employees in a timely manner. Although we intend to continue to devote significant resources to recruit, train and retain qualified employees, we may not be able to attract and retain these employees, especially in technical fields in which the supply of experienced qualified candidates is limited or at the senior management level. Any failure to do so would have an adverse effect on our business. Any loss of key personnel could have a material adverse effect on our ability to meet key operational objectives, such as timely and effective project milestones and product introductions, which in turn could adversely affect our business, results of operations and financial condition. We also have contractual obligations to adequately staff certain development projects, and a loss of key personnel could lead to our inability to meet these obligations, which in turn could expose us to claims for significant damages under any such agreement.

We provide certain services to the U.S. government that require us to maintain a facility security clearance and for certain of our employees and our board chairman to hold security clearances. As of the date of this report, the Defense Security Service, or DSS, is conducting a review of our processes in connection with security clearance applications. Depending on the outcome of this review, the DSS could require a variety of changes or impose sanctions on us. The loss of a facility security clearance, as a result of this review or otherwise, the failure for necessary persons to obtain or retain sufficient security clearances or any public reprimand could result in a U.S. government customer terminating an existing contract or choosing not to renew a contract or prevent us from bidding on or winning certain new government contracts.

In addition, our future success depends in a large part upon the continued service of key members of our senior management team. We do not maintain any key-person life insurance policies on our officers. The loss of any members of our management team or other key personnel could seriously harm our business.

The results of our operations could be adversely affected by economic and political conditions and the effects of these conditions on our customers' businesses and levels of business activity.

Global economic and political conditions affect our customers' businesses and the markets they serve. A severe or prolonged economic downturn or a negative or uncertain political climate could adversely affect our customers' financial conditions and the timing or levels of business activity of our customers and the industries we serve. This may reduce the demand for our products or depress pricing for our products and have a material adverse effect on our results of operations. Changes in global economic conditions could also shift demand to products or services for which we do not have competitive advantages, and this could negatively affect the amount of business we are able to obtain. In addition, if we are unable to successfully anticipate changing economic and political conditions, we may be unable to effectively plan for and respond to those changes, and our business could be negatively affected as a result.

There was a rapid softening of the economy and tightening of the financial markets in the second half of 2008 that continued into 2011. This slowing of the economy has reduced the financial capacity of our customers and possibly our potential customers, thereby slowing spending on the products and services we provide. The outlook for the economy for the remainder of 2011 remains uncertain, and until there is a sustained economic recovery our revenues and results of operations could be negatively impacted.

We have a history of losses, and because our strategy for expansion may be costly to implement, we may experience continuing losses and may never achieve or maintain profitability or positive cash flow.

We realized a consolidated net income attributable to common stockholders of approximately $0.2 million for the three months ended September 30, 2011 and incurred a consolidated net loss attributable to common stockholders of approximately $0.5 million for the three months ended September 30, 2010. We incurred a consolidated net loss attributable to common stockholders of approximately $1.1 million and $2.5 million for the nine months ended September 30, 2011 and 2010, respectively. As of September 30, 2011, our accumulated deficit totaled $48.2 million. We expect to continue to incur significant expenses as we expand our operations, including increased expenses for research and development, sales and marketing, manufacturing, finance and accounting personnel and expenses associated with being a public company. We may also grow our business in part through acquisitions of additional companies and complementary technologies which could cause us to incur greater than anticipated transaction expenses, amortization or write-offs of intangible assets and other acquisition-related expenses. As a result, we expect to incur net losses for the foreseeable future, and these losses could be substantial.

Our ability to generate additional revenues and to become profitable will depend on our ability to develop and commercialize innovative technologies, expand our contract research capabilities and sell the products that result from those development initiatives. We are unable to predict when or if we will be able to achieve profitability. If our revenues do not increase, or if our expenses increase at a greater rate than our revenues, we will continue to experience losses. Even if we do achieve profitability, we may not be able to sustain or increase our profitability on a quarterly or annual basis.

We might require additional capital to support and expand our business, and this capital might not be available on favorable terms, if at all.

We intend to continue to make investments to support our business growth, including developing new products, enhancing our existing products, obtaining important regulatory approvals, enhancing our operating infrastructure, completing our development activities and building our commercial scale manufacturing facilities. To the extent that we are unable to become or remain profitable and to finance our activities from our continuing operations, we may require additional funds to support these initiatives and to grow our business.

If we are successful in raising additional funds through issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, including as the result of the issuance of warrants in connection with the financing, and any new equity securities we issue could have rights, preferences and privileges superior to those of our existing common stock. Furthermore, such financings may jeopardize our ability to apply for SBIR grants or qualify for SBIR contracts or grants, and our dependence on SBIR grants may restrict our ability to raise additional outside capital. If we raise additional funds through debt financings, these financings may involve significant cash payment obligations and covenants that restrict our ability to operate our business and make distributions to our stockholders.

We have issued to Hansen a warrant exercisable for a number of shares of our common stock such that Hansen may maintain ownership of 9.9% of our total outstanding common stock for a period of three years at a price of one cent per common share. In the event that we raise capital through the issuance of common stock, shareholders will experience further dilution to the extent that Hansen exercises this warrant, which may make it more difficult to raise equity capital or may adversely affect the price at which we are able to raise equity capital.

If we are unable to obtain adequate financing or financing terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly limited.

RISKS RELATING TO OUR OPERATIONS AND BUSINESS STRATEGY

If we cannot successfully transition our revenue mix from contract research revenues to product sales and license revenues, we may not be able to fully execute our business model or grow our business.

Our business model and future growth depend on our ability to transition to a revenue mix that contains significantly larger product sales and revenues from the provision of services or from licensing. Product sales and these revenues potentially offer greater scalability than contract research revenues. Our current plan is to increase our sales of commercial products, our licensing revenue and our provision of non-research services to customers so as to represent a larger percentage of our total revenues. If we are unable to develop and grow our product sales and revenues from the provision of services or from licensing to augment our contract research revenues, however, our ability to execute our business model or grow our business could suffer. There can be no assurance that we will be able to achieve increased revenues in this manner.

If we are unable to manage growth effectively, our revenue and net loss could be adversely affected.

While historically we have developed and commercialized only a few products at a time, we plan to grow our revenues by developing and commercializing multiple products concurrently across many industries, technologies and markets. Our ability to expand our business by developing and commercializing multiple products simultaneously requires that we manage a diverse range of projects and expand our personnel resources. Our inability to do any of these could prevent us from successfully implementing our growth strategy, causing our revenues and profits to be adversely affected.

To advance the development of multiple promising potential products concurrently, we need to manage effectively the logistics of maintaining the requisite corporate, operational, administrative and financing functions for each of these product opportunities. Potentially expanding our operations into new geographic areas and relying on multiple facilities to develop and manufacture different products concurrently pose additional challenges. We have little experience in managing these functions simultaneously for multiple projects in development or in building new infrastructure and integrating the operations of various facilities. If we cannot manage this process successfully, we may experience operating difficulties, additional expenditures and limited revenue growth.

We may need to expand our personnel resources to grow our business effectively. We believe that sustained growth at a higher rate will place a strain on our management as well as on our other human resources. To manage this growth, we must continue to attract and retain qualified management, professional, scientific and technical and operating personnel. If we are unable to recruit a sufficient number of qualified personnel, we may be unable to staff and manage projects adequately, which in turn may slow the rate of growth of our contract research revenue or our product development efforts.

We may not be successful in identifying market needs for new technologies and developing new products to meet those needs.

The success of our business model depends on our ability to correctly identify market needs for new technologies. We intend to identify new market needs, but we may not always have success in doing so in part because our contract research largely centers on identification and development of unproven technologies, often for new or emerging markets. Furthermore, we must identify the most promising technologies from a sizable pool of projects. If our commercialization strategy process fails to identify projects with commercial potential or if management does not ensure that such projects advance to the commercialization stage, we may not successfully commercialize new products and grow our revenues.

Our growth strategy requires that we not only identify new technologies that meet market needs, but that we also develop successful commercial products that address those needs. We face several challenges in developing successful new products. Many of our existing products and those currently under development, including our Trimetasphere® carbon nanomaterials, are technologically innovative and require significant and lengthy product development efforts. These efforts include planning, designing, developing and testing at the technological, product and manufacturing-process levels. These activities require us to make significant investments. Although there are many potential applications for our technologies, our resource constraints require us to focus on specific products and to forgo other opportunities. We expect that one or more of the potential products we choose to develop will not be technologically feasible or will not achieve commercial acceptance, and we cannot predict which, if any, of our products we will successfully develop or commercialize. The technologies we research and develop are new and steadily changing and advancing. The products that are derived from these technologies may not be applicable or compatible with the state of technology or demands in existing markets. Our existing products and technologies may become uncompetitive or obsolete if our competitors adapt more quickly than we do to new technologies and changes in customers' requirements. Furthermore, we may not be able to identify if and when new markets will open for our products given that future applications of any given product may not be readily determinable, and we cannot reasonably estimate the size of any markets that may develop. If we are not able to successfully develop new products, we may be unable to increase our product revenues.

We depend on third-party vendors for specialized components in our manufacturing operations, making us vulnerable to supply shortages and price fluctuations that could harm our business.

We primarily rely on third-party vendors for the manufacture of the specialized components used in our products. The highly specialized nature of our supply requirements poses risks that we may not be able to locate additional sources of the specialized components required in our business. For example, there are few manufacturers who produce the special lasers used in our optical test equipment. Our reliance on these vendors subjects us to a number of risks that could negatively affect our ability to manufacture our products and harm our business, including interruption of supply. Although we are now manufacturing tunable lasers in low-rate initial production, we expect our overall reliance on third-party vendors to continue. Any significant delay or interruption in the supply of components, or our inability to obtain substitute components or materials from alternate sources at acceptable prices and in a timely manner, could impair our ability to meet the demand of our customers and could harm our business.

If we are unable to secure third-party reimbursement for our medical products, our revenue and net loss could be adversely affected.

In both the United States and foreign markets where we intend to sell our medical products, third-party payers such as the government and health insurance companies are generally responsible for hospital and doctor reimbursement for medical products and services. Governments and insurance companies carefully review and may challenge the prices charged for medical products and services. Reimbursement rates from private insurance companies vary depending on the procedure performed, the third party involved, the insurance plan involved and other factors. In the United States, reimbursement for medical procedures under the Medicare and Medicaid programs is administered by Centers for Medicare & Medicaid Services. Medicare reimburses both hospitals and physicians a pre-determined, fixed amount based on the procedure performed. This fixed amount is paid regardless of the actual costs incurred by the hospital or physician in furnishing the care and is often unrelated to the specific devices used in that procedure. Thus, any reimbursements that hospitals or physicians obtain for using our medical products will generally have to cover any additional costs that hospitals incur in purchasing such products.

Hospitals and medical centers to which we intend to sell our medical products typically bill the services performed with our products to various third-party payers, such as Medicare, Medicaid and other government programs and private insurance plans. If hospitals do not obtain sufficient reimbursement from third-party payers for procedures performed with our products, or if governmental and private payers' policies do not permit reimbursement for services performed using our products, demand for our products may be negatively impacted.

In countries outside the United States, reimbursement is obtained from various sources, including governmental authorities, private health insurance plans and labor unions. To sell our product in foreign markets, we may need to seek international reimbursement approvals. We cannot be certain whether such required approvals will be obtained in a timely manner or at all.

Furthermore, any regulatory or legislative developments in domestic or foreign markets that eliminate or reduce reimbursement rates for procedures performed with our products could harm our ability to sell our products or cause downward pressure on the prices of our products, either of which would have a negative effect on our product revenue and net loss.

We face and will face substantial competition in several different markets that may adversely affect our results of operations.

We face and will face substantial competition from a variety of companies in several different markets. Our competitors in contract research include, but are not limited to, companies such as General Dynamics Corporation, Lockheed Martin Corporation, SAIC, Inc. and SRA International, Inc. In the instrumentation and test and measurement products market, our competitors include, but are not limited to, large companies such as Agilent Technologies, Inc., Analog Devices, Inc., Freescale Semiconductor, Inc., JDS Uniphase Corp., Robert Bosch GmbH and Silicon Sensing, as well as emerging companies. In addition, in the MRI contrast agent market our competitors include Amersham Plc, Berlex Laboratories, Inc., Bracco Diagnostics, Inc. and Mallinckrodt Inc.

The products that we have developed or are currently developing will compete with other technologically innovative products as well as products incorporating conventional materials and technologies. We expect that our products will face competition in a wide range of industries, including telecommunications, industrial instrumentation, healthcare, military and security applications.

Many of our competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, sales and marketing, manufacturing, distribution, technical and other resources than we do. These competitors may be able to adapt more quickly to new or emerging technologies and changes in customer requirements. In addition, current and potential competitors have established or may establish financial or strategic relationships among themselves or with existing or potential customers or other third parties. Accordingly, new competitors or alliances among competitors could emerge and rapidly acquire significant market share. We cannot assure you that we will be able to compete successfully against current or new competitors, in which case our net revenues may fail to increase or may decline.

We have limited experience manufacturing our products in commercial quantities in a cost-effective manner, which could adversely impact our business.

In the past, we produced most of our products on a custom order basis rather than pursuant to large contracts that require production on a large volume basis. Accordingly, other than the commercial manufacture of products by our Product and License segment, we have no experience manufacturing products in large volumes. Because our experience in large scale manufacturing is limited, we may encounter unforeseen difficulties in our efforts to manufacture other products or materials in commercial quantities or have to rely on third-party contractors over which we may not have direct control to manufacture our products. For example, we may need to develop or in-license Trimetasphere nanomaterial purification and isolation technology, which would result in manufacturing delays or shortfalls. We may also encounter difficulties and delays in manufacturing our products for any of the following reasons:

- we may need to expand our manufacturing operations, and our production processes may have to change to accommodate this growth;
- to increase our manufacturing output significantly, we will have to attract and retain qualified employees, who are in short supply, for the assembly and testing operations;
- we might have to sub-contract to outside manufacturers which might limit our control of costs and processes; and
- our manufacturing operations may have to comply with government specifications.

If we are unable to keep up with demand for our products, our revenues could be impaired, market acceptance of our products could be adversely affected and our customers might instead purchase our competitors' products. Moreover, failure to develop and maintain a U.S. market for goods developed with U.S. government-licensed technology may result in the cancellation of the relevant U.S. government licenses. Our inability to manufacture our products successfully would have a material adverse effect on our revenues.

Even if we are able to manufacture our products on a commercial scale, the cost of manufacturing our products may be higher than we expect. If the costs associated with manufacturing are not significantly less than the prices at which we can sell our products, we may not be able to operate at a profit.

Our nanotechnology-enabled products are new and may be, or may be perceived as being, harmful to human health or the environment.

While we believe that none of our current products contain chemicals known by us to be hazardous or subject to environmental regulation, it is possible that our current or future products, particularly carbon-based nanomaterials, may become subject to environmental or other regulation. We intend to develop and sell carbon-based nanomaterials as well as nanotechnology-enabled products, which are products that include nanomaterials as a component to enhance those products' performance. Nanomaterials and nanotechnology-enabled products have a limited historical safety record. Because of their size or shape or because they may contain harmful elements, such as gadolinium and other rare-earth metals, our products could pose a safety risk to human health or the environment. These characteristics may also cause countries to adopt regulations in the future prohibiting or limiting the manufacture, distribution or use of nanomaterials or nanotechnology-enabled products. Such regulations may inhibit our ability to sell some products containing those materials and thereby harm our business or impair our ability to develop commercially viable products.

The subject of nanotechnology has received negative publicity and has aroused public debate. Government authorities could, for social or other purposes, prohibit or regulate the use of nanotechnology. Ethical and other concerns about nanotechnology could adversely affect acceptance of our potential products or lead to government regulation of nanotechnology-enabled products.

We face risks associated with our international business.

We currently conduct business internationally and we might considerably expand our international activities in the future. Our international business operations are subject to a variety of risks associated with conducting business internationally, including:

- having to comply with U.S. export control regulations and policies that restrict our ability to communicate with non-U.S. employees and supply foreign affiliates and customers;
- changes in or interpretations of foreign regulations that may adversely affect our ability to sell our products, perform services or repatriate profits to the United States;
- the imposition of tariffs;
- hyperinflation or economic or political instability in foreign countries;
- imposition of limitations on or increase of withholding and other taxes on remittances and other payments by foreign subsidiaries or joint ventures;
- conducting business in places where business practices and customs are unfamiliar and unknown;
- the imposition of restrictive trade policies;
- the imposition of inconsistent laws or regulations;

- the imposition or increase of investment and other restrictions or requirements by foreign governments;
- uncertainties relating to foreign laws and legal proceedings;
- having to comply with a variety of U.S. laws, including the Foreign Corrupt Practices Act; and
- having to comply with licensing requirements.

We do not know the impact that these regulatory, geopolitical and other factors may have on our international business in the future.

RISKS RELATING TO OUR REGULATORY ENVIRONMENT

As a provider of contract research to the U.S. government, we are subject to federal rules, regulations, audits and investigations, the violation or failure of which could adversely affect our business.

We must comply with and are affected by laws and regulations relating to the award, administration and performance of U.S. government contracts. Government contract laws and regulations affect how we do business with our government customers and, in some instances, impose added costs on our business. A violation of a specific law or regulation could result in the imposition of fines and penalties, termination of our contracts or debarment from bidding on contracts. In some instances, these laws and regulations impose terms or rights that are more favorable to the government than those typically available to commercial parties in negotiated transactions. For example, the U.S. government may terminate any of our government contracts and, in general, subcontracts, at their convenience, as well as for default based on performance.

In addition, U.S. government agencies, including the Defense Contract Audit Agency and the Department of Labor, routinely audit and investigate government contractors. These agencies review a contractor's performance under its contracts, cost structure and compliance with applicable laws, regulations and standards. The U.S. government also may review the adequacy of, and a contractor's compliance with, its internal control systems and policies, including the contractor's purchasing, property, estimating, compensation and management information systems. Any costs found to be improperly allocated to a specific contract will not be reimbursed, while such costs already reimbursed must be refunded. If an audit uncovers improper or illegal activities, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, fines and suspension or prohibition from doing business with the U.S. government. In addition, our reputation could suffer serious harm if allegations of impropriety were made against us.

In addition to the risk of government audits and investigations, U.S. government contracts and grants impose requirements on contractors and grantees relating to ethics and business practices, which carry civil and criminal penalties including monetary fines, assessments, loss of the ability to do business with the U.S. government and certain other criminal penalties.

We may also be prohibited from commercially selling certain products that we develop under our Technology Development segment or related products based on the same core technologies if the U.S. government determines that the commercial availability of those products could pose a risk to national security. For example, certain of our wireless technologies have been classified as secret by the U.S. government and as a result we cannot sell them commercially. Any of these determinations would limit our ability to generate product sales and license revenues.

Our operations are subject to domestic and foreign laws, regulations and restrictions, and noncompliance with these laws, regulations and restrictions could expose us to fines, penalties, suspension or debarment, which could have a material adverse effect on our profitability and overall financial position.

Our international sales subject us to numerous U.S. and foreign laws and regulations, including, without limitation, regulations relating to imports, exports (including the Export Administration Regulations and the International Traffic in Arms Regulations), technology transfer restrictions, anti-boycott provisions, economic sanctions and the Foreign Corrupt Practices Act. Failure by us or our sales representatives or consultants to comply with these laws and regulations could result in administrative, civil, or criminal liabilities and could result in suspension of our export privileges, which could have a material adverse effect on our business. Changes in regulation or political environment may affect our ability to conduct business in foreign markets including investment, procurement and repatriation of earnings.

Our healthcare and medical products are subject to a lengthy and uncertain domestic regulatory approval process. If we do not obtain and maintain the necessary domestic regulatory approvals or clearances, we will not be able to market and sell our products for clinical use in the United States.

Certain of our current and potential products will require regulatory clearances or approvals prior to commercialization. In particular, our Trimetasphere® nanomaterial-based MRI contrast agent will be considered a drug under the Federal Food, Drug and Cosmetic Act, or FDC Act, and our EDAC® ultrasound diagnostic devices for measuring certain medical conditions will be considered medical devices under the FDC Act. Drugs and some medical devices are subject to rigorous preclinical testing and other approval requirements by the U.S. Food and Drug Administration, or FDA, pursuant to the FDC Act, and regulations under the FDC Act, as well as by similar health authorities in foreign countries.

Various federal statutes and regulations also govern or influence the testing, manufacturing, safety, labeling, packaging, advertising, storage, registration, listing and recordkeeping related to marketing of pharmaceuticals. The process of obtaining these clearances or approvals and the subsequent compliance with appropriate federal statutes and regulations require the expenditure of substantial resources, which we may not be able to obtain on favorable terms, if at all. We cannot be certain that any required FDA or other regulatory approval will be granted or, if granted, will not be withdrawn. Our failure to obtain the necessary regulatory approvals, or our failure to obtain them in a timely manner, will prevent or delay our commercialization of new products and our business or our stock price could be adversely affected as a result.

In general, the FDA regulates the research, testing, manufacturing, safety, labeling, storage, record keeping, promotion, distribution and production of medical devices in the United States to ensure that medical products distributed domestically are safe and effective for their intended uses. In order for us to market medical devices for clinical use in the United States, we generally must first obtain clearance from the FDA pursuant to Section 510(k) of the FDC Act, which has occurred in the case of the EDAC® product. Clearance under Section 510(k) requires demonstration that a new device is substantially equivalent to another device with 510(k) clearance or is eligible for grandfathered status. If we significantly modify our products after they receive FDA clearance, the FDA may require us to submit a separate 510(k) or premarket approval application, or PMA, for the modified product before we are permitted to market the products in the United States. In addition, if we develop products in the future that are not considered to be substantially equivalent to a device with 510(k) clearance or are ineligible for grandfathered status, we will be required to obtain FDA approval by submitting a PMA.

The FDA may not act favorably or quickly in its review of our 510(k) or PMA submissions, or we may encounter significant difficulties and costs in our efforts to obtain FDA clearance or approval, all of which could delay or preclude sale of new products for clinical use in the United States. Furthermore, the FDA may request additional data or require us to conduct further testing, or compile more data, including clinical data and clinical studies, in support of a 510(k) submission. The FDA may also, instead of accepting a 510(k) submission, require us to submit a PMA, which is typically a much more complex and burdensome application than a 510(k). To support a PMA, the FDA would likely require that we conduct one or more clinical studies to demonstrate that the device is safe and effective. We may not be able to meet the requirements to obtain 510(k) clearance or PMA approval, or the FDA may not grant any necessary clearances or approvals. In addition, the FDA may place significant limitations upon the intended use of our products as a condition to a 510(k) clearance or PMA approval. Product applications can also be denied or withdrawn due to failure to comply with regulatory requirements or the occurrence of unforeseen problems following clearance or approval. Any delays or failure to obtain FDA clearance or approvals of new products we develop, any limitations imposed by the FDA on new product use, or the costs of obtaining FDA clearance or approvals could have a material adverse effect on our business, financial condition and results of operations.

Complying with FDA regulations is an expensive and time-consuming process. Our failure to fully comply with such regulations could subject us to enforcement actions.

Our commercially distributed medical device products will be subject to numerous post-market regulatory requirements, including the following:

- Quality System Regulation, or QSR, which requires manufacturers to follow elaborate design, testing, control, documentation and other quality assurance procedures during the manufacturing process;
- labeling regulations;
- the FDA's general prohibition against false or misleading statements in the labeling or promotion of products for unapproved or "off-label" uses;
- the Reports of Corrections and Removals regulation, which requires that manufacturers report to the FDA recalls and field corrective actions taken to reduce a risk to health or to remedy a violation of the FDC Act that may pose a risk to health; and

- the Medical Device Reporting regulation, which requires that manufacturers report to the FDA if their device may have caused or contributed to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if it were to recur.

We will also become subject to inspection and marketing surveillance by the FDA to determine our compliance with regulatory requirements. If the FDA determines that we have failed to comply, it can institute a wide variety of enforcement actions ranging from a regulatory letter to a public warning letter to more severe civil and criminal sanctions. Our failure to comply with applicable requirements could lead to an enforcement action that may have an adverse effect on our financial condition and results of operations.

If our manufacturing facilities do not meet Federal, state or foreign country manufacturing standards, we may be required to temporarily cease all or part of our manufacturing operations, which would result in product delivery delays and negatively impact revenue.

Our manufacturing facilities are subject to periodic inspection by regulatory authorities and our operations will continue to be regulated by the FDA for compliance with Good Manufacturing Practice requirements contained in the QSRs. We are also required to comply with International Organization for Standardization, or ISO, quality system standards in order to produce products for sale in Europe. If we fail to continue to comply with Good Manufacturing Practice requirements or ISO standards, we may be required to cease all or part of our operations until we comply with these regulations. Obtaining and maintaining such compliance is difficult and costly. We cannot be certain that our facilities will be found to comply with Good Manufacturing Practice requirements or ISO standards in future inspections and audits by regulatory authorities. In addition, if we cannot maintain or establish manufacturing facilities or operations that comply with such standards or do not meet the expectations of our customers, we may not be able to realize certain economic opportunities in our current or future supply arrangements.

Our medical products are subject to various international regulatory processes and approval requirements. If we do not obtain and maintain the necessary international regulatory approvals, we may not be able to market and sell our medical products in foreign countries.

To be able to market and sell our products in other countries, we must obtain regulatory approvals and comply with the regulations of those countries. These regulations, including the requirements for approvals and the time required for regulatory review, vary from country to country. Obtaining and maintaining foreign regulatory approvals are expensive, and we cannot be certain that we will receive regulatory approvals in any foreign country in which we plan to market our products. If we fail to obtain regulatory approval in any foreign country in which we plan to market our products, our ability to generate revenue will be harmed.

The European Union requires that manufacturers of medical products obtain the right to affix the CE mark to their products before selling them in member countries of the European Union. The CE mark is an international symbol of adherence to quality assurance standards and compliance with applicable European medical device directives. In order to obtain the right to affix the CE mark to products, a manufacturer must obtain certification that its processes meet certain European quality standards.

We have not yet received permission to affix the CE mark to our medical products. We do not know whether we will be able to obtain permission to affix the CE mark for new or modified products. If we are unable to obtain permission to affix the CE mark to our products, we will not be able to sell our products in member countries of the European Union.

We are subject to additional significant foreign and domestic government regulations, including environmental and health and safety regulations, and failure to comply with these regulations could harm our business.

Our facilities and current and proposed activities involve the use of a broad range of materials that are considered hazardous under applicable laws and regulations. Accordingly, we are subject to a number of foreign, federal, state and local laws and regulations relating to health and safety, protection of the environment and the storage, use, disposal of, and exposure to, hazardous materials and wastes. We could incur costs, fines and civil and criminal penalties, personal injury and third party property damage claims, or could be required to incur substantial investigation or remediation costs, if we were to violate or become liable under environmental, health and safety laws. Moreover, a failure to comply with environmental laws could result in fines and the revocation of environmental permits, which could prevent us from conducting our business. Liability under environmental laws can be joint and several and without regard to fault. There can be no assurance that violations of environmental health and safety laws will not occur in the future as a result of the inability to obtain permits, human error, equipment failure or other causes. Environmental laws could become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violations, which could harm our business. Accordingly, violations of present and future environmental laws could restrict our ability to expand facilities, pursue certain technologies, and could require us to acquire costly equipment or incur potentially significant costs to comply with environmental regulations.

The European Union Directive 2002/96/EC on Waste Electrical and Electronic Equipment, known as the "WEEE Directive," requires producers of certain electrical and electronic equipment, including monitoring instruments, to be financially responsible for specified collection, recycling, treatment and disposal of past and present covered products placed on the market in the European Union. As a manufacturer of covered products, we may be required to register as a producer in some European Union countries and we may incur some financial responsibility for the collection, recycling, treatment and disposal of both new product sold and product already sold prior to the WEEE Directive's enforcement date, including the products of other manufacturers when they are replaced by our own products. European Union Directive 2002/95/EC on the Restriction of the use of Hazardous Substances in electrical and electronic equipment, known as the "RoHS Directive," restricts the use of certain hazardous substances, including mercury, lead and cadmium in specified covered products; however, the RoHS Directive currently exempts monitoring instruments from its requirements. If the European Commission were to remove this exemption in the future, we would be required to change our manufacturing processes and redesign products regulated under the RoHS Directive in order to be able to continue to offer them for sale within the European Union. For some products, substituting certain components containing regulated hazardous substances may be difficult, costly or result in production delays. We will continue to review the applicability and impact of both directives on the sale of our products within the European Union, and although we cannot currently estimate the extent of such impact, they are likely to result in additional costs and could require us to redesign or change how we manufacture our products, any of which could adversely affect our operating results. Failure to comply with the directives could result in the imposition of fines and penalties, inability to sell covered products in the European Union and loss of revenues.

Compliance with foreign, federal, state and local environmental laws and regulations represents a small part of our present budget. If we fail to comply with any such laws or regulations, however, a government entity may levy a fine on us or require us to take costly measures to ensure compliance. Any such fine or expenditure may adversely affect our development. We are committed to complying with and, to our knowledge, are in compliance with, all governmental regulations. We cannot predict the extent to which future legislation and regulation could cause us to incur additional operating expenses, capital expenditures or restrictions and delays in the development of our products and properties.

RISKS RELATING TO OUR INTELLECTUAL PROPERTY

Our proprietary rights may not adequately protect our technologies.

Our commercial success will depend in part on our obtaining and maintaining patent, trade secret, copyright and trademark protection of our technologies in the United States and other jurisdictions as well as successfully enforcing this intellectual property and defending it against third-party challenges. We will only be able to protect our technologies from unauthorized use by third parties to the extent that valid and enforceable intellectual property protections, such as patents or trade secrets, cover them. In particular, we place considerable emphasis on obtaining patent and trade secret protection for significant new technologies, products and processes. The degree of future protection of our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. The degree of future protection of our proprietary rights is also uncertain for products that are currently in the early stages of development because we cannot predict which of these products will ultimately reach the commercial market or whether the commercial versions of these products will incorporate proprietary technologies.

Our patent position is highly uncertain and involves complex legal and factual questions. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. For example:

- we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and issued patents;
- we or our licensors might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies;
- it is possible that none of our pending patent applications or the pending patent applications of our licensors will result in issued patents;
- patents may issue to third parties that cover how we might practice our technology;
- our issued patents and issued patents of our licensors may not provide a basis for commercially viable technologies, may not provide us with any competitive advantages, or may be challenged and invalidated by third parties; and
- we may not develop additional proprietary technologies that are patentable.

Patents may not be issued for any pending or future pending patent applications owned by or licensed to us, and claims allowed under any issued patent or future issued patent owned or licensed by us may not be valid or sufficiently broad to protect our technologies. Moreover, protection of certain of our intellectual property may be unavailable or limited in the United States or in foreign countries, and we have not sought to obtain foreign patent protection for certain of our products or technologies due to cost, concerns about enforceability or other reasons. Any issued patents owned by or licensed to us now or in the future may be challenged, invalidated, or circumvented, and the rights under such patents may not provide us with competitive advantages. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, and in the case of certain products no foreign patents were filed or can be filed. This could make it easier for competitors to capture or increase their market share with respect to related technologies. We could incur substantial costs to bring suits in which we may assert our patent rights against others or defend ourselves in suits brought against us. An unfavorable outcome of any litigation, such as our litigation with Hansen, could have a material adverse effect on our business and results of operations.

We also rely on trade secrets to protect our technology, especially where we believe patent protection is not appropriate or obtainable. However, trade secrets are difficult to protect. We regularly attempt to obtain confidentiality agreements and contractual provisions with our collaborators, employees and consultants to protect our trade secrets and proprietary know-how. These agreements may be breached or may not have adequate remedies for such breach. While we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors or scientific and other advisors, or those of our strategic partners, may unintentionally or willfully disclose our information to competitors. If we were to enforce a claim that a third party had illegally obtained and was using our trade secrets, our enforcement efforts would be expensive and time consuming, and the outcome would be unpredictable. In addition, courts outside the United States are sometimes unwilling to protect trade secrets. Moreover, if our competitors independently develop equivalent knowledge, methods and know-how, it will be more difficult for us to enforce our rights and our business could be harmed.

If we are not able to defend the patent or trade secret protection position of our technologies, then we will not be able to exclude competitors from developing or marketing competing technologies and we may not generate enough revenues from product sales to justify the cost of developing our technologies and to achieve or maintain profitability.

We also rely on trademarks to establish a market identity for our company and our products. To maintain the value of our trademarks, we might have to file lawsuits against third parties to prevent them from using trademarks confusingly similar to or dilutive of our registered or unregistered trademarks. Also, we might not obtain registrations for our pending trademark applications, and we might have to defend our registered trademark and pending trademark applications from challenge by third parties. Enforcing or defending our registered and unregistered trademarks might result in significant litigation costs and damages, including the inability to continue using certain trademarks.

Third parties may claim that we infringe their intellectual property, and we could suffer significant litigation or licensing expense as a result.

Various U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in our technology areas. Such third parties may claim that we infringe their patents. Because patent applications can take several years to result in a patent issuance, there may be currently pending applications, unknown to us, which may later result in issued patents that our technologies may infringe. For example, we are aware of competitors with patents in technology areas applicable to our optical test equipment products. Such competitors may allege that we infringe these patents. There could also be existing patents of which we are not aware that our technologies may inadvertently infringe. If third parties assert claims against us alleging that we infringe their patents or other intellectual property rights—including third parties that have asserted claims against businesses that we have acquired, prior to our acquisition of these businesses—we could incur substantial costs and diversion of management resources in defending these claims, and the defense of these claims could have a material adverse effect on our business, financial condition and results of operations. In addition, if third parties assert claims against us and we are unsuccessful in defending against these claims, these third parties may be awarded substantial damages as well as injunctive or other equitable relief against us, which could effectively block our ability to make, use, sell, distribute or market our products and services in the United States or abroad.

Commercial application of nanotechnologies in particular, or technologies involving nanomaterials, is new and the scope and breadth of patent protection is uncertain. Consequently, the patent positions of companies involved in nanotechnologies have not been tested, and there are complex legal and factual questions for which important legal principles will be developed or may remain unresolved. In addition, it is not clear whether such patents will be subject to interpretations or legal doctrines that differ from conventional patent law principles. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our nanotechnology-related intellectual property. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our nanotechnology-related patents or in third party patents.

In the event that a claim relating to intellectual property is asserted against us, or third parties not affiliated with us hold pending or issued patents that relate to our products or technology, we may seek licenses to such intellectual property or challenge those patents. However, we may be unable to obtain these licenses on commercially reasonable terms, if at all, and our challenge of the patents may be unsuccessful. Our failure to obtain the necessary licenses or other rights could prevent the sale, manufacture or distribution of our products and, therefore, could have a material adverse effect on our business, financial condition and results of operations.

A substantial portion of our technology is subject to retained rights of our licensors, and we may not be able to prevent the loss of those rights or the grant of similar rights to third parties.

A substantial portion of our technology is licensed from academic institutions, corporations and government agencies. Under these licensing arrangements, a licensor may obtain rights over the technology, including the right to require us to grant a license to one or more third parties selected by the licensor or that we provide licensed technology or material to third parties for non-commercial research. The grant of a license for any of our core technologies to a third party could have a material and adverse effect on our business. In addition, some of our licensors retain certain rights under the licenses, including the right to grant additional licenses to a substantial portion of our core technology to third parties for non-commercial academic and research use. It is difficult to monitor and enforce such non-commercial academic and research uses, and we cannot predict whether the third-party licensees would comply with the use restrictions of such licenses. We have incurred and could incur substantial expenses to enforce our rights against them. We also may not fully control the ability to assert or defend those patents or other intellectual property which we have licensed from other entities, or which we have licensed to other entities.

In addition, some of our licenses with academic institutions give us the right to use certain technology previously developed by researchers at these institutions. In certain cases we also have the right to practice improvements on the licensed technology to the extent they are encompassed by the licensed patents and are within our field of use. Our licensors may currently own and may in the future obtain additional patents and patent applications that are necessary for the development, manufacture and commercial sale of our anticipated products. We may be unable to agree with one or more academic institutions from which we have obtained licenses whether certain intellectual property developed by researchers at these academic institutions is covered by our existing licenses. In the event that the new intellectual property is not covered by our existing licenses, we would be required to negotiate a new license agreement. We may not be able to reach agreement with current or future licensors on commercially reasonable terms, if at all, or the terms may not permit us to sell our products at a profit after payment of royalties, which could harm our business.

Some of our patents may cover inventions that were conceived or first reduced to practice under, or in connection with, U.S. government contracts or other federal funding agreements. With respect to inventions conceived or first reduced to practice under a federal funding agreement, the U.S. government may retain a non-exclusive, non-transferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention throughout the world. We may not succeed in our efforts to retain title in patents, maintain ownership of intellectual property or in limiting the U.S. government's rights in our proprietary technologies and intellectual property when there exists an issue as to whether such intellectual property was developed in the performance of a federal funding agreement or developed at private expense.

RISKS RELATING TO OUR COMMON STOCK

We may not be able to comply with all applicable listing requirements or standards of the NASDAQ Capital Market and NASDAQ could delist our common stock.

Our common stock is listed on the NASDAQ Capital Market. In order to maintain that listing, we must satisfy minimum financial and other continued listing requirements and standards. There can be no assurances that we will be able to comply with applicable listing standards. In the event that our common stock is not eligible for quotation on another market or exchange, trading of our common stock could be conducted in the over-the-counter market or on an electronic bulletin board established for unlisted securities such as the Pink Sheets or the OTC Bulletin Board. In such event, it could become more difficult to dispose of, or obtain accurate price quotations for, our common stock, and there would likely also be a reduction in our coverage by security analysts and the news media, which could cause the price of our common stock to decline further. Also, it may be difficult for us to raise additional capital if we are not listed on a major exchange.

Our common stock price has been volatile and we expect that the price of our common stock will fluctuate substantially in the future, which could cause you to lose all or a substantial part of your investment.

The public trading price for our common stock is volatile and may fluctuate significantly. For example, since January 1, 2009, our common stock has traded between a high of $5.00 per share and a low of $0.26 per share. Among the factors, many of which we cannot control, that could cause material fluctuations in the market price for our common stock are:

- changes in earnings estimates, investors' perceptions, recommendations by securities analysts or our failure to achieve analysts' earnings estimates;
- changes in our status as an entity eligible to receive SBIR contracts and grants;
- quarterly variations in our or our competitors' results of operations;
- general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors;
- announcements by us, or by our competitors, of acquisitions, new products, significant contracts, commercial relationships or capital commitments;
- litigation;
- any major change in our board of directors or management or any competing proxy solicitations for director nominees;
- changes in governmental regulations or in the status of our regulatory approvals;
- announcements related to patents issued to us or our competitors;
- a lack of, limited or negative industry or securities analyst coverage;
- discussions of our company or our stock price by the financial and scientific press and online investor communities such as chat rooms; and
- general developments in our industry.

In addition, the stock prices of many technology companies have experienced wide fluctuations that have often been unrelated to the operating performance of those companies. These factors may materially and adversely affect the market price of our common stock.

If there are substantial sales of our common stock, or the perception that such sales may occur, our stock price could decline.

If any of our stockholders were to sell substantial amounts of our common stock, the market price of our common stock may decline, which might make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem appropriate. Substantial sales of our common stock, or the perception that such sales may occur, may have a material adverse effect on the prevailing market price of our common stock.

Carilion, Dr. Kent Murphy and certain other stockholders have rights to require us, subject to certain conditions, to file one or more registration statements providing for the sale of up to an aggregate of approximately 6.4 million shares of our common stock, which number includes approximately 1.3 million shares of common stock issuable to Carilion upon conversion of shares of Series A Preferred Stock it currently holds, or to include their shares in registration statements that we may file for ourselves or other stockholders. Once we register the issuance of these shares, they can generally be freely sold in the public market.

Dr. Murphy currently owns approximately 2.8 million shares of our common stock. Dr. Murphy has agreed that, subject to certain conditions, he may only request the registration of up to 800,000 shares of common stock through December 31, 2011, and that he will not make any open market sales of his common stock pursuant to the exemption from registration provided by Rule 144 under the Securities Act during this period. However, these restrictions expire at the end of 2011, after which time Dr. Murphy will once again have the contractual ability to cause us to register all remaining shares that he owns at that time and sell under Rule 144.

Certain of our employees, including some of our executive officers, previously entered into agreements with us that restricted their ability to sell shares of our common stock beyond specified amounts through December 31, 2010. These contractual restrictions are no longer in force and therefore the employees will be able to sell their shares into the market subject to compliance with securities laws.

We cannot assure you that Carilion, Dr. Murphy or any of our other significant stockholders will not seek to sell their shares now that the contractual restrictions on their ability to do so have lapsed, or at any other time that could have an adverse effect on the market price of our stock.

If our internal controls over financial reporting are found not to be effective or if we make disclosure of existing or potential significant deficiencies or material weaknesses in those controls, investors could lose confidence in our financial reports, and our stock price may be adversely affected.

Section 404 of the Sarbanes-Oxley Act of 2002 requires us to include an internal control report with our Annual Report on Form 10-K. That report must include management's assessment of the effectiveness of our internal control over financial reporting as of the end of the fiscal year.

We evaluate our existing internal control over financial reporting based on the framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. During the course of our ongoing evaluation of the internal controls, we may identify areas requiring improvement, and may have to design enhanced processes and controls to address issues identified through this review. Remedying any deficiencies, significant deficiencies or material weaknesses that we identify may require us to incur significant costs and expend significant time and management resources. We cannot assure you that any of the measures we implement to remedy any such deficiencies will effectively mitigate or remedy such deficiencies. Investors could lose confidence in our financial reports, and our stock price may be adversely affected, if our internal controls over financial reporting are found not to be effective by management or if we make disclosure of existing or potential significant deficiencies or material weaknesses in those controls.

Anti-takeover provisions in our amended and restated certificate of incorporation and bylaws and Delaware law could discourage or prevent a change in control, even if an acquisition would be beneficial to our stockholders, which could affect our stock price adversely and prevent attempts by our stockholders to replace or remove our current management.

Our amended and restated certificate of incorporation and bylaws and Delaware law contain provisions that might delay or prevent a change in control, discourage bids at a premium over the market price of our common stock and adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. These provisions include:

- a classified board of directors serving staggered terms;
- advance notice requirements to stockholders for matters to be brought at stockholder meetings;
- a supermajority stockholder vote requirement for amending certain provisions of our amended and restated certificate of incorporation and bylaws; and
- the right to issue preferred stock without stockholder approval, which could be used to dilute the stock ownership of a potential hostile acquirer.

We are also subject to provisions of the Delaware corporation law that, in general, prohibit any business combination with a beneficial owner of 15% or more of our common stock for five years unless the holder's acquisition of our stock was approved in advance by our board of directors.

The existence of these provisions could adversely affect the voting power of holders of common stock and limit the price that investors might be willing to pay in the future for shares of our common stock.

We may become involved in securities class action litigation that could divert management's attention and harm our business and our insurance coverage may not be sufficient to cover all costs and damages.

The stock market has from time to time experienced significant price and volume fluctuations that have affected the market prices for the common stock of technology companies. These broad market fluctuations may cause the market price of our common stock to decline. In the past, following periods of volatility in the market price of a particular company's securities, securities class action litigation has often been brought against that company. We may become involved in this type of litigation in the future. Litigation often is expensive and diverts management's attention and resources, which could adversely affect our business.

ITEM 2. ***UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS***

(a) Unregistered Sales of Equity Securities during the Three-Month Period Ended September 30, 2011

Common Stock Dividend Payable to Carilion

The Company issued 1,321,514 shares of Series A Preferred Stock, par value $0.001 per share, to Carilion Clinic in January 2010, which shares were issued in reliance on the exemptions from registration under the Securities Act provided by Sections 3(a)(9) and 4(2) thereof. The Series A Preferred Stock accrues dividends at the rate of approximately $0.2815 per share per annum, payable quarterly in arrears. Accrued dividends are payable in shares of the Company's common stock, with the number of shares being equal to the quotient of (i) the cumulative aggregate balance of accrued but unpaid dividends on each share of Series A Preferred Stock divided by (ii) the conversion price of the Series A Preferred Stock, which is currently $4.69159 per share. For the period from January 12, 2010, the original issue date of the Series A Preferred Stock, through September 30, 2011, the Series A Preferred Stock issued to Carilion has accrued approximately $455,583 in dividends. The accrued dividend as of September 30, 2011 will be paid by the issuance of 136,338 shares of the Company's common stock, which the Company will issue subsequent to September 30, 2011. As the Series A Preferred Stock was issued in reliance on the exemption provided by Section 3(a)(9), the shares of common stock payable as dividends will also be exempt from registration in reliance on Section 3(a)(9) of the Securities Act.

(b) Use of Proceeds from Sale of Registered Equity Securities

Not applicable.

(c) Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

ITEM 3. ***DEFAULTS UPON SENIOR SECURITIES***

None.

ITEM 4. ***REMOVED AND RESERVED***

ITEM 5. ***OTHER INFORMATION***

None.

ITEM 6. ***EXHIBITS***

The exhibits listed on the Exhibit Index hereto are filed or incorporated by reference (as stated therein) as part of this Quarterly Report on Form 10-Q.

SIGNATURES

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

Luna Innovations Incorporated

Date: November 14, 2011

By: /s/ Dale Messick

Dale Messick
Chief Financial Officer
(principal financial and accounting officer and duly authorized officer)

EXHIBIT INDEX

Exhibit Number	Description
31.1	Certification of the Principal Executive Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of the Principal Financial Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1**	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2**	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101***	The following materials from the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2011, formatted in XBRL (eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets at September 30, 2011 and December 31, 2010, (ii) Condensed Consolidated Statements of Operations for the three months and nine months ended September 30, 2011 and 2010, (iii) Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2011 and 2010, and (iv) Notes to Unaudited Condensed Consolidated Financial Statements.

** These certifications are being furnished solely to accompany this quarterly report pursuant to 18 U.S.C. Section 1350, and are not being filed for purposes of Section 18 of the Securities Exchange Act of 1934 and are not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

*** Pursuant to Rule 406T of Regulation S-T, the Interactive Data Files on Exhibit 101 hereto are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, are deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise are not subject to liability under those sections.

Exhibit 31.1

CERTIFICATION

I, My E. Chung, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Luna Innovations Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 14, 2011

/s/ My E. Chung
My E. Chung
President and Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATION

I, Dale E. Messick, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Luna Innovations Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 14, 2011

/s/ Dale E. Messick

Dale E. Messick
Chief Financial Officer
(principal financial officer)

Exhibit 32.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Luna Innovations Incorporated (the "Company") on Form 10-Q for the quarterly period ended September 30, 2011 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, My E. Chung, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

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

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

This certification accompanies this Report to which it relates, shall not be deemed "filed" with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Report), irrespective of any general incorporation language contained in such filing.

/s/ MY E. CHUNG

My E. Chung
President and Chief Executive Officer
(principal executive officer)

November 14, 2011

Exhibit 32.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Luna Innovations Incorporated (the "Company") on Form 10-Q for the quarterly period ended September 30, 2011 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Dale E. Messick, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

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

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

This certification accompanies this Report to which it relates, shall not be deemed "filed" with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Report), irrespective of any general incorporation language contained in such filing.

/s/ DALE E. MESSICK

Dale E. Messick
Chief Financial Officer
(principal financial officer)

November 14, 2011