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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 June 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 (State or Other Jurisdiction of Incorporation or Organization)	**54-1560050** (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 August 5, 2011, there were 13,664,471 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 Item1A 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 JUNE 30, 2011

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Luna Innovations Incorporated
Condensed Consolidated Balance Sheets

	June 30, 2011 (unaudited)	December 31, 2010
Assets		
Current assets		
Cash and cash equivalents	$ 8,066,006	$ 7,216,580
Accounts receivable, net	6,675,480	7,669,625
Inventory, net	3,772,483	3,106,600
Prepaid expenses	688,057	665,210
Other current assets	45,004	45,348
Total current assets	19,247,030	18,703,363
Property and equipment, net	3,144,099	3,204,670
Intangible assets, net	662,551	664,418
Other assets	265,627	303,210
Total assets	$ 23,319,307	$ 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	49,446	2,194
Accounts payable	1,498,678	2,008,183
Accrued liabilities	4,209,901	3,549,604
Deferred credits	1,685,740	1,392,602
Total current liabilities	8,943,765	10,648,367
Long-term debt obligation	4,375,000	2,611,609
Long-term lease obligation	208,864	—
Total liabilities	13,527,629	13,259,976
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value $ 0.001, 1,321,514 shares authorized, issued and outstanding at June 30, 2011 and December 31, 2010	1,322	1,322
Common stock, par value $ 0.001, 100,000,000 shares authorized, 13,646,474 and 13,449,345 shares issued and outstanding at June 30, 2011 and December 31, 2010, respectively	13,763	13,526
Additional paid-in capital	58,213,370	56,681,756
Accumulated deficit	(48,436,777)	(47,080,919)
Total stockholders' equity	9,791,678	9,615,685
Total liabilities and stockholders' equity	$ 23,319,307	$ 22,875,661

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

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Luna Innovations Incorporated
Condensed Consolidated Statements of Operations

	Three Months Ended June 30,		Six Months Ended June 30,	
	2011	2010	2011	2010
	(unaudited)		(unaudited)	
Revenues:				
Technology development revenues	$ 5,623,074	$ 6,091,503	$11,244,689	$11,902,597
Product and license revenues	4,000,515	2,907,139	7,377,525	4,981,836
Total revenues	9,623,589	8,998,642	18,622,214	16,884,433
Cost of revenues:				
Technology development costs	4,194,442	4,192,920	8,280,608	8,025,260
Product and license costs	1,767,778	1,499,861	3,340,469	2,719,102
Total cost of revenues	5,962,220	5,692,781	11,621,077	10,744,362
Gross Profit	3,661,369	3,305,861	7,001,137	6,140,071
Operating expense:				
Selling, general and administrative	3,251,073	3,350,524	6,929,593	6,765,036
Research, development, and engineering	620,470	430,181	1,180,159	946,809
Total operating expense	3,871,543	3,780,705	8,109,752	7,711,845
Operating loss	(210,174)	(474,844)	(1,108,615)	(1,571,774)
Other income/(expense)				
Other income/(expense)	37,823	—	35,835	(14,872)
Interest expense	(84,303)	(143,485)	(198,725)	(227,526)
Total other income/(expense)	(46,480)	(143,485)	(162,890)	(242,398)
Loss before income taxes	(256,654)	(618,329)	(1,271,505)	(1,814,172)
Income tax expense	—	—	10,020	—
Net loss	(256,654)	(618,329)	(1,281,525)	(1,814 ,172)
Preferred stock dividend	32,708	93,000	74,336	174,633
Net loss attributable to common stockholders	$ (289,362)	$ (711,329)	$ (1,355,861)	$ (1,988,805)
Net loss per share:				
Basic and Diluted	$ (0.02)	$ (0.05)	$ (0.10)	$ (0.16)
Weighted average shares:				
Basic and Diluted	13,636,993	12,946,802	13,561,225	12,739,201

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

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Luna Innovations Incorporated
Condensed Consolidated Statements of Cash Flows

	Six months ended June 30, 2011	Six months ended June 30, 2010
	(unaudited)	
Cash flows provided by / (used in) operating activities		
Net loss	$(1,281,525)	$(1,814,172)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation and amortization	710,269	641,979
Share-based compensation	1,275,147	1,763,015
Warrant expense	38,893	122,183
Change in assets and liabilities:		
Accounts receivable	994,149	(1,007,451)
Inventory	(665,883)	(127,163)
Other current assets	(22,503)	668,871
Other assets	37,583	31,024
Accounts payable and accrued expenses	111,900	(2,386,304)
Deferred credits	103,138	426,444
Net cash provided by/(used in) operating activities	1,301,168	(1,681,574)
Cash flows used in investing activities		
Acquisition of property and equipment	(173,945)	(39,146)
Intangible property costs	(199,741)	(88,712)
Net cash used in investing activities	(373,686)	(127,858)
Cash flows provided by (used in) financing activities		
Payments on capital lease obligations	(18,030)	(2,684)
Proceeds from debt obligations	6,000,000	2,500,000
Payment of debt obligations	(6,242,394)	(265,657)
Proceeds from the exercise of options and warrants	182,368	616,940
Net cash (used in) / provided by financing activities	(78,056)	2,848,599
Net change in cash	849,426	1,039,167
Cash and cash equivalents—beginning of period	7,216,580	5,228,802
Cash and cash equivalents—end of period	$ 8,066,006	$ 6,267,969
Supplemental disclosure of cash flow information		
Cash paid for interest	$ 96,021	$ 145,000
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, 39,646 and 37,223 shares of common stock issuable at June 30, 2011 and 2010 respectively	$ 74,336	$ 174,633
Property and equipment financed by capital leases	$ 274,145	
Cash paid for income taxes	$ 10,020	

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.

We have a history of net losses from 2005 through the six months ended June 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. We experienced positive cash flow from operations in the six months ended June 30, 2011.

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, 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 June 30, 2011, results of operations for the three and six months ended June 30, 2011 and 2010, and cash flows for the six months ended June 30, 2011 and 2010. The results of operations for the six months ended June 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 loss 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.

The effect of 6,466,356 and 6,724,111 common stock equivalents (which include conversion of preferred stock, outstanding warrants and stock options) are not included for the three and six months ended June 30, 2011 and 2010, respectively, as they are anti-dilutive to earnings per share.

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.

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:

	Six months ended June 30, 2011	Six months ended June 30, 2010
Risk-free interest rate	2.47 - 2.81%	2.87 – 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 periods 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	4,500	$ 1.80	$ 1.80				
Exercised	(100,967)	$ 0.35 – 1.77	$ 1.00				
Canceled	(112,007)	$ 0.82 – 6.00	$ 4.44				
Balance, March 31, 2011	4,507,965	$0.35 - $ 7.08	$ 2.33	$3,421,713	3,027,486	$ 2.27	$2,482,776
Granted	673,850	$ 2.05 - 2.17	$ 2.10				
Exercised	(10,212)	$ 0.35 – 1.77	$ 1.38				
Canceled	(278,222)	$ 0.35 – 7.08	$ 3.80				
Balance, June 30, 2011	4,893,381	$0.35 - $ 7.08	$ 2.22	$1,483,968	3,074,986	$ 2.12	$1,273,151

(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 June 30, 2011, the outstanding stock options to purchase an aggregate of 4,893,381 shares had a weighted average remaining contractual term of 7.1 years, and the exercisable stock options to purchase an aggregate of 3,074,986 shares had a weighted average remaining contractual term of 6.0 years.

For the three months ended June 30, 2011 and 2010, we recognized approximately $457,476 and $875,675, respectively, in stock-based compensation expense, and for the six months ended June 30, 2011 and 2010, we recognized $1,275,147 and $1,763,015, respectively, in stock-based compensation expense. We expect to recognize approximately $3.2 million in stock-based compensation expense over the remaining requisite service period of five years for stock options outstanding as of June 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 FASB issued 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 Luna Innovations, Inc., effective January 1, 2012, will result in additional fair value measurement disclosures, but is not expected to have a material impact on the 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 Luna Innovations, Inc. consolidated financial position or results of operations.

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 follow:

	June 30 , 2011	December 31, 2010
Finished goods	$ 715,783	$ 476,375
Work-in-process	211,956	222,623
Parts	2,927,814	2,468,958
	3,855,553	3,167,956
Less: Inventory reserves	83,070	61,356
Total inventory, net	$3,772,483	$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,. 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 June 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 June 30, 2011 was $5,875,000 of which $4,375,000 was classified as long-term and $1,500,000 was classified as short-term. No amounts were outstanding under the Line of Credit at June 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.

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4. Capital Stock and Additional Paid-in Capital

During the six months ended June 30, 2011, we issued shares of capital stock as follows:

	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	—	—	137,813	138	167,429
Stock-based compensation	—	—	51,648	52	1,275,147
Stock dividends to Carilion Clinic(1)	—	—	—	40	74,296
Issuance of Common Stock, other (2)	—	—	7,668	7	14,742
Balances, June 30, 2011	1,321,514	1,322	13,643,474	13,763	58,213,370

(1) The stock dividends payable in connection with Carilion Clinic's Series A Preferred Stock will be issued subsequent to June 30, 2011. For the period from January 12, 2010, the original issue date of the Series A Preferred Stock, through June 30, 2011, the Series A Preferred Stock issued to Carilion has accrued approximately $434,967 in dividends. The accrued and unpaid dividends as of June 30, 2011 will be paid by the issuance of 116,514 shares of the company's common stock.

(2) During the six months ended June 30, 2011, we issued shares of common stock to two 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 June 30, 2011, our Chief Executive Officer and his direct reports collectively represented our chief operating decision makers, 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).

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The table below presents revenues and operating loss for reportable segments:

	Three Months Ended June 30 ,		Six Months Ended June 30 ,	
	2011	2010	2011	2010
	(unaudited)		(unaudited)	
Revenues:				
Technology development revenues	$5,623,074	$6,091,503	$11,244,689	$11,902,597
Product and license revenues	4,000,515	2,907,139	7,377,525	4,981,836
Total revenues	$9,623,589	$8,998,642	$18,622,214	$16,884,433
Technology development operating loss	(681,371)	(406,434)	(1,485,907)	(710,654)
Product and license operating loss	$ 471,197	$ (68,410)	$ 377,292	$ (861,120)
Total operating loss	$ (210,174)	$ (474,844)	$ (1,108,615)	$ (1,571,774)
Depreciation, technology development	147,842	177,834	317,771	377,597
Depreciation, product and license	105,182	84,870	190,891	158,043
Amortization, technology development	75,861	34,061	125,948	74,963
Amortization, product and license	53,971	16,255	75,659	31,376

Additional segment information is as follows:

The table below presents assets for reportable segments:

	June 30, 2011	December 31, 2010
Total segment assets:		
Technology development	$13,625,498	$14,839,358
Product and license	9,693,809	8,036,303
Total	$23,319,307	$22,875,661
Property plant and equipment, and intangible assets, Technology development	$ 2,224,230	$ 2,509,863
Property plant and equipment, and intangible assets, Product and license	$ 1,582,420	$ 1,359,225

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

The United States Government accounted for approximately 59% and 65% of total consolidated revenues for the three months ended June 30, 2011 and 2010, respectively and 61% and 70% of total consolidated revenues for the six months ended June 30, 2011 and 2010, respectively.

International revenues (customers outside the United States) accounted for approximately 11% and 10% of total consolidated revenues for the three months ended June 30, 2011 and 2010, respectively and 15% and 10% for the six months ended June 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 June 30, 2011, approximately $0.4 million of this commitment remained.

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 58% and 68% of our total revenues for the three months ended June 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 Products and License segment also commercializes healthcare products. Our Product and License revenues represented approximately 42% and 32% of our total revenues for the three months ended June 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 revenues decreased from $6.1 million in the three months ended June 30, 2010 to $5.6 million in the three months ended June 30, 2011, due primarily to a timing issue in our SCC group, that group finished work on one fairly large contract and were not able to start another project until August 2011. While SCC did have this timing issue, the other groups in the technology development segment increased their revenue in the aggregate.

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 $19.8 million and $21.7 million at June 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 continue 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.

There was a rapid softening of the economy and tightening of the financial markets in the second half of 2008 that continued into 2010. This slowing of the economy has reduced the financial capacities of our customers and possibly our potential customers, thereby slowing spending on the products and services we provide. Furthermore, in the second quarter of 2011 we began to experience a decline in new orders received for our fiber optic products, resulting in a decline of approximately $1.3 million in our backlog of unshipped orders from March 31, 2011 to June 30, 2011. We believe this decline 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 58% and 68% of our total revenues for the three months ended June 30, 2011 and 2010, respectively and 60% and 70% of our total revenues for the six months ended June 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 42% and 32% of our total revenues for the three months ended June 30, 2011 and 2010, respectively and 40% and 30% of our total revenues for the six months ended June 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 June 30, 2011 Compared to Three Months Ended June 30, 2010

Revenues

	Three months ended June 30,		Change	
	2011	2010		
Revenues:				
Technology development revenues	$5,623,074	$6,091,503	$ (468,429)	(8%)
Product and license revenues	4,000,515	2,907,139	1,093,376	38%
Total revenues	9,623,589	8,998,642	624,947	7%

Revenues within our Technology Development segment declined due to a decrease in revenues for our Secure Computing and Communications group, or SCC, where a large contract was completed during the second quarter of 2011 and was not replaced with a new large contract award until August 2011. Revenues in our Product and License segment increased from $2.9 million to $4.0 million. We increased sales of our products, primarily fiber optic test and measurement equipment, by 41%, from $2.0 million to $2.9 million, and our revenues earned from funded product development contracts increased by 29%, from $0.9 million to $1.1 million.

Cost of Revenues

	Three months ended June 30,		Change	
	2011	2010		
Cost of revenues:				
Technology development costs	$4,194,442	$4,192,920	$ 1,522	0%
Product and license costs	1,767,778	1,499,861	267,917	18%
Total cost of revenues	$5,962,220	$5,692,781	$269,439	5%
Gross Profit	$3,661,369	$3,305,861	$355,508	11%

The Technology Development segment's cost of revenues remained flat at $4.2 million during the second quarter of 2011 as compared to the same period in 2010. While revenues declined due to a gap between programs in SCC, we maintained the personnel costs associated with the group in anticipation of the new program ultimately awarded in August 2011. The Product and License segment's cost of revenues increased from $1.5 million to $1.8 million, primarily due to the growth in our fiber optic product sales during the quarter, though at a slower rate due to the mix in products sold.

The growth in our Product and License segment more than offset the gross profit impact of lower revenues from our Technology Development segment. Revenues from our Product and License segment typically carry a higher gross margin percentage than revenues from our Technology Development segment.

Operating Expense

	Three months ended June 30, 2011	2010	Change	
Operating expense:				
Selling, general and administrative	$3,251,073	$3,350,524	$ (99,451)	(3%)
Research, development, and engineering	620,470	430,181	190,289	44%
Total operating expense	$3,871,543	$3,780,705	$ 90,838	2%

Selling, general and administrative expenses decreased slightly from $3.4 million to $3.3 million primarily due to a decrease in our stock compensation expense of $0.4 million, partially offset by expenses incurred in connection with the settlement of a potential proxy contest and other expenses.

Operating expense increased slightly due to the increase in research, development and engineering expenses, which reflected additional engineering personnel and other related costs primarily associated with the development and enhancement of our fiber optic sensing products.

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Interest Income (Expense)

Interest expense for the three months ended June 30, 2011 was approximately $84,000 compared to interest expense of approximately $143,000 during the same period in 2010. The monthly average loan balance during the second quarter of 2011 was $5.9 million compared to $7.2 million for the same period in 2010. While we did refinance our debt with Silicon Valley Bank ("SVB") and repay the Hansen debt in May 2011, because of the timing and our lower average interest rate under the SVB credit facilities, this did not affect our total interest rate significantly.

Six Months Ended June 30, 2011 Compared to Six Months Ended June 30, 2010

Revenues

	Six months ended June 30, 2011	2010	Change	
Revenues:				
Technology development revenues	$11,244,689	$11,902,597	$ (657,908)	(6%)
Product and license revenues	7,377,525	4,981,836	2,395,689	48%
Total revenues	$18,622,214	$16,884,433	$1,737,781	10%

Revenues in our Technology Development segment declined primarily due to the completion of a large contract with our Secure Computing and Communications group, which was not replaced with a new large contract until August 2011. Excluding the decline in revenues for SCC, revenues in other groups within our Technology Development segment increased approximately $475,000 as compared to the first half of 2010.

Revenues in our Product and License segment increased primarily due to an increase in sales of our fiber optic test and measurement products to $5.5 million during the first half of 2011 from $3.4 million for the same period in 2010.

Cost of Revenues

	Six months ended June 30, 2011	2010	Change	
Cost of revenues:				
Technology development costs	$ 8,280,608	$ 8,025,260	$255,348	3%
Product and license costs	3,340,469	2,719,102	621,367	23%
Total cost of revenues	$11,621,077	$10,744,362	$876,715	8%
Gross Profit	$ 7,001,137	$ 6,140,071	$861,066	14%

The Technology Development segment's cost of revenues increased slightly due primarily to an increase in direct overhead in this segment, offset in part by a decrease in direct costs billable under contract. The Product and License segment's cost of revenues increased reflecting the growth in our product sales during the first half of 2011.

The growth in our Product and License segment more than offset the gross profit impact of lower revenues from our Technology Development segment. Revenues from our Product and License segment typically carry a higher gross margin percentage than revenues from our Technology Development segment.

Operating Expense

	Six months ended June 30, 2011	2010	Change	
Operating expense:				
Selling, general and administrative	$6,929,593	$6,765,036	$164,557	2%
Research, development, and engineering	1,180,159	946,809	233,350	25%
Total operating expense	$8,109,752	$7,711,845	$397,907	5%

Operating expense increased due to accelerating expense recognition for the remaining payment obligations in the amount of approximately $230,000 for the remainder of the term of our consulting agreement with Dr. Kent Murphy, legal and other expenses related to the settlement of a potential proxy contest, and an increase in product development expenses in our Product and License segment for new product development.

Interest Income (Expense)

Interest expense for the six months ended June 30, 2011 was approximately $199,000 compared to interest expense of approximately $228,000 during the same period in 2010. The monthly average loan for the first half of 2011 was $5.9 million compared to $6.5 million for the same period in 2010. While we did refinance our debt with SVB and repay the Hansen debt in May 2011, because of the timing and our lower average interest rate under the SVB credit facilities, this did not affect our total interest rate significantly.

Liquidity and Capital Resources

At June 30, 2011, our total cash and cash equivalents were approximately $8.1 million.

On February 18, 2010, we entered into a revolving line of credit with SVB 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 line of credit was originally scheduled to mature on February 17, 2011, but was amended to extend the maturity date until May 18, 2011.

On May 18, 2011, we amended our loan agreement with SVB, and SVB agreed to make a term loan to us in the amount of $6.0 million. The loan is to be repaid by us in 48 monthly installments, plus accrued interest payable monthly in arrears and carries a floating annual interest rate equal to SVB's prime rate then in effect plus 2%. In addition, we reduced the maximum borrowing capacity under the line of credit from $5.0 million to $1.0 million and extended its maturity date until May 18, 2012. The annual interest rate on the line of credit was reduced to SVB's prime rate plus 1.25%, payable monthly in arrears, and the amount of the unused line of credit fee was reduced from 0.50% to 0.25%.

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. 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 June 30, 2011 was $5,875,000, of which $4,375,000 is classified as long-term and $1,500,000 is classified as short-term. No amounts were outstanding under the line of credit and the full borrowing capacity of $1.0 million remained available.

In January 2010, we issued a convertible promissory note to Hansen Medical, Inc. in the original principal amount of $5.0 million. As part of the refinancing of our borrowings from SVB, we and Hansen agreed upon a final payoff in the approximate amount of $3 million as payment in full for all principal and accrued interest under the Hansen note, which represented a $190,000 discount.

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

	Six months ended June 30, 2011	Six months ended June 30, 2010	Change
Net cash provided by / (used in) operating activities	1,301,168	(1,681,574)	2,982,742
Net cash used in investing activities	(373,686)	(127,858)	(245,828)
Net cash (used in) / provided by financing activities	(78,056)	2,848,599	(2,926,655)
Net change in cash	849,426	1,039,167	(189,741)

Our improvement in cash provided by operations was primarily due to a lower net loss of $1.3 million during the six months ended June 30, 2011 as compared to a net loss of $1.8 million during the six months ended June 30, 2010, as well as improved collections on accounts receivable, which resulted in a net $1.0 million inflow of cash during the first six months of 2011 as compared to a net outflow of $1.0 million during the first six months of 2010, and a reduction in payments to vendors, which resulted in a net $112,000 cash inflow during the first six months of 2011 as compared to a net cash outflow of $2.4 million during the first six months of 2010. During the first six months of 2010, we paid approximately $1.9 million of liabilities that had been accrued in connection with our Chapter 11 reorganization, from which we emerged in January 2010.

These improvements in operating cash flow were partially offset by lower non-cash expenses of $2.0 million during the first six months of 2011 as compared to $2.5 million during the first six months of 2010, an increase in our inventories of approximately $666,000 during the first half of 2011 as compared to a corresponding increase of $127,000 during the first half of 2010, and other changes in operating assets and liabilities that results in net cash inflows of $118,000 during the first half of 2011 as compared to net cash inflows of $1.1 million during the first half of 2010.

Our cash used in investing activities, is composed of purchases of equipment and costs associated with certain intangible assets. During the six months ended June 30, 2011, we made $174,000 in equipment purchases, compared to $39,000 during the same period of the prior year, and we incurred $200,000 in costs associated with certain intangible assets associated with our fiber optic platform, compared to only $89,000 in such costs during the same period of the prior year.

Net cash used in financing activities during the six months ended June 30, 2011 included the refinancing of our debt with SVB, scheduled payments of principal on the Hansen note, and the final repayment of the Hansen note, which in the aggregate resulted in net cash outflows of $243,000. During the six months ended June 30, 2010, we borrowed under the SVB loan facility and made payments on the Hansen note, resulting in aggregate net cash inflows of $2.2 million. We also received $182,000 from the exercise of stock options during the six months ended June 30, 2011, as compared to $617,000 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 June 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 $5.9 million outstanding under the term loan as of June 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 $52,000.

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 June 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 June 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 June 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 June 30, 2011, we had approximately 197 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 58% and 68% respectively, of our consolidated total revenues for the three months ended June 30, 2011 and 2010 and 60% and 70% respectively, of our consolidated total revenues for the six months ended June 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 the U.S. government's use of contract research providers, including curtailment due to government budget reductions and related fiscal matters. These or other factors could cause U.S. defense and other federal agencies to conduct research internally rather than through commercial research 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 Luna. 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.

Effective April 25, 2011, My E. Chung was appointed as our President and Chief Executive Officer. Mr. Chung also joined our board of directors. As of the date of Mr. Chung's appointment, Dale Messick ceased to serve as our interim President and Chief Operating Officer and returned to his previous role as our Chief Financial Officer, and Scott Graeff ceased to serve in his role as our interim Chief Financial Officer but continues in his role as our Chief Commercialization Officer and Treasurer. There can be no assurances that we will be able to implement a smooth transition to our new Chief Executive Officer or that the transition of these responsibilities will be successful. Leadership transitions can be inherently difficult to manage and may cause uncertainty or a disruption to our business, may increase the likelihood of turnover in key officers and employees or could lead to concerns from current and potential customers, suppliers and other third parties with whom we do business, any of which could have a material adverse impact on our operations.

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 incurred consolidated net losses attributable to common stockholders of approximately $0.3 million and $0.7 million for the three months ended June 30, 2011 and 2010, respectively and $1.4 million and $2.0 million for the six months ended June 30, 2011 and 2010, respectively. As of June 30, 2011, our accumulated deficit totaled $48.4 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 Products 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.

Our directors and executive officers collectively control approximately 43% of our outstanding common stock and if they choose to act together, they can significantly influence our management and operations in a manner that may be in their best interests and not in the best interests of other stockholders.

As of the date of this report, our directors and executive officers, together with their affiliates, collectively own an aggregate of approximately 43% of our outstanding common stock, determined on an as-converted basis. As a result, these stockholders, if they were to act together, will be able to significantly influence our management and affairs and all matters requiring stockholder approval, including the election of directors and approval of mergers or other significant corporate transactions. You and other stockholders will have minimal influence over these actions. The interests of this group of stockholders may not always coincide with our interests or the interests of other stockholders, and this group may act in a manner that advances their best interests and not necessarily those of other stockholders. This concentration of ownership may also have the effect of delaying or preventing a change in control of our company and might adversely affect the market price of our common stock.

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 June 30, 2011

Shares Issued Upon Exercise of Warrants

During the three months ended June 30, 2011, the Company issued 9,725 shares of common stock upon the cashless exercise of warrants held by Hansen. As an exchange of securities in which no cash was paid, the issuance of these shares was deemed to be exempt from registration under the Securities Act in reliance on Section 3(a)(9) thereof.

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 June 30, 2011, the Series A Preferred Stock issued to Carilion has accrued approximately $434,967 in dividends. The accrued dividend as of June 30, 2011 will be paid by the issuance of 116,514 shares of the Company's common stock, which the Company will issue subsequent to June 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.

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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: August 12, 2011

By: /s/ Dale Messick

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

EXHIBIT INDEX

Exhibit Number	Description
10.1	Second Loan Modification Agreement, dated as of May 18, 2011, by and between Luna Innovations Incorporated, Luna Technologies, Inc. and Silicon Valley Bank.
10.2*	Amendment No. 3 to the Development and Supply Agreement, dated as of May 18, 2011, by and between Luna Innovations Incorporated, Luna Technologies, Inc. and Hansen Medical, Inc.
10.3	Amendment to Secured Promissory Note and Payoff Letter, dated as of May 18, 2011, by and between Luna Innovations Incorporated, Luna Technologies, Inc. and Hansen Medical, Inc. (Exhibit A omitted but Registrant undertakes to provide to the Commission upon request).
10.4	Employment Agreement dated April 18, 2011, by and between My E. Chung and Luna Innovations Incorporated.
10.5	Letter Agreement, dated as of May 18, 2011, by and between Luna Innovations Incorporated and Dr. Kent A. Murphy (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, Commission File No. 000-52008, filed on May 23, 2011).
10.6	First Amendment to Separation and Consulting Agreement, dated as of May 18, 2011, by and between Luna Innovations Incorporated and Dr. Kent A. Murphy (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, Commission File No. 000-52008, filed on May 23, 2011).
10.7	General Release Agreement, dated as of May 18, 2011, by and between Luna Innovations Incorporated and Dr. Kent A. Murphy (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K, Commission File No. 000-52008, filed on May 23, 2011).
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 June 30, 2011, formatted in XBRL (eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets at June 30, 2011 and December 31, 2010, (ii) Condensed Consolidated Statements of Operations for the three months and six months ended June 30, 2011 and 2010, (iii) Condensed Consolidated Statements of Cash Flows for the six months ended June 30, 2011 and 2010, and (iv) Notes to Unaudited Condensed Consolidated Financial Statements.

* Confidential treatment has been requested with respect to portions of this exhibit, indicated by asterisks, which have been filed separately with the Securities and Exchange Commission.

** 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 10.1

EXECUTION COPY

SECOND LOAN MODIFICATION AGREEMENT

This Second Loan Modification Agreement (this "**Loan Modification Agreement**") is entered into as of May 18, 2011, by and between (i) **SILICON VALLEY BANK**, a California corporation with a loan production office located at 275 Grove Street, Suite 2-200, Newton, Massachusetts 02466 ("**Bank**"), and (ii) **LUNA INNOVATIONS INCORPORATED**, a Delaware corporation and **LUNA TECHNOLOGIES, INC.**, a Delaware corporation, each with offices located at 1 Riverside Circle, Suite 400, Roanoke, Virginia 24016 (individually and collectively, jointly and severally, the "**Borrower**").

1. DESCRIPTION OF EXISTING INDEBTEDNESS AND OBLIGATIONS. Among other indebtedness and obligations which may be owing by Borrower to Bank, Borrower is indebted to Bank pursuant to a loan arrangement dated as of February 18, 2010, evidenced by, among other documents, a certain Loan and Security Agreement dated as of February 18, 2010, between Borrower and Bank, as amended by a certain First Loan Modification Agreement, dated as of March 7, 2011 (as amended, the "**Loan Agreement**"). Capitalized terms used but not otherwise defined herein shall have the same meaning as in the Loan Agreement.

2. DESCRIPTION OF COLLATERAL. Repayment of the Obligations is secured by the Collateral as described in the Loan Agreement and in certain Intellectual Property Security Agreements executed by each Borrower in favor of Bank (collectively, the "**IP Agreements**", and together with any other collateral security granted to Bank, the "**Security Documents**").

Hereinafter, the Security Documents, together with all other documents evidencing or securing the Obligations shall be referred to as the "**Existing Loan Documents**".

3. DESCRIPTION OF CHANGE IN TERMS.

A. Modifications to Loan Agreement.

1 The Loan Agreement shall be amended by inserting the following new Section 2.1.5 immediately following Section 2.1.4 thereof:

"2.1.5 Term Loan.

"(a) Availability. Bank shall make one (1) term loan available to Borrower in an amount up to the Term Loan Amount on or within five (5) days after the Second Loan Modification Effective Date subject to the satisfaction of the terms and conditions of this Agreement.

(b) Repayment. Borrower shall repay the Term Loan in (i) forty-eight (48) equal installment payments of principal, based on a forty-eight (48) month amortization schedule; plus (ii) monthly payments of accrued interest (each such payment being referred to herein as a "**Term Loan Payment**"). Commencing on the last day of the month following the month in which the Funding Date occurs, each Term Loan Payment shall be payable on the last day of each month. Borrower's final Term Loan Payment, due on the Term Loan Maturity Date, shall include all outstanding principal and accrued and unpaid interest under the Term Loan. Once repaid, the Term Loan may not be reborrowed.

(c) Prepayment. Prior to the Term Loan Maturity Date, Borrower may prepay all or any portion of the Term Loan, effective three (3) Business Days after written notice of such prepayment is given to Bank. Notwithstanding any such prepayment, Bank's lien and security interest in the Collateral shall continue until Borrower fully satisfies its Obligations. If such prepayment is at Borrower's election or at Bank's election due to the occurrence and continuance of an Event of Default, Borrower shall pay to Bank, in addition to the payment of any other expenses or fees then-owing, an early termination fee in an amount equal to (i) if such prepayment is made on or before the day that is 365 days after the Second Loan Modification Effective Date (the "**First Anniversary**"), an amount equal to two percent (2.00%) of the amount of the Term Loan so prepaid; and (ii) if such prepayment is made after the First Anniversary but on or before the day that is 365 days after the First Anniversary, an amount equal to one percent (1.00%) of the amount of the Term Loan so prepaid; provided that no termination fee shall be charged if the credit facility hereunder is replaced with a new facility from another division of Silicon Valley Bank. Any prepayments on the Term Loan shall be in an amount equal to One Million Dollars ($1,000,000) and Two Hundred Fifty Thousand Dollars ($250,000) increments in excess thereof. Upon payment in full of the Obligations and at such time as Bank's obligation to make Credit Extensions has terminated, Bank shall terminate and release its liens and security interests in the Collateral and all rights therein shall revert to Borrower.

(d) Use of Proceeds - Term Loan. Borrower acknowledges and agrees that the proceeds of the Term Loan hereunder shall be used to immediately repay in full all remaining outstanding principal and accrued and unpaid interest owed to Hansen Medical pursuant to the Hansen Subordinated Loan Documents and the Hansen Settlement Documents, together with any additional fees associated therewith and for other general corporate purposes of the Borrower."

2 The Loan Agreement shall be amended by deleting the following text appearing as Section 2.3(a) thereof:

"(a) Interest Rate; Advances. Subject to Section 2.3(b), the principal amount outstanding under the Revolving Line shall accrue interest at a floating per annum rate equal to the Prime Rate plus two percentage points (2.00%), which interest shall be payable monthly, in arrears, in accordance with Section 2.3(f) below."

and inserting in lieu thereof the following:

"(a) Interest Rate;

(i) Advances. Subject to Section 2.3(b), the principal amount outstanding under the Revolving Line shall accrue interest at a floating per annum rate equal to the Prime Rate plus one and one-quarter percentage points (1.25%), which interest shall be payable monthly, in arrears, in accordance with Section 2.3(f) below.

(ii) Term Loan. Subject to Section 2.3(b), the principal amount outstanding under the Term Loan shall accrue interest at a floating per annum rate equal to the Prime Rate plus two percentage points (2.00%), which interest shall be payable monthly, in arrears, in accordance with Section 2.1.5(b)."

3 The Loan Agreement shall be amended by deleting the following text appearing as Section 2.4(d) thereof:

"(d) Unused Revolving Line Facility Fee. A fee (the "**Unused Revolving Line Facility Fee**"), payable quarterly, in arrears, on a calendar year basis on the last Business Day of each quarter, in an amount equal to one-half of one percent (0.50%) per annum of the average unused portion of the Revolving Line, as determined by Bank. The unused portion of the Revolving Line, for the purposes of this calculation, shall not include amounts reserved for products provided in connection with Cash Management Services and FX Forward Contracts. Borrower shall not be entitled to any credit, rebate or repayment of any Unused Revolving Line Facility Fee previously earned by Bank pursuant to this Section notwithstanding any termination of the Agreement or the suspension or termination of Bank's obligation to make loans and advances hereunder, including during any Streamline Period; and"

and inserting in lieu thereof the following:

Unused Revolving Line Facility Fee. A fee (the "**Unused Revolving Line Facility Fee**"), payable monthly, in arrears, on a calendar year basis on the last Business Day of each month, in an amount equal to one-quarter of one percent (0.25%) per annum of the average unused portion of the Revolving Line, as determined by Bank. The unused portion of the Revolving Line, for the purposes of this calculation, shall not include amounts reserved for products provided in connection with Cash Management Services and FX Forward Contracts. Borrower shall not be entitled to any credit, rebate or repayment of any Unused Revolving Line Facility Fee previously earned by Bank pursuant to this Section notwithstanding any termination of the Agreement or the suspension or termination of Bank's obligation to make loans and advances hereunder, including during any Streamline Period; and

4 The Loan Agreement shall be amended by deleting the following text appearing as Section 6.2(a)(ii) thereof:

"(ii) within fifteen (15) days, or the next succeeding Business Day if the 15th day is not a Business Day, after the end of each month, (A) monthly accounts receivable agings, aged by invoice date, (B) monthly accounts payable agings, aged by invoice date, and outstanding or held check registers, if any, and (C) monthly reconciliations of accounts receivable agings (aged by invoice date), transaction reports, Deferred Revenue/billings in excess of cost report and general ledger;"

and inserting in lieu thereof the following:

"(ii) within fifteen (15) days, or the next succeeding Business Day if the 15th day is not a Business Day, after the end of each month, (A) monthly accounts receivable agings, aged by invoice date, (B) monthly accounts payable agings, aged by invoice date (including, without limitation, project identifiers for the purpose of tracking the status of assignments under the Federal Assignment of Claims Act of 1940, as amended), and outstanding or held check registers, if any, and (C) monthly reconciliations of accounts receivable agings (aged by invoice date), transaction reports, Deferred Revenue/billings in excess of cost report and general ledger;"

5 The Loan Agreement shall be amended by deleting the following text appearing as Section 6.2(a)(v) thereof:

"(v) within thirty (30) days of approval by Borrower's board of directors (or sooner if reasonably requested by Bank) and as amended and approved by Borrower's board of directors, annual operating budgets (including income statements, balance sheets and cash flow statements, by month) for the upcoming fiscal year of Borrower and financial projections for the following fiscal year (on a quarterly basis) as approved by Borrower's board of directors, together with any related business forecasts used in the preparation of such annual financial projections;"

and inserting in lieu thereof the following:

"(v) within thirty (30) days after the end of each fiscal year of Borrower and as amended and approved by Borrower's board of directors, annual operating budgets (including income statements, balance sheets and cash flow statements, by month) for the upcoming fiscal year of Borrower and financial projections for the following fiscal year (on a quarterly basis) as approved by Borrower's board of directors, together with any related business forecasts used in the preparation of such annual financial projections;"

6 The Loan Agreement shall be amended by deleting the following text appearing as Section 6.9(a) thereof:

"(a) Adjusted Quick Ratio. A ratio of (i) Quick Assets to (ii) Current Liabilities (net of the Litigation Accrual for purposes of the December 31, 2009 test) minus the current portion of Deferred Revenue of at least 1.25 to 1.00."

and inserting in lieu thereof the following:

"(a) Liquidity. Borrower's (i) unrestricted cash at Bank plus (ii) the lesser of (x) thirty percent (30%) of net billed accounts receivable (including, without limitation, unbilled but contractually due accounts receivable) or (y) Three Million Dollars ($3,000,000) of not less than Seven Million Dollars ($7,000,000)."

7 The Loan Agreement shall be amended by deleting the following text appearing as Section 6.9(b) thereof:

"(b) Adjusted EBITDA. Maintain, measured as of the end of each fiscal quarter during the following periods on a trailing three month basis, Adjusted EBITDA of at least the following:

Trailing Three Month Period Ended	**Minimum Adjusted EBITDA**
December 31, 2009	($1,000,000)
March 31, 2010	($ 250,000)
June 30, 2010	$ 1.00
September 30, 2010	$ 250,000
December 31, 2010	$ 500,000
March 31, 2011	($ 300,000)"

and inserting in lieu thereof the following:

"(b) Adjusted EBITDA. Maintain, measured as of the end of each fiscal quarter during the following periods on a trailing three month basis, Adjusted EBITDA of at least the following:

Trailing Three Month Period Ended	**Minimum Adjusted EBITDA**
March 31, 2011	($300,000)
June 30, 2011 through and including September 30, 2011	$500,000
December 31, 2011	$100,000
March 31, 2012, and each trailing three month period ending thereafter	The greater of (i) forty percent (40%) of forecasted Adjusted EBITDA per the board approved projections; or (b) $100,000"

8 The Loan Agreement shall be amended by deleting the following text appearing as Section 8.1 thereof:

"**8.1 Payment Default.** Borrower fails to (a) make any payment of principal or interest on any Credit Extension on its due date, or (b) pay any other Obligations within three (3) Business Days after such Obligations are due and payable (which three (3) Business Day cure period shall not apply to payments due on the Revolving Line Maturity Date). During the cure period, the failure to make or pay any payment specified under clause (a) or (b) hereunder is not an Event of Default (but no Credit Extension will be made during the cure period);"

and inserting in lieu thereof the following:

"**8.1 Payment Default.** Borrower fails to (a) make any payment of principal or interest on any Credit Extension on its due date, or (b) pay any other Obligations within three (3) Business Days after such Obligations are due and payable (which three (3) Business Day cure period shall not apply to payments due on the Revolving Line Maturity Date and/or the Term Loan Maturity Date, as applicable). During the cure period, the failure to make or pay any payment specified under clause (a) or (b) hereunder is not an Event of Default (but no Credit Extension will be made during the cure period);"

9 The Loan Agreement shall be amended by deleting the following text appearing as Section 12.1 thereof:

"**12.1 Termination Prior to Maturity Date.** This Agreement may be terminated prior to the Revolving Line Maturity Date by Borrower, effective three (3) Business Days after written notice of termination is given to Bank or if Bank's obligation to fund Credit Extensions terminates pursuant to the terms of Section 2.1.1(b). Notwithstanding any such termination, Bank's lien and security interest in the Collateral shall continue until Borrower fully satisfies its Obligations. If such termination is at Borrower's election, Borrower shall pay to Bank, in addition to the payment of any other expenses or fees then-owing, a termination fee in an amount equal to Fifty Thousand Dollars ($50,000) (one percent (1.00%) of $5,000,000), provided that no termination fee shall be charged if the credit facility hereunder is replaced with a new facility from another division of Silicon Valley Bank. Upon payment in full of the Obligations and at such time as Bank's obligation to make Credit Extensions has terminated, Bank shall release its liens and security interests in the Collateral and all rights therein shall revert to Borrower."

and inserting in lieu thereof the following:

"**12.1 Termination Prior to Maturity Date.** This Agreement may be terminated prior to the Revolving Line Maturity Date by Borrower, effective three (3) Business Days after written notice of termination is given to Bank or if Bank's obligation to fund Credit Extensions terminates pursuant to the terms of Section 2.1.1(b). Notwithstanding any such termination, Bank's lien and security interest in the Collateral shall continue until Borrower fully satisfies its Obligations. If such termination is at Borrower's election, Borrower shall pay to Bank, in addition to the payment of any other expenses or fees then-owing, a termination fee in an amount equal to Ten Thousand Dollars ($10,000) (one percent (1.00%) of $1,000,000), provided that no termination fee shall be charged if the credit facility hereunder is replaced with a new facility from another division of Silicon Valley Bank. Upon payment in full of the Obligations and at such time as Bank's obligation to make Credit Extensions has terminated, Bank shall release its liens and security interests in the Collateral and all rights therein shall revert to Borrower."

10 The Loan Agreement shall be amended by deleting following definitions appearing in Section 13.1 thereof:

"“**Eligible Governmental Accounts**” are, so long as Borrower’s unrestricted cash at Bank minus all outstanding Obligations of Borrower owed to Bank is equal to or greater than $2,500,000 (the “**Eligible Governmental Accounts Threshold**”), Accounts that are otherwise Eligible Accounts which are owing from an Account Debtor which is a United States government entity or any department, agency or instrumentality thereof, for which Bank determines, in its sole discretion, that Borrower and the Account Debtors of such Eligible Governmental Accounts are using best efforts to obtain an assignment under the Federal Assignment of Claims Act of 1940 in favor of Bank. For the avoidance of doubt, at any time the Borrower fails to maintain the Eligible Governmental Accounts Threshold, no Accounts will be considered “Eligible Governmental Accounts” until such time as Bank determines, in its sole discretion, that Borrower has achieved the Eligible Governmental Accounts Threshold. Any Overadvance created by Borrower failing to maintain the Eligible Governmental Accounts Threshold shall immediately be repaid in accordance with Section 2.2.

“**Litigation Accrual**” is a onetime amount accrued and reported by Borrower under GAAP for the first quarter of 2009 between Borrower and Hansen Medical, Inc. in the approximate amount of $36,100,000.”

11 The Loan Agreement shall be amended by deleting the following definitions appearing in Section 13.1 thereof:

"“**Adjusted EBITDA**” shall mean (a) Net Income, plus (b) Interest Expense, plus (c) to the extent deducted in the calculation of Net Income, depreciation expense and amortization expense, plus (d) income tax expense, plus (e) to the extent deducted in the calculation of Net Income, non-cash stock compensation expense, less (f) to the extent included in the calculation of Net Income, the reversal of any portion of the Litigation Accrual.

“**Borrowing Base**” is (a) eighty percent (80%) of Eligible Accounts plus (b) the lesser of (i) eighty percent (80%) of Eligible Governmental Accounts or (ii) Two Million Five Hundred Thousand Dollars ($2,500,000), in each case as determined by Bank from Borrower’s most recent Borrowing Base Certificate; provided, however, that Bank may decrease the foregoing percentage in its good faith business judgment based on events, conditions, contingencies, or risks which, as determined by Bank, may adversely affect the Collateral.”

“**Credit Extensions**” is any Advance, Letter of Credit, FX Forward Contract, amount utilized for Cash Management Services, or any other extension of credit by Bank for Borrower’s benefit.

“**Revolving Line**” is an Advance or Advances in an amount not to exceed Five Million Dollars ($5,000,000).

“**Revolving Line Maturity Date**” is May 18, 2011.”

and inserting in lieu thereof the following:

"“**Adjusted EBITDA**” shall mean (a) Net Income, plus (b) Interest Expense, plus (c) to the extent deducted in the calculation of Net Income, depreciation expense and amortization expense, plus (d) income tax expense, plus (e) to the extent deducted in the calculation of Net Income, non-cash stock compensation expense, plus (f) to the extent deducted in the calculation of Net Income, after-tax dividends (provided, that nothing herein shall be construed as permitting Borrower to pay and dividends or distributions in violation of Section 7.7 hereof) less (g) to the extent included in the calculation of Net Income, non-cash income recognized in connection with the early termination of the Indebtedness under the Hansen Subordinated Loan Documents.

"**Borrowing Base**" is (a) eighty percent (80%) of Eligible Accounts, as determined by Bank from Borrower's most recent Borrowing Base Certificate; provided, that Bank may decrease the foregoing percentage in its good faith business judgment based on events, conditions, contingencies, or risks which, as determined by Bank, may adversely affect the Collateral."

"**Credit Extensions**" is any Advance, Letter of Credit, FX Forward Contract, amount utilized for Cash Management Services, Term Loan or any other extension of credit by Bank for Borrower's benefit.

"**Revolving Line**" is an Advance or Advances in an amount not to exceed One Million Dollars ($1,000,000).

"**Revolving Line Maturity Date**" is May 17, 2012."

12 The Loan Agreement shall be amended by deleting the following clauses (j) and clause (s) from the definition of "Eligible Accounts" in Section 13.1 thereof:

"(j) Accounts owing from the United States or any department, agency, or instrumentality thereof except for Accounts of the United States if Borrower has assigned its payment rights to Bank and the assignment has been acknowledged under the Federal Assignment of Claims Act of 1940, as amended, except for Eligible Governmental Accounts;

(s) Accounts for which the Account Debtor is Hansen Medical; and"

and inserting in lieu thereof the following:

"(j) Accounts owing from the United States or any department, agency, or instrumentality thereof except for Accounts of the United States if Borrower has assigned its payment rights to Bank and the assignment has been acknowledged under the Federal Assignment of Claims Act of 1940, as amended;

(s) prior to (i) payment in full of all Indebtedness of Borrower under the Hansen Subordinated Loan Documents and (y) the termination of all of the Hansen Subordinated Loan Documents and prior to release of all security interests or Liens created thereunder, Accounts for which the Account Debtor is Hansen Medical; and"

13 The loan Agreement shall be amended by inserting the following definitions in Section 13.1 thereof, each in its appropriate alphabetical order:

""**Second Loan Modification Effective Date**" is May 18, 2011.

"**Term Loan**" is a loan made by Bank pursuant to the terms of Section 2.1.5 hereof.

"**Term Loan Amount**" is an aggregate amount equal to Six Million Dollars ($6,000,000) outstanding at any time.

"**Term Loan Maturity Date**" is the earliest of (a) May 1, 2015 or (b) the occurrence of an Event of Default.

"**Term Loan Payment**" is defined in Section 2.1.5(b)."

14 The Compliance Certificate appearing as Exhibit B to the Loan Agreement is hereby replaced with the Compliance Certificate attached as Exhibit A hereto.

4. CONDITIONS PRECEDENT. Borrower hereby agrees that the following documents shall be delivered to the Bank prior to or concurrently with the Second Loan Modification Effective Date, each in form and substance satisfactory to the Bank, in its sole discretion (collectively, the "**Conditions Precedent**"):

A. Copies, certified by a duly authorized officer of the Borrower, to be true and complete as of the date hereof, of each of (i) the governing documents of the Borrower as in effect on the date hereof (but only to the extent modified since last delivered to the Bank), (ii) the resolutions of the Borrower authorizing the execution and delivery of this Loan Modification Agreement, the other documents executed in connection herewith and the Borrower's performance of all of the transactions contemplated hereby (but only to the extent required since last delivered to Bank), and (iii) an incumbency certificate giving the name and bearing a specimen signature of each individual who shall be so authorized (but only to the extent any signatories have changed since such incumbency certificate was last delivered to Bank);

B. A certificate from the Secretary of State of the applicable State of organization as of a recent date as to the Borrower's existence and good standing, together with certificates of foreign qualification from the applicable authority in each applicable jurisdiction in which Borrower is so qualified, each as of a recent date;

C. An executed Payoff and Release Letter from Hansen Medical;

D. Updated Perfection Certificates, executed by Borrower; and

E. Such other documents as Bank may reasonably request.

5. FEES. Borrower shall pay to Bank Borrower shall pay to Bank (i) a Term Loan commitment fee equal to Twenty Nine Thousand Seven Hundred Fifty Dollars ($29,750); and (ii) a Revolving Line commitment fee equal to Five Thousand Two Hundred Fifty Dollars ($5,250), which fees shall be due on the date hereof and shall be deemed fully earned as of the date hereof. Borrower shall also reimburse Bank for all legal fees and expenses incurred in connection with this amendment to the Existing Loan Documents.

6. CONDITIONS SUBSEQUENT. On or before the date that is three (3) Business Days after the Second Loan Modification Effective Date (the "**Due Date**") (or such later date as Bank shall determine, in its sole discretion), Borrower shall cause to be delivered to Bank the following documents with all applicable executed signature pages and attachments (each a "**Condition Subsequent**" and collectively, the "**Conditions Subsequent**"). Borrower's failure to timely fulfill and deliver each Condition Subsequent to Bank on or before the Due Date (or such later date as Bank shall determine, in its sole discretion), shall constitute an Event of Default under the Loan Agreement. In addition, until such time as all of the following Conditions Subsequent have been either received by Bank or, in Bank's sole discretion, have been waived by Bank, no Accounts, the Account Debtor for which is Hansen Medical, shall be included in any Borrowing Base calculation:

A. Filed UCC-3 Termination Statements, terminating the UCC-1 financing Statements in favor of Hansen Medical;

B. Evidence satisfactory to Bank that Borrower has received its Hansen Secured Promissory Note, marked "canceled"; and

C. Executed Release of Security Interest in Patents and Trademarks, executed by Hansen Medical, in form and substance acceptable to Bank.

7. RATIFICATION OF IP AGREEMENTS. Borrower hereby ratifies, confirms and reaffirms, all and singular, the terms and conditions of the IP Agreements, and acknowledges, confirms and agrees that said IP Agreements, as modified by certain disclosures made by Borrower to Bank through and including the date hereof, contain an accurate and complete listing of all Intellectual Property Collateral as defined in each respective IP Agreement, and each remains in full force and effect. Notwithstanding the terms and conditions of any of the IP Agreements, Borrower shall not register any Copyrights or Mask Works in the United States Copyright Office unless it: (i) has given at least fifteen (15) days' prior written notice to Bank of its intent to register such Copyrights

or Mask Works and has provided Bank with a copy of the application it intends to file with the United States Copyright Office (excluding exhibits thereto); (ii) executes a security agreement or such other documents as Bank may reasonably request in order to maintain the perfection and priority of Bank's security interest in the Copyrights proposed to be registered with the United States Copyright Office; and (iii) records such security documents with the United States Copyright Office contemporaneously with filing the Copyright application(s) with the United States Copyright Office. Borrower shall promptly provide to Bank a copy of the Copyright application(s) filed with the United States Copyright Office, together with evidence of the recording of the security documents necessary for Bank to maintain the perfection and priority of its security interest in such Copyrights or Mask Works. Borrower shall provide written notice to Bank of any application filed by Borrower in the United States Patent Trademark Office for a patent or to register a trademark or service mark within thirty (30) days of any such filing.

8. RATIFICATION OF PERFECTION CERTIFICATE. Borrower hereby ratifies, confirms and reaffirms, all and singular, the terms and disclosures contained in certain Perfection Certificates, each dated as of February 18, 2010, each as modified by written disclosures made by Borrower to Bank through and including the date hereof, and acknowledges, confirms and agrees the disclosures and information above Borrower provided to Bank in each such Perfection Certificate, as modified through the date hereof, remains true and correct in all material respects as of the date hereof.

9. AUTHORIZATION TO FILE. Borrower hereby authorizes Bank to file UCC financing statements without notice to Borrower, with all appropriate jurisdictions, as Bank deems appropriate, in order to further perfect or protect Bank's interest in the Collateral, including a notice that any disposition of the Collateral, by either the Borrower or any other Person, shall be deemed to violate the rights of the Bank under the Code.

10. CONSISTENT CHANGES. The Existing Loan Documents are hereby amended wherever necessary to reflect the changes described above.

11. RATIFICATION OF LOAN DOCUMENTS. Borrower hereby ratifies, confirms, and reaffirms all terms and conditions of the Loan Agreement (as modified by this Loan Modification Agreement), and all security or other collateral granted to the Bank, and confirms that the indebtedness secured thereby includes, without limitation, the Obligations.

12. NO DEFENSES OF BORROWER. Borrower hereby acknowledges and agrees that Borrower has no offsets, defenses, claims, or counterclaims against Bank with respect to the Obligations, or otherwise, and that if Borrower now has, or ever did have, any offsets, defenses, claims, or counterclaims against Bank, whether known or unknown, at law or in equity, all of them are hereby expressly WAIVED and Borrower hereby RELEASES Bank from any liability thereunder.

13. CONTINUING VALIDITY. Borrower understands and agrees that in modifying the existing Obligations, Bank is relying upon Borrower's representations, warranties, and agreements, as set forth in the Existing Loan Documents. Except as expressly modified pursuant to this Loan Modification Agreement, the terms of the Existing Loan Documents remain unchanged and in full force and effect. Bank's agreement to modifications to the existing Obligations pursuant to this Loan Modification Agreement in no way shall obligate Bank to make any future modifications to the Obligations. Nothing in this Loan Modification Agreement shall constitute a satisfaction of the Obligations. It is the intention of Bank and Borrower to retain as liable parties all makers of Existing Loan Documents, unless the party is expressly released by Bank in writing. No maker will be released by virtue of this Loan Modification Agreement.

14. JURISDICTION/VENUE. Section 11 of the Loan Agreement is hereby incorporated by reference in its entirety.

15. COUNTERSIGNATURE. This Loan Modification Agreement shall become effective only when it shall have been executed by Borrower and Bank.

[The remainder of this page is intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Loan Modification Agreement to be executed as a sealed instrument under the laws of the Commonwealth of Massachusetts as of the date first above written.

BORROWER:

LUNA INNOVATIONS INCORPORATED

By: /s/ My E. Chung
Name: My E. Chung
Title: President and CEO

LUNA TECHNOLOGIES, INC.

By: /s/ Scott A. Graeff
Name: Scott A. Graeff
Title: President

BANK:

SILICON VALLEY BANK

By: /s/ Christopher Leary
Name: Christopher Leary
Title: Vice President

EXHIBIT B
COMPLIANCE CERTIFICATE

TO: SILICON VALLEY BANK Date:
FROM: LUNA INNOVATIONS INCORPORATED
LUNA TECHNOLOGIES, INC.

The undersigned authorized officer of Luna Innovations Incorporated, a Delaware corporation, and Luna Technologies, Inc., a Delaware corporation (individually and collectively, jointly and severally, the "**Borrower**") certifies that under the terms and conditions of the Loan and Security Agreement between Borrower and Bank (the "**Agreement**"), (1) Borrower is in complete compliance for the period ending with all required covenants except as noted below, (2) there are no Events of Default, (3) all representations and warranties in the Agreement are true and correct in all material respects on this date except as noted below; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, (4) Borrower, and each of its Subsidiaries, has timely filed all required tax returns and reports, and Borrower has timely paid all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower except as otherwise permitted pursuant to the terms of Section 5.9 of the Agreement, and (5) no Liens have been levied or claims made against Borrower or any of its Subsidiaries, if any, relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Bank. Attached are the required documents supporting the certification. The undersigned certifies that these are prepared in accordance with GAAP consistently applied from one period to the next except as explained in an accompanying letter or footnotes. The undersigned acknowledges that no borrowings may be requested at any time or date of determination that Borrower is not in compliance with any of the terms of the Agreement, and that compliance is determined not just at the date this certificate is delivered. Capitalized terms used but not otherwise defined herein shall have the meanings given them in the Agreement.

Please indicate compliance status by circling Yes/No under "Complies" column.

Reporting Covenant	Required	Complies
Monthly financial statements with Compliance Certificate	Monthly within 30 days	Yes No
Annual financial statement (CPA Audited) + CC	FYE within 120 days	Yes No
10-Q, 10-K and 8-K	Within 5 days after filing with SEC	Yes No
A/R & A/P Agings, Deferred Revenue/billings in excess of cost report/project identifiers for Assignments of Claim tracking purposes	Monthly within 15 days	Yes No
Transaction Reports	Bi-weekly (monthly with 30 days during a Streamline Period) and with each request for an advance	Yes No
Projections	FYE within 30 days, and as amended	Yes No

The following Intellectual Property was registered after the Effective Date (if no registrations, state "None")

____

Financial Covenant	Required	Actual	Complies
Maintain as indicated:			
Minimum Liquidity	**$7,000,000**	**$**	**Yes No**
Minimum Adjusted EBITDA	*****	**$**	**Yes No**

* See Section 6.9(b) of the Loan and Security Agreement

The following financial covenant analyses and information set forth in Schedule 1 attached hereto are true and accurate as of the date of this Certificate.

The following are the exceptions with respect to the certification above: (If no exceptions exist, state "No exceptions to note.")

LUNA INNOVATIONS INCORPORATED LUNA TECHNOLOGIES, INC.	**BANK USE ONLY**
	Received by: ______________________ AUTHORIZED SIGNER
By: /s/ My E. Chung	Date: ______________________
Name: My E. Chung	
Title: President & CEO	Verified: ______________________ AUTHORIZED SIGNER
	Date: ______________________
	Compliance Status: Yes No

Schedule 1 to Compliance Certificate

Financial Covenants of Borrower

Dated:

I. **Liquidity** (Section 6.9(a))

Required: Liquidity. Borrower's (i) unrestricted cash at Bank plus (ii) the lesser of (x) thirty percent (30%) of net billed accounts receivable (including, without limitation, unbilled but contractually due accounts receivable) or (y) Three Million Dollars ($3,000,000) of not less than Seven Million Dollars ($7,000,000)."

Actual:

A.	Aggregate value of Borrower's unrestricted cash at Bank	$
B.	The lesser of (x) thirty percent (30%) of net billed accounts receivable (including, without limitation, unbilled but contractually due accounts receivable) or (y) Three Million Dollars ($3,000,000)	$
C.	LIQUIDITY (line A plus line B)	$

Is line C equal to or greater than $7,000,000?

No, not in compliance Yes, in compliance

II. **Adjusted EBITDA** (Section 6.9(b))

Required: Maintain, measured as of the end of each fiscal quarter during the following periods on a trailing three month basis, Adjusted EBITDA of at least the following:

Trailing Three Month Period Ended	**Minimum Adjusted EBITDA**
March 31, 2011	($300,000)
June 30, 2011 through and including September 30, 2011	$500,000
December 31, 2011	$100,000
March 31, 2012, and each trailing three month period ending thereafter	The greater of (i) forty percent (40%) of forecasted Adjusted EBITDA per the board approved projections; or (b) $100,000

Actual: All amounts calculated on a trailing three month basis:

A.	Net Income	$
B.	To the extent included in the determination of Net Income	
	1. The provision for income taxes	$
	2. Depreciation expense	$
	3. Amortization expense	$
	4. Net Interest Expense	$
	5. Non-cash stock compensation expense	$
	6. After-tax dividends (provided, that nothing herein shall be construed as permitting Borrower to pay and dividends or distributions in violation of Section 7.7 of the Loan Agreement)	$
	7. Non-cash income recognized in connection with the early termination of the Indebtedness under the Hansen Subordinated Loan Documents.	$
	8. The sum of lines 1 through 6 minus line 7	$
C.	Adjusted EBITDA (line A plus line B.8)	

Is line C equal to or greater than $ [   ]?

No, not in compliance   Yes, in compliance

Exhibit 10.2

*** Text Omitted and Filed Separately
Confidential Treatment Requested
Under 17 CFR §§ 200.80(b)(4) and 240.24b-2

AMENDMENT NO. 3 TO

DEVELOPMENT AND SUPPLY AGREEMENT

This Amendment No. 3 to Development and Supply Agreement (this "**Amendment**") is entered into as of May 18, 2011, by and between Luna Innovations Incorporated, a Delaware corporation, together with Luna Technologies, Inc., a Delaware corporation (acting jointly and severally, individually and collectively, "**Luna**"), and Hansen Medical, Inc., a Delaware corporation ("**Hansen**").

RECITALS

WHEREAS, Luna and Hansen are parties to that certain Development and Supply Agreement having an effective date of January 12, 2010 and amended by Amendment Nos. 1 and 2 to Development and Supply Agreement dated as of February 17, 2010 and April 2, 2010, respectively (collectively, the "**Agreement**");

WHEREAS, Luna and Hansen desire to amend and restate Exhibits A and B of the Agreement to amend certain existing Specifications and estimated budget amounts (for Development Milestones [***]) and add new Development Milestones ([***]) and Specifications therefor;

WHEREAS, Luna and Hansen desire to deem Development Milestone [***] ("[***]") to have been successfully achieved;

WHEREAS, Luna and Hansen desire to amend the Agreement to provide for a payment structure whereby Luna shares [***]% of the Development Fees up to a certain amount and to change the mechanism for calculating the Holdback Amount as a result;

WHEREAS, Luna and Hansen desire to amend the Agreement to lower the discount on the Commercial Transfer Price from [***]% to [***]% and to increase the limit on the Commercial Transfer Price per unit with respect to the Interrogators part of the Luna Product from $[***] to $[***] (until [***] units have been purchased);

WHEREAS, as Luna expects to refinance its existing credit facility with Silicon Valley Bank on or prior to May 18, 2011, Luna and Hansen also desire to agree, pursuant to the separate Amendment to Secured Promissory Note and Payoff Letter ("**Amendment and Payoff Letter**") entered into by the Parties contemporaneously with this Amendment, to a discount on the Promissory Note of $190,000 in connection with Luna paying it off within five (5) business days of the date hereof, and this Amendment is contingent upon Luna and Hansen entering into the Amendment and Payoff Letter and Luna making the payments to Hansen set forth therein.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, Luna and Hansen hereby agree to the following terms and conditions and to amend the Agreement as follows:

[***] = Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

*** Text Omitted and Filed Separately
Confidential Treatment Requested
Under 17 CFR §§ 200.80(b)(4) and 240.24b-2

AMENDMENT AND AGREEMENT

1. Definitions. Except as otherwise provided herein, capitalized terms used in this Amendment shall have the definitions set forth in the Agreement.

2. Amendment and Restatements of Exhibits A and B. Exhibits A and B of the Agreement are hereby amended and restated and replaced in their entirety by the exhibits attached hereto as Exhibits A and B, respectively.

3. [***] Achievement. The Parties hereby deem [***] to have been successfully achieved as of March 31, 2011, with any otherwise applicable penalties in respect of [***] deemed waived, and the related [***] Amount of [***] shall be due and payable within thirty (30) days after the effective date of this Amendment.

4. Amendment to Section 4.1 of the Agreement regarding Payment and the Holdback Amount. Section 4.1 of the Agreement shall be amended as follows:

(a) Section 4.1.1 ([***] Fees) of the Agreement shall be replaced in its entirety with the following:

[***] **Fees.** [***].

(b) The second sentence of Section 4.1.2 (Invoicing and Payment) of the Agreement shall be replaced in its entirety with the following:

[***].

(c) The second-to-last sentence of Section 4.1.3 ([***]) of the Agreement shall be replaced in its entirety with the following:

[***].

5. Commercial Transfer Price. Section 3.3.2 (Commercial Transfer Price) of the Agreement shall be amended as follows:

(a) The second sentence of Section 3.3.2 (Commercial Transfer Price) of the Agreement shall be replaced in its entirety with the following:

[***].

(b) Clause (a) in the proviso at the end of the last sentence of Section 3.3.2 (Commercial Transfer Price) of the Agreement shall be replaced in its entirety with the following:

[***], and

[***] = Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

6. Manufacturing Technology Transfer. Section 3.7(c) of the Agreement shall be replaced in its entirety with the following:

[***]

7. Discount to Promissory Note. Pursuant to the Amendment and Payoff Letter, Hansen intends to provide Luna with a $190,000 discount against the outstanding principal balance and accrued interest on the Promissory Note. This Amendment is contingent upon Luna paying in full such discounted balance and accrued interest in accordance with the terms of the Amendment and Payoff Letter. If Luna does not pay in full such amounts in accordance therewith, this Amendment shall, without further action by the Parties, automatically terminate and be deemed null and void and of no force and effect.

8. Terms and Conditions of Agreement. Except as expressly modified hereby, all terms, conditions and provisions of the Agreement shall continue in full force and effect.

9. Conflicting Terms. In the event of any inconsistency or conflict between the Agreement and this Amendment, the terms, conditions and provisions of this Amendment shall govern and control.

10. Term and Termination. This Amendment shall become effective upon its execution by each of Luna and Hansen and shall continue unless terminated as set forth in Section 6 of this Amendment.

11. Entire Agreement. This Amendment and the Agreement constitute the entire and exclusive agreement between the Parties with respect to this subject matter. All previous discussions and agreements with respect to this subject matter are superseded by the Agreement and this Amendment. This Amendment may be executed in one or more counterparts, each of which shall be an original and all of which taken together shall constitute one and the same instrument.

[*Signature Page to Follow*]

[***] = Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed by their duly authorized representatives as of the date first listed above.

LUNA INNOVATIONS INCORPORATED

By: /s/ My E. Chung

Name: My E. Chung

Title: President and CEO

HANSEN MEDICAL, INC.

By: /s/ Bruce J. Barclay

Name: Bruce J. Barclay

Title: President and CEO

LUNA TECHNOLOGIES, INC.

By: /s/ Scott A. Graeff

Name: Scott A. Graeff

Title: President

SIGNATURE PAGE TO AMENDMENT NO. 3 TO DEVELOPMENT AND SUPPLY AGREEMENT

Exhibit A
Development Milestones

[***]

[***] = Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit B
Development Plan

[***]

[***] = Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

AMENDMENT TO SECURED PROMISSORY NOTE AND PAYOFF LETTER

This Amendment to Secured Promissory Note and Payoff Letter (the "**Amendment and Payoff Letter**") is entered into effective as of May 18, 2011 (the "**Effective Date**"), by and between Luna Innovations Incorporated, a Delaware corporation and Luna Technologies, Inc., a Delaware corporation (individually and collectively, called the "**Borrower**") and Hansen Medical, Inc., a Delaware corporation (the "**Lender**").

RECITALS

A. Borrower issued to Lender a Secured Promissory Note dated January 12, 2010 in the principal amount of $5,000,000 (the "**Note**"). Borrower's obligations under the Note are secured by certain collateral described in the Security Agreement (the "**Security Agreement**") and Patent and Trademark Security Agreement (the "**IP Security Agreement**"), each dated January 12, 2010. Capitalized terms not otherwise defined herein shall have the meanings given in the Note, the Security Agreement, or the IP Security Agreement, as applicable.

B. As of the date hereof, the outstanding principal balance on the Note is $3,230,017.09, and the outstanding interest on the Note is $14,330.98.

C. Lender has agreed to a discount on the Note in the amount of $190,000 to be applied against the outstanding principal balance and accrued interest.

D. Borrower desires to pre-pay the remaining amounts due under the Note, after applying the foregoing discount.

E. Contemporaneously with this Amendment and Payoff Letter, Borrower and Lender are entering into an Amendment No. 3 to Development and Supply Agreement (the "**Amendment**"). The Amendment is contingent upon Borrower and Lender entering into this Amendment and Payoff Letter and Borrower making the payments to Lender set forth below.

In consideration for the foregoing and for the mutual promises set forth below, Borrower and Lender agree as follows:

AGREEMENT

1. Within four business days of the Effective Date, Borrower shall pay to Lender to the account specified on Exhibit A to the Note the amount of $3,054,348.07 (comprised of ((a) $3,230,017.09 (outstanding principal balance), plus (b) 14,330.98, minus (c) $190,000.00 (the discount)), in immediately available funds, in full satisfaction of Borrower's Obligations under the Note (the "**Final Payment**").

2. Upon receipt of the Final Payment in accordance with the preceding paragraph, (a) all amounts owing under the Note, Security Agreement and IP Security Agreement shall have

been paid in full, (b) Borrower shall have no further Obligations to Lender under the Note and all obligations, liabilities, covenants and agreements of Borrower, under or in connection with the Note, Security Agreement and IP Security Agreement shall be terminated and canceled and are of no further force and effect, (c) all of Lender's security interest in, security titles to and other liens on all real and personal assets and property of Borrower shall be terminated automatically without any further action, (d) Borrower, and their attorneys and agents, are authorized to (1) file UCC-3 Termination Statements for each of the UCC-1 Financing Statements previously filed by Lender against Borrower, (2) file releases of security interest in patents and trademarks previously filed with the United States Patent and Trademark Office, and(3) take such other action to release and terminate the security interests and liens in favor of Lender, and (e) Lender shall promptly execute and deliver to each Borrower such documents and instruments reasonably requested by such Borrower as shall be necessary to evidence termination of all security interests given by such Borrow to Lender under the Security Agreement or the IP Security Agreement.

3. This Amendment and Payoff Letter shall be governed by the laws of the State of Delaware, without regard to conflicts of laws, or applicable federal laws as to a particular subject where federal law governs.

4. This Amendment and Payoff Letter represents the entire agreement of the parties with respect to the subject matter hereof, and mergers all prior agreements, whether written or oral. This Amendment and Payoff Letter will terminate and have no force or effect if the Final Payment is not received by Lender on or before four business days of the Effective Date. This Amendment and Payoff Letter may be executed in one or more counterparts, each of which shall be an original and all of which taken together shall constitute one and the same instrument.

[*Remainder of Page Left Intentionally Blank*]

IN WITNESS WHEREOF, the parties hereto have duly executed this Amendment and Payoff Letter, as of the date first above written.

Luna Innovations Incorporated

By: /s/ My E. Chung
Name: My E. Chung
Title: President and CEO

One Riverside Circle, Suite 400
Roanoke, VA 24016

Attn: ______________________
Fax: ______________________
email: ______________________

Luna Technologies, Inc.

By: /s/ Scott A. Graeff
Name: Scott A. Graeff
Title: President

One Riverside Circle, Suite 400
Roanoke, VA 24016

Attn: ______________________
Fax: ______________________
email: ______________________

Hansen Medical, Inc.

By: /s/ Bruce J. Barclay
Name: Bruce J. Barclay
Title: President and CEO

800 East Middlefield Road
Mountain View, CA 94043

Attn: ____________________
Fax: ____________________
email: ____________________

Exhibit 10.4

LUNA INNOVATIONS INCORPORATED
EMPLOYMENT AGREEMENT

This Employment Agreement (the "**Agreement**") is entered into as of April 18, 2011 by and between Luna Innovations Incorporated, a Delaware Corporation (the "**Company**"), and My Chung ("**Executive**").

1. Duties and Scope of Employment.

(a) Positions and Duties. During the Employment Term (as defined herein), Executive will serve as the Company's President and Chief Executive Officer. Executive will render such business and professional services in the performance of his duties, consistent with Executive's position within the Company, as shall reasonably be assigned to him by the Company's Board of Directors ("**Board**").

(b) Reporting. Executive shall report directly to the Board.

(c) Obligations. During the Employment Term, and excluding periods of vacation and sick leave to which Executive is entitled, Executive shall devote all business time and attention to the affairs of the Company necessary to discharge the responsibilities assigned hereunder, and shall use commercially reasonable efforts to perform faithfully and efficiently such responsibilities. Notwithstanding anything herein to the contrary, Executive may provide services as a volunteer, member, director or officer of charitable, educational or civic organizations or industry trade associations or groups, and may serve as trustee, director or advisor to any family companies or trusts, provided that such service does not materially interfere with the performance of Executive's duties to the Company as required under this Agreement.

2. Term. The period of Executive's employment under this Agreement is referred to herein as the "**Employment Term**." The Agreement shall have an initial term beginning on the Executive's starting date of employment as mutually determined by Executive and the Chairman of the Board of the Company (the "**Effective Date**") through June 30, 2012 ("**Initial Term**"). At the end of the Initial Term and on each annual anniversary of such date thereafter, the Agreement automatically will renew for successive additional one (1) year terms, unless either party provides the other party with written notice of non-renewal at least ninety (90) days prior to the date of the automatic renewal.

3. At-Will Employment. The parties agree that Executive's employment with the Company will be "at-will" employment and may be terminated by either party at any time, effective immediately, upon written notice to the other party, with or without cause. However, as described in this Agreement, Executive may be entitled to severance benefits depending upon the circumstances of his termination of employment. Executive understands and agrees that neither his job performance nor promotions, commendations, bonuses or the like from the Company give rise to or in any way serve as the basis for modification, amendment, or extension, by implication or otherwise, of his employment with the Company.

4. Compensation.

(a) Base Salary. During the Employment Term, the Company will pay Executive as compensation for his services a base salary at the annualized rate of not less than $305,000, as adjusted from time to time as provided herein (the "**Base Salary**"). The Base Salary will be paid periodically in accordance with the Company's normal payroll practices and will be subject to standard federal, state and local withholding. Executive's performance will be reviewed at least annually to determine if an increase in compensation is appropriate, which increase shall be in the sole discretion of the Company.

(b) Starting Bonus. The Company will pay Executive a starting bonus of $50,000, subject to the usual required withholding, within days of the Effective Date of this Agreement.

(c) Bonus. As additional compensation for services hereunder, Executive shall be eligible under the Company's then current senior management incentive plan for an annual discretionary cash bonus of at least fifty per cent (50%) of Executive's then current Base Salary, to be determined by the Company's Board or Compensation Committee thereof and contingent upon the Company's and/or Executive's achievement of objectives set by the Company from time to time. Executive shall also be eligible to receive equity bonuses at such times and in such amounts as determined by the Board. All bonuses shall be in the discretion of the Board.

5. Employee Benefits. During the Employment Term, Executive will be entitled to participate in the employee benefit plans currently and hereafter maintained by the Company of general applicability to other senior executives of the Company, as such plans and terms may exist from time to time, including, without limitation, group health insurance, 401(k), and equity incentive plans. The Company reserves the right to cancel or change the benefit plans and programs it offers to its employees at any time.

6. Expenses. The Company will reimburse Executive for reasonable travel, entertainment or other expenses incurred by Executive in the furtherance of or in connection with the performance of Executive's duties hereunder, in accordance with the Company's expense reimbursement policy as in effect from time to time. To the extent applicable, any reimbursement benefits shall comply with the requirements of Treasury Regulations Section 1.409A-3(i)(1)(iv).

7. Severance in Connection with a Change In Control. If Executive's employment relationship with the Company is terminated within twelve months following a Change in Control (as defined herein), Executive may be entitled to payment of severance in accordance with this Section 7.

(a) Termination Without Cause; Termination for Good Reason. In the event that within twelve months following a Change in Control (i) Executive terminates his employment with the Company for Good Reason (as defined herein) or (ii) Executive is terminated by the Company without Cause (as defined herein), Executive shall be entitled to receive the following severance benefits if Executive executes a general release, the standard form of which is attached hereto as Exhibit A, with such changes as the Company may reasonably require (the " **Release Agreement** "), within the applicable time period set forth therein, but in no event later than forty-five (45) days following the date of Executive's termination (such latest permitted date is the "**Release Agreement Deadline**"), and permits the Release Agreement to become effective in accordance with its terms:

(i) Base Salary; Accrued Vacation; Pro-Rated Incentive Bonus. Executive shall receive severance pay in an amount equal to eighteen (18) months of the Base Salary (at the rate in effect immediately before the date of termination but not giving effect to any reduction that would give Executive the right to resign for Good Reason) paid in accordance with the Company's normal payroll practices and subject to the usual required withholding, plus an amount equal to all accrued and unpaid vacation or paid-time off outstanding on Executive's termination date, subject to the usual required withholding, plus a pro-rated discretionary cash bonus under the Company's then current senior management incentive plan as outlined in Section 4(c) herein. To the extent that all sums due pursuant to this Section 7(a)(i) have not been paid by the 15th day of the third month of the calendar year following the calendar year during which the date of termination occurs, the remaining amount due will be paid on that date.

(ii) Acceleration of Vesting. As of the date of termination, Executive shall receive twelve (12) months of additional vesting of any unvested stock options in accordance with their applicable vesting schedules as if Executive had remained in service for an additional twelve (12) months as of the date of termination. Executive shall also receive a cash payment equal to the value of any unvested 401(k) Company match amount.

(iii) COBRA Benefits. The Company shall pay the group health continuation coverage premiums for Executive and Executive's covered dependents under Title X of the Consolidated Budget Reconciliation Act of 1985, as amended ("**COBRA**"), for a period of not less than eighteen (18) months from the date of Executive's termination of employment to the extent Executive is eligible for and elects such continuation coverage under COBRA. Notwithstanding the above, the Company shall only be responsible for the premiums for the same type of coverage in which Executive participated at the time of his termination.

(iv) Notwithstanding any of the foregoing to the contrary, Executive shall not receive the severance pay, pro-rated incentive bonus, or health care insurance reimbursement referenced above unless and until the Release Agreement becomes effective and can no longer be revoked under its terms. Amounts otherwise payable prior to the Release Agreement's effective date shall accrue and become payable on the first regularly scheduled pay date following the effective date of the Release Agreement. Notwithstanding any provisions in this Agreement to the contrary, the Company's obligations and Executive's rights to severance benefits under this Section shall cease and be rendered a nullity immediately should Executive violate any provision of Executive's Confidentiality Agreement with the Company of even date herewith (the "**Confidentiality Agreement**").

8. Severance Not in Connection with a Change In Control. If Executive's employment relationship with the Company is terminated without Cause or by Executive for Good Reason and Executive is not entitled to payment of severance in accordance with Section 7, the provisions of this Section 8 will apply.

(a) Termination Without Cause; Termination for Good Reason. In the event (i) Executive terminates his employment with the Company for Good Reason (as defined herein) or (ii) Executive is terminated by the Company without Cause (as defined herein), Executive shall be entitled to receive the following severance benefits if Executive executes the Release Agreement within the applicable time period set forth therein, but in no event later than forty-five (45) days following the date of termination (such latest permitted date is the "**Release Agreement Deadline**"), and permits the Release Agreement to become effective in accordance with its terms:

(i) Base Salary; Accrued Vacation. Executive shall receive severance pay in an amount equal to twelve (12) months of the Base Salary (at the rate in effect immediately before the date of termination but not giving effect to any reduction that would give Executive the right to resign for Good Reason) paid in accordance with the Company's normal payroll practices and subject to the usual required withholding, plus an amount equal to all accrued and unpaid vacation or paid-time off outstanding on Executive's termination date, subject to the usual required withholding. To the extent that all sums due pursuant to this Section 8(a)(i) have not been paid by the 15th day of the third month of the calendar year following the calendar year during which the date of termination occurs, the remaining amount due will be paid on that date.

(ii) Acceleration of Vesting. As of the date of termination, Executive shall receive twelve (12) months of additional vesting of any unvested stock options in accordance with their applicable vesting schedules as if Executive had remained in service for an additional twelve (12) months as of the date of termination. Executive shall also receive a cash payment equal to the value of any unvested 401(k) Company match amount.

(iii) COBRA Benefits. The Company shall pay the group health continuation coverage premiums for Executive and Executive's covered dependents under **COBRA** for a period of not less than twelve (12) months from the date of Executive's termination of employment to the extent Executive is eligible for and elects such continuation coverage under COBRA. Notwithstanding the above, the Company shall only be responsible for the premiums for the same type of coverage in which Executive participated at the time of his termination.

(iv) Notwithstanding any of the foregoing to the contrary, Executive shall not receive the severance pay or health care insurance reimbursement referenced above unless and until the Release Agreement becomes effective and can no longer be revoked under its terms. Amounts otherwise payable prior to the Release Agreement's effective date shall accrue and become payable on the first regularly scheduled pay date following the effective date of the Release Agreement. Notwithstanding any provisions in this Agreement to the contrary, the Company's obligations and Executive's rights to severance benefits under this Section shall cease and be rendered a nullity immediately should Executive violate any provision of the Confidentiality Agreement.

(b) Voluntary Termination; Termination for Cause. If Executive's employment with the Company is terminated voluntarily by Executive without Good Reason or Executive is terminated for Cause by the Company, he will not receive severance pay, paid COBRA benefits, or any other similar compensation.

(c) Dissolution, Liquidation or Insolvency of the Company. Notwithstanding the above, in the event Executive's employment is terminated by the Company in connection with or as a result of the liquidation, dissolution, insolvency or other winding up of the affairs of the Company without the establishment of a successor entity to the Company, the Company shall have no obligation to provide severance or further financial consideration to Executive except for any reasonable expense reimbursements or base salary that Executive has accrued and earned at the time of such termination.

(d) Death or Disability. Executive's employment and this Agreement shall automatically terminate, and Executive will receive the severance pay, acceleration of vesting, benefits and other compensation set forth in Section 8(a) above (i) upon Executive's death or (ii) in the event of any Complete Disability, as defined in Section 9. If Executive is entitled to long-term disability insurance benefits under a long-term disability insurance plan for which the Company paid the insurance premiums, any amounts due pursuant to this Section 8(d) shall be reduced by the maximum amount of such benefits.

9. Definitions.

(a) Cause. For purposes of this Agreement, "**Cause**" is defined as follows:

(i) an act of embezzlement, theft, or fraud by Executive with respect to the Company or any of its affiliates;

(ii) Executive's conviction of, or plea of nolo contendere to, a felony or any other crime involving moral turpitude (excluding traffic offenses);

(iii) Executive's (A) repeated gross negligence or willful misconduct in the performance of his employment duties and responsibilities to the Company (other than as a result of a disability) or (B) refusal to comply with the directives of the Board, provided that such gross negligence, willful misconduct or refusal to comply with the directives of the Board shall only constitute Cause after Executive has received a written notice from the Company or the Board which specifically sets forth the factual basis for the Company's belief that Executive's actions or inactions constitute Cause and Executive has been provided with a reasonable opportunity of not less than thirty (30) days to cure, to the reasonable satisfaction of the Board, any alleged gross negligence, willful misconduct or refusal to comply with the directives of the Board; or

(iv) Executive's material breach of this Agreement or the Confidentiality Agreement.

(b) Change in Control. For purposes of this Agreement, "**Change in Control**" is defined as follows:

(i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or

(ii) the consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; or

(iii) a change in the composition of the Board occurring within a two-year period, as a result of which fewer than a majority of the directors are Incumbent Directors. "**Incumbent Directors**" means directors who either (A) are Directors as of the Effective Date, or (B) are elected, or nominated for election, to the Board with the affirmative votes of at least a majority of the Incumbent Directors at the time of such election or nomination, but will neither include an individual whose election or nomination is done by a competing proxy solicitation nor any existing Director who sponsors any such competing proxy solicitation ; or

(iv) the consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation.

(c) Complete Disability. For purposes of this Agreement, Executive's "Complete Disability" means Executive has been determined to be eligible for benefits under the Company's long-term disability benefits plan. If the Company has no long-term disability benefits plan, "Complete Disability" means Executive is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than 12 months as determined by a qualified physician selected by the Board.

(d) Good Reason. For purposes of this Agreement, "Good Reason" shall mean Executive's voluntary termination of his employment after the occurrence of any of the following without the express written consent of Executive:

(i) a non-voluntary material reduction in Executive's annualized Base Salary that is not part of a general reduction of salary or other concessionary arrangement affecting all employees of the Company or affecting all senior executive officers of the Company;

(ii) a requirement by the Company or the Board that Executive be relocated to a Company office more than fifty (50) miles from Roanoke, Virginia; or

(iii) any material breach by the Company of any of its obligations hereunder; provided, however that in order for Executive's termination of his employment to qualify as a voluntary termination for "Good Reason," (i) Executive must provide the Company with written notice within sixty (60) days of the event(s) that Executive believes constitutes "Good Reason" specifically identifying the acts or omissions constituting the grounds for Good Reason, (ii) the Company must have failed to cure such Good Reason acts or omissions within thirty (30) days following the date of such notice (the "**Cure Period**"), and (iii) Executive's voluntary termination occurs within thirty (30) days following the expiration of the Cure Period.

10. Confidentiality Agreement. As of even date herewith, Executive has entered into and agrees to continue to abide by the terms of the Confidentiality Agreement. To the extent the terms of this Agreement are inconsistent with the terms of the Confidentiality Agreement, the terms of this Agreement shall control. The terms and conditions of the Confidentiality Agreement are incorporated herein by reference.

11. Excise Tax Adjustment. Notwithstanding any of the foregoing to the contrary, in the event that the severance and other benefits provided for in this Agreement or otherwise payable to Executive (i) constitute "parachute payments" within the meaning of Section 280G of the Internal Revenue Code of 1986, as amended (the "**Code**") and (ii) but for this Section, would be subject to the excise tax imposed by Section 4999 of the Code, then Executive's severance benefits under this Agreement shall be payable either (A) in full, or (B) as to such lesser amount which would result in no portion of such severance benefits being subject to excise tax under Section 4999 of the Code, whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the excise tax imposed by Section 4999, results in the receipt by Executive on an after-tax basis, of the greatest amount of severance benefits under this Agreement, notwithstanding that all or some portion of such severance benefits may be taxable under Section 4999 of the Code. Unless the Company and Executive otherwise agree in writing, any determination required under this Section shall be made in writing by the Company's independent public accountants (the "**Accountants**"), whose determination shall be conclusive and binding upon Executive and the Company for all purposes. For purposes of making the calculations required by this Section, the Accountants may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code. The Company and Executive shall furnish to the Accountants such information and documents as the Accountants may reasonably request in order to make a determination under this Section. The Company shall bear all costs the Accountants may reasonably incur in connection with any calculations contemplated by this Section 11. Any reduction in payments and/or benefits required by this Section 11 shall occur in the following order: (1) reduction of cash payments; (2) reduction in vesting acceleration of equity awards; and (3) reduction of other benefits paid or provided to Executive. In the event that acceleration of vesting of equity awards is to be reduced, such acceleration of vesting shall be cancelled in the reverse order of the date of grant for Executive's equity awards. If two or more equity awards are granted on the same date, each award will be reduced on a pro-rata basis.

12. Assignment. This Agreement will be binding upon and inure to the benefit of (a) the heirs, executors and legal representatives of Executive upon Executive's death and (b) any successor of the Company. Any such successor of the Company will be deemed substituted for the Company under the terms of this Agreement for all purposes and shall assume in writing and be bound by all of the Company's obligations under this Agreement. For this purpose, "successor" means any person, firm, corporation or other business entity which at any time, whether by purchase, merger or otherwise, directly or indirectly acquires all or substantially all of the assets or business of the Company. None of the rights of Executive to receive any form of compensation payable pursuant to this Agreement may be assigned or transferred except by will or the laws of descent and distribution. Any other attempted assignment, transfer, conveyance or other disposition of Executive's right to compensation or other benefits will be null and void.

13. Notices. All notices, requests, demands and other communications called for hereunder shall be in writing and shall be deemed given (i) on the date of delivery if delivered personally, (ii) one (1) day after being sent by a well established commercial overnight service, or (iii) four (4) days after being mailed by registered or certified mail, return receipt requested, prepaid and addressed to the parties or their successors at the following addresses, or at such other addresses as the parties may later designate in writing:

If to the Company:

Luna Innovations Incorporated
One Riverside Circle, Suite 400
Roanoke, Virginia 24016
Attn: General Counsel

If to Executive:

At the last residential address known by the Company.

14. Severability. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement will continue in full force and effect without said provision.

15. Arbitration. To ensure the rapid and economical resolution of disputes that may arise in connection with Executive's employment with the Company, Executive and the Company agree that any and all disputes, claims, or causes of action, in law or equity, arising from or relating to the enforcement, breach, performance, or interpretation of this Agreement, Executive's employment, or the termination of Executive's employment, shall be resolved, to the fullest extent permitted by law, by final, binding and confidential arbitration in Roanoke, Virginia, conducted by the Judicial Arbitration and Mediation Services, Inc. ("**JAMS**") or its successor, under the then applicable rules of JAMS. Executive and the Company acknowledge that by agreeing to this arbitration procedure, each party waives the right to resolve any such dispute through a trial by jury or judge or administrative proceeding. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; and (b) issue a written arbitration decision including the arbitrator's essential findings and conclusions and a statement of the award. The arbitrator shall be authorized to award any or all remedies that Executive or the Company would be entitled to seek in a court of law. Nothing in this Agreement is intended to prevent either Executive or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Notwithstanding the foregoing, Executive and the Company each have the right to resolve any issue or dispute arising under the Confidentiality Agreement by court action instead of arbitration.

16. Entire Agreement. This Agreement and the Confidentiality Agreement collectively represent the entire agreement and understanding between the parties as to the subject matter herein and therein and together supersede all prior or contemporaneous agreements whether written or oral. No waiver, alteration, amendment or modification of any of the provisions of this Agreement or of the Confidentiality Agreement will be binding unless it is in writing and is signed by the person or party to be charged. The Chairman of the Board is the only person with authority to act on behalf of the Company with respect to such matters under this Agreement.

17. Tax Matters.

(a) Withholding. All payments made pursuant to this Agreement will be subject to withholding of applicable taxes.

(b) Section 409A Compliance.

(i) Notwithstanding anything to the contrary herein, the following provisions apply to the extent severance benefits provided herein are subject to Section 409A of the Internal Revenue Code of 1986, as amended (the ***"Code"***) and the regulations and other guidance thereunder and any state law of similar effect (collectively ***"Section 409A"***). Severance benefits shall not commence until Executive has a “separation from service” for purposes of Section 409A. Each installment of severance benefits is a separate “payment” for purposes of Treas. Reg. Section 1.409A-2(b)(2)(i), and the severance benefits are intended to satisfy the exemptions from application of Section 409A provided under Treasury Regulations Sections 1.409A-1(b)(4) and 1.409A-1(b)(5). However, if such exemptions are not available and Executive is, upon separation from service, a “specified employee” for purposes of Section 409A, then, solely to the extent necessary to avoid adverse personal tax consequences under Section 409A, the timing of the severance benefits payments shall be delayed until the earlier of (i) six (6) months and one day after Executive’s separation from service, or (ii) Executive’s death. Additionally, if the severance benefits are not covered by one or more exemptions from the application of Section 409A and the Release Agreement could become effective in the calendar year following the calendar year in which Executive separates from service, the Release Agreement will not be deemed effective any earlier than the Release Agreement Deadline.

(ii) The foregoing provisions are intended to comply with the requirements of Section 409A so that none of the severance payments and benefits to be provided hereunder shall be subject to the additional tax imposed under Section 409A, and any ambiguities herein shall be interpreted to so comply. The Company and Executive agree to work together in good faith to consider amendments to this Agreement and to take such reasonable actions which are necessary, appropriate or desirable to avoid imposition of any additional tax or income recognition prior to actual payment to Executive under Section 409A.

18. <u>Governing Law</u>. This Agreement will be governed by the laws of the Commonwealth of Virginia, without regard to its conflict of laws principles.

19. <u>Acknowledgment</u>. Executive acknowledges that he has had the opportunity to discuss this matter with and obtain advice from his private attorney, has had sufficient time to, and has carefully read and fully understands all the provisions of this Agreement, and is knowingly and voluntarily entering into this Agreement.

20. <u>Resignation from the Board.</u> Executive understands and agrees that if he is a member of the Board at the time his employment with the Company terminates, whether with or without cause and whether voluntary or involuntary, and as a further condition of his receipt of any severance benefits to which he otherwise might be entitled under this Agreement, he will submit his resignation as a member of the Board effective as of his last day of employment.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned parties have caused this Agreement to be executed as of the date first set forth above.

MY CHUNG

/s/ My Chung
Signature

My Chung
Print Name

LUNA INNOVATIONS INCORPORATED

By: /s/ Richard Roedel
Signature

Richard Roedel
Print Name

Chairman
Print Title

[Signature Page to Employment Agreement]

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: August 12, 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: August 12, 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 June 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)

August 12, 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 June 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)

August 12, 2011