

LUNA INNOVATIONS INC  
Form 10-Q  
May 17, 2010  
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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
**WASHINGTON, DC 20549**

**FORM 10-Q**

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

**For the quarterly period ended March 31, 2010**

**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)**

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**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

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Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: As of May 12, 2010, there were 12,893,901 shares of the registrant's common stock outstanding.

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**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 sections entitled Legal Proceedings, Risk Factors, and Unregistered Sales of Equity Securities and Use of Proceeds under Items 1, 1A and 2, respectively, 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 facts are forward-looking statements for purposes of these provisions, 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 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, 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.*

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**LUNA INNOVATIONS INCORPORATED**  
**QUARTERLY REPORT ON FORM 10-Q**  
**FOR THE QUARTER ENDED MARCH 31, 2010**  
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**Table of Contents****PART I. FINANCIAL INFORMATION****ITEM 1. FINANCIAL STATEMENTS****Luna Innovations Incorporated****Consolidated Balance Sheets**

|   | <b>March 31,<br/>2010<br/>(unaudited)</b> | <b>December 31,<br/>2009</b> |
|---|---|------------------------------|
| <b>Assets</b>   |   |                              |
| <b>Current assets</b>   |   |                              |
| Cash and cash equivalents   | \$ 6,467,080                              | \$ 5,228,802                 |
| Accounts receivable, net  | 7,754,801                                 | 7,203,203                    |
| Inventory, net  | 2,822,059                                 | 2,890,364                    |
| Prepaid expenses  | 672,685                                   | 560,964                      |
| Other current assets  | 46,916                                    | 729,532                      |
| <b>Total current assets</b>   | <b>17,763,541</b>                         | <b>16,612,865</b>            |
| Property and equipment, net   | 3,855,226                                 | 4,129,015                    |
| Intangible assets, net  | 553,794                                   | 580,785                      |
| Other assets  | 359,585                                   | 435,259                      |
| <b>Total assets</b>   | <b>\$ 22,532,146</b>                      | <b>\$ 21,757,924</b>         |
| <b>Liabilities and stockholders' equity (deficit)</b>   |   |                              |
| <b>Liabilities:</b>   |   |                              |
| <b>Current Liabilities</b>  |   |                              |
| Line of credit  | 2,500,000                                 |                              |
| Current portion of long term debt obligation  | 1,096,981                                 |                              |
| Accounts payable  | 1,881,731                                 | 1,142,267                    |
| Accrued liabilities   | 3,978,413                                 | 3,386,849                    |
| Deferred credits  | 1,355,541                                 | 1,027,016                    |
| <b>Total current liabilities</b>  | <b>10,812,666</b>                         | <b>5,556,132</b>             |
| Long-term debt obligation   | 3,903,019                                 |                              |
| <b>Liabilities subject to compromise</b>  |   | <b>19,062,000</b>            |
| <b>Total liabilities</b>  | <b>14,715,685</b>                         | <b>24,618,132</b>            |
| <b>Commitments and contingencies</b>  |   |                              |
| <b>Stockholders' equity (deficit):</b>  |   |                              |
| Preferred stock, par value \$0.001, 1,321,514 shares authorized, issued and outstanding at March 31, 2010   | 1,322                                     |                              |
| Common stock, par value \$0.001, 100,000,000 shares authorized, 12,785,895 and 11,351,967 shares issued and outstanding at March 31, 2010 and December 31, 2009, respectively | 12,823                                    | 11,352                       |
| Additional paid-in capital  | 53,180,051                                | 41,228,698                   |
| Accumulated deficit   | (45,377,735)                              | (44,100,258)                 |

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|   |                      |                      |
|---|----------------------|----------------------|
| <b>Total stockholders' equity (deficit)</b>                 | 7,816,461            | (2,860,208)          |
| <b>Total liabilities and stockholders' equity (deficit)</b> | <b>\$ 22,532,146</b> | <b>\$ 21,757,924</b> |

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

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**Luna Innovations Incorporated**  
**Consolidated Statements of Operations**

|  | <b>Three Months Ended<br/>March 31,</b> |                             |
|--|---|-----------------------------|
|  | <b>2010<br/>(unaudited)</b>             | <b>2009<br/>(unaudited)</b> |
| Revenues:                                    |   |                             |
| Technology development revenues              | \$ 5,811,094                            | \$ 6,882,372                |
| Product and license revenues                 | 2,074,697                               | 1,611,184                   |
| Total revenues                               | 7,885,791                               | 8,493,556                   |
| Cost of revenues :                           |   |                             |
| Technology development costs                 | 3,832,342                               | 4,897,756                   |
| Product and license costs                    | 1,219,241                               | 878,601                     |
| Total cost of revenues                       | 5,051,583                               | 5,776,357                   |
| Gross profit                                 | 2,834,208                               | 2,717,199                   |
| Operating expense:                           |   |                             |
| Selling, general and administrative          | 3,421,262                               | 4,235,588                   |
| Research, development, and engineering       | 509,899                                 | 995,643                     |
| Litigation reserve                           |   | 36,303,643                  |
| Impairment of intangible assets              |   | 1,310,598                   |
| Total operating expense                      | 3,931,161                               | 42,845,472                  |
| Operating loss                               | (1,096,953)                             | (40,128,273)                |
| Other expense                                |   |                             |
| Interest expense, net                        | 84,014                                  | 158,988                     |
| Other  | 14,877                                  | 923                         |
| Total other expense                          | 98,891                                  | 159,911                     |
| Loss before income taxes                     | (1,195,844)                             | (40,288,184)                |
| Income tax expense                           |   | 600,000                     |
| Net loss                                     | \$ (1,195,844)                          | \$ (40,888,184)             |
| Preferred stock dividend                     | 81,633                                  |                             |
| Net loss attributable to common stockholders | (1,277,477)                             | (40,888,184)                |



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Net loss per share of common stock:

|  |    |            |    |            |
|--|----|------------|----|------------|
| Basic                                    | \$ | (0.10)     | \$ | (3.66)     |
| Diluted                                  | \$ | (0.10)     | \$ | (3.66)     |
| Weighted average shares of common stock: |    |            |    |            |
| Basic                                    |    | 12,497,502 |    | 11,161,423 |
| Diluted                                  |    | 12,497,502 |    | 11,161,423 |

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

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**Table of Contents****Luna Innovations Incorporated****Consolidated Statements of Cash Flows**

|   | <b>Three months ended<br/>March 31,</b> |                             |
|---|---|-----------------------------|
|   | <b>2010<br/>(unaudited)</b>             | <b>2009<br/>(unaudited)</b> |
| <b>Cash flows used in operating activities</b>                              |   |                             |
| Net loss  | \$ (1,195,844)                          | \$ (40,888,184)             |
| Adjustments to reconcile net loss to net cash used in operating activities: |   |                             |
| Depreciation and amortization   | 328,959                                 | 619,788                     |
| Impairment of Intangible Assets   |   | 1,310,598                   |
| Share-based compensation  | 840,101                                 | 789,511                     |
| Warrant expense   | 47,239                                  |                             |
| Deferred tax expense  |   | 600,000                     |
| Change in assets and liabilities:   |   |                             |
| Accounts receivable   | (551,599)                               | (589,248)                   |
| Inventory   | 80,168                                  | (21,336)                    |
| Other current assets  | 570,896                                 | (5,317)                     |
| Other assets  | 33,446                                  | 17,728                      |
| Accounts payable and accrued expenses                                       | (1,923,634)                             | (263,459)                   |
| Litigation reserve  |   | 36,303,643                  |
| Deferred credits  | 328,525                                 | 200,260                     |
| <b>Net cash used in operating activities</b>                                | <b>(1,441,743)</b>                      | <b>(1,926,016)</b>          |
| <b>Cash flows used in investing activities</b>                              |   |                             |
| Acquisition of property and equipment                                       | (11,010)                                | (34,037)                    |
| Capitalized intellectual property costs                                     | (34,362)                                | (30,749)                    |
| <b>Net cash used in investing activities</b>                                | <b>(45,372)</b>                         | <b>(64,786)</b>             |
| <b>Cash flows provided by financing activities</b>                          |   |                             |
| Payments on capital lease obligations                                       | (1,367)                                 | (2,799)                     |
| Payments on debt obligation   |   | (357,143)                   |
| Borrowings under line of credit   | 2,500,000                               |                             |
| Proceeds from the exercise of options                                       | 226,759                                 | 10,824                      |
| <b>Net cash provided by/ (used in) financing activities</b>                 | <b>2,725,392</b>                        | <b>(349,118)</b>            |
| <b>Net change in cash</b>   | <b>1,238,278</b>                        | <b>(2,339,920)</b>          |
| Cash beginning of period  | 5,228,802                               | 15,518,960                  |
| Cash end of period  | \$ 6,467,080                            | \$ 13,179,040               |
| <b>Supplemental disclosure of cash flow information</b>                     |   |                             |
| Cash paid for interest  | \$ 1,035                                | \$ 85,815                   |
| Common stock issued in litigation settlement (1,247,330 shares)             | \$ 4,565,227                            |                             |

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|   |              |
|---|--------------|
| Installment note issued in litigation settlement                    | \$ 5,000,000 |
| Preferred stock issued in exchange of notes (1,321,514)             | \$ 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, 37,446 shares of common stock issuable | \$ 81,633    |

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

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### **Luna Innovations Incorporated**

#### **Notes to Unaudited Consolidated Financial Statements**

##### **1. Basis of Presentation and Significant Accounting Policies**

###### **Nature of Operations**

Luna Innovations Incorporated ( "Luna Innovations" ) was incorporated in the Commonwealth of Virginia in 1990 and subsequently reincorporated in the State of Delaware in April 2003. We are engaged in the research, development and commercialization of innovative technologies in the areas of test & measurement, sensing, and instrumentation products and health care products. We are organized into two main groups, which work closely together to turn ideas into products: our Technology Development Group, and our Product and License Group. We have a disciplined and integrated business model that is designed to accelerate the process of bringing new and innovative technologies to market. We identify technology that can fulfill identified market needs. We then take these solutions from the applied research stage through commercialization.

###### **Unaudited Interim Financial Information**

The accompanying unaudited consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ( "US 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 US GAAP for audited financial statements. The unaudited 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 March 31, 2010 and results of operations and cash flows for the three months ended March 31, 2010 and 2009. The results of operations for the three months ended March 31, 2010 are not necessarily indicative of the results that may be expected for the year ending December 31, 2010.

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, 2009, included in the Company's Annual Report on Form 10-K as filed with the Securities and Exchange Commission on March 26, 2010. As used herein, the terms "Luna", "Company", "we", "our" and "mean" mean Luna Innovations Incorporated and its consolidated subsidiaries.

###### **Consolidation Policy**

Our consolidated financial statements are prepared in accordance with US 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 inter-company transactions. We do not have any investments in entities we believe are variable interest entities for which we are the primary beneficiary.

###### **Emergence from Chapter 11 Reorganization**

On July 17, 2009, Luna Innovations, along with Luna Technologies, Inc., which together included all of the operations of the consolidated Company, filed a voluntary petition for relief in order to reorganize under Chapter 11 of the United States Bankruptcy Code, including a proposed plan of reorganization, in the United States Bankruptcy Court for the Western District of Virginia (the "Bankruptcy Court"). During the period from July 17, 2009 through January 12, 2010, the Company continued to operate its business in the ordinary course as a Debtor-in-Possession. On January 12, 2010, the Bankruptcy Court approved our plan of reorganization, and the Company successfully emerged from Chapter 11.

Upon our emergence and in connection with our litigation settlement, we issued approximately 1.2 million shares of common stock to Hansen Medical, Inc., as described below. Other outstanding shares of common stock were not impacted as a result of our reorganization activities. Because the shareholders immediately prior to our emergence from Chapter 11 continue to own more than 50% of the total outstanding common stock immediately following our emergence from Chapter 11, we did not adopt the fresh-start reporting principles of Accounting Standards Codification ASC 852-10-45 Financial Reporting During Reorganization.



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### **Settlement of Hansen Litigation (the Hansen Settlement )**

In June 2007, Hansen Medical, Inc. ( Hansen ), a company for which we had conducted certain research and performed certain services, filed a lawsuit against us for using allegedly misappropriated trade secrets from Hansen in connection with our work with Intuitive Surgical, Inc. ( Intuitive ), or otherwise. On April 21, 2009, a jury found in favor of Hansen and awarded a verdict for \$36.3 million against us. As a result of this jury verdict, we filed for Chapter 11 reorganization in July 2009, as described above under Emergence from Chapter 11 Reorganization.

On December 11, 2009, we and our wholly owned subsidiary Luna Technologies, Inc., entered into a settlement agreement with Hansen to settle all claims arising out of the litigation. As a result of the settlement our accrual of \$36.3 million recorded during the quarter ended March 31, 2009 was adjusted to \$9.7 million at December 31, 2009. On January 12, 2010, as part of our reorganization plan, we entered into a series of agreements with Hansen and Intuitive that were contemplated by the settlement agreement. The following is a summary of the material terms of these agreements.

### **License Agreement with Hansen (the Hansen License )**

Under the Hansen License, we granted Hansen (i) a co-exclusive (with Intuitive), royalty-free, fully paid, perpetual and irrevocable license to our fiber optic shape sensing/localization technology within the medical robotics field. The license can only be sublicensed by Hansen in connection with Hansen products, except that Hansen can grant full sublicenses to third parties for single degree of freedom robotic medical devices; (ii) an exclusive (and fully sublicenseable) royalty-free, fully paid, perpetual and irrevocable license to our fiber optic shape sensing/localization technology for non-robotic medical devices within the orthopedics, vascular, and endoluminal fields; and (iii) a co-exclusive (with us) royalty-free, fully paid, perpetual and irrevocable license to our fiber optic shape sensing/localization technology for non-robotic medical devices in other medical fields (including colonoscopies but not including devices described in clause (ii) above). After five years, the exclusive license in the non-robotic endoluminal field may be converted to a co-exclusive (with us) license in certain circumstances in connection with certain supply provisions applicable to that field under the Development and Supply Agreement described below.

The Hansen License provides that Hansen and Intuitive have the right to enforce the intellectual property licensed by us within the medical robotics field. Hansen has the sole right to enforce such intellectual property for non-robotic devices in the orthopedics field, the vascular field and the endoluminal field. We have the right to enforce such intellectual property in other non-robotic medical fields.

In addition, Hansen granted us a nonexclusive, sublicenseable, royalty-free, fully paid, perpetual and irrevocable license to certain Hansen fiber optic shape sensing/localization technology in all fields outside of the medical robotics field and the orthopedics, vascular and endoluminal fields. Furthermore, we confirmed Hansen's ownership of certain intellectual property developed in whole or in part by us under a prior agreement between us and Hansen.

### **Development and Supply Agreement with Hansen (the Development and Supply Agreement )**

In connection with the settlement agreement, we also entered into a development and supply agreement with Hansen. Under the terms of this agreement, we will perform product development services with respect to fiber optic shape sensing at Hansen's request and provide Luna shape sensing products to Hansen. Revenues earned for product development will be determined in a manner consistent with our contract development services in our Technology Development business segment and will be payable monthly to us. Each quarter, to the extent such revenues exceed the installment payment owed by us to Hansen under the Hansen Note described below, then such excess will not be payable in cash and instead will be credited against the outstanding principal balance of the Hansen Note. Revenue is recognized under the development and supply agreement as time and expenses are incurred based upon contractual billing rates. Under the agreement, 30% of the amounts worked under the contract are not billable until specified milestones are met. Additionally, such amounts may be reduced if such milestones are not met within the timetable specified in the agreement. Since such amount is not fixed and determinable as of March 31, 2010, we have deferred such amounts until the milestone is achieved.

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### **Luna Securities Issued to Hansen**

In connection with the settlement agreement, on January 12, 2010, we issued 1,247,330 shares of common stock to Hansen, representing 9.9% of our common stock then outstanding. In addition, we issued to Hansen a warrant entitling Hansen to purchase, until January 12, 2013, a number of shares of our common stock as necessary for Hansen to maintain a 9.9% ownership interest in our common stock, at an exercise price of \$0.01 per share.

### **Note Payable to Hansen (the Hansen Note )**

In connection with the settlement agreement, we issued a promissory note to Hansen in the principal amount of \$5.0 million, payable in 16 quarterly installments beginning in April 2010. The Hansen Note bears interest at a fixed rate of 8.5% and is secured by substantially all of our assets. The Hansen Note is subordinated to our primary bank credit facility.

### **Preferred Stock Issued to Carilion Clinic**

In January 2010, we entered into a transaction with Carilion Clinic ( Carilion ), in which Carilion agreed to exchange all of its Senior Convertible Promissory Notes in the principal amount of \$5.0 million plus all accrued but unpaid interest, totaling \$1.2 million, for (i) 1,321,514 shares of our newly designated Series A Convertible Preferred Stock and (ii) an additional warrant to purchase 356,000 shares of our common stock at an exercise price of \$2.50 per share. This warrant is exercisable beginning February 1, 2013, and continuing until December 31, 2020. We also agreed to reduce the exercise price of Carilion's prior common stock warrant from \$7.98 to \$2.50 per share and to extend its expiration date to December 31, 2020. The Series A Convertible Preferred Stock carries a dividend of 6% payable in shares of common stock and maintains a liquidation preference up to \$6.2 million. Each share of Series A Convertible Preferred Stock may be converted into one share of our common stock at the option of the holder. We recorded the fair value of the Series A Convertible Preferred Stock, determined based upon the conversion value immediately prior to the exchange, the fair value of the new warrant issued, determined using the Black-Scholes valuation model, and the incremental fair value of the prior warrant due to the re-pricing and extension of maturity to stockholders' equity.

### **Going Concern**

The accompanying consolidated financial statements have been prepared assuming that we will continue as a going concern, which contemplates the realization of assets and the liquidation of liabilities in the normal course of business. We have a history of net losses from 2005 through the three months ended March 31, 2010, attributable to our operations and other charges. We experienced continued negative cash flow from operations in the three months ended March 31, 2010. We have historically managed our liquidity through cost reduction initiatives, debt financings, and capital markets transactions.

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 is expected to be extremely limited. The deteriorating economic and market conditions may not improve significantly during 2010, may continue past 2010, and could get worse.

We believe that our current cash balance in addition to the funds available to us under the Credit Facility described below provide adequate liquidity for us to meet our working capital needs through 2010.

### **Use of Estimates**

The preparation of our consolidated financial statements in accordance with US 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**

We compute net loss per share in accordance with ASC 260-10-45, Earnings 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





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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 6,802,234 and 4,834,418 common stock equivalents (which include conversion of preferred stock, outstanding warrants and stock options) are not included for the three months ended March 31, 2010 and 2009, respectively, as they are anti-dilutive to earnings per share.

**Stock-Based Compensation**

We recognize stock-based compensation expense based upon the fair market value of the underlying equity award on the date of the grant. The Company has 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 lifetime volatility of our common stock. The risk-free interest rate is based on US 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.

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

|                                 | Three Months ended<br>March 31, 2010 |       | Three months ended<br>March 31, 2009 |       |
|---------------------------------|--------------------------------------|-------|--------------------------------------|-------|
| Risk-free interest rate         | 3.16                                 | 3.22% |                                      | 3.38% |
| Expected life of options        |                                      | 7.5   |                                      | 7.5   |
| Expected stock price volatility |                                      | 117%  |                                      | 83%   |

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

|                            | Number<br>of<br>Shares | Options Outstanding         |                     |                                     | Number<br>of<br>Shares | Options Exercisable |                                     |
|----------------------------|------------------------|-----------------------------|---------------------|-------------------------------------|------------------------|---------------------|-------------------------------------|
|                            |                        | Price<br>per Share<br>Range | Weighted<br>Average | Aggregate<br>Intrinsic<br>Value (1) |                        | Weighted<br>Average | Aggregate<br>Intrinsic<br>Value (1) |
| Balance, December 31, 2009 | 4,727,360              | \$ 0.35 - \$8.20            | \$ 2.43             | \$ 3,545,705                        | 2,987,955              | \$ 1.72             | \$ 2,734,841                        |
| Granted                    | 563,667                | \$ 3.45 - 4.43              | \$ 4.21             |                                     |                        |                     |                                     |
| Exercised                  | (210,104)              | \$ 0.35 - 2.11              | \$ 1.49             |                                     |                        |                     |                                     |
| Canceled                   | (24,277)               | \$ 1.77 - \$5.73            | \$ 4.03             |                                     |                        |                     |                                     |
| Balance, March 31, 2010    | 5,056,646              | \$ 0.35 - \$8.20            | \$ 0.76             | \$ 3,866,520                        | 2,924,567              | \$ 2.10             | \$ 2,980,196                        |

- (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 price of \$2.29, which was the closing price of the Company's Common Stock on the NASDAQ Capital Market on March 31, 2010.

At March 31, 2010, our approximately 5.1 million outstanding stock options had a weighted average remaining contractual term of 7.0 years, and our approximately 3.0 million outstanding and exercisable stock options had a weighted average remaining contractual term of 6.1 years.

For the three months ended March 31, 2010 and 2009, we recognized \$887,340 and \$789,511 in share-based payment expense, respectively, including the expense of warrants issued to a third party. We expect to recognize approximately \$6.0 million in stock-based compensation expense over the remaining requisite service period of five years for stock options outstanding as of March 31, 2010.



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### **Income Taxes**

We have not recorded an income tax benefit during the current period as we have determined that it is not more likely than not that such amount will be recovered.

### **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.

### **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. Inventory reserves at March 31, 2010 and December 31, 2009 were approximately \$64,665 and \$47,757, respectively.

### **Recent Accounting Pronouncements**

There have been no recent accounting pronouncements or changes in accounting pronouncements during the three months ended March 31, 2010, as compared to the recent accounting pronouncements described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2009, that we believe are of significance, or potential significance, to us.

In October 2009, the Financial Accounting Standards Board issued *Revenue Arrangements with Multiple Deliverables*. The standard revises guidance on (1) the determination of when individual deliverables may be treated as separate units of accounting and (2) the allocation of transaction consideration among separately identified deliverables. It also expands disclosure requirements regarding an entity's multiple element revenue arrangements. The standard is effective for fiscal years beginning on or after June 15, 2010, with early adoption permitted. We expect to adopt this guidance at June 30, 2010 and do not believe the adoption of this standard will have a material impact on our Consolidated Financial Statements.

In October 2009, the Financial Accounting Standards Board issued authoritative guidance which removes non-software components of tangible products and certain software components of tangible products from the scope of existing software revenue guidance, resulting in the recognition of revenue similar to that for other tangible products. It also requires expanded qualitative and quantitative disclosures. The guidance is effective for the Company beginning in the first quarter of fiscal 2011. The Company is currently evaluating the potential impact, if any, of the adoption of this guidance on its consolidated financial statements.

## **2. Debt**

### *Silicon Valley Bank Facility*

On February 18, 2010, we entered into a Loan and Security Agreement (the *Credit Facility*) with Silicon Valley Bank (the *Bank*). The Credit Facility is a revolving credit facility that provides the Company with borrowing capacity of up to \$5 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) the Bank's prime rate then in effect plus 2%. The Credit Facility matures on February 17, 2011, unless earlier terminated, and any amounts due under the Credit Facility will be secured by substantially all of the Company's assets, including our intellectual property, personal property and bank accounts. Outstanding borrowings under the facility were \$2.5 million as of March 31, 2010, at an annual rate of 6%.

The Credit Facility includes a fee of one-half of one percent (0.50%) per annum based on the average unused portion of the Credit Facility from time to time.

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The Credit Facility requires the Company 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. If the Company draws on the Credit Facility, we may use the proceeds of the loans for any variety of purposes, including working capital and general corporate purposes. As of March 31, 2010 we were in compliance with all covenants.

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In addition, the Credit Facility contains 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. If any event of default occurs the Bank may declare due immediately all borrowings under the Credit Facility and foreclose on the collateral. Furthermore, an event of default under the Credit Facility would result in an increase in the interest rate on any amounts outstanding.

### *Hansen Note*

As described in Note 1, we issued the Hansen Note in the principal amount of \$5 million in January 2010. Hansen agreed to subordinate its right to payment under the Hansen Note in favor of the Bank's right to payment under the Credit Facility, subject to certain terms and conditions.

### *Issuance of Preferred Stock in exchange for Carilion Promissory Note*

In 2005, we issued \$5.0 million in principal amount of convertible promissory notes to Carilion Clinic ( Carilion ) that were convertible into shares of our Common Stock at a fixed price of \$4.69 per share. The notes accrued simple interest at a rate of 6.0% per year and were originally scheduled to mature on December 30, 2009. In May 2008, we amended the terms of the notes to extend their due date to December 31, 2012 and to subordinate them to our credit facility with Silicon Valley Bank. We also issued warrants to purchase 10,000 shares of Common Stock at a price of \$7.98 per share in connection with the amended terms. We valued the warrants using the Black-Scholes option pricing model, and we were amortizing the value as a deferred financing cost over the life of the promissory notes.

On January 12, 2010, we exchanged the convertible notes for 1,321,514 shares of convertible preferred stock in full satisfaction of the \$5.0 million principal amount due under the convertible notes and \$1.2 million in accrued but unpaid interest under the notes. In addition, the warrants issued in May 2008 to purchase 10,000 shares of Common Stock were amended to reduce their strike price to \$2.50 per share. As part of the exchange, the company also issued additional warrants to Carilion to purchase an aggregate of 356,000 shares of Common Stock with a strike price of \$2.50. The warrants are exercisable beginning December 31, 2012 and February 1, 2013, respectively, and continuing until December 31, 2020.

**Table of Contents****3. Capital Stock and Additional Paid-in Capital**

For the three months ended March 31, 2010, we issued shares of capital stock as follows:

|   | <b>Preferred Stock</b> |                 | <b>Common Stock</b> |                  | <b>Additional<br/>Paid-in<br/>Capital</b> |
|---|------------------------|-----------------|---------------------|------------------|---|
|   | <b>Shares</b>          | <b>\$</b>       | <b>Shares</b>       | <b>\$</b>        | <b>\$</b>                                 |
| Balance, December 31, 2009  |                        | \$              | 11,351,967          | \$ 11,352        | 41,228,697                                |
| Exercise of stock options   |                        |                 | 161,598             | 162              | 226,596                                   |
| Share-based compensation  |                        |                 |                     |                  | 887,340                                   |
| Issuance of Common Stock, Hansen Settlement                       |                        |                 | 1,247,330           | 1247             | 4,563,980                                 |
| Stock dividends, not yet issued (1)                               |                        |                 |                     | 37               | 81,596                                    |
| Issuance of Warrants, in connection with Carilion note conversion |                        |                 |                     |                  | 1,264,946                                 |
| Issuance of Common Stock, Other (2)                               |                        |                 | 25,000              | 25               | 91,475                                    |
| Issuance of Preferred Stock, in exchange of Carilion notes        | 1,321,514              | 1,322           |                     |                  | 4,835,420                                 |
| <b>Balance, March 31, 2010</b>                                    | <b>1,321,514</b>       | <b>\$ 1,322</b> | <b>12,785,895</b>   | <b>\$ 12,823</b> | <b>\$ 53,180,051</b>                      |

(1) The stock dividends will be issued subsequent to March 31, 2010.

(2) In January 2010 we settled a complaint filed by a former employee in exchange for the payment of \$13,000 in cash and the issuance of 25,000 shares of our common stock. The settlement was included as an accrued liability on our December 31, 2009 consolidated balance sheet.

See Note 1 for a description of the securities issued to Hansen and Note 2 for a description of the issuance of preferred stock to Carilion.

**4. Operating Segments**

Our operations are divided into two operating segments Technology Development and Product and Licensing.

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 Licensing segment develops and sells products or licenses technologies based on commercially viable concepts developed by the Technology Development segment. The Product and Licensing segment derives its revenue from product sales, funded product development and technology licenses.

Through March 31, 2010, our Chief Executive Officer and his direct reports collectively represented our chief operating decision makers, and they evaluate 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 26, 2010).



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

|                                       | <b>Three Months Ended March 31,</b> |                        |
|---------------------------------------|-------------------------------------|------------------------|
|                                       | <b>2010</b>                         | <b>2009</b>            |
| Technology Development revenue        | \$ 5,811,094                        | \$ 6,882,372           |
| Product and License revenue           | 2,074,697                           | 1,611,184              |
| <b>Total revenue</b>                  | <b>7,885,791</b>                    | <b>8,493,556</b>       |
| Technology Development operating loss | (808,352)                           | (32,516,145)           |
| Product and License operating loss    | (288,601)                           | (7,612,128)            |
| <b>Total operating loss</b>           | <b>\$ (1,096,953)</b>               | <b>\$ (40,128,273)</b> |
| Depreciation, Technology Development  | 201,128                             | 291,747                |
| Depreciation, Product and License     | 71,808                              | 68,299                 |
| Amortization, Technology Development  | 41,284                              | 210,471                |
| Amortization, Product and License     | 14,739                              | 49,272                 |

Additional segment information is as follows:

The table below presents assets for reportable segments:

|   | <b>March 31,</b>     | <b>December 31,</b>  |
|---|----------------------|----------------------|
|   | <b>2010</b>          | <b>2009</b>          |
| Total segment assets:   |                      |                      |
| Technology Development  | \$ 16,604,094        | \$ 15,937,039        |
| Product and License   | 5,928,052            | 5,820,885            |
| <b>Total</b>  | <b>\$ 22,532,146</b> | <b>\$ 21,757,924</b> |
| Property plant and equipment, and intangible assets, Technology Development | \$ 3,249,037         | \$ 3,449,790         |
| Property plant and equipment, and intangible assets, Product and License    | \$ 1,159,983         | \$ 1,260,010         |

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

The United States Government accounted for approximately 76% and 82% of total consolidated revenues for the three months ended March 31, 2010 and 2009 respectively.

International revenues (customers outside of the United States) accounted for 9.7% and 5.4% of total revenues for the three months ended March 31, 2010 and 2009 respectively.



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### **5. 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.

We have an outstanding letter of credit as of March 31, 2010, in the amount of \$239,832 in favor of the Industrial Development Authority of Montgomery County, Virginia, to support a lease of office space. This letter of credit expires in June 2011.

In September 2008, our Luna Technologies Division executed a non-cancelable, non-reschedulable \$2.0 million purchase order for multiple shipments of tunable lasers to be delivered over an 18-month period beginning in September 2008. As of March 31, 2010, approximately \$0.9 million of this commitment remained. The delivery of the remaining lasers has been extended through September 2010.

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

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

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

#### **Overview**

We research, develop and commercialize innovative technologies in two primary areas of focus: instrumentation, test & measurement and sensing products, and healthcare products. We have a disciplined and integrated business model that is designed to accelerate the process of bringing new and innovative products to market. We identify technologies that can fulfill large and unmet market needs and then take these technologies from the applied research stage through commercialization. Although revenues from product sales currently represent less than a quarter of our total revenues, we continue to invest in product development and commercialization, which we anticipate will lead to increased product sales growth. In the future, we expect that revenues from product sales will represent a larger proportion of our total revenues. In addition, we anticipate that these revenues will reflect a broader and more diversified mix of products as we develop and commercialize new products.

We have developed a disciplined and integrated process to accelerate the development and commercialization of innovative technologies. Our business model employs a market-driven approach and provides the infrastructure, resources and know-how throughout the process of developing and commercializing new products. To manage a diverse set of products effectively across a range of development stages, we are organized into two main groups: our Technology Development Division and our Products and License Division. These groups work together through all product development stages, including:

Searching for emerging technologies based on market needs;

Conducting applied research;

Developing and commercializing innovative products; and

Applying proven technologies and products to new market opportunities.

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Our total revenues were \$7.9 million and \$8.5 million during the three months ended March 31, 2010 and 2009, respectively, and we had net losses attributable to common stockholders of \$1.3 million and \$40.9 million for the same periods, respectively. Our loss attributable to common stockholders for the three months ended March 31, 2009 included the expense associated with a litigation reserve of approximately \$36.3 million recognized in connection with the then estimated losses from our litigation with Hansen Medical, Inc., or Hansen, and approximately \$1.3 million in impairment charges against goodwill and other intangible assets related to the impact of the estimated costs of the litigation on our future cash flows.

We generate revenues through technology development services provided under contractual arrangements, product sales and license fees. Historically, our technology development revenues have accounted for a large and growing proportion 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 \$6.9 million for the three months ended March 31, 2009 to \$5.8 million for the three months ended March 31, 2010. We regularly have 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 (the amount for which money has been directly authorized by the U.S. Congress or for which a purchase order has been received by a commercial customer) and unfunded backlog (firm orders for which funding has not been appropriated). Indefinite delivery and quantity contracts and unexercised options are not reported in total backlog. The approximate value of our backlog was \$28.4 million as of March 31, 2010.

Revenues from product sales currently represent a smaller proportion 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. 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; however, over time we do intend to gradually increase such revenues. In the near term, we expect revenues from product sales to increase primarily in areas associated with our fiber optic instrumentation and test and measurement platforms. We also expect to continue our efforts in product development and commercialization, which we anticipate will lead to increased product sales growth. In the future, we expect that revenues from product sales will represent a larger proportion 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.

While the magnitude of loss in the first quarter of 2009 was driven by accrual of a litigation reserve associated with the Hansen litigation, we do expect to continue to incur significant expenses as we expand our business, including increased expenses for research and development, sales and marketing, and manufacturing capability, which could result in losses. 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 that we may likely continue to incur losses in 2010 and 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 throughout 2009 and into 2010. This slowing of the economy has in some instances 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 2010 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 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 product revenues reflect amounts that we receive from sales of our products or development of products for third parties and represented approximately 26% of our total revenues for the three month period ended March 31, 2010. Our license revenues are composed of fees paid to us in connection with licenses or sublicenses of certain patents and other intellectual property.

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### *Cost of Revenues*

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

Cost of revenues associated with product sales and license 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; shipping and handling; provisions for product warranty; inventory obsolescence; and overhead costs related to these activities.

### *Operating Expense*

Operating expense consists of selling, general and administrative expenses, as well as expenses related to research and development, 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 Division; product development activities not provided under contracts with third parties; and overhead costs related to these activities.

Our operating expenses include stock-based compensation charges. We recorded stock-based compensation charges of approximately \$0.9 million including the expense of warrants issued to a third party, for the three months ended March 31, 2010. We also expect to recognize aggregate stock-based compensation expenses of \$6.0 million in future periods through 2014 relating to stock options outstanding as of March 31, 2010.

### *Litigation Reserve*

In the first quarter of 2009, we established a litigation reserve of \$36.3 million in connection with the Hansen litigation, equal to the original jury verdict against us, pending final resolution of the matter. In January 2010, we concluded the settlement of our litigation with Hansen and issued to Hansen a secured promissory note in the principal amount of \$5.0 million as well as 1,247,330 shares of our common stock, with a fair value of approximately \$4.7 million, based on the closing price of our common stock on January 11, 2010. Therefore, in the fourth quarter of 2009, we adjusted the prior litigation reserve downward to \$9.7 million. This adjustment was recorded on our statement of operations as a reduction of operating expenses during the fourth quarter of 2009.

### *Interest Income/Expense*

Interest expense includes interest accrued on our outstanding bank credit facilities, our 6% senior convertible notes issued to Carilion Clinic and our promissory note issued to Hansen in January 2010, which we refer to in this report as the Hansen Note, as well as interest incurred with respect to our capital lease obligations. From January 1, 2009 through July 15, 2009, we had borrowed \$5.0 million under a term loan with Silicon Valley Bank. On July 15, 2009, we repaid the outstanding balance of our term loan with Silicon Valley Bank and terminated the credit facility. In February 2010, we entered into a new revolving line of credit with Silicon Valley Bank for up to \$5.0 million, of which \$2.5 million was outstanding as of March 31, 2010. In addition, as of March 31, 2010 we also had the full \$5.0 million principal balance outstanding on the Hansen Note. During the year ended December 31, 2009, we also had the full \$5.0 million principal balance outstanding under the senior convertible notes issued to Carilion. During January 2010, the principal balance and accrued interest under the senior convertible notes was converted in full into shares of our Series A Preferred Stock and no amounts were outstanding under these notes as of March 31, 2010.

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### **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 US 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 significant 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, 2009, as filed with the Securities and Exchange Commission on March 26, 2010. There have been no material changes to the descriptions therein.

### **Results of Operations**

#### ***Three Months Ended March 31, 2010 Compared to Three Months Ended March 31, 2009***

##### *Revenues*

Total revenues decreased 7.2% to \$7.9 million for the three months ended March 31, 2010 from \$8.5 million for the three months ended March 31, 2009. Revenues within our Technology Development Division decreased 15.6% from the corresponding period in 2009, while revenues in our Product and License Division increased by 28.8%. Technology development revenues decreased to \$5.8 million for the three months ended March 31, 2010 from \$6.9 million for the corresponding 2009 period. Technology development revenue in the first quarter of 2009 was favorably impacted by approximately \$0.6 million higher pass through charges incurred in the execution of one of our largest government contracts. We generated approximately \$2.1 million in product and license revenues in the first quarter of 2010 as compared with \$1.6 million in the first quarter of 2009, an increase of 28.8% in revenue for this segment, primarily reflecting increased demand for fiber optic test and measurement equipment during the quarter.

##### *Cost of Revenues*

Cost of revenues decreased by 12.5%, to \$5.1 million for the three months ended March 31, 2010 from \$5.8 million for the corresponding 2009 period, primarily corresponding to decreased revenue in our Technology Development Division business segment. The Technology Development Division cost of sales decreased by approximately 21.8%, from \$4.9 million to \$3.8 million, reflecting the 15.6% decrease in Technology Development Division revenues and the lower costs attendant to that reduced activity. Product and license cost of sales increased by \$0.3 million, or 38.8%, from \$879,000 to \$1.2 million, reflecting the growth in our product sales during the first quarter of 2010. Additionally, Product and License Division cost of sales includes the costs associated with certain product development activities for which approximately \$145,000 was deferred until the achievement of certain milestones and, accordingly, this revenue has been deferred as of March 31, 2010.

Our resulting gross profit increased to \$2.8 million, or 35.9% of revenue, for the quarter ended March 31, 2010, from \$2.7 million, or 32.0% of revenue, for the quarter ended March 31, 2009. The improvement in gross profit is attributable to the mix of revenues, with a greater proportion of revenues in the first quarter of 2010 being realized in our Products and License Division business segment, which typically carries a higher gross margin percentage than revenues in our Technology Development Division business segment.

##### *Operating Expense*

Operating expense decreased to \$3.9 million for the three months ended March 31, 2010 from \$42.8 million for the corresponding quarter in 2009. This decrease is primarily due to the \$36.3 million Hansen litigation reserve recorded in the first quarter of 2009 and the associated impairment of goodwill and other intangible assets totaling \$1.3 million in our Products and License Division business segment. Excluding those charges, operating expenses were \$5.2 million for the quarter ended March 31, 2009. Operating expenses in the first quarter of 2009 also included approximately \$0.8 million of professional fees associated with the Hansen litigation. The remaining improvement in operating expenses is primarily attributable to our expense reduction initiatives undertaken after the first quarter of 2009 and carrying into the first quarter of 2010.

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### *Other Income (Expense)*

Net interest expense for the three months ended March 31, 2010 was approximately \$84,000 compared to a net interest expense of approximately \$159,000 during the same period in 2009. During the first quarter of 2009, the company had approximately \$4.6 million outstanding under a term loan with Silicon Valley Bank and recognized approximately \$66,000 in interest expense, along with a promissory note of \$5.0 million with Carilion Clinic with approximately \$75,000 in interest expense. For the quarter ended March 31, 2010, we had a \$5.0 million promissory note to Hansen for which we recognized approximately \$89,000 in interest expense. While we had a balance of \$2.5 million outstanding with Silicon Valley Bank on our revolving line of credit as of March 31, 2010, we did not have this balance for most of the quarter and therefore incurred no significant interest expense associated with that balance.

### **Liquidity and Capital Resources**

At March 31, 2010, our total cash and cash equivalents were approximately \$6.5 million. We expect the settlement of our litigation with Hansen and our emergence from bankruptcy in January 2010 will improve our cash flows in future periods.

On February 18, 2010, we entered into a line of credit facility with Silicon Valley Bank, or SVB, under which we have a borrowing capacity of up to \$5 million 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 facility matures on February 17, 2011, unless earlier terminated, and any amounts due under the facility are secured by substantially all of our assets, including our intellectual property, personal property and bank accounts. Amounts due to Hansen under our January 2010 promissory note are subordinated to amounts due to SVB under the line of credit, subject to certain terms and conditions. On March 30, 2010, we borrowed \$2.5 million under the line of credit with SVB, and \$2.5 million remains available under the facility as of the date of this report. The line of credit includes a fee of one-half of one percent (0.50%) per annum based on the average unused portion of the facility from time to time.

The SVB facility requires 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. We may use the proceeds of borrowings for any variety of purposes, including working capital and general corporate purposes. At March 31, 2010 we were in compliance with the required covenants.

The line of credit with SVB contains 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. If any event of default occurs, SVB may declare due immediately all borrowings and foreclose on the collateral. Furthermore, an event of default under the line of credit would result in an increase in the interest rate on any amounts outstanding.

We believe that our current cash balance, in addition to the funds available to us under the line of credit with SVB, provide adequate liquidity for us to meet our working capital needs during 2010.

### **Discussion of Cash Flows**

#### *Recent Activity*

We used approximately \$1.4 million and \$2.0 million of net cash in operations during the three months ended March 31, 2010 and 2009, respectively. Our cash use in the quarter ending March 31, 2010 was primarily driven by our net loss from operations of \$1.2 million. Our net loss in the quarter ending March 31, 2009 was \$3.3 million, excluding the litigation reserve and charge for impairment of intangible assets incurred in the first quarter of 2009. During the first quarter of 2010, we incurred other non-cash expenses of \$1.3 million, as compared to other non-cash expenses of \$2.0 million in the first quarter of 2009. Changes in working capital resulted in a net cash outflow of \$1.5 million during the first quarter of 2010, primarily due to the payment of significant amounts of accounts payable and accrued expenses as of December 31, 2009 resulting from our litigation and reorganization. During the first quarter of 2009, changes in working capital resulted in a net cash outflow of \$661,000.

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Our cash flows from investing activities were not material during the three months ended March 31, 2010 or 2009.

Net cash provided to us by financing activities during the first quarter of 2010 was \$2.7 million, which was the result of our \$2.5 million borrowing under the new line of credit with SVB and \$227,000 from the exercise of employee stock options during the quarter. During the first quarter of 2009, our only material financial activities were repayments of approximately \$357,000 under our term loan with SVB in place at that time.

### **Summary of Contractual Obligations**

We lease our facilities in Blacksburg, Charlottesville, Danville and Roanoke, Virginia under operating leases that expire on various dates through December 2015 or under a month-to-month arrangement. Upon expiration of the leases, we may exercise certain renewal options as specified in the leases.

We also lease certain computer equipment and software under capital lease agreements that expire through September 2013. The assets subject to these obligations are included in property and equipment on our consolidated balance sheet.

In September 2008, our Luna Technologies division executed a non-cancelable, non-reschedulable \$2.0 million purchase order for multiple shipments of tunable lasers to be delivered over an 18-month period beginning in September 2008. As of March 31, 2010, approximately \$0.9 million of this commitment remained. The delivery of the remaining lasers has been extended through September 2010.

The Hansen Note is payable in quarterly installments through April 2014. As of March 31, 2010, the full \$5.0 million principal amount was outstanding under the Hansen Note.

We have licensed certain third-party technologies from vendors for which we owe minimum royalties aggregating \$2.0 million payable over the remaining patent terms of the underlying technology.

### **Off-Balance Sheet Arrangements**

We have no material off-balance sheet arrangements as defined in Regulation S-K 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. As of March 31, 2010 we had \$6.5 million deposited in cash and cash equivalents.

We are exposed to interest rate fluctuations as a result of our \$2.5 million revolving line of credit with SVB, 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 March 31, 2010, the revolving debt facility interest rate was 6%. At the principal amount of our outstanding liabilities under the line of credit as of March 31, 2010, a change in the prime interest rate by one percentage point for one year would result in a change in our annual interest expense of approximately \$25,000.

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.





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### **Foreign Currency Exchange Rate Risk**

As of March 31, 2010, all payments made under our research contracts have been denominated in United States dollars. Our product sales to foreign customers are also denominated in U.S. dollars, and we 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 Chief Executive Officer and Chief 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 Chief Executive Officer and Chief Financial Officer have concluded that, as of March 31, 2010, 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 March 31, 2010 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**

On June 22, 2007, Hansen Medical Inc., or Hansen, a company for which we had performed certain services, filed a complaint against us in the Superior Court of the State of California, County of Santa Clara. On March 18, 2008, the complaint was amended and alleged misappropriation of trade secrets, aiding and abetting breach of fiduciary duty, unfair competition, breach of contract, conversion, intentional interference with contract, breach of implied covenant of good faith and fair dealing, and fraud. In addition to monetary damages in an unspecified amount, Hansen sought, among other things, equitable relief, including an injunction against our using the allegedly misappropriated Hansen trade secrets in connection with our work with Intuitive Surgical, Inc., or Intuitive, or otherwise.

The matter proceeded to jury trial in March 2009. Prior to and during the course of the trial, Hansen's claims for conversion, unfair competition, aiding and abetting breach of fiduciary duty and intentional interference with contract were all dismissed. Hansen's remaining claims for misappropriation of trade secrets, breach of contract, breach of implied covenant of good faith and fair dealing and fraud were submitted to a jury following a



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trial on the merits that concluded in April 2009. On April 21, 2009, a jury found in favor of Hansen on its breach of contract, breach of the covenant of good faith and fair dealing and misappropriation of trade secrets claims, and it awarded a verdict for \$36.3 million against us. The jury did not find in favor of Hansen on its fraud claims against us, but it did find that our misappropriation was willful or malicious. As a result of the jury verdict, we filed for Chapter 11 reorganization in July 2009.

On December 11, 2009, we and our wholly owned subsidiary Luna Technologies, Inc. entered into a settlement agreement with Hansen to settle all claims arising out of the litigation. On January 12, 2010, we entered into a series of agreements with Hansen and Intuitive that were contemplated by the settlement agreement.

On May 30, 2006, we were served with a complaint filed by a former employee in the Circuit Court for the City of Roanoke, Virginia, alleging that we breached a consulting agreement with the former employee, and that we were indebted to the former employee in an unspecified amount of at least \$100,000. In February 2010 we settled the matter in exchange for the payment of \$13,000 in cash and the issuance of 25,000 shares of our common stock.

From time to time, we may become involved in other litigation in relation to claims arising out of our operations in the normal course of business. While management currently believes the amount of ultimate liability, if any, with respect to these actions will not materially affect our financial position, results of operations, or liquidity, the ultimate outcome of any litigation is uncertain. Were an unfavorable outcome to occur, or if protracted litigation were to ensue, the impact could be material to us.

### **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**

***Our business could suffer as a result of our filing for reorganization under Chapter 11 of the U.S. Bankruptcy Code in 2009.***

As described elsewhere in this report, in July 2009, we filed a voluntary petition for relief in order to reorganize under Chapter 11 of the United States Bankruptcy Code, including a proposed plan of reorganization, under Chapter 11 of the U.S. Bankruptcy Code. In January 2010, the bankruptcy court approved our reorganization plan and we emerged from bankruptcy on that date. Even though our plan of reorganization has been implemented, operating results may be adversely affected by the possible reluctance of prospective customers, suppliers and lenders to do business with a company that recently emerged from bankruptcy proceedings. In addition, our emergence from bankruptcy may result in reputational risks that increase our difficulty in attracting and retaining employees.

***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 level of business activity.***

Global economic and political conditions affect our customers' businesses and the markets they serve. A severe and/or prolonged economic downturn or a negative or uncertain political climate could adversely affect our customers' financial condition 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

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services for which we do not have competitive advantages, and this could negatively affect the amount of business that 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.

There was a rapid softening of the economy and tightening of the financial markets in the second half of 2008 that continued throughout 2009. 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 2010 remains uncertain, and until there is a sustained economic recovery our revenues and results of operations could be negatively impacted.

***Our failure to attract, train and retain skilled employees or manage leadership transitions 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 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 such difficulty, 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 where the supply of experienced qualified candidates is limited. Any failure to do so would have an adverse effect on our business.

In May 2010, we announced a number of significant senior management changes. These changes include the appointment of Jonathan Cool, an existing member of our board of directors, as our acting president and chief operating officer and the transition of Scott Graeff from the position of chief operating officer to chief commercialization officer. We also announced that, in the future, there will be a transition of Dr. Kent Murphy, our founder and chief executive officer, from his present role to a role that best enables Dr. Murphy to focus on our strategic and scientific vision.

Leadership transitions can be inherently difficult to manage and may cause uncertainty, a disruption to our business or increase the likelihood of turnover in key officers and employees.

Competition for qualified personnel, particularly those with the significant skills and expertise of many of Luna's officers and employees, remains intense. 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 could adversely affect our business, results of operations and financial condition. Also, the uncertainty inherent in our senior management transitions could lead to concerns from current and potential customers, suppliers and other third parties with whom the company does 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. Except with respect to our CEO and founder, Kent A. Murphy, Ph.D., we do not maintain any key-person life insurance policies on our officers. The loss of any of our management or key personnel could seriously harm our business.

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

We incurred consolidated net losses attributable to common stock holders of approximately \$1.3 million and \$40.9 million for the quarters ended March 31, 2010 and 2009, respectively. As of March 31, 2010, our accumulated deficit totaled \$45.4 million. While the magnitude of our net loss during the first quarter of 2009 exceeded our historical losses due to expenses associated with litigation, which was resolved in December 2009, 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 that we may likely continue to incur losses for the foreseeable future, and these losses could be substantial.

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Because of the numerous risks and uncertainties associated with our business, we are unable to predict when or if we will be able to achieve profitability again. 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 the development of new products and the enhancement of 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 warrants in connection with the financing, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders 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.

As part of the settlement of our litigation with Hansen Medical, Inc., or Hansen, we issued to Hansen a warrant for additional shares of our common stock in an amount 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 adversely impact 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.

***We rely on contract research, including government-funded research contracts, for a significant portion of our revenues. A decline in government funding of existing or future government research contracts, including Small Business Innovation Research (SBIR), could adversely affect our revenues and cash flows and our ability to fund our growth.***

Technology development revenue, which consists primarily of government-funded research, accounted for approximately 74% of our consolidated total revenues for the quarter ended March 31, 2010 and 81% for the same period in 2009. 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. The U.S. government, for example, 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. In addition, we may not be successful in securing future contracts. 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 and cash flows and our ability to fund our growth.

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***We rely and will continue to rely on contracts and grants awarded under the Small Business Innovation Research program for a significant portion of our revenues. A finding by the U.S. Small Business Administration, or SBA, that we no longer qualify to receive SBIR funding could adversely affect our business.***

We compete as a small business for some of our government contracts. Our revenues under the Small Business Innovation Research, or SBIR, program accounts 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 receive new SBIR awards from federal agencies. In order to qualify for SBIR contracts and grants, we must meet certain size and revenue eligibility criteria. These eligibility criteria are applied as of the time of the award of a contract or grant. We believe that we are currently in compliance with the SBIR eligibility criteria, but we cannot assure you that the U.S. Small Business Administration, or SBA, the federal agency that administers the SBIR program, will interpret its regulations in our favor. As we grow our business, it is foreseeable that we will eventually exceed the SBIR eligibility limitations, in which case we may be required to seek alternative sources of revenues or capital.

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. In determining whether we are affiliated with any other entity, the SBA analyzes whether another entity controls or has the power to control us. As of March 31, 2010, we had approximately 195 employees. Our largest institutional stockholder, Carilion Clinic, holds approximately 28% of our common stock, including shares issuable upon conversion of preferred stock. If the SBA were to make a determination that we are affiliated with Carilion Clinic, we could exceed the size limitations, as Carilion Clinic has over 500 employees. In that case, we could lose eligibility for new SBA contracts, public contracts, grants and other awards that are set aside for small businesses, including SBIR grants.

Alternatively, the U.S. government may decrease the scope of or discontinue the SBIR program or its funding altogether, which would limit our ability to obtain new contract awards and adversely affect our revenues and cash flows and our ability to fund our growth.

***Our settlement agreement and related agreements with Hansen could result in our making substantial future cash payments.***

As part of the settlement of our litigation with Hansen, we issued a promissory note payable to Hansen in the principal amount of \$5.0 million. The note bears interest at a rate of 8.5% and is payable in quarterly installments commencing April 2010 and continuing through January 2014. Additionally, we entered into a Development and Supply Agreement with Hansen under which we will develop certain fiber optic shape sensing technologies or products for Hansen. Hansen is required to pay us for the development services provided. In the event that the amounts owed by Hansen under the Development and Supply Agreement exceed the quarterly installment payment under Hansen's promissory note, then the excess amount will not be payable in cash by Hansen but will reduce the outstanding principal balance on the note to Hansen. Additionally, Hansen may terminate the Development and Supply Agreement at any time without further obligation, while we would remain liable for the payments due under the note, which would have a material adverse effect on our cash flows. The Development and Supply Agreement also provides for substantial liquidated damages in the event that we are deemed not to have complied in a commercially reasonable good faith manner with respect to our technology development obligations under the agreement. In the event that we are required to make substantial payments to Hansen under the Development and Supply Agreement, it would adversely affect our results of operations and cash flows.

***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 revenues mix that contains significantly larger product sales and license revenues components. Product sales and license revenues potentially offer greater scalability than services-based contract research revenues. Our current plan is to increase our portfolio of commercial products and, accordingly, we expect that our future product sales and license revenues will represent a larger percentage of total revenues. However, if we are unable to develop and grow our product sales and license revenues to augment our contract research revenues, our ability to execute our business model or grow our business could suffer.

***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, and our revenues and profits could be adversely affected.



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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 be subject to 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; this 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 identify correctly 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.



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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 in a timely manner, could impair our ability to meet the demand of our customers and harm our business.

***If we are unable to secure third-party reimbursement for our health care products, including our EDAC® product, 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 increasingly 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 EDAC® product 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 payors for procedures performed with our products, or if governmental and private payors' policies do not permit reimbursement for services performed using our products, demand for our product 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 or 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.

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***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 Luna Technologies division, we have no experience manufacturing products in large volume. 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<sup>®</sup> 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 for 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 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.

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### ***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.***

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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 specific laws and regulations could result in the imposition of fines and penalties or the 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.

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We may also be prohibited from commercially selling certain products that we develop under our Technology Development division 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 health care 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.

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 grandfather 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 is eligible for grandfather 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

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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 comply fully 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 finds 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.

***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.***

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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

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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 to 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 where these 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



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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 this intellectual property 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. Furthermore, 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 such as the Trimetasphere® carbon nanomaterials products 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 certain of our products including our Trimetasphere® carbon nanomaterials products do not have foreign patent protection. 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

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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

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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 and 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 development of 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 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 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.

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***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 noncommercial academic and research use. It is difficult to monitor and enforce such noncommercial 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 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 that 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 nonexclusive, 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 be successful or 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 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 quotations for the price of 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 in such event, 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 and will continue to be affected by a number of factors, many of which we cannot control. For example, since January 1, 2008, our

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common stock has traded between a high of \$8.49 per share and a low of \$0.30 per share. Among the factors that could cause material fluctuations in the market price for our common stock include:

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 our competitors, of acquisitions, new products, significant contracts, commercial relationships or capital commitments;

litigation, such as our recently settled litigation with Hansen;

any major change in our board of directors or management;

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 security 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.***

Certain of our employees, including some of our executive officers, have entered into agreements with us that restrict their ability to sell shares of our common stock beyond specified amounts through December 31, 2010. These employees currently beneficially own approximately 24% of our outstanding common stock, including shares issuable upon exercise of stock options. We have the right to waive any of these sale restrictions for employees and management at our discretion, and in such instance, the shares would become freely tradable.

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If our stockholders 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. We are unable to predict the effect that sales of our common stock may have on the prevailing market price of our common 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. Additionally, our independent registered public accounting firm will be required to issue a report on their evaluation of the operating effectiveness of our internal control over financial reporting beginning with our Annual Report for the year ending December 31, 2010.

We evaluate our existing internal control over financial reporting against the standards adopted by 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 or our independent registered public accounting firm may identify, may require us to

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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 by an independent registered public accounting firm 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 50% 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 50% 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.





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

*(a) Unregistered Sales of Equity Securities during the Three Month Period Ended March 31, 2010*

On February 11, 2010, we issued 25,000 shares of our common stock and paid \$13,000 to a former employee in connection with the settlement of a complaint originally filed by the former employee in 2006. The issuance of these securities was deemed to be exempt from registration under the Act in reliance on Sections 3(a)(7) and 4(2) of the Act.

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

In 2006, we completed the initial public offering of 3,500,000 shares of our common stock at a price to the public of \$6.00 per share and received net proceeds of approximately \$17.9 million, after deducting underwriters' discounts and commissions and additional offering-related expenses.

We are using, or expect to use, the net proceeds of the offering principally to fund further development and expansion of our products and product candidates, in particular our nanomaterial and ultrasound-related medical product candidates, and for general working capital purposes. We may also use a portion of the net proceeds for the acquisition of, or investment in, companies, technologies, products or assets that complement our business. We have no present commitments or binding agreements to enter into any acquisitions or investments. Pending these uses, we intend to continue to invest the net proceeds of our initial public offering in short-term, investment-grade interest-bearing securities or guaranteed obligations of the U.S. government.

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

None.

**ITEM 3. DEFAULTS UPON SENIOR SECURITIES**

None.

**ITEM 4. 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: May 17, 2010

By: /s/ DALE E. MESSICK  
**Dale E. Messick**  
**Chief Financial Officer**

**(Principal Financial and Accounting Officer**

**and duly authorized Officer)**

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**EXHIBIT INDEX**

**Exhibit**

| <b>Number</b> | <b>Description</b>  |
|---------------|---|
| 2.1(1)        | Findings of Fact, Conclusions of Law, and Order under 11 U.S.C. §§ 1129(a) and (b) and Fed. R. Bankr. P. 3020 Confirming First Amended Joint Plan of Reorganization of Luna Innovations Incorporated and Luna Innovations, Inc, debtors and debtors-in-possession, dated January 12, 2010 (Exhibit 2.1)   |
| 3.1(3)        | Amended and Restated Certificate of Incorporation of the Registrant (Exhibit 3.2)   |
| 3.2(2)        | Certificate of Designations of the Series A Convertible Preferred Stock (Exhibit 3.1)   |
| 3.3(4)        | Amended and Restated Bylaws of the Registrant (Exhibit 3.4)   |
| 3.4(5)        | Amendment to Amended and Restated Bylaws (Exhibit 3.1)  |
| 10.1(2)       | Securities Purchase and Exchange Agreement, dated January 12, 2010, by and between Luna Innovations Incorporated and Carilion Clinic (Exhibit 10.1)   |
| 10.2(2)       | Warrant No. 1 to Purchase Common Stock, dated January 13, 2010 and issued to Carilion Clinic (Exhibit 10.2)   |
| 10.3(2)       | Warrant No. 2 to Purchase Common Stock, dated January 13, 2010 and issued to Carilion Clinic (Exhibit 10.3)   |
| 10.4(2)       | Amended and Restated Investor Rights Agreement, dated January 13, 2010, by and among Luna Innovations Incorporated, Carilion Clinic, and certain stockholders of Luna Innovations Incorporated (Exhibit 10.4)   |
| 10.5          | Loan and Security Agreement, dated February 18, 2010, by and between Luna Innovations Incorporated, Luna Technologies, Inc. and Silicon Valley Bank   |
| 10.6*         | License Agreement, effective January 12, 2010, by and among Luna Innovations Incorporated, Luna Technologies, Inc. and Hansen Medical, Inc.   |
| 10.7*         | Development and Supply Agreement, effective January 12, 2010, by and among Luna Innovations Incorporated, Luna Technologies, Inc. and Hansen Medical, Inc., as amended on February 17, 2010 and April 2, 2010   |
| 10.8*         | License Agreement, effective January 12, 2010, by and among Luna Innovations Incorporated, Luna Technologies, Inc. and Intuitive Surgical, Inc.   |
| 10.9*         | Amendments to Development and Supply Agreement, effective January 12, 2010 and April 27, 2010, by and between Luna Innovations Incorporated and Intuitive Surgical, Inc.  |
| 10.10         | Secured Promissory Note, dated January 12, 2010, issued to Hansen Medical, Inc.   |
| 10.11         | Security Agreement, effective as of January 12, 2010, by and among Luna Innovations Incorporated, Luna Technologies, Inc. and Hansen Medical, Inc.  |
| 10.12         | Warrant to Purchase Common Stock of Luna Innovations Incorporated, dated January 12, 2010, issued to Hansen Medical, Inc.   |
| 10.13         | Confidential Mutual Release, effective as of January 12, 2010, by and among Luna Innovations Incorporated, Luna Technologies, Inc. and Hansen Medical, Inc.   |
| 10.14         | Industrial Lease Agreement, dated as of March 21, 2006, by and between Luna Innovations Incorporated and the Economic Development Authority of Montgomery County, Virginia, as amended by a First Amendment effective as of May 11, 2006, a Second Amendment effective as of July 15, 2009 and a Third Amendment effective as of March 23, 2010 |
| 10.15         | Lease for Riverside Center, dated December 30, 2005, by and between Carilion Medical Center and Luna Innovations Incorporated, as amended by an Amended Lease dated July 20, 2006, a Second Amendment dated on or about October 5, 2007 and a Third Amendment effective as of April 1, 2010   |
| 31.1          | Certification of the Chief 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 Chief 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   |

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- 32.1 Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 32.2 Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 
- (1) Incorporated by reference to the exhibits to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 15, 2010 (Items 1.03, 5.02 and 9.01) (File No. 000-52008). The number in parentheses indicates the corresponding exhibit number in such Form 8-K.
- (2) Incorporated by reference to the exhibits to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 15, 2010 (Items 1.01, 3.02, 3.03, 5.03 and 9.01) (File No. 000-52008). The number parentheses indicates the corresponding exhibit number in such Form 8-K.
- (3) Incorporated by reference to the exhibit to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on June 8, 2006 (File No. 000-52008). The number in parentheses indicates the corresponding exhibit number in such Form 8-K.
- (4) Incorporated by reference to the exhibit to the Registrant's Registration Statement on Form S-1 filed with the Securities and Exchange Commission on February 10, 2006 (File No. 333-131764). The number in parentheses indicates the corresponding exhibit number in such Form 8-K.
- (5) Incorporated by reference to the exhibit to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 10, 2010 (File No. 000-52008). The number in parentheses indicates the corresponding exhibit number in such Form 8-K.
- \* 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.