

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM 10-Q

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

For the quarterly period ended September 30, 2006

OR

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

For the transition period from _____ to _____

COMMISSION FILE NUMBER 000-52008

LUNA INNOVATIONS INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

54-1560050

(I.R.S. Employer Identification Number)

**1703 South Jefferson Street, SW, Suite 400
Roanoke, VA 24016**

(Address of Principal Executive Offices)

(540) 769-8400

(Registrant's Telephone Number, Including Area Code)

**10 South Jefferson Street, Suite 130
Roanoke, VA 24011**

(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 is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated Filer ☐

Accelerated Filer ☐

Non-Accelerated Filer ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

☐ Yes ☒ No

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: As of November 9, 2006, there were 9,860,664 shares of the registrant's common stock outstanding.

[Table of Contents](#)

LUNA INNOVATIONS INCORPORATED
QUARTERLY REPORT ON FORM 10-Q
FOR THE QUARTER ENDED SEPTEMBER 30, 2006

TABLE OF CONTENTS

PART I. FINANCIAL INFORMATION	3
ITEM 1. FINANCIAL STATEMENTS	3
ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	13
ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK	21
ITEM 4. CONTROLS AND PROCEDURES	22
PART II. OTHER INFORMATION	23
ITEM 1. LEGAL PROCEEDINGS	23
ITEM 1A. RISK FACTORS	23
ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS	41
ITEM 3. DEFAULTS UPON SENIOR SECURITIES	42
ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS	42
ITEM 5. OTHER INFORMATION	42
ITEM 6. EXHIBITS	42
SIGNATURES	43
EXHIBIT INDEX	44

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Luna Innovations Incorporated Consolidated Balance Sheets

	September 30, 2006 (unaudited)	December 31, 2005
Assets		
Current assets		
Cash and cash equivalents	\$ 22,442,016	\$ 12,514,839
Accounts receivable, net	5,194,447	5,129,911
Refundable income taxes	396,062	514,797
Inventory	681,559	448,475
Other current assets	535,076	227,409
Total current assets	29,249,160	18,835,431
Property and equipment, net	3,831,631	2,972,287
Intangible assets, net	1,425,852	999,544
Deferred offering costs	—	710,018
Deferred tax asset	600,000	600,000
Other assets	13,447	16,550
Total assets	\$ 35,120,090	\$ 24,133,830
Liabilities and stockholders' equity		
Current liabilities		
Current portion of capital lease obligation	\$ 91,507	\$ 98,820
Current portion of long-term debt obligation	214,955	—
Accounts payable	1,639,717	3,647,505
Accrued liabilities	2,554,166	1,788,162
Deferred credits	1,076,549	1,458,393
Total current liabilities	5,576,894	6,992,880
Long-term capital lease obligation	50,216	117,134
Long-term debt obligation	5,000,000	5,214,955
Deferred credits	354,418	450,000
Total liabilities	10,981,528	12,774,969
Redeemable Class B common stock, 308,216 shares at December 31, 2005	—	504,984
Stockholders' equity:		
Preferred Stock, par value \$0.001, 5,000,000 shares authorized at September 30, 2006, no shares issued and outstanding at September 30, 2006	—	—
Common stock		
Common stock, par value \$0.001, 100,000,000 and 23,257,094 shares authorized at September 30, 2006 and December 31, 2005, respectively, 9,858,806 shares issued and outstanding at September 30, 2006	9,859	—
Class A voting common stock, par value \$0.001, 7,164,463 shares authorized at December 31, 2005, 2,834,814 shares issued and outstanding at December 31, 2005	—	2,835
Class B non-voting common stock, par value \$0.001, 13,707,297 shares authorized at December 31, 2005, 734,427 shares issued and outstanding at December 31, 2005	—	734
Class C voting common stock, par value \$0.001, 5,656,472 shares authorized at December 31, 2005, 2,131,474 shares issued and outstanding at December 31, 2005	—	2,131
Additional paid-in capital	30,970,277	10,935,049
Accumulated deficit	(6,841,574)	(86,872)
Total stockholders' equity	24,138,562	10,853,877
Total liabilities and stockholders' equity	\$ 35,120,090	\$ 24,133,830

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

Luna Innovations Incorporated
Consolidated Statements of Operations

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2006	2005	2006	2005
	(unaudited)		(unaudited)	
Revenues:				
Contract research revenues	\$ 4,885,854	3,942,195	\$ 12,977,066	\$ 11,111,721
Product and license revenues	1,163,663	—	2,521,403	—
Total revenues	6,049,517	3,942,195	15,498,469	11,111,721
Cost of revenues:				
Contract research costs	3,587,280	3,068,372	9,600,404	8,539,567
Product and license costs	520,699	—	1,194,969	—
Total cost of revenues	4,107,979	3,068,372	10,795,373	8,539,567
Gross Profit	1,941,538	873,823	4,703,096	2,572,154
Operating expense	4,110,926	1,040,235	11,805,277	2,952,666
Operating loss	(2,169,388)	(166,412)	(7,102,181)	(380,512)
Other income (expense)				
Other income (expense)	934	(782)	10,331	(92)
Interest income / (expense), net	232,649	(9,893)	345,794	(75,206)
Total other income (expense)	233,583	(10,675)	356,125	(75,298)
Loss before income taxes	(1,935,805)	(177,087)	(6,746,056)	(455,810)
Income tax expense (benefit)	12,829	(126,396)	12,829	(187,273)
Net loss	\$ (1,948,634)	(50,691)	(6,758,885)	(268,537)
Net loss per share:				
Basic	\$ (0.20)	(0.01)	(0.87)	(0.08)
Diluted	\$ (0.20)	(0.01)	(0.87)	(0.08)
Weighted average shares:				
Basic	9,842,265	3,839,512	7,743,885	3,229,683
Diluted	9,842,265	3,839,512	7,743,885	3,229,683

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

Luna Innovations Incorporated
Consolidated Statements of Cash Flows

	Nine months ended September 30,	
	2006	2005
	(unaudited)	
Cash flows used in operating activities		
Net loss	\$ (6,758,885)	\$ (268,537)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	792,725	355,026
Deferred income taxes	—	(4,358)
Share-based compensation	1,164,709	137,829
Change in assets and liabilities:		
Accounts receivable	(64,536)	(509,743)
Refundable income taxes	118,735	570,162
Other assets	(524,201)	(406,035)
Accounts payable and accrued expenses	(545,211)	(175,595)
Deferred revenues	(477,426)	(154,341)
Net cash used in operating activities	<u>(6,294,090)</u>	<u>(455,592)</u>
Cash flows used in investing activities		
Acquisition of property and equipment	(1,377,466)	(452,762)
Intangible property costs	(282,840)	(159,749)
Net cash from acquisition of Luna Technologies	—	33,713
Capitalized software development costs	—	(14,468)
Net cash used in investing activities	<u>(1,660,306)</u>	<u>(593,266)</u>
Cash flows from financing activities		
Payments on capital lease obligations	(74,229)	(73,343)
Proceeds from the issuance of common stock, net	17,866,241	7,000,000
Proceeds from the exercise of options and warrants	89,561	76,575
Net cash from financing activities	<u>17,881,573</u>	<u>7,003,232</u>
Net change in cash	<u>9,927,177</u>	<u>5,954,374</u>
Cash—beginning of period	12,514,839	609,636
Cash—end of period	<u>\$ 22,442,016</u>	<u>\$ 6,564,010</u>
Supplemental disclosure of cash flow information		
Cash paid for interest	\$ 30,690	\$ 72,151
Cash paid for income taxes	\$ 12,829	\$ 25,927
Property and equipment financed by capital leases	\$ —	\$ 11,700

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

Luna Innovations Incorporated
Notes to 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 molecular technology solutions and sensing solutions. We identify technology that can fulfill identified market needs, and 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 (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 September 30, 2006 and results of operations and cash flows for the three and nine months ended September 30, 2006 and 2005. The results of the operations for the three and nine months ended September 30, 2006, are not necessarily indicative of the results that may be expected for the year ending December 31, 2006.

The year-end consolidated balance sheet data was derived from the audited December 31, 2005, balance sheet.

The consolidated financial statements, including the Company’s significant accounting policies, should be read in conjunction with the audited Consolidated Financial Statements and the notes thereto included in the Company’s Registration Statement on Form S-1 (No. 333-131764) as amended and filed with the Securities and Exchange Commission on June 2, 2006. As used herein, the terms “Luna”, “Company”, “we”, “our” and “us” mean Luna Innovations Incorporated and its consolidated subsidiaries.

Certain reclassifications have been made to prior period amounts to conform with current year presentation.

Consolidation Policy

Our consolidated financial statements are prepared in accordance with US GAAP and include the accounts of the Company, its wholly owned subsidiaries and other entities in which the Company has a controlling financial interest. We eliminate from our financial results all significant intercompany transactions. The Company does not have any investments in entities it believes are variable interest entities for which the Company is the primary beneficiary.

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 Statement of Financial Accounting Standards (SFAS) No. 128, *Earnings Per Share*. Basic per share data is computed by dividing loss available to common shareholders by the weighted average number of shares outstanding during the period. Diluted per share data is computed by dividing loss available to common shareholders by the weighted average shares outstanding during the period increased to include, if dilutive, the number of additional common share equivalents that would have been outstanding if potential common shares had been issued using the treasury stock method. Diluted per share data would also include the potential common share equivalents relating to convertible securities by application of the if-converted method.

Per share amounts for all periods presented in this report have been adjusted to reflect the 1-for-1.7691911 reverse stock split of our common stock effected on May 23, 2006. All applicable share and per share amounts in the financial statements give pro forma effect to such split. The following information presents the pro forma effect of such split on basic and diluted net loss per share:

	Three Months Ended September 30,		Nine months ended September 30,	
	2006	2005	2006	2005
Net loss	\$ (1,948,634)	\$ (50,691)	\$ (6,758,885)	\$ (268,537)
Weighted average shares—basic	9,842,265	3,839,512	7,743,885	3,229,683
Dilutive effect of common stock equivalents: Shares issued upon the exercise of stock options and warrants	—	—	—	—
Weighted averages shares—diluted	9,842,265	3,839,512	7,743,885	3,229,683
Net loss per share—basic	\$ (0.20)	\$ (0.01)	\$ (0.87)	\$ (0.08)
Net loss per share—diluted	\$ (0.20)	\$ (0.01)	\$ (0.87)	\$ (0.08)

The effect of 3,800,510 and 2,813,097 common stock equivalents are ignored for the three months ended September 30, 2006 and 2005, as they are antidilutive to earnings per share. The effect of 3,842,338 and 2,589,076 common stock equivalents are ignored for the nine months ended September 30, 2006 and 2005, as they are antidilutive to earnings per share. In addition, the conversion of the \$5.0 million in senior convertible promissory notes would have been antidilutive for such periods.

Share Based Compensation

We have a stock-based compensation plan, which is described further in Note 9 to the Financial Statements in the Company's Registration Statement on Form S-1 (No. 333-131764) as amended and filed with the Securities and Exchange Commission on June 2, 2006. Effective January 1, 2006, we adopted SFAS No. 123R, *Share-Based Payment* (SFAS No. 123R) using the modified prospective transition method. Under this transition method, our financial statements for the periods prior to January 1, 2006 have not been restated. However, new awards and awards modified, repurchased or cancelled after January 1, 2006, result in compensation expense based on the fair value of the stock option as determined by the Black-Scholes option pricing model. We amortize share-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.

The adoption of SFAS No. 123R has increased the net loss by approximately \$440 thousand and \$535 thousand for the three and nine months ended September 30, 2006, as compared to what our net loss would have been if we had continued to account for share-based compensation under Accounting Principles Board Opinion (APB) No. 25, *Accounting for Stock Issued to Employees* (APB No. 25).

[Table of Contents](#)

For the periods prior to 2006, we accounted for share-based employee compensation arrangements using the intrinsic value method in accordance with the provisions of APB No. 25, and related amendments and interpretations. We complied with the disclosure provisions of Statement of Financial Accounting Standards (SFAS) No. 123, *Accounting for Stock-based Compensation*, as amended by SFAS No. 148, *Accounting for Stock Based Compensation—Transition and Disclosure*, which requires fair value recognition for employee stock-based compensation. We account for equity instruments issued to non-employees in accordance with the provisions of SFAS No. 123 and Emerging Issues Task Force (EITF) Issue No. 96-18.

Generally, we award options to employees and directors with exercise prices equal to or greater than the estimated fair value of our common stock on the date of grant. In September 2003, we entered into an option exchange with our employees that resulted in the new option grant being considered a re-pricing in accordance with FASB Interpretation No. (FIN) 44, *Accounting for Certain Transactions Involving Stock Compensation* (FIN 44). We apply variable plan accounting to outstanding options related to this award and measure compensation expense at each reporting period equal to an amount that reflects the change in the fair value of the underlying security.

Had compensation expense been measured under the fair value method prescribed by SFAS No. 123, our pro forma net loss, and pro forma net loss per share would have been as follows:

	Three Months ended September 30, 2005	Nine months ended September 30, 2005
Net loss:		
As reported	\$ (50,691)	\$ (268,537)
Add—share-based employee compensation expense in reported net loss, net of related tax effects	62,785	134,131
Deduct—total share-based employee compensation expense determined under Black-Scholes method for all awards, net of related tax effects	(100,227)	(328,981)
Pro forma net loss	<u>\$ (88,133)</u>	<u>\$ (463,387)</u>
Basic net loss per common share:		
As reported	\$ (0.01)	\$ (0.08)
Pro forma	\$ (0.02)	\$ (0.14)
Diluted net loss per common share:		
As reported	\$ (0.01)	\$ (0.08)
Pro forma	\$ (0.02)	\$ (0.14)

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

	Three Months ended September 30, 2006	Nine months ended September 30, 2006
Risk-free interest rate range	4.77%	4.55% – 5.20%
Expected life of option—range of years	7.5	7.0 – 7.5
Expected stock price volatility	64%	64%
Expected dividend yield	—	—

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. Expected volatility is based upon an average volatility of comparable public companies due to the limited time our shares have been publicly traded. The expected life and estimated post employment termination behavior is based upon historical experience of homogeneous groups within our company.

[Table of Contents](#)

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

	Options Outstanding				Options Exercisable		
	Number of Shares	Price per Share	Weighted Average	Aggregate Intrinsic Value (1)	Number of Shares	Weighted Average	Aggregate Intrinsic Value (1)
		Range				Exercise Price	
Balance, December 31, 2005	3,975,555	\$0.35 - \$1.77	\$ 0.65	3,962,864	1,519,397	\$ 0.35	1,975,216
Granted	981,946	\$1.77	\$ 1.77				
Exercised	(128,633)	\$0.35	\$ 0.35				
Canceled	(16,501)	\$0.35	\$ 0.35				
Balance, March 31, 2006	4,812,367	\$0.35 - \$1.77	\$ 0.89	39,028,605	1,505,850	\$ 0.35	13,025,603
Granted	186,685	\$6.00 - \$7.08	\$ 6.31				
Exercised	(94,712)	\$0.35	\$ 0.35				
Canceled	(17,211)	\$0.35 - \$1.77	\$ 0.61				
Balance, June 30, 2006	4,887,129	\$0.35 - \$7.08	\$ 1.11	23,899,988	1,754,088	\$ 0.35	9,910,597
Granted	189,750	\$5.47	\$ 5.47				
Exercised	(29,768)	\$0.35	\$ 0.35				
Canceled	(48,436)	\$0.35 - \$1.77	\$ 0.81				
Balance, September 30, 2006	4,998,675	\$0.35 - \$7.08	\$ 1.28	12,771,610	2,045,215	\$ 0.49	6,503,784

(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 \$9.00, \$6.00, and \$3.67 for the Company's stock on March 31, 2006, June 30, 2006, and September 30, 2006, respectively. The price on June 30, 2006 and September 30, 2006 represent the closing price of the Company's Common Stock on the NASD Global Market on the respective dates.

At September 30, 2006, our 5.0 million outstanding stock options (including fully vested options and options that are expected to vest) had a weighted average remaining contractual term of 8.4 years, and our 2.0 million outstanding and exercisable stock options had a weighted average remaining contractual term of 7.7 years.

For the three and nine months ended September 30, 2006, we recognized \$403,427 and \$1,164,709 in share-based payment expense. We will recognize approximately \$5,616,000 over the remaining requisite service period.

Income Taxes

Our effective quarterly tax rate is estimated based upon the effective tax to be applicable to the full fiscal year. A deferred tax asset of \$600,000 was recorded at December 31, 2005, and September 30, 2006, based upon management's assessment that more likely than not the benefit will be realized in future periods.

Recent Accounting Pronouncements

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements*. SFAS No. 157 clarifies the principle that fair value should be based on the assumptions market participants would use when pricing an asset or liability and establishes a fair value hierarchy that prioritizes the information used to develop those assumptions. SFAS No. 157 is effective for the fiscal year beginning January 1, 2007. The Company is currently evaluating the potential impact of the adoption of SFAS No. 157 on its future consolidated financial statements.

In September 2006, the Securities and Exchange Commission ("SEC") issued Staff Accounting Bulletin No. 108, *Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements* ("SAB 108"). SAB 108 provides interpretive guidance on how the effects of the carryover or reversal of prior year misstatements should be considered in quantifying a current year misstatement. The SEC staff believes that registrants should quantify errors using both a balance sheet and an income statement approach and evaluate whether either approach results in quantifying a misstatement that, when all relevant quantitative and qualitative factors are considered, is material. SAB 108 is effective for the fiscal year ending December 31, 2006.

[Table of Contents](#)

In June 2006, the FASB issued FIN 48, *Accounting for Uncertainty in Income Taxes*, which is an interpretation of SFAS No. 109, *Accounting for Income Taxes*. FIN 48 clarifies the accounting for uncertainty in income taxes recognized in accordance with SFAS No. 109 by prescribing a recognition threshold and measurement process for recording in the financial statements uncertain tax positions taken or expected to be taken on a tax return. Additionally, FIN 48 provides guidance on the derecognition, classification, accounting in interim periods and disclosure requirements for uncertain tax positions. FIN 48 will be effective for the Company beginning January 1, 2007. The Company is in the process of determining the effect, if any, the adoption of FIN 48 will have on its financial statements.

2. Line of Credit

There were no outstanding balances on our \$2.5 million line of credit with First National Bank (FNB) at September 30, 2006 and at December 31, 2005, and no borrowings during the nine month period ended September 30, 2006. In May 2006, we obtained a modification to allow a \$1.0 million sub-limit under the line of credit for the issuance of letters of credit, and FNB issued a \$719,500 letter of credit on our behalf to the Industrial Development Authority of Montgomery County, Virginia, in conjunction with the execution of an office lease.

The covenants under this line of credit agreement are reviewed annually at December 31. At December 31, 2005, we were not in compliance with the minimum interest coverage covenant. We requested and received a waiver from FNB for fiscal 2005.

3. Initial Public Offering and Capital Structure

On May 23, 2006, we effected a 1-for-1.7691911 reverse stock split of our common stock in anticipation of our initial public offering. In connection with our June 2, 2006 initial public offering, we sold 3,500,000 shares of common stock at \$6.00 per share resulting in gross proceeds of \$21.0 million. In connection with this offering, we paid \$1.47 million in underwriting discounts and commissions and incurred estimated other offering expenses of approximately \$1.66 million. The net proceeds from the offering were approximately \$17.87 million.

Concurrent with the initial public offering, all outstanding shares of our Class A voting Common Stock, Class B non-voting Common Stock, and Class C voting Common Stock were converted to shares of common stock on a one-for-one basis. All outstanding shares of our Redeemable Class B Common Stock converted to common stock on a one-for-one basis as the successful initial public offering eliminated the redeemable feature of such shares. We also issued 96,724 shares of common stock to Carilion Health System in accordance with the anti-dilution provisions of our previous amended and restated certificate of incorporation, which was adopted in connection with our Class C Common Stock financing in December 2005. Upon the closing of our initial public offering the total authorized shares of our capital stock increased to 100,000,000 shares of common stock and 5,000,000 shares of preferred stock.

[Table of Contents](#)

For the nine months ended September 30, 2006, our capital structure changed as follows:

	Class A Common Stock		Class B Common Stock		Class C Common Stock		Common Stock		Additional Paid-in Capital
	Shares	\$	Shares	\$	Shares	\$	Shares	\$	
Balances, December 31, 2005	2,834,814	\$ 2,835	734,429	\$ 734	2,131,474	\$ 2,131	—	\$ —	\$ 10,935,049
Exercise of stock options	—	—	139,049	139	—	—	114,071	114	89,310
Issuance of warrants and options in connection with Luna Technologies acquisition	—	—	—	—	—	—	—	—	418,073
Share-based payment expense	—	—	—	—	—	—	—	—	1,164,709
Initial Public Offering, net of costs	—	—	—	—	—	—	3,500,000	3,500	17,862,741
Carilion anti-dilution shares	—	—	—	—	—	—	96,724	97	(97)
Conversion of Class A, Class B, and Class C Common Stock to Common Stock	(2,834,814)	(2,835)	(873,478)	(873)	(2,131,474)	(2,131)	5,839,766	5,839	—
Conversion of Redeemable Class B Common Stock to Common Stock	—	—	—	—	—	—	308,216	308	504,676
Rounding of Fractional Shares and par value effect of Stock Split	—	—	—	—	—	—	29	1	(4,184)
Balances, September 30, 2006	—	\$ —	—	\$ —	—	\$ —	9,858,806	\$ 9,859	\$ 30,970,277

4. Operating Segments

Our operations are divided into two operating segments—Contract Research and Product and Licensing.

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

The Chief Executive Officer and his direct reports collectively represent 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 presented in the Registration Statement on Form S-1 filed with the Securities and Exchange Commission on June 2, 2006).

[Table of Contents](#)

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

	Three Months Ended September 30,		Nine months ended September 30,	
	2006	2005	2006	2005
Contract Research Revenue from External Customers	\$ 4,885,854	\$ 3,942,195	\$ 12,977,066	\$ 11,111,721
Product and License Revenue from External Customers	1,163,663	—	2,521,403	—
Total Revenue from External Customers	\$ 6,049,517	\$ 3,942,195	\$ 15,498,469	\$ 11,111,721
Contract Research Operating Loss	\$ (715,563)	\$ (166,412)	\$ (2,629,963)	\$ (380,512)
Product and License Operating Loss	(1,453,825)	—	(4,472,218)	—
Total Operating Loss	<u>\$ (2,169,388)</u>	<u>\$ (166,412)</u>	<u>\$ (7,102,181)</u>	<u>\$ (380,512)</u>

Additional segment information is as follows:

	September 30, 2006	December 31, 2005
Total segment assets:		
Contract Research	\$31,545,230	\$21,583,007
Product and License Revenue	3,574,860	2,550,823
Total	<u>\$35,120,090</u>	<u>\$ 24,133,830</u>

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

The United States Government accounted for approximately 72% and 81% of revenues for the three months ended September 30, 2006 and 2005, and 74% and 64% of revenues for the nine months ended September 30, 2006 and 2005.

International revenues (customers outside of the United States) accounted for 4.0% and 2.8% of total revenues for the three months ended September 30, 2006 and 2005, and 3.5% and 1.3% for the nine months ended September 30, 2006 and 2005.

5. Contingencies and Guarantees

The Company is from time to time involved in certain legal proceedings in the ordinary course of conducting its business. While the ultimate liability pursuant to these actions cannot currently be determined, the Company believes these legal proceedings will not have a material adverse effect on its financial position or results of operations.

The Company has an outstanding letter of credit at September 30, 2006, of \$719,500 to the Industrial Development Authority of Montgomery County, Virginia, to support a lease of office space. This letter of credit expires in 2011.

The Company has an agreement with a supplier to purchase inventory and estimates its noncancellable obligation to approximate \$959,400 through October 2007.

The Company leases its facilities in Blacksburg, Charlottesville, Danville, Hampton and Roanoke, Virginia, under non-cancellable operating leases that expire between 2006 and 2013. Certain of the leases are subject to fixed escalations. Future minimum lease payments for the remainder of 2006 and for each of the subsequent four years from 2007 through 2010 approximate \$286,000, \$1,483,000, \$1,350,000, \$1,199,000, and \$1,178,000, respectively.

The Company has entered into indemnification agreements with its officers and directors, to the extent permitted by law, pursuant to which the Company has 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. The Company has 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 Quarterly Report on Form 10-Q. In addition to historical financial information, this report contains forward-looking statements that involve risks, uncertainties and assumptions. These statements 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. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. These risks and other factors include, but are not limited to, those listed under the section entitled "Risk Factors" in Item 1A of Part II of this report. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "could," "expect," "plan," "anticipate," "believe," "estimate," "predict," "intend," "potential," "continue," "seek" or the negative of these terms or other comparable terminology. These statements are only predictions. Actual events and/or results may differ materially.

The forward-looking statements contained in this report are made pursuant to the safe harbor protection provided by the Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act of 1933, as amended. 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.

Overview

We research, develop and commercialize innovative technologies in two primary areas: molecular technology solutions and sensing solutions. 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 in our two areas of focus:

- **Molecular Technology Solutions.** We develop molecular technology solutions, which are substances and materials with enhanced performance characteristics obtained by harnessing chemical, physical and biological properties of novel combinations of matter. We focus on substances and materials at the molecular level, including nanomaterials, which are materials whose size can be measured in nanometers, or one billionth of a meter. Examples of our product candidates in this area include flame retardants, protective coatings, and materials that can help physicians identify diseased tissues using magnetic resonance imaging, or MRI.
- **Sensing Solutions.** We develop integrated sensing solutions, which are products that combine sensors, software and hardware to measure, monitor and control chemical, physical and biological properties. We have particular expertise in optical, acoustic and wireless technologies. Examples of our solutions in this area include medical monitoring products and industrial instrumentation for aerospace, energy generation and distribution, and defense applications.

We have a successful track record in executing our market-driven business model. Since our inception, we have developed products serving various industries including energy, telecommunications, life sciences and defense.

Our annual revenues were \$16.5 million in 2005 and \$15.5 million during the nine months ended September 30, 2006. We generate revenues through contract research, product sales and license fees. We had net losses of \$2.0 million and \$6.8 million for the year ended December 31, 2005 and the nine months ended

[Table of Contents](#)

September 30, 2006, respectively, and we expect to incur significant additional expenses as we expand our business. We also expect losses to continue for the foreseeable future primarily due to increased expenditures related to our nanomaterial and medical device product development efforts.

Historically, our contract research revenues have accounted for a large proportion of our total revenues, and we expect that they will continue to grow and will represent a significant portion of our total revenues for the foreseeable future. Our contract research revenue was \$15.4 million in 2005. We generated contract research revenues of \$4.9 million and \$13.0 million for the three and nine months ended September 30, 2006, respectively. As of September 30, 2006, our Contract Research Group was working on 94 contracts. In addition to these contracts, 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. The approximate value of our backlog was \$24.1 million as of September 30, 2006.

Revenues from product sales currently represent a small 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. License revenues were significant in 2004 primarily due to the Luna Energy transactions described in our Registration Statement on Form S-1. Although we have been successful in licensing certain technology, 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. For the full year, we expect revenues from product sales to increase because of our acquisition of Luna Technologies, Inc. ("Luna Technologies") on September 30, 2005. We also expect to increase our investments 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.

In June 2005, prior to its acquisition by Luna Innovations, Luna Technologies entered into a Joint Cooperation Agreement with Luna Energy, an independent company which is no longer affiliated with us. Under this agreement, both parties have agreed to cooperate to develop a fiber optic sensing system product and have agreed to contribute materials, intellectual property, personnel and other resources to the development effort. Upon successful completion of product development, Luna Energy will receive a license to certain of Luna Technologies' intellectual property and will be required beginning in 2007 and continuing through December 31, 2017 to make payments to Luna Technologies with respect to revenues derived from products sold that utilize this intellectual property. As of September 30, 2006, Luna Energy had not yet sold products that would entitle Luna Technologies to royalty payments under this joint cooperation agreement. Luna Technologies had received aggregate development milestone payments of \$320 thousand as of that date under this agreement and is entitled to receive additional development milestone payments of up to \$105 thousand in the aggregate, subject to the satisfaction of certain conditions. Luna Technologies also has the right to receive royalty payments from sales of products in the future. The license of certain of the intellectual property from Luna Technologies to Luna Energy shall be an exclusive license if Luna Energy makes certain minimum royalty payments of \$420 thousand in the aggregate between 2007 and 2017, and shall be a non-exclusive license if Luna Energy fails to make these minimum royalty payments. Since December 2004, we have not held an ownership interest in Luna Energy. Luna Technologies continues to operate as part of our products group.

In connection with becoming a public company in June 2006, we have incurred and will continue to incur significant additional expenses such as audit fees, professional fees, increased directors' and officers' insurance premiums, advisory board and board of directors compensation, and expenses related to hiring additional personnel and expanding our administrative functions. Many of these expenses were not incurred by us in prior periods. We began to incur these expenses during the second half of 2005 and we expect that these expenses will continue to increase. In addition, using the net proceeds from our initial public offering, we have begun to implement our strategy for expansion that have significantly increased our operating expenses and will likely

[Table of Contents](#)

create substantial losses. We incurred consolidated net losses of approximately \$2.0 million and \$6.8 million for the year ended December 31, 2005 and the nine months ended September 30, 2006, respectively. We expect to continue to incur significant additional expenses as we expand our business, 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 will likely continue to incur losses for the foreseeable future, and these losses could be substantial.

Our operating expenses to date for fiscal year 2006 have also increased as a result of the adoption of the provisions of the Financial Accounting Standards Board's revised Statement of Financial Accounting Standards No. 123 *Share-Based Payment* (SFAS No. 123R). We recorded stock-based compensation charges of \$403 thousand and \$1,165 thousand for the three and nine months ended September 30, 2006, respectively. We also expect to record an aggregate stock-based compensation charge for stock options granted through September 30, 2006 of \$5.6 million to be recognized over years 2006 through 2011.

Description of Our Revenues, Costs and Expenses

Revenues

We generate revenues from contract research, product sales and license payments. We derive contract research revenues from providing research and development services to third parties, including government entities and corporations, and from achieving milestones established by some of these contracts and 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 specified in the contracts.

Our product revenues reflect amounts that we receive from sales of our products and development fees paid by third-parties to complete development or create customized applications of products that we anticipate will lead to product sales or licensing revenues. Such product revenues currently represent a small but growing portion of our total revenues. Revenues from product sales that require no ongoing obligations are recognized as revenues when the product has shipped to the customer, title has passed and collection is reasonably assured. In transactions where a right-of-return exists, revenues are deferred until acceptance has occurred and the period for the right-of-return has lapsed.

Our license revenues comprise up-front license fees paid to us in connection with licenses or sublicenses of certain patents and other intellectual property as well as royalties, which currently represent an insignificant portion of our license revenues. Amounts received from third parties for licenses to our intellectual property are recognized when earned under the terms of the agreements. Revenues are recognized upon transfer of the license unless we have continuing obligations for which fair value cannot be established, in which case the revenues are recognized over the period of the obligation. If there are extended payment terms, license fees are recognized as these payments become due and collectibility is probable. We consider all arrangements with payment terms beyond twelve months not to be fixed and determinable.

Certain of our agreements also involve research and development activities. We apply the guidance from the Emerging Taskforce Consensus on Issue 00-21, *Revenue Arrangements with Multiple-Deliverables* (EITF 00-21). Accordingly, we will allocate our arrangement fees to the various elements based upon objective reliable evidence of fair value, if available. For those arrangements in which evidence of fair value is not available, we will defer revenues from any upfront payments and recognize them over the service period in the arrangement. Certain of these arrangements also include the payment of performance bonuses based upon the achievement of specific milestones. Generally, there are no assurances at the onset of these arrangements that the milestones will

[Table of Contents](#)

be achieved. As such, fees related to such milestones are excluded from the initial allocation of the arrangement fee in accordance with EITF 00-21 and are recognized upon achievement of the milestone provided that such fees are non-refundable and collection is probable.

Cost of Revenues

Cost of revenues associated with contract research revenues consists of research contract costs, including direct labor, amounts paid to subcontractors and overhead allocated to contract research 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; manufacturing, shipping and handling; provisions for product warranty; and inventory obsolescence, as well as overhead allocated to these activities. Product manufacturing activity has historically been and continues to be a relatively insignificant element of our cost of revenues due to our relatively low product sales activity in comparison with our other activities, however, we anticipate this element will grow over time as we expand our manufacturing capabilities.

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 and other equity-based compensation; facilities costs to the extent not allocable to cost of revenues; 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 Contract Research Group; product development activities not covered by contracted research; and overhead costs related to these activities.

We anticipate our operating expenses will continue to increase over time due to dedication of resources to product development and increased administrative costs for insurance, professional fees, external reporting requirements, Sarbanes-Oxley compliance and investor relations activities associated with operating as a public company. These increases will also include the hiring of additional personnel.

Interest Income / Expense, Net

Interest expense historically related primarily to interest we paid under our senior secured revolving credit facility. As of September 30, 2006, there was no amount outstanding on our credit facility, and we do not expect to draw on that facility in the near term. Beginning December 2005, interest expense also included interest accrued on the outstanding aggregate principal of the senior convertible promissory notes issued to Carilion Health System on December 30, 2005.

Interest income consists of amounts earned at money market rates on our available cash balances.

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 accounting principles generally accepted in the United States (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

[Table of Contents](#)

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 notes to our audited consolidated financial statements previously included in our Registration Statement on Form S-1 (No. 333-131764), as amended and filed with the Securities and Exchange Commission on June 2, 2006.

Results of Operations

Three Months Ended September 30, 2006 Compared to Three Months Ended September 30, 2005

Revenues

Total revenues increased 53% to \$6.0 million for the three months ended September 30, 2006, from \$3.9 million for the three months ended September 30, 2005. The increase was due in part to increased product sales related to our Luna Technologies Division, which was not acquired until September 30, 2005 and thus was not yet reflected in the results of our consolidated operations for the third quarter of 2005. Our acquisition of Luna Technologies and the subsequent product sales by that division are key elements of our strategic transition towards our goal of increased product sales revenues. We generated approximately \$1.2 million in product sales in the third quarter of 2006 as compared with no such product sales revenues in the third quarter of 2005.

Growth in our contract research revenues also contributed to our overall growth in revenues for the third quarter of 2006 as compared with the third quarter of 2005. Contract research revenues increased 24% to \$4.9 million for the three months ended September 30, 2006 from \$3.9 million for the same period in 2005. This increase was primarily a result of a continued strong success in obtaining research contracts, an increase in the size of certain awards, and the addition of direct contract personnel. The increase was driven in part by application of proceeds from the Carilion financing activities in the second half of 2005, which enabled us to devote more resources to pursuing contract awards.

Cost of Revenues

Cost of revenues increased 34% to \$4.1 million for the three months ended September 30, 2006 from \$3.1 million for the three months ended September 30, 2005. This increase was consistent with our overall increase in revenues. The main component of this overall increase was the inclusion of product sales costs due to the operations of our Luna Technologies Division during the third quarter of 2006; these costs were not previously a component of our operations in the third quarter of 2005. New product sales costs accounted for approximately \$521 thousand, or approximately half, of the overall increase in costs of revenues.

Contract research costs increased 17% to \$3.6 million for the three months ended September 30, 2006 from \$3.1 million in the same period in 2005. This increase was lower than the increase in our contract research revenues due in part to a higher direct labor utilization.

With the inclusion of product sales in the third quarter of 2006, our overall gross margin improved significantly as compared with the third quarter of 2005. Our overall gross margin during the three months ended September 30, 2006 was 32% compared to 22% during the same period in 2005. During the three months ended September 30, 2006, contract research activity returned a gross margin of approximately 27% compared to 22% in the same period of 2005. Product sales activity returned a higher gross margin of 55% for the three months ended September 30, 2006. One of our objectives in seeking greater relative product sales is based on the goal of achieving higher margins to improve our overall profitability.

Operating Expense

Operating expense increased 295% to \$4.1 million for the three months ended September 30, 2006 from \$1.0 million for the corresponding quarter in 2005. Much of the increase in the third quarter of 2006 as compared to the same period in 2005 was due to significant indirect expenses in connection with implementing our

[Table of Contents](#)

business plan relating to commercializing new products and increasing our product sales capabilities, as well as the costs associated with becoming a public company. Consistent with our strategy of building a growing portfolio of businesses and products, we were and are actively hiring additional staff with related recruitment and relocation charges, incurring legal and professional fees and implementing various internal changes to prepare and to strengthen our existing infrastructure and management resources as a result of becoming a public company. With the completion of our financing with Carilion Health System in December 2005, we gained the necessary resources to begin implementing many of these important changes to our business. We expect that our operating expenses will remain at these increased levels in the coming months due to our continued growth and development as well as the indirect costs of our initial public offering and compliance with the various regulatory requirements associated with being a public company.

Another factor in the increase in our operating expense between the third quarter of 2006 and the third quarter in 2005 was our adoption of SFAS No. 123R, which required us to record expense related to the fair value of unvested option grants. We recorded share-based compensation expense of approximately \$403 thousand during the three months ended September 30, 2006.

Other Income (Expense)

Net interest income (expense) increased from a net expense during the three months ended September 30, 2005 to net income during the same period in 2006. Nearly all of the interest expense during the three months ended September 30, 2006, was incurred on our senior convertible promissory notes issued to Carilion Health System on December 30, 2005, which were not previously outstanding during the third quarter of 2005. These notes have an aggregate outstanding principal of approximately \$5.0 million and accrue simple interest at a rate of 6.0% per year. During the three month period ended September 30, 2006, interest expense on such notes was approximately \$75 thousand. At the same time, the proceeds from the issuance of the senior convertible promissory notes and the proceeds from the sale of our Class C Common Stock received at the beginning of the first quarter in 2006 continued to provide a cash surplus for us. Additionally, the net proceeds of \$17.87 million from the initial public offering were received in the first week of June 2006. The proceeds from these financing transactions resulted in our holding significantly greater interest-bearing balances in the three months ended September 30, 2006, than during the same period in 2005. Interest income for the three months ended September 30, 2006, totaled \$318 thousand. Finally, during the third quarter of 2006, we did not have an outstanding balance on our \$2.5 million line of credit. As such, we did not incur interest expense on that line of credit in 2006 compared to interest expense of \$23 thousand incurred in the third quarter of 2005. We do not anticipate a need to draw on that line of credit in the near term given the funds raised from our August and December 2005 financing with Carilion Health System and from our initial public offering in June 2006.

Nine months ended September 30, 2006 Compared to Nine months ended September 30, 2005

Revenues

Total revenues increased 39% to \$15.5 million for the nine months ended September 30, 2006 from \$11.1 million for the nine months ended September 30, 2005. The increase was due in part to increased product sales related to our Luna Technologies Division, which was not acquired until September 30, 2005 and thus was not yet reflected in the results of our consolidated operations for the first, second and third quarters of 2005. Our acquisition of Luna Technologies and the subsequent product sales by that division is a key element of our strategic transition towards our goal of increased product sales revenues. We generated approximately \$2.5 million in product sales in the first nine months of 2006 as compared with no such product sales revenues in the same period of 2005.

Growth in our contract research revenues also contributed to our overall growth in revenues for the first nine months of 2006 as compared with the same period of 2005. Contract research revenues increased 17% to \$13.0 million for the nine months ended September 30, 2006, from \$11.1 million for the same period in 2005. This

[Table of Contents](#)

increase was primarily a result of a continued strong success rate in obtaining research contracts, an increase in the size of certain awards, and the addition of direct contract personnel. The increase in the success rate was driven in part by application of proceeds from the Carilion financings in the second half of 2005, which enabled us to devote more resources to pursuing new contracts.

Cost of Revenues

Cost of revenues increased 26% to \$10.8 million for the nine months ended September 30, 2006 from \$8.5 million for the nine months ended September 30, 2005. This increase was consistent with our overall increase in revenues and our product mix. The main component of this overall increase was the inclusion of product sales costs due to the operations of our Luna Technologies Division during the first nine months of 2006 resulting from our acquisition of Luna Technologies in September, 2005. New product sales costs accounted for approximately \$1.2 million, or more than half, of the overall increase in costs of revenues.

Contract research costs increased 12% to \$9.6 million for the nine months ended September 30, 2006 from \$8.5 million in the same period in 2005. This increase was consistent with the overall increase in contract research revenues.

With the inclusion of product sales in the first nine months of 2006, our overall gross margin improved as compared with the first nine months of 2005. Our overall gross margin during the nine months ended September 30, 2006 was 30% compared to 23% during the same period in 2005. During the nine months ended September 30, 2006, contract research activity returned a gross margin of approximately 26% compared to 23% in the first nine months of 2005. Product sales activity returned a higher gross margin of 53% during the nine months ended September 30, 2006. Our objective of seeking greater relative product sales is based on the goal of achieving higher margins to improve our overall profitability.

Operating Expense

Operating expense increased 300% to \$11.8 million for the nine months ended September 30, 2006 from \$3.0 million for the corresponding period of 2005. Much of the increase in the first nine months of 2006 as compared to the same period in 2005 was due to significant indirect expenses in connection with implementing our business plan relating to increasing our product portfolio and product sales capabilities, as well as costs associated with becoming a public company. Consistent with our strategy of building a growing portfolio of businesses and products, we were and are actively hiring additional staff with related recruitment and relocation charges, incurring legal and professional fees and implementing various internal changes to prepare and to strengthen our existing infrastructure and management resources during and after our transition to being a public company. With the completion of our financing with Carilion Health System in December 2005, we gained the necessary resources to begin implementing many of these important changes to our business. We expect that our operating expenses will remain at these increased levels in the coming months due to our continued growth and development as well as the costs of compliance with the various regulatory requirements of being a public company.

Another factor in the increase in our operating expense for the nine months ended September 30, 2006 compared to the same period in 2005 was our adoption of SFAS No. 123R, which required us to record expense related to the fair value of unvested option grants. We recorded share-based compensation expense of approximately \$1.2 million during the nine months ended September 30, 2006.

Other Income (Expense)

Net interest income (expense) increased from a net expense during the nine months ended September 30, 2005 to net income during the same period in 2005. Nearly all of the interest expense during the nine months ended September 30, 2006 was incurred on our senior convertible promissory notes issued to Carilion Health

[Table of Contents](#)

System on December 30, 2005 which were not previously outstanding during the first nine months of 2005. These notes have an aggregate outstanding principal of approximately \$5.0 million and accrue simple interest at a rate of 6.0% per year. During the nine month period ended September 30, 2006, interest expense on such notes was approximately \$225 thousand. At the same time, the proceeds from the issuance of the senior convertible promissory notes and the proceeds from the sale of our Class C Common Stock received at the beginning of the first quarter in 2006 continued to provide a cash surplus for us. Additionally, the proceeds of the initial public offering were received in the first week of June. The proceeds from these financing transactions resulted in our holding significantly greater interest-bearing balances in the nine months ended September 30, 2006, compared to the same period in 2005. Interest income for the nine months ended September 30, 2006, totaled \$612 thousand. Finally, during the first nine months of 2006, we did not have an outstanding balance on our \$2.5 million line of credit. As such, we did not incur interest expense on that line of credit in 2006 as compared to interest expense of \$67 thousand incurred in 2005. We do not anticipate the need to draw on that line of credit in the near term given the funds raised from our August and December 2005 financing rounds with Carilion Health System and our initial public offering.

Liquidity and Capital Resources

Prior to August 2005, our primary source of liquidity had been cash provided by operations, financing from the revolving credit facility, and divestitures of certain assets and businesses. In August 2005, we completed our first outside equity financing and raised \$7.0 million through an equity investment by Carilion Health System. Carilion Health System invested an additional \$8.0 million in December 2005 in the form of \$5.0 million in senior convertible promissory notes and \$3.0 million in additional equity. Our principal uses of cash have been to fund our expansion, including facilities, personnel, working capital and other capital expenditures, and to fund our costs of transition to a public company.

We have a \$2.5 million senior secured revolving credit facility with First National Bank that is collateralized by a security interest in substantially all of our assets. The interest rate on borrowings under our secured revolving credit facility is equal to the prime rate, limited to no less than 6.0% and no greater than 10.0% per annum, with interest payable monthly. This agreement was modified in May 2006, to allow a \$1.0 million sub-limit for letters of credit and to extend the expiration date to November 30, 2006. Under the terms of the senior secured revolving credit facility, the outstanding principal is payable in full on demand or at maturity on November 30, 2006. The senior secured revolving credit facility contains covenants which require us to maintain \$1.0 to \$2.0 million in liquidity depending on our outstanding balance. Additionally, without First National Bank's prior approval, we may not make a direct loan to an affiliate or subsidiary of ours exceeding \$500 thousand annually, guaranty the debt of our affiliate or subsidiary or incur debt in excess of \$200 thousand other than First National Bank debt annually. Finally, we are obligated to continue to provide First National Bank an assignment of life insurance in a minimum amount of \$1.0 million on the life of Kent A. Murphy, covering all of our indebtedness to First National Bank. As of December 31, 2005, we had repaid the outstanding balance on our secured revolving credit facility, and we do not anticipate the need to draw on that line of credit in the near term given the funds raised from our August and December 2005 financing rounds with Carilion Health System as well as the proceeds from our initial public offering. With the exception of our obligations under the senior convertible promissory notes, the senior secured revolving credit facility and our capital lease, we have no other debt outstanding.

On June 2, 2006, the effective date of our initial public offering, we sold 3,500,000 shares of common stock at \$6.00 per share resulting in gross proceeds of \$21.0 million. In connection with this offering, we paid \$1.47 million in underwriting discounts and commissions and incurred other offering expenses of approximately \$1.66 million. The net proceeds from the offering were approximately \$17.87 million.

Discussion of Cash Flows

Recent Activity

During the nine months ended September 30, 2006, we used approximately \$6.3 million of net cash from operations. This was a substantial change over the activity in the corresponding nine months of 2005. Most of this change was due to the addition of operations from the Luna Technologies Division, which was not reflected

[Table of Contents](#)

in the cash flows from operations in the first nine months of 2005, and the general increase in cash outflows that resulted from our expenditures increase to achieve a greater relative amount of product sales, fund new product development activities, and our preparation to become a public company.

Cash used in investing activities for the nine months ended September 30, 2006, related primarily to the purchase of property and equipment and legal fees associated with securing patent rights to certain technology. Our overall cash used in investing activities was \$1.7 million representing an increase of \$1.1 million in the first nine months of 2006 as compared with the first nine months of 2005 due primarily to capital expenditures to support our increase in personnel and test equipment requirements. In future months, we expect an increase in net cash used in investing activities as we now have the necessary resources to begin and complete a number of longer-term investments in our growth.

Cash flows from financing activities for the nine months ended September 30, 2006, increased significantly compared to the first nine months of 2005 due to the net proceeds of \$17.9 million from our initial public offering. As a result of our increased cash position through the initial public offering and our Carilion financing at the end of 2005, we did not need to draw additional financing from our line of credit or other sources in the first nine months of 2006 as we had previously done in the first nine months of 2005.

At September 30, 2006, total cash and cash equivalents were approximately \$22.4 million. We believe that our current cash on hand and cash available under our line of credit agreement will be sufficient to fund operations for the next 12 months.

Summary of Contractual Obligations

We lease our facilities in Blacksburg, Charlottesville, Danville, Hampton, McLean and Roanoke, Virginia under operating leases that expire on various dates through December 2013 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 January 2010. The assets subject to these obligations are included in property and equipment on our consolidated balance sheet.

Our Luna Technologies Division has an agreement with a supplier to purchase tunable lasers and estimates its noncancellable obligation to be approximately \$959 thousand through 2007.

In March 2004, we received a grant of \$900 thousand from the City of Danville, Virginia under a Grant Agreement to support the expansion of economic and commercial growth within the City. Under the Grant Agreement, we agreed to locate a nanomaterials manufacturing and research facility and maintain its operations in Danville until March 25, 2009. As of September 25, 2006, we had not fully met the capital expenditures and job milestones under this agreement, and, as a result, we may be obligated to repay the City of Danville a portion of the \$900 thousand in funds based on a formula of the pro rata shortfall of such expenditures and jobs falling below such required levels. Because of the failure to meet these milestones and the continuing obligation to maintain our investment and employees at this location through March 25, 2009, we currently have classified the full amount of the grant as a liability on our balance sheet in anticipation of potentially returning the funds.

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 DISCLOSURE ABOUT MARKET RISK*

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 immediate available liquidity or short-term nature of these financial instruments. As of September 30, 2006, we had \$22.3 million deposited in cash and cash equivalents bearing a weighted-average interest rate of 4.8%.

Foreign Currency Exchange Rate Risk

Our product sales to foreign customers are 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

Our Chief Executive Officer and our Chief Financial Officer, after evaluating the effectiveness of our disclosure controls and procedures (as defined in Securities Exchange Act of 1934 (the “Exchange Act”) Rules 13a-15(e) and 15d-15(e)) as of the end of the period covered by this report, have concluded that as of September 30, 2006, our disclosure controls and procedures were effective to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act (i) is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission and (ii) is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting

Within the past nine months, we have hired a new Chief Financial Officer, a Chief Accounting Officer as well as an additional senior accountant. These individuals have prior experience with external financial reporting in a public company environment and should improve our ability to prepare timely consolidated financial statements as well as to address more complex accounting matters, such as business combinations and share-based payments.

We also intend to continue to establish new and enhanced systems of internal control that we believe will be necessary to allow management to report on, and our independent auditors to attest to, our internal controls. To improve the timeliness of our financial reporting, we instituted a detailed closing schedule to enhance overall completeness and quality of our reporting. The closing schedule was first implemented in March 2006 and provides guidance on routine processes, such as procedures for handling key account reconciliations, month end cutoff procedures for accounts payable and accrued expenses as well as cutoff procedures for revenue and related receivables. The documentation will be expanded in later periods to provide detailed guidance of our entire closing process including preparation of interim and year-end consolidated financial statements and related notes.

We have also taken measures to improve our cutoff and accrual procedures. Specifically, during the past nine months we have implemented a process to improve our estimation of subcontractor expenses to ensure completeness of our direct costs and related revenue. We will continue to review this process to monitor the sufficiency of such policies and procedures.

We do not believe we have material weaknesses or significant deficiencies related to our policies and procedures that pertain to maintenance of records, authorizations of receipts and expenditures, or prevention or timely detection of unauthorized acquisition, use, or disposition of our assets. However, we have not performed specific tests to determine the effectiveness of key controls within these policies and procedures. We intend to monitor those policies and procedures in connection with the establishment of a formally documented system of internal control. We are continuing documentation of our internal controls processes in order to identify additional areas for improvement as well as in anticipation of our future requirements under the Sarbanes-Oxley Act of 2002.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we may become involved in 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.

In July 2005, we received a letter from legal counsel retained by a former employee and consultant that such law firm is investigating whether such former employee has any claims against us, including breaches of contract, fiduciary duty, implied covenants of good faith and fair dealing as well as potential violations of minority stockholder rights that such former employee may have as a stockholder in one of our subsidiaries. On May 30, 2006, we were served process of a complaint filed by the former employee in the Circuit Court for the City of Roanoke, Virginia, alleging that we breached our consulting contract with the former employee, and that we are indebted to the former employee in an unspecified amount of at least \$100 thousand. We have answered the complaint and intend to defend the company vigorously in this matter. While we believe the former employee's claims are without merit, counsel for such former employee has indicated that it may file additional claims against us. We cannot predict whether such former employee will file additional litigation against us or our subsidiaries or the ultimate outcome of any such litigation.

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 Securities and Exchange Commission also contain forward-looking statements that involve risks or uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks we face described below.

Risks Related to Our Business and Technologies

If we are unable to manage our growth effectively, our revenues and profits could be adversely affected.

While historically we have developed and commercialized only a few products at a time, we plan to grow by developing and commercializing multiple products concurrently across many industries, technologies and markets. Our ability to grow 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.

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 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

[Table of Contents](#)

manage this growth, we must continue to attract and retain qualified management, professional, scientific and technical and operating personnel. During the quarter ended September 30, 2006, the labor market, particularly for highly-specialized scientists and engineers remained tight. If we are unable to recruit a sufficient number of qualified personnel, we may be unable to staff and manage projects adequately, which may slow the rate of growth of our contract research revenue or our product development efforts.

We have incurred recent losses, and because our strategy for expansion may be costly to implement, we may experience continuing losses which may be significant.

We incurred consolidated net losses of approximately \$2.0 million and \$6.8 million for the year ended December 31, 2005 and the nine months ended September 30, 2006, respectively. We expect to continue to incur significant additional expenses as we expand our business, 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.

Because of the numerous risks and uncertainties associated with our business and our expansion strategy, 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.

Our failure to attract, train and retain skilled employees 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. We have recently experienced difficulties in recruiting and hiring these personnel as a result of the tight labor market in certain fields. This fact, combined with our growth strategy and future needs for additional experienced personnel, particularly in highly specialized areas such as nanomaterial manufacturing and innovative ultrasound 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 addition, our future success depends in a large part upon the continued service of key members of our senior management team. In particular, our Chairman, CEO and founder, Kent A. Murphy, Ph.D., is essential to our overall management as well as the development of our technologies, our culture and our strategic direction. All of our executive officers and key employees are at-will employees, and, except with respect to Kent A. Murphy, Ph.D., we do not maintain any key-person life insurance policies. The loss of any of our management or key personnel could seriously harm our business.

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, which are nanomaterials in the form of a carbon sphere with three metal atoms enclosed inside—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 rely and will continue to rely on contract research for a significant portion of our revenues. Any decrease in these revenues, including Small Business Innovation Research, or SBIR, revenues, could adversely affect our business.

We derive a significant portion of our revenues from contract research that we perform for third parties. Contract research accounted for approximately 93.5% and 83.7% of our consolidated total revenues for the year ended December 31, 2005 and the nine months ended September 30, 2006, respectively. SBIR revenues accounted for approximately 59.8% and 65.2% of our consolidated total revenues for the year ended December 31, 2005 and the nine months ended September 30, 2006, respectively, and 52.8% of our pro forma consolidated total revenues, which include the operations of Luna Technologies for the year ended December 31, 2005. Contract research will remain a significant portion of our consolidated total revenues for the foreseeable future. Our strategy for developing innovative technologies and products depends in large part on our ability to continue to enter into and generate revenues from contract research, including in the near term SBIR contracts, for which we must comply with certain eligibility criteria. Our contract research customer base includes government agencies, corporations and academic institutions. Our customers are not obligated to extend their agreements with us. In addition, our contracts with government agencies, which accounted for approximately 93.3% and 88.6% of our contract research revenues for the year ended December 31, 2005 and the nine months ended September 30, 2006, respectively, provide that the U.S. government may terminate funding prior to the expiration of these contracts, regardless of whether we have demonstrated technological feasibility or have met specified milestones. 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.

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

We may not qualify to participate in the Small Business Administration's, or SBA's, SBIR program or receive new SBIR awards from federal agencies in the future. In order to qualify for SBIR contracts and grants,

[Table of Contents](#)

at least 51% of our equity must be owned and controlled by U.S. citizens or permanent resident aliens, or by another entity that is at least 51% owned or controlled by U.S. citizens or permanent resident aliens, and we must have 500 or fewer employees. These eligibility criteria are applied as of the time of the award of a contract or grant. In determining whether we satisfy the 51% equity ownership requirement, agreements to merge, stock options, convertible debt and other similar instruments are given "present effect" by the SBA, as though the underlying securities were actually issued unless the exercisability or conversion of such securities is speculative, remote or beyond the control of the security holder. We therefore believe our outstanding options and warrants held by eligible individuals may be counted as, and our convertible debt may be excluded from, outstanding equity for purposes of meeting the 51% equity ownership requirement.

We believe that we are currently in compliance with the SBIR eligibility criteria but we cannot provide assurance that the SBA will interpret its regulations in our favor. We must be able to certify that we meet the SBIR ownership and size requirements as of the time we enter into each SBIR contract or grant, and SBA may review our size status in connection with each SBIR contract or grant. As we grow our business, it is foreseeable that we will eventually exceed the SBIR eligibility limitations and we may need to find other sources to fund our research and development efforts. If we are unsuccessful in obtaining additional contracts or funding grants because we cannot meet the eligibility requirements or if our customers decide to reduce or discontinue support of our products, we may be required to seek alternative sources of revenues or capital.

The SBA could determine that, as a result of Carilion Health System's equity ownership, the number of our employees exceeds the size limitation placed on SBA contract and SBIR grant recipients, and therefore we will not be eligible to receive future SBA contracts and SBIR grants.

In addition to the U.S. ownership eligibility criteria discussed above, to be eligible for SBA contracts and SBIR grants, the number of our employees including those of any entities that are considered to be affiliated with us, cannot exceed 500. As of September 30, 2006, we, including all of our divisions, had 184 full-time and 17 part-time employees. However, in determining whether we are affiliated with any other entity, the SBA analyzes whether another entity controls or has the power to control us. If the SBA determines that another entity controls or has the power to control us, it will aggregate that entity's employees (and the employees of its subsidiaries and affiliates) with our own for purposes of applying the 500 employee test.

The SBA may make an affiliation determination based on stock ownership. For example, the SBA may presume that two or more entities have the power to control a company if the entities each own, control or has the power to control, less than 50 percent of the company's stock, such minority holdings are equal or approximately equal in size, and the aggregate of the minority holdings is large as compared to any other stock holding. However, this presumption may be rebutted by showing that such control or power to control does not in fact exist. As of September 30, 2006, Carilion Health System held approximately 22.6% of our common stock, and Dr. Kent Murphy held approximately 26.7% of our common stock. Thus, applying the criteria stated above, the SBA could find that both Carilion Health System and Dr. Murphy own less than 50% of the stock, their percentages are roughly equal, and their respective percentages are large compared to any other stock holding. We believe that the relative beneficial ownership of our individual stockholders rebuts the presumption of control by Carilion Health System because the shares held by our executive officers and directors constitute the controlling interest in us. However, if the SBA were to make a determination that we are affiliated with Carilion Health System, we would exceed the size limitations as Carilion Health System has over 500 employees, and we therefore would lose eligibility for new SBA contracts, public contracts, grants and other awards that are set aside for small businesses, including SBIR grants.

We depend on government-funded research contracts for most of our contract research revenues, and a decline in government funding of existing or future government research contracts could adversely affect our revenues and cash flows and our ability to fund our growth.

Government-funded research accounted for approximately 93.3% and 88.6% of our contract research revenues and 87.2% and 74.2% of our consolidated total revenues for the year ended December 31, 2005 and the

[Table of Contents](#)

nine months ended September 30, 2006, respectively. On a pro forma consolidated basis, which includes the results of operations of Luna Technologies as if acquired on January 1, 2005, government-funded research accounted for 76.9% of our pro forma consolidated total revenues for the year ended December 31, 2005. As a result, we are vulnerable to adverse changes in our revenues and cash flows if a significant number of our government research contracts and subcontracts are simultaneously delayed or canceled for budgetary, performance or other reasons. The U.S. government may cancel these contracts at any time without cause and without penalty or may change its requirements, programs or contract budget, any of which could reduce our revenues and cash flows from U.S. government research contracts. Our revenues and cash flows from U.S. government research contracts 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.

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. 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.

If we cannot successfully transition our revenues 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.

We might require additional capital to support business growth, and this capital might not be available.

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges, including the need to develop new products or enhance our existing products, enhance our operating infrastructure, complete our development activities, build our commercial scale manufacturing facilities and acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds for these investments. In addition, we were contacted during the third quarter 2006 by counsel representing two former investors in our Luna Technologies subsidiary who assert that they have a contractual right to put a portion of their stock in Luna Innovations back to us. Such investors have stated that they intend to file litigation against us unless we recognize their alleged claim. Based on the advice of counsel, we believe that such right was extinguished in connection with our initial public offering and that such claim is without legal basis. We cannot, however, predict whether such former investors will file litigation against us or the ultimate outcome of such litigation. Any repurchase of outstanding shares of our common stock would result in a reduction in our cash position and could accelerate our need to engage in equity or debt financings.

If we raise additional funds through issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock, including shares of common stock sold in our initial public offering. 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

[Table of Contents](#)

raise additional outside capital. In addition, we may not be able to obtain continued SBIR funding, or other additional financing on terms favorable to us, if at all. In order to retain SBIR eligibility, we may be restricted in our ability to raise certain forms of equity capital from institutional investors. For example, in connection with the closing of our financing with Carilion Health System on December 30, 2005, we were not able to raise all proceeds through the issuance of equity without potentially jeopardizing our SBIR eligibility. We therefore elected to issue debt in the amount of \$5.0 million of the total \$8.0 million raised in such financing to maintain SBIR eligibility. Under the terms of these notes, we agreed that we will not draw down any amount under our existing senior secured credit facility with First National Bank or incur additional indebtedness other than under certain limited conditions. If we are unable to obtain adequate financing or financing on 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 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 molecular technology solutions products market, our competitors include, but are not limited to, large public manufacturers such as The Dow Chemical Company, E.I. du Pont de Nemours and Company, Rohm and Haas Company and 3M Company, 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. In the sensor solutions 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.

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 compete with companies in a wide range of industries, including semiconductors, electronics, biotechnology, textiles, alternative energy, military, defense, healthcare, telecommunications, industrial measurement, security applications and consumer electronics.

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.

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 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 have succeeded 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.

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;

[Table of Contents](#)

- it is possible that none of our pending patent applications or the pending patent applications of our licensors will result in issued patents;
- 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 filed. This could make it easier for competitors to capture or increase their market share with respect to related technologies. Although we are not currently involved in any legal proceedings related to intellectual property, 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 such litigation 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 vigorously pursue 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 Luna and Luna 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. For example, we acquired a business that had received a letter in 2002 from a competitor alleging infringement of certain patents. The competitor sent an additional letter on January 14, 2004 to the business that we acquired, again alleging infringement of the competitor's patents. Neither we nor the business that we acquired have received any further communications from this third party. We cannot currently predict whether this third party, or any other third party, will assert a claim against us, or whether any third parties that have asserted such claims against businesses that we have acquired will assert claims or pursue infringement litigation against us; nor can we predict the ultimate outcome of any such potential claims or litigation.

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.

For example, we are a party to an exclusive license agreement with NASA for certain patented ultrasound technology. The field of this license is limited to measurement of intracranial pressure and compartment syndrome. We currently engage in ultrasound product development activities in bone strength measurement, embolus detection and detection of concealed weapons. To the extent that these activities are covered by the licensed NASA patents, we may be required to modify our existing license or acquire an additional license from NASA. Although we are in discussions with NASA to potentially modify the field, we cannot currently predict whether NASA will be willing to modify our existing license or grant an additional license to us for these fields of use, or the terms of any such modifications or additional licenses.

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

We must comply with and are affected by laws and regulations relating to the award, administration and performance of U.S. government contracts. Government contract laws and regulations affect how we do business with our government customers and, in some instances, impose added costs on our business. A violation of 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 March 2003, the Office of Inspector General of the Department of Commerce advised us that the government was investigating anonymous allegations of contract improprieties. We have cooperated fully and extensively with that investigation through interviews and document production. In April 2003, the government advised our regulatory counsel that to date no wrongdoing had been identified, although the government indicated that we may not have fully complied with contractual reporting requirements in one or two instances, which the government did not specify. We believe that the investigation has been resolved favorably, based on statements by the government investigator to our employees in June 2003, and that this matter effectively is at an end absent any advice or communication from the government to the contrary. However, there can be no assurance as to how or whether our relationships, business, financial condition or results of operations will ultimately be affected, if at all, by the investigation.

In March 2006, our senior management became aware that seven foreign national citizens who were working for us had access to International Traffic in Arms Regulations, or ITAR, controlled technical data. Such data may be deemed to have been exported/disclosed to certain of these individuals without the required export licenses. We do not believe that exports of ITAR-controlled technical data occurred to any other unauthorized parties. In addition, we do not believe that any disclosures to foreign nationals involved technology related to classified contracts. Following this discovery, in an effort to ensure full compliance with ITAR we submitted voluntary disclosure of these circumstances to the U.S. Department of State (the "Department of State") in April 2006, and provided additional information regarding the matter to the Department of State in June and September 2006. While the Department of State encourages such voluntary disclosure, we nevertheless could be subject to potential investigation and may be exposed to potential regulatory consequences ranging from a no-action letter, government oversight of facilities and export transactions, monetary penalties, and in extreme cases, debarment from government contracting, denial of export privileges and criminal sanctions.

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 ranging from monetary fines, assessments, loss of the ability to do business with the U.S. government and certain other criminal penalties.

[Table of Contents](#)

We may also be prohibited from commercially selling certain products that we develop under our Contract Research Group 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.

We are subject to 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 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

[Table of Contents](#)

regulation could cause us to incur additional operating expenses, capital expenditures, or restrictions and delays in the development of our products and properties.

Our ability to develop and market certain of our current and potential products may be hindered as a result of FDA regulatory requirements and a lengthy and expensive approval process.

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 and our EDAC™ and EN-TACT™ ultrasound diagnostic devices for measuring certain medical conditions will be considered a drug and medical devices, respectively, under the Federal Food, Drug & Cosmetic Act, or FDC Act. Drugs and some medical devices are subject to rigorous preclinical testing and other approval requirements by the 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 these products. The process of obtaining these clearances or approvals and the subsequent compliance with appropriate federal statutes and regulations require the expenditure of substantial resources. 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.

We may be obligated to repay part of the proceeds received in connection with a grant from the City of Danville, Virginia, for failing make certain agreed upon expenditures and failing to meet certain employment obligations.

In March 2004, we received a grant of \$900 thousand from the City of Danville, Virginia under a Grant Agreement to support the expansion of economic and commercial growth within the City. Under the Grant Agreement, we agreed to locate a nanomaterials manufacturing and research facility and maintain its operations in Danville until March 25, 2009. Our obligations under this Grant Agreement require us to incur significant expenditures in order to retain such proceeds from the grant. Specifically, we agreed under the Grant Agreement to invest at least \$5.2 million in capital equipment expenditures and \$1.2 million in certain facilities by September 25, 2006 and to maintain such investments in our Danville facility until March 25, 2009. We also agreed to create by September 25, 2006 at least 54 new full-time jobs at the Danville facility at an average annual wage of at least \$39 thousand plus benefits, and to maintain these jobs at such facility until March 25, 2009. These contractual requirements obligate us to an annual payroll obligation exceeding \$2.0 million until March 25, 2009. To the extent such hiring results in salaries in excess of the required minimum wages, our annual payroll obligation could be substantially greater than \$2.0 million. As of September 25, 2006, we had not fully met these capital expenditures and job milestones, and, as a result, we may be obligated to repay the City of Danville a portion of the \$900 thousand in funds based on a formula of the pro rata shortfall of such expenditures and jobs falling below such required levels. Because of the failure to meet these milestones and the continuing obligation to maintain our investment and employees at this location through March 25, 2009, we currently have classified the full amount of the grant as a liability on our balance sheet in anticipation of potentially returning the funds.

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

We have 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. For example, we may need to develop or

[Table of Contents](#)

in-license Trimetasphere™ nanomaterial purification and isolation technology, which would result in manufacturing delays or shortfalls. We may also encounter difficulties and delays in manufacturing our products for the following reasons:

- we plan 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.

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. Although we do not have any sole source suppliers of materials, 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, we are aware of only two manufacturers that produce the special lasers used in our optical test equipment. Moreover, none of these third-party vendors is obligated to continue to supply us with components. Our reliance on these vendors subjects us to a number of risks that could impact our ability to manufacture our products and harm our business, including interruption of supply.

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.

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 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.

[Table of Contents](#)

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

We face risks associated with our international business.

Our Luna Technologies Division and our Luna nanoWorks Division 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 Related to Our Common Stock

Our common stock price has been volatile and we expect that the price of our common stock will fluctuate substantially in the future.

Before our initial public offering, there was no public market for our common stock, and in the future, an active public trading market may not be sustained. The public trading price for our common stock will continue to be affected by a number of factors, including:

- changes in earnings estimates, investors' perceptions, recommendations by securities analysts or our failure to achieve analysts' earning 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;

[Table of Contents](#)

- commencement of, or involvement in, litigation;
- 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 and to litigation;
- a lack of, limited or negative industry or security analyst coverage; and
- 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, our stock price could decline.

If our existing stockholders sell a large number of shares of our common stock or the public market perceives that these sales may occur, the market price of our common stock could decline. We intend to file a Registration Statement on Form S-8 to register approximately 8,491,210 shares of common stock issued, issuable or reserved for issuance under our 2003 Stock Plan and 2006 Equity Incentive Plan, thus permitting the resale of such shares. Once we register these shares, they can be freely sold if vested in the public market upon issuance, subject to the underwriter lock-up agreements, our stock purchase restriction agreements and restrictions on our affiliates. In addition, holders of warrants exercisable for up to 61,214 shares of common stock may exercise those rights and subsequently sell the underlying shares in the public market.

ThinkEquity Partners LLC, on behalf of the underwriters of our June 2, 2006 initial public offering, may in its sole discretion, at any time without notice, release all or any portion of the shares subject to the lock-up agreements, which would result in more shares being available for sale in the public market at earlier dates. Sales of common stock by existing stockholders in the public market, the availability of these shares for sale, our issuance of securities or the perception that any of these events might occur could materially and adversely affect the market price of our common stock.

In addition, employees and former employees holding approximately 1.8 million shares of our common stock or options exercisable for our common stock have entered into an agreement not to sell more than 20.0% of such shares in any year during the five years following the effective date of our initial public offering, provided, any shares subject to such annual limit not sold in a year may be sold in subsequent years notwithstanding such limitation. Certain members of our management holding options exercisable for approximately 2.2 million shares of our common stock have entered into an agreement not to sell more than 15.0% of such shares in any year during the five years following the effective date of our initial public offering, provided, any shares subject to such annual limit not sold in a year may be sold in subsequent years notwithstanding such limitation. We have the right to waive any of these resale restrictions for employees and management at our discretion, and in such instance, the shares would become freely tradable.

We have and will continue to incur increased costs as a result of being a public company.

As a public company, we have and will continue to incur significant legal, accounting and other expenses. We have and will continue to incur costs associated with our public company reporting requirements. We also have and will continue to incur costs associated with corporate governance requirements, including requirements under the Sarbanes-Oxley Act of 2002, as well as rules implemented by the SEC and the National Association of Securities Dealers, Inc., or NASD. We expect these rules and regulations to increase our legal and financial compliance costs and to make some activities more time-consuming and costly. We cannot accurately predict or estimate the amount of additional costs we may incur or the timing of such costs.

As of September 30, 2006, our directors and management collectively controlled approximately 49.9% of our outstanding common stock.

As of September 30, 2006, our directors and executive officers and their affiliates collectively controlled approximately 49.9% of our outstanding common stock. As a result, these stockholders, if they act together, will be able to influence our management and affairs and all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. You and other stockholders will have minimal influence over these actions. This concentration of ownership may 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.

Our financial results may vary significantly from period to period, which may reduce our stock price.

Our financial results may fluctuate as a result of a number of factors, many of which are outside of our control, which may cause the market price of our common stock to fall. For these reasons, comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance. Our financial results may be negatively affected by any of the risk factors listed in this “Risk factors” section and, in particular, the following risks:

- a reduction of contract research funding;
- decisions by government agencies, academic institutions or corporations not to exercise contract options or to modify, curtail or terminate our major contracts;
- failure to estimate or control contract costs;
- adverse judgments or settlements in legal disputes;
- expenses related to acquisitions, mergers or joint ventures; and
- other one-time financial charges.

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.

Beginning with our Annual Report for the year ending December 31, 2007, 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 management’s assessment of our internal control over financial reporting and a report on their evaluation of the operating effectiveness of our internal control over financial reporting.

We continue to evaluate our existing internal control over financial reporting against the standards adopted by the Public Company Accounting Oversight Board, or PCAOB. 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 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 independent auditors have previously identified material weaknesses and significant deficiencies in our internal controls, and if we are unable to develop, implement and maintain appropriate controls we will not be able to comply with applicable regulatory requirements imposed on reporting companies.

In connection with the audit of our financial statements for each of the three years in the period ended December 31, 2005, our independent registered public accounting firm identified certain weaknesses in our internal control over financial reporting, which they considered to be material weaknesses and significant deficiencies. Specifically, because we previously lacked appropriate resources and personnel with sufficient experience, our independent registered public accounting firm noted weaknesses in our ability to account for certain complex accounting transactions relating to business combinations and consolidation matters, to account for share-based payments to employees and consultants, as well as weaknesses in our ability to prepare timely consolidated financial statements in accordance with U.S. generally accepted accounting principles and Regulation S-X under the Securities Exchange Act of 1934, as amended. We also lacked adequate cutoff and accrual procedures which materially affected recognition of expenses and, in certain instances, related revenues. These weaknesses led to significant audit adjustments for each of the three years in the period ended December 31, 2005 which had a material effect on our financial statements.

Our business operations were relatively small in previous years and, as a result, we have historically operated with very limited staffing of key accounting functions. Such limited staffing historically made it difficult for us to segregate certain accounting functions. Because of these circumstances, we have relied on outside consultants to supplement our internal accounting staff and to meet our financial reporting obligations.

Since December 31, 2005, we have hired a new Chief Financial Officer, a Chief Accounting Officer as well as an additional senior accountant. These individuals have prior experience handling external financial reporting in a public company environment and should improve our ability to prepare timely consolidated financial statements as well to address more complex accounting matters, such as business combinations and share-based payments.

We also intend to establish new and enhanced systems of internal control that we believe will be necessary to allow management to report on, and our independent auditors to attest to, our internal controls. To improve the timeliness of our financial reporting, we have instituted a detailed closing schedule to enhance overall completeness and quality of our reporting. This schedule was first implemented in March 2006 and provides guidance on routine processes, such as procedures for handling key account reconciliations, month end cutoff procedures for accounts payable and accrued expenses as well as cutoff procedures for revenue and related receivables. The documentation will be expanded in later periods to provide detailed guidance of our entire closing process including preparation of interim and year-end consolidated financial statements and related notes. We have also taken measures to improve our accrual procedures.

Specifically, we have implemented a process to improve our estimation of subcontractor expenses to ensure completeness of our direct costs and related revenue. We will continue to review this process to monitor the sufficiency of such policies and procedures.

Although we do not believe we have material weaknesses or significant deficiencies related to our policies and procedures that pertain to maintenance of records, authorizations of receipts and expenditures, or prevention or timely detection of unauthorized acquisition, use, or disposition of our assets, we have not performed specific tests to determine the effectiveness of key controls within these policies and procedures. We intend to monitor those policies and procedures in connection with the establishment of a formally documented system of internal control. We are continuing documentation of our internal controls processes in order to identify additional areas for improvement as well as in anticipation of our future requirements under the Sarbanes-Oxley Act of 2002.

While we anticipate being able to implement fully the requirements relating to internal controls and all other applicable requirements of the Sarbanes-Oxley Act of 2002 in a timely fashion, we cannot be certain as to the

[Table of Contents](#)

timing of the completion of our evaluation and testing and any necessary remediation or the impact of the same on our operations. Our development, implementation and maintenance of appropriate internal controls will depend materially both on our successful hiring and retention of key senior accounting personnel. If we are not able to complete the assessment required under Section 404 in a timely manner, we and our independent registered public accounting firm would be unable to conclude that our internal control over financial reporting is effective as of December 31, 2007.

If we are unable to retain and attract qualified personnel, to implement and integrate financial reporting and accounting systems or if we are unable to scale these systems to our growth, we may not have adequate, accurate or timely financial information, and we may be unable to meet our reporting obligations or comply with the requirements of the SEC, the NASDAQ Global Market or the Sarbanes-Oxley Act of 2002, which could result in the imposition of sanctions, including the suspension or delisting of our common stock from the NASDAQ Global Market and the inability of registered broker dealers to make a market in our common stock, or investigation by regulatory authorities. Any such action or other negative results caused by our inability to meet our reporting requirements or comply with legal and regulatory requirements or by disclosure of an accounting, reporting or control issue could adversely affect the price of our class common stock. Further and continued determinations that there are significant deficiencies or material weaknesses in the effectiveness of our internal control over financial reporting could also reduce our ability to obtain financing or could increase the cost of any financing we obtain and require additional expenditures to comply with applicable requirements.

Anti-takeover provisions in our amended and restated certificate of incorporation and bylaws and Delaware law could discourage a takeover.

Our amended and restated certificate of incorporation and bylaws and Delaware law contain provisions that might enable our management to resist a takeover. These provisions include:

- a classified board of directors;
- 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.

These provisions might discourage, delay or prevent a change in control of our company or a change in our management. 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.

Changes in, or interpretations of, accounting rules and regulations, such as expensing of stock options, could result in unfavorable accounting charges or require us to change our compensation policies.

Accounting methods and policies, including policies governing revenues recognition, expenses, and accounting for stock options are subject to further review, interpretation and guidance from relevant accounting authorities, including the SEC. Changes to, or interpretations of, accounting methods or policies in the future may require us to reclassify, restate or otherwise change or revise our financial statements, including those contained in this Quarterly Report on Form 10-Q. Prior to January 1, 2006, we were not required to record stock-based compensation charges if the employee's stock option exercise price equals or exceeds the fair market value of our common stock at the date of grant.

On December 16, 2004, the FASB issued SFAS No. 123 (revised 2004), *Share-Based Payment*, which is a revision of SFAS No. 123, *Accounting for Stock-Based Compensation* (SFAS No. 123R). SFAS No. 123R supersedes APB Opinion No. 25, *Accounting for Stock Issued to Employees*, and amends SFAS No. 95,

[Table of Contents](#)

Statement of Cash Flows . Generally, the approach in SFAS No. 123R is similar to the approach described in SFAS No. 123. However, SFAS No. 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. Pro forma disclosure is no longer an alternative. We are required to adopt SFAS No. 123R on January 1, 2006, and have adopted it as of that date.

As permitted by SFAS No. 123, we accounted for share-based payments to employees through December 31, 2005 using APB Opinion No. 25's intrinsic value method and, as such, generally recognized no compensation cost for employee stock options. Accordingly, the adoption of SFAS No. 123R's fair value method will have a significant impact on the presentation of our results of operations, although it will have no impact on our overall financial position. The impact of adoption of SFAS No. 123R cannot be predicted at this time because it will depend on levels of share-based payments granted in the future and the assumptions for the variables which impact the computation.

We rely heavily on stock options to motivate existing employees and to attract new employees. When we are required to expense stock options, we may then choose to reduce our reliance on stock options as a motivation tool. If we reduce our use of stock options, it may be more difficult for us to attract and retain qualified employees. If we do not reduce our reliance on stock options, our reported earnings will be adversely affected.

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

Unregistered Sales of Equity Securities during the Three Months Ended September 30, 2006

During the three months ended September 30, 2006, we issued and sold an aggregate of 29,768 shares of common stock to certain existing and former employees upon the exercise of options awarded prior to the completion of our initial public offering under our 2003 Stock Plan. We received aggregate proceeds of \$10,533 as a result of the exercise of these options. The above shares numbers have been adjusted to reflect the 1-for-1.7691911 reverse stock split of our outstanding equity and the conversion of our Class B Common Stock into common stock, both of which were effected prior to or upon the completion of our initial public offering. We believe these transactions were exempt from registration pursuant to Rule 701 promulgated under the Securities Act of 1933, as amended (the "Securities Act") or Section 4(2) of the Securities Act.

Use of Proceeds from Sale of Registered Equity Securities

On June 6, 2006, we completed the initial public offering of our common stock, \$0.001 par value per share, pursuant to our Registration Statement on Form S-1, as amended (File No. 333-131764) that was declared effective on June 2, 2006. We sold 3,500,000 shares in the offering at a price to the public of \$6.00 per share and received net proceeds of \$17.87 million in the offering.

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.

ITEM 3. *DEFAULTS UPON SENIOR SECURITIES*

None.

ITEM 4. *SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS*

None.

ITEM 5. *OTHER INFORMATION*

None.

ITEM 6. *EXHIBITS*

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

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Quarterly Report on Form 10-Q to be signed on its behalf by the undersigned thereunto duly authorized.

Date: November 13, 2006

Luna Innovations Incorporated

/s/ DALE E. MESSICK

Dale E. Messick
Chief Financial Officer
(Principal Financial and Accounting Officer
and duly authorized Officer)

EXHIBIT INDEX

Exhibit Number	Description
3.1(1)	Amended and Restated Certificate of Incorporation of the Registrant. (Exhibit 3.2)
3.2(2)	Amended and Restated Bylaws of the Registrant. (Exhibit 3.4)
10.1(3)	Employment Agreement, dated July 14, 2006, by and between Dr. Kent A. Murphy and Luna Innovations Incorporated, and exhibits thereto. (Exhibit 10.1)
10.2(3)	Employment Agreement, dated July 14, 2006, by and between John T. Goehrke and Luna Innovations Incorporated, and exhibits thereto. (Exhibit 10.2)
10.3(4)	Employment Agreement, dated July 14, 2006, by and between Scott A. Graeff and Luna Innovations Incorporated, and exhibits thereto. (Exhibit 10.3)
10.4(5)	Employment Agreement, dated August 29, 2006, by and between Dale E. Messick and Luna Innovations Incorporated, and exhibits thereto. (Exhibit 10.1)
10.5(6)	Amended Lease, dated July 20, 2006, by and between Carilion Medical Center and Luna Innovations Incorporated. (Exhibit 10.1)
10.6†	Co-Operation Agreement, dated August 10, 2006, by and between Luna Technologies, Inc. and Acterna France SAS.
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.
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 dated June 2, 2006 (file No. 000-52008). The number given in parenthesis indicates the corresponding exhibit number in such Form 8-K.
(2)	Incorporated by reference to the exhibits to the Registrant's Registration Statement on Form S-1, as amended, dated June 2, 2006 (file No. 333-131764). The number given in parenthesis indicates the corresponding exhibit number in such Form S-1.
(3)	Incorporated by reference to the exhibits to the Registrant's Current Report on Form 8-K dated July 14, 2006 (file No. 000-52008). The number given in parenthesis indicates the corresponding exhibit number in such Form 8-K.
(4)	Incorporated by reference to the exhibits to the Registrant's Current Report on Form 8-K dated July 14, 2006 (file No. 000-52008), as amended by the Registrant's Current Report on Form 8-K dated July 24, 2006 (file No. 000-52008). The number given in parenthesis indicates the corresponding exhibit number in such Form 8-K dated July 14, 2006.
(5)	Incorporated by reference to the exhibits to the Registrant's Current Report on Form 8-K dated August 29, 2006 (file No. 000-52008). The number given in parenthesis indicates the corresponding exhibit number in such Form 8-K.
(6)	Incorporated by reference to the exhibits to the Registrant's Current Report on Form 8-K dated July 20, 2006 (file No. 000-52008). The number given in parenthesis indicates the corresponding exhibit number in such Form 8-K.
†	Confidential treatment requested for this exhibit.

CONFIDENTIAL TREATMENT REQUESTED: Certain portions of this document have been omitted pursuant to a request for confidential treatment and, where applicable, have been marked with an asterisk ("****") to denote where omissions have been made. The confidential material has been filed separately with the Securities and Exchange Commission.

CO-OPERATION AGREEMENT

This AGREEMENT is made

BETWEEN

Luna Technologies
A Division of Luna Innovations Incorporated
2020 Kraft Dr. Suite 2000
Blacksburg, VA 24060

(hereafter referred to as „LUNA”)

AND

Acterna France SAS
34, Rue Necker
42000 Saint Etienne
France

(hereafter referred to as „ACTERNA”)

WHEREAS:

A. LUNA is engaged in developing, designing, procuring, manufacturing, selling, marketing, distributing and maintaining the products set forth in Schedule 1 hereto, including spare parts and supply items therefore (in card form developed under this Agreement, the “Luna Products”)

B. ACTERNA is engaged in designing, procuring, manufacturing, selling, marketing, distributing and maintaining the products set forth in Schedule 2, including spare parts and supply items therefore (with custom software developed under this Agreement, the “Acterna Products”).

The term “Products” shall include to both Luna Products and Acterna Products.

C. The parties intend to collaborate on the development, marketing and sales of certain products, such products partially to be developed by LUNA on one side and partially to be developed by ACTERNA on the other side.

D. Further, the parties intend to enter into an agreement regarding the marketing, distribution and sale of these products. The product being sold by each party will be a combination of the parties’ respective products.

THEREFORE IT IS HEREBY AGREED AS FOLLOWS:

A. DEVELOPMENT

1. Product Detail

1.1 LUNA and ACTERNA agree to collaborate on the development, marketing and sales of an OFDR solution combining a highly integrated OFDR module to be developed by Luna and a mainframe belonging to the MTS/TB family of mainframes from ACTERNA, including [****]. The OFDR to be developed by LUNA can only be operated inside the MTS mainframe to be developed by ACTERNA.

1.2 LUNA shall use commercially reasonable efforts to develop a highly integrated OFDR (Optical Frequency Domain Reflectometer) module according the specifications as set forth in Schedule 3. This includes the hardware development as well as the development of embedded application firmware. LUNA shall use commercially reasonable efforts to complete such development according to the roadmap as set forth in Schedule 7.

1.3 ACTERNA shall, for its [***], use commercially reasonable efforts to develop a new user interface according to the specifications as set forth in Schedule 4 that will drive the OFDR application. This user interface software will also allow to configure the OFDR module and also display the traces and manage the measurement results. Acterna will also use commercially reasonable efforts to develop a new backplane board for the [****] enclosure if it is decided to integrate the OFDR module inside the [****] platform. ACTERNA shall use commercially reasonable efforts to complete such development according to the roadmap as set forth in Schedule 7.

1.4 The parties shall co-operate regarding the respective developments on the basis of good faith. Each party undertakes to provide to the other party the information regarding its own products / developments such other party reasonably requires for its development.

For the avoidance of any doubt, the Non Disclosure Agreement concluded between the parties on February 13, 2006, shall apply to such information.

1.5 The roadmap regarding the above described developments, including the provision of prototypes to the respective other party for testing purposes, is attached and bincorporated as Schedule 7 to this Agreement. Each party's timely performance of development obligations under according to the roadmap is dependent on the other party's timely and effective satisfaction of its responsibilities hereunder, and timely decisions and approvals by the other party. [****].

The units shall be provided as follows:

[****]

Title in such units /software shall transfer to the receiving party. The parties shall treat the respective other party's units with a reasonable degree of care.

2. Costs

Each party bears the costs for its developments as conducted according to this Agreement. Under no circumstances a party shall have a claim against the other party regarding the reimbursement of such costs.

B. DISTRIBUTION AND SALE

3. Grant of Distribution Rights

3.1 The parties to this agreement will act as distributor for the respective other party's Products developed under this agreement. Thus, the following terms shall be applied depending on which Product is concerned.

Where Luna Products are concerned, the term MANUFACTURER shall refer to LUNA and the term DISTRIBUTOR shall refer to ACTERNA.

Where Acterna Products are concerned, the term MANUFACTURER shall refer to ACTERNA and the term DISTRIBUTOR shall refer to LUNA.

3.2 MANUFACTURER hereby grants to DISTRIBUTOR and DISTRIBUTOR hereby accepts the right to distribute through resale, in the case of hardware Products, and to distribute under sublicense, in the case of software Products, and generally to market such Products of the other party purchased hereunder as defined on p. 1, A and B, solely as part of a combination of the parties' respective Products.

-
- 3.3 The Parties agree that DISTRIBUTOR's distribution rights under this Agreement with respect to the other party's Products shall be limited to the Territories and customer groups as set forth in Schedule 5 hereto. In certain Territories and amongst certain groups of customers (the "Customer Groups"), DISTRIBUTOR's distribution rights shall be exclusive. These exclusive Territories and Customer Groups are identified in Schedule 5 hereto. Exclusivity shall mean that the MANUFACTURER shall neither use other third parties for the distribution of the Products in the respective Territories or amongst the respective Customer Groups (regardless of the form of such distribution, in particular but not limited to distributorship or agency), nor shall the MANUFACTURER make direct sales in the respective Territories or to the respective Customer Groups.
- 3.4 DISTRIBUTOR shall have the right to distribute the Products through sub-distributors.

4. Term

The Agreement shall take effect on the latest date appearing on page 13, the signature page of this agreement (the „Commencement date“) notwithstanding the date hereof and shall endure for a period of 3 years from the Commencement Date. After the initial period of 3 years, this Agreement shall renew for further terms of 1 year until or unless terminated by either party giving to the other not less than six (6) months prior written notice. For the avoidance of doubt, the sections specified in 21.3 will survive the termination of this agreement according to conditions described in the respective Articles.

5. Technical Information

- 5.1 Upon execution of this Agreement, MANUFACTURER immediately will step by step at its own cost furnish to DISTRIBUTOR reproducible copies in English of all available documentation, data and component lists that MANUFACTURER possesses and has the right to provide, and that are necessary to enable DISTRIBUTOR to sell the Products.
- 5.2 MANUFACTURER undertakes also to keep DISTRIBUTOR fully informed of any material changes, additions or modifications to such documentation, data and component lists that have an effect on performance.
- DISTRIBUTOR has the right to buy [****] demonstration units per Product covered by this Agreement including such Products as added from time to time. The price for such demonstration units will be [****]. Any units that are not retained by DISTRIBUTOR for at least 12 months shall not be considered demonstration units.

6. Commercial and Technical Assistance

- 6.1 MANUFACTURER undertakes during the term of this Agreement, at the request of DISTRIBUTOR, to render from time to time to DISTRIBUTOR reasonable assistance in connection with the demonstration kits, initial demonstration to customers in the Territory, the assembly of spare parts, maintenance, support and marketing of the Products. The cost of such assistance and who shall pay for it will be agreed in advance between the parties.

-
- 6.2 DISTRIBUTOR shall continuously and vigorously promote, sell and support the Products through its marketing and sales organizations for sales and support in the Territory. DISTRIBUTOR names the contact persons for Market Development and Market Communication for MANUFACTURER's Products.

7. Market Volumes, Purchase and Transfer Prices

- 7.1 Annual sales plans for the Products for the first year of contract duration are set forth on Schedule 5 of this Agreement.
- 7.2 DISTRIBUTOR shall supply to MANUFACTURER formal quarterly rolling forecasts of the projected sales volume of the Products in the designated Territories. The due dates for such rolling forecasts are the 15th day in advance of each calendar quarter.
- 7.3 The prices for the Products to be paid by DISTRIBUTOR are fixed Transfer Prices Ex Works MANUFACTURER.
- 7.4 Prices will be as set forth in Schedule 6 to this Agreement and will be reviewed and updated (annually) always with the effective date of the respective anniversary of the Commencement Date. At such price review changes requested by either Party are always subject of prior written mutual agreements between the Parties. The new agreed prices become part of the Agreement with an amendment to the applicable schedule hereafter.
- 7.5 Nothing in this Agreement shall constitute an obligation for DISTRIBUTOR to purchase goods from the MANUFACTURER.

8. Orders, Delivery, Invoicing

- 8.1 DISTRIBUTOR may obtain Products by placing orders under this Agreement with MANUFACTURER.
- 8.2 MANUFACTURER shall send a written order acknowledgement to DISTRIBUTOR within five (5) working days after receipt of an order from DISTRIBUTOR confirming the delivery dates requested, or setting forth such other delivery dates that DISTRIBUTOR is able to meet (which shall be deemed accepted by MANUFACTURER unless rejected in writing within three (3) working days after the date of MANUFACTURER's acknowledgement). In the absence of such acknowledgement, DISTRIBUTOR's order shall be considered rejected.
- 8.3 Delivery of the Products will be made to the DISTRIBUTOR sales and distribution centers Ex Works MANUFACTURER, and all costs of transportation, insurance, import or other duties shall be met by DISTRIBUTOR. MANUFACTURER will ship Products ordered by DISTRIBUTOR using a method and carrier selected by MANUFACTURER unless otherwise instructed in DISTRIBUTOR's order. MANUFACTURER will ship freight collect, uninsured, unless otherwise instructed by DISTRIBUTOR's order.
- 8.4 Distributor shall, at its own expense, obtain all import and export licenses and permits, pay customs charges and duty fees, and take all other actions required to accomplish the export and import of the Products purchased by DISTRIBUTOR. DISTRIBUTOR understands that MANUFACTURER is subject to regulation by agencies of the U.S. government, including the U.S. Department of Commerce, which prohibit export or diversion of certain technical products to certain countries. DISTRIBUTOR warrants that it will comply in all respects with the export and re-export restrictions set forth in the

export license for every Product delivered to DISTRIBUTOR. On the request of DISTRIBUTOR, MANUFACTURER shall assist DISTRIBUTOR in the process of obtaining such licenses and permits by providing such information about the Products as MANUFACTURER possesses as reasonably necessary for such purposes.

- 8.5 All delivery orders from DISTRIBUTOR to MANUFACTURER shall specify (i) the quantities of the Products, (ii) the prices to be invoiced by MANUFACTURER to DISTRIBUTOR according to Schedule 6, (iii) the shipping and invoice address, (iv) specific shipping instructions, if applicable, (v) the requested delivery date, and (vi) such other information MANUFACTURER may reasonably request from time to time required to enable MANUFACTURER to fill the order.
- 8.6 The parties undertake to ensure continuity of supply as set forth under this subsection 8.6. Each party shall continue to sell reasonable quantities of its respective Products under this agreement to the other party for resale to any customers with which the other party has a written contract has been entered during the term of this Agreement, to the extent the other party has continuing supply obligations to its customer under such written contract, for a period of up to 5 years following the effective date of the written contract governing such customer relationship.

9. Passing of Risk

The risk for loss or damage to the Products passes from MANUFACTURER to DISTRIBUTOR when delivery of the Products has been made to DISTRIBUTOR Ex Works MANUFACTURER.

10. Payment

Payment for each Products ordered by DISTRIBUTOR shall be made forty-five (45) days following receipt of the MANUFACTURER's invoice by DISTRIBUTOR, but in no even earlier than forty-five (45) days following delivery Ex Works MANUFACTURER.

11. Sale, Sub-License

- 11.1 DISTRIBUTOR agrees to use vigorous efforts at promoting, selling, distributing, advertising generally for creating a demand for the Products throughout the Territories as agreed in Schedule 5 hereto. The responsibilities for the Territories will be reviewed and should be adjusted if necessary no later than 6 months after product launch.
- 11.2 DISTRIBUTOR is hereby granted a license to distribute the software contained in Schedule 1, respectively Schedule 2 hereto to purchasers of the Products, and to sublicense use of such software to end-user customers of the Products, solely to run the software in object-code form for use in connection with such Products. All sublicenses of such software granted by DISTRIBUTOR hereunder shall be under the end-user license agreement applicable to the software contained in DISTRIBUTOR's Product, which shall in any event be as protective of the MANUFACTURER's software as the terms of this Agreement.
- 11.3 With the Commencement Date of this Agreement MANUFACTURER undertakes to transfer to the DISTRIBUTOR sales organizations all sales responsibilities and sales contacts in the Territories, case by case. On current sales projects of MANUFACTURER in the Territory transfer activities to DISTRIBUTOR will be mutually agreed case by case on the basis of the best practices and customer satisfaction.

12. Customer Service, Support, Spare Parts and Sub-Assemblies

- 12.1 MANUFACTURER agrees to supply maintenance or repair support including but not limited to board exchange and calibration services on the Products and its spare parts and sub-assemblies for a period of two (2) years from the date of the last delivery of the Products to DISTRIBUTOR.
- 12.2 Spare parts and sub assembly prices for DISTRIBUTOR, respectively its customers, as well as repair, maintenance, exchange and calibration services for the Products are set forth in Schedule 6 to this Agreement.

13. Non-Solicitation

For the duration of this Agreement and one year following its termination, the parties shall not, directly or through an affiliated or otherwise related company, solicit and/or hire any person who is an employee of the other party, provided that a party shall not be prevented to hire persons who have had no involvement whatsoever in the contractual relationship constituted by this Agreement or business hereunder or related to this Agreement during a period of twelve months preceding the hiring date. For of this Article 13, employees outside of the Fiber Optic Test and Measurement Group of Acterna shall not be considered employees of Acterna, and employees outside of the Luna Technologies Division of Luna Innovations Incorporated shall not be considered employees of Luna.

The other party shall be entitled, without any limitation, to compensation from the infringing party for damages arising out of such breach in excess of the liquidated damages.

For the avoidance of any doubt, nothing in this Agreement shall prevent the other party from seeking injunctive relief against a breach of this Article 13 by the infringing party.

14. Successor Products

If MANUFACTURER procures, develops or markets any successor product not covered by this Agreement or being a product of the same description and the use as any of the Products, such product shall be brought within the scope of this Agreement upon DISTRIBUTOR's request, as one of the Products and the Schedules hereto will be amended accordingly.

15. Liability

- 15.1 DISTRIBUTOR shall not be liable to MANUFACTURER and MANUFACTURER shall not be liable to DISTRIBUTOR or to any other person or institution for any loss or damage whatsoever or howsoever caused arising directly or indirectly in connection with the Products, parts, or otherwise other than as imposed by the law relating to this Agreement. DISTRIBUTOR and MANUFACTURER mutually and expressly exclude liability to each other for consequential loss or damage including but not limited to loss of profit, business, revenue, goodwill or anticipated savings, unless such claim is based on gross negligence or wilful misconduct.

-
- 15.2 MANUFACTURER undertakes to take out and maintain adequate insurance cover with a reputable insurance company against liability which MANUFACTURER or DISTRIBUTOR may incur to a customer or any other person in connection with the Products or any information or documentation or training supplied therewith or upon which DISTRIBUTOR has relied. MANUFACTURER shall upon request of DISTRIBUTOR produce its policy of such insurance, the premium receipt and insurance certificate.

16. Force Majeure

The parties shall be under no liability to each other in any way whatsoever for destruction, damage, delay or any other matters of any nature whatsoever arising out of war, rebellion, civil commotion, strikes, lock outs and industrial disputes, fire explosion, earthquake, act of God, flood, drought or bad weather, the requisitioning or other act or order by any government department, council or other constituted body, or any other similar circumstances or happenings beyond their control.

17. Warranty

- 17.1 MANUFACTURER warrants that the Products shipped under the scope of this Agreement substantially work within their specifications and conform to local, national and international standards and requirements affecting the Territory.
- 17.2 MANUFACTURER warrants to DISTRIBUTOR that the Products and parts purchased by DISTRIBUTOR are free from defects in respect of material and workmanship, and MANUFACTURER undertakes to repair or replace the Products, part or sub-assembly found defective within a period of 24 months from Ex Works delivery under this Agreement, subject to compliance with the provisions of (17.3) below.
- 17.3 Upon receipt of a claim from DISTRIBUTOR under the warranty period agreed in (17.2), MANUFACTURER shall forthwith test and inspect the Products at MANUFACTURER's expense and return to DISTRIBUTOR, freight paid by MANUFACTURER. Replacement parts, items or Products shall be sent by MANUFACTURER to DISTRIBUTOR freight prepaid Original freight cost from DISTRIBUTOR to MANUFACTURER of deemed defective Products will be borne by DISTRIBUTOR.
- Notwithstanding the foregoing, prior to returning any Product, DISTRIBUTOR must obtain a Return Materials Authorization (RMA) number from MANUFACTURER pursuant to MANUFACTURER's RMA procedures, and in cases where MANUFACTURER is unable to confirm the existence of a defect in any Product returned to MANUFACTURE ("NDF Product"), DISTRIBUTOR shall be responsible to pay or reimburse MANUFACTURER for the shipping costs incurred with respect to the original return of the NDF Product from DISTRIBUTOR to MANUFACTURER, and MANUFACTURER's return of the NDF Product back to DISTRIBUTOR.

18. Indemnities

- 18.1 MANUFACTURER agrees to protect and save harmless and defend at its own expense DISTRIBUTOR from and against any and all third-party claims that allege infringement by MANUFACTURER's Products of patents, trade marks, industrial designs, copyrights or other intellectual property rights issued under the laws of the United States and any other country affecting the Territory.

-
- 18.2 MANUFACTURER's obligations under 18.1 are contingent on: DISTRIBUTOR (i) providing MANUFACTURER prompt notice of any claim described in 18.1 above (ii) MANUFACTURER having the sole right to defend any such claims and make settlements thereof at its own expense, and (iii) DISTRIBUTOR providing, at MANUFACTURER's expense, reasonable assistance in connection with the defense or settlement of the claim.
- 18.3 MANUFACTURER shall have no obligation under Section 18.1 to the extent any claim of infringement is caused by (i) use of the MANUFACTURER's Product in combination with any other product not provided by MANUFACTURER if the infringement would not have occurred but for such combination; (ii) any alteration or modification of the MANUFACTURER's Product which MANUFACTURER did not authorize, if the infringement would not have occurred but for such alteration or modification; or (iii) MANUFACTURER's compliance with DISTRIBUTOR's design specifications, if the infringement would not have occurred but for MANUFACTURER's implementation of such specifications.

19. Patents, Trademarks and Intellectual Property Rights

- 19.1 The parties acknowledge the any intellectual property ("IP") continues to vest in the party who owned such IP prior to the commencement of this Agreement. In particular but not limited to, this applies to any trade marks, trade names, copyrights, patents and other intellectual property rights used or embodied in or in connection with a party's pre-existing products and / or resulting from a party's previous development efforts. In addition, each party shall continue to own all IP developed by that party following the commencement of this Agreement, regardless of whether such IP was created or acquired in connection with this Agreement. No party shall during or at any time after the expiry or termination of this Agreement in any way question or dispute the other party's ownership of any such rights.
- 19.2 MANUFACTURER or DISTRIBUTOR respectively shall not during or after the expiry or termination of this Agreement, without the prior written consent of the other Party, use or adopt any name, trade name, trading style or commercial designation that includes or is similar to or may be mistaken for the whole or any part of any trade mark, trade name, trading style or commercial designation used by the other Party as a trademark.

20. Confidential Information

- 20.1 Each party (the "Disclosing Party") has imparted and may from time to time impart to the other party (the "Receiving Party") certain confidential information and documentation relating to the Products, its marketing, use, maintenance, operation and software including technical specifications therefore (together with the types of information described as confidential in the Non-Disclosure Agreement between the parties, "Confidential Information") and the Receiving Party hereby agrees that it shall use such Confidential Information solely for the purposes of this Agreement and that it shall not disclose, whether directly or indirectly, to any third party (including end customers), such information other than is required to carry out the purposes of this Agreement.
- 20.2 In the event that disclosure is necessary, Receiving Party will obtain the prior written approval of the Disclosing Party and then will obtain from such third parties duly binding agreements to maintain in confidence the information disclosed to the same extent at least as the Receiving Party is so bound to the Disclosing Party hereunder.

-
- 20.3 The Receiving Party further agrees that on expiry or termination of this Agreement it shall return or destroy (as the Disclosing Party may instruct) such information and documentation and it shall not itself or through any subsidiary, agent or other party sell, market, distribute, manufacture or otherwise deal with the Products or have the same manufactured for it based on any technical or Confidential Information supplied to it by the Disclosing Party, with the exception of information or action needed to Service the Product (cf Article 12).
- 20.4 Obligations regarding handling of Confidential Information will remain valid for a period of 5 years following termination of this agreement.

21. Termination or Expiry

- 21.1 Notwithstanding any other provisions herein contained, this Agreement may be terminated forthwith by one Party by notice in writing if any of the following events shall occur:
- (i) if the other Party shall commit any act of bankruptcy, or shall cease to carry on business;
 - (ii) if the other Party shall at any time be in material default under this Agreement and shall fail to remedy such material default within ninety (90) days. after receiving written notice thereof from the non-defaulting party;
 - (iii) if the other Party is by any cause prevented from performing its obligations hereunder for a continuous period of three (3) months or for a total period of six (6) months in any period of twelve (12) consecutive months. If any such event referred to in (i), (ii), or (iii) above shall occur, termination shall become effective forthwith or on the date set forth in such notice.
- 21.2 The expiry or termination of this Agreement shall be without prejudice to the rights of the parties accrued up to the date of such expiry or termination.

21.3 Upon termination or expiration of this Agreement the provisions of Sections 8.6,12,13,15 through 20, 29 and 30 and all payment obligations incurred prior to the effective date of such termination or expiration shall survive. All other provisions of this Agreement shall terminate.

22. Information

DISTRIBUTOR agrees and undertakes to provide MANUFACTURER at mutually agreed intervals or at such reasonable times or at request of MANUFACTURER with information concerning sales of the Products and parts thereof and any changes in the Territory relating to demand, ultimate users and customers, the activities of competitors and such other matters and information in any way relating to the performance of this Agreement. MANUFACTURER undertakes to do all such reasonable acts and things as may be necessary or helpful to extend and improve the Product and goodwill in the Territory.

23. Title in the Products

Title in the products shall pass to DISTRIBUTOR when delivery of the Products has been made Ex Works MANUFACTURER.

24. Waiver

Failure or neglect by one Party to enforce at any time any of the provisions hereof shall not be construed nor shall be deemed to be a waiver of its rights hereunder nor in any way affect the validity of the whole or any part of this Agreement nor prejudice the respective Party's rights to take subsequent action.

25. Assignment

This Agreement shall not be assigned by a party, in whole or part, to any party without the prior written consent of the other party. Notwithstanding, either party may assign this Agreement without the consent of the other in connection with a sale of all or substantially all of such party's business or assets, whether by merger, asset sale, consolidation or the like. Subject to the foregoing, this Agreement shall bind and inure to the benefit of the parties and their respective successors and assigns.

26. Notices

Any notice required or permitted under the terms of this Agreement or required by statute, law or regulation shall (unless otherwise provided) be in writing and shall be delivered in person, sent by registered mail or air mail as appropriate, properly posted and fully prepaid in an envelope properly addressed or sent by Telefax to the respective parties as follows:

LUNA

Luna Technologies, a Division of Luna Innovations Incorporated
2020 Kraft Dr. Suite 2000
Blacksburg, VA 24060
Fax: 1-540-961-5191

ACTERNA

Acterna France SAS
34 Rue Necker
42000 Saint Etienne, France
France
FAX NUMBER +33 4 77 47 89 70

or to such other address or Telefax number as may from time to time be designated by notice hereunder. Any such notice shall be in the English language and shall be considered to have been given at the time when actually delivered, sent by Telefax or in any other event within fourteen (14) days after it was mailed in the manner herein before provided.

27. Agreement

This Agreement supersedes any arrangements, understandings, promises or agreements made or existing between the parties hereto prior to or simultaneously with this Agreement and constitutes the entire understanding between the parties hereto. Except as otherwise provided herein, no addition, amendment to or modification of this Agreement shall be effective unless it is in writing and signed by and on behalf of both parties.

28. Headings

The headings of the paragraphs of this Agreement are inserted for convenience of reference only and are not intended to be part of or to affect the meaning or interpretation of this Agreement.

29. Severability

In the event that any of the terms, conditions or provisions contained herein shall be determined invalid, unlawful or unenforceable to any extent, such term, condition or provision shall be severed from the remaining body of the Agreement which shall continue to be valid and enforceable to the fullest extent permitted by law.

30. Governing Law

The rights and obligations of the parties to the Agreement and the interpretation of this Agreement shall be governed by and construed in accordance with the laws of England without giving effect to its conflict of laws provisions. The application of the United Nations Convention on Contracts for the International Sales of Goods (the "CISG") is explicitly excluded. The competent courts shall be the English courts.

IN WITNESS WHEREOF the parties hereto have executed this Agreement on the date, set forth opposite their respective names.

SIGNED for and on behalf of

LUNA	August 18 th , 2006	/s/ R J Soller	
	Date	Name	Brian J. Soller
	Date	Name	

SIGNED for and on behalf of

ACTERNA	August 18 th , 2006	DILUIGI ENZO	
	Date	Name	/s/ Diluigi Enzo
	Date	Name	

Schedules:

- 1: Luna Products
- 2.: Acterna Products
- 3.: Specifications for OFDR module
- 4.: Specifications for MTS/TB module
- 5.: Territories / Customer Groups
- 6.: Prices
- 7.: Roadmap

Luna Products

- OBR (Optical Backscatter Reflectometer) Module

Acterna Products

[****]

Specifications for OFDR Module

TBD

Specifications for MTS/TB Module

This is not required since the only module is the OFDR module which is described in schedule 3

Territories / Customer Groups

1. ACTERNA shall be the exclusive distributor for Luna Products in the following geographies and customer groups:
[***]
ACTERNA shall be the non-exclusive distributor for Luna Products in the following geographies and customer groups:
[****]
2. LUNA shall be the exclusive distributor for Acterna Products in the following geographies and customer groups:
[***]
LUNA shall be the non-exclusive distributor for Acterna Products in the following geographies and customer groups:
[****]

Prices

Roadmap

[****]

**Exhibit 31.1—CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Kent A. Murphy, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Luna Innovations Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (c) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

Date: November 13, 2006

/s/ KENT A. MURPHY

Kent A. Murphy, Ph.D.
President and Chief Executive Officer

**Exhibit 31.2—CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Dale E. Messick, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Luna Innovations Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (c) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

Date: November 13, 2006

/s/ DALE E. MESSICK

Dale E. Messick
Chief Financial Officer

**Exhibit 32.1—CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the quarterly report of Luna Innovations Incorporated (the “Company”) on Form 10-Q for the period ending September 30, 2006 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Kent A. Murphy, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ KENT A. MURPHY

Kent A. Murphy, Ph.D.
President and Chief Executive Officer

November 13, 2006

**Exhibit 32.2—CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the quarterly report of Luna Innovations Incorporated (the “Company”) on Form 10-Q for the period ending September 30, 2006 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Dale E. Messick, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ DALE E. MESSICK

Dale E. Messick
Chief Financial Officer

November 13, 2006