UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

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

For the quarterly period ended June 30, 2016

OR

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

For the transition period from _________ to _________

COMMISSION FILE NUMBER 000-52008

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

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

301 First Street SW, Suite 200
Roanoke, VA 24011
(Address of Principal Executive Offices)

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

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

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

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

Large accelerated filer ☐ Accelerated filer ☐

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

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: As of August 9, 2016, there were 27,692,776 shares of the registrant's common stock outstanding.

LUNA INNOVATIONS INCORPORATED
QUARTERLY REPORT ON FORM 10-Q
FOR THE QUARTER ENDED JUNE 30, 2016

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PART I. FINANCIAL INFORMATION

ITEM 1. *FINANCIAL STATEMENTS*

Luna Innovations Incorporated
Consolidated Balance Sheets

	June 30, 2016	December 31, 2015
	(unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	$ 13,807,799	$ 17,464,040
Accounts receivable, net	11,151,791	11,034,557
Inventory	8,389,095	8,863,167
Prepaid expenses and other current assets	1,694,810	1,388,439
Total current assets	35,043,495	38,750,203
Property and equipment, net	7,362,464	6,614,238
Intangible assets, net	9,490,702	10,404,312
Goodwill	2,348,331	2,274,112
Other assets	88,948	88,948
Total assets	$ 54,333,940	$ 58,131,813
Liabilities and stockholders' equity		
Liabilities:		
Current liabilities:		
Current portion of long-term debt obligations	$ 1,833,333	$ 1,833,333
Current portion of capital lease obligations	50,335	31,459
Accounts payable	3,889,383	4,054,425
Accrued liabilities	7,524,569	8,304,686
Deferred revenue	1,027,929	1,109,759
Total current liabilities	14,325,549	15,333,662
Long-term deferred rent	1,481,824	1,564,229
Long-term debt obligations	3,375,000	4,291,667
Long-term capital lease obligations	141,457	35,237
Total liabilities	19,323,830	21,224,795
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value $0.001, 1,321,514 shares authorized, issued and outstanding at June 30, 2016 and December 31, 2015	1,322	1,322
Common stock, par value $0.001, 100,000,000 shares authorized, 27,988,103 and 27,644,832 shares issued, 27,692,776 and 27,477,181 shares outstanding at June 30, 2016 and December 31, 2015	28,241	28,178
Treasury stock at cost, 300,327 and 167,652 shares at June 30, 2016 and December 31, 2015	(341,320)	(184,934)
Additional paid-in capital	81,997,662	81,461,907
Accumulated deficit	(46,675,795)	(44,399,455)
Total stockholders' equity	35,010,110	36,907,018
Total liabilities and stockholders' equity	$ 54,333,940	$ 58,131,813

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

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Luna Innovations Incorporated
Consolidated Statements of Operations

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(unaudited)		(unaudited)	
Revenues:				
Technology development	$ 4,137,382	$ 3,728,271	$ 7,860,644	$ 6,603,786
Products and licensing	10,509,522	6,297,475	20,773,273	8,761,062
Total revenues	14,646,904	10,025,746	28,633,917	15,364,848
Cost of revenues:				
Technology development	3,181,447	2,576,145	6,061,282	4,659,769
Products and licensing	6,294,607	3,252,627	12,558,180	4,219,317
Total cost of revenues	9,476,054	5,828,772	18,619,462	8,879,086
Gross profit	5,170,850	4,196,974	10,014,455	6,485,762
Operating expense:				
Selling, general and administrative	4,581,776	5,518,656	9,227,060	10,087,609
Research, development and engineering	1,240,655	801,221	2,791,146	1,136,111
Total operating expense	5,822,431	6,319,877	12,018,206	11,223,720
Operating loss	(651,581)	(2,122,903)	(2,003,751)	(4,737,958)
Other income (expense):				
Other (expense) income, net	(39,489)	4,264	(35,545)	4,109
Interest expense	(78,906)	(49,966)	(165,079)	(59,103)
Total other expense	(118,395)	(45,702)	(200,624)	(54,994)
Loss before income taxes	(769,976)	(2,168,605)	(2,204,375)	(4,792,952)
Income tax expense	1,000	—	26,175	2,808
Net loss	(770,976)	(2,168,605)	(2,230,550)	(4,795,760)
Preferred stock dividend	24,580	20,021	45,790	46,581
Net loss attributable to common stockholders	$ (795,556)	$ (2,188,626)	$ (2,276,340)	$ (4,842,341)
Net loss per share attributable to common stockholders:				
Basic and diluted	$ (0.03)	$ (0.10)	$ (0.08)	$ (0.26)
Weighted average common shares and common equivalent shares outstanding:				
Basic and diluted	27,557,960	21,997,768	27,517,792	18,577,006

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

Luna Innovations Incorporated
Consolidated Statements of Cash Flows

	Six Months Ended June 30,	
	2016	2015
	(unaudited)	
Cash flows used in operating activities		
Net loss	$ (2,230,550)	$ (4,795,760)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation and amortization	1,861,603	824,251
Share-based compensation	465,028	571,439
Bad debt expense	50,515	10,375
Change in assets and liabilities		
Accounts receivable	(167,749)	(335,811)
Inventory	474,072	(1,345,687)
Other current assets	(306,371)	(358,794)
Accounts payable and accrued expenses	(1,076,784)	(1,271,686)
Deferred revenue	(81,830)	(154,189)
Net cash used in operating activities	(1,012,066)	(6,855,862)
Cash flows (used in) provided by investing activities		
Acquisition of property and equipment	(1,294,775)	(50,175)
Intangible property costs	(244,198)	(123,578)
Cash acquired in business combination	—	374,517
Net cash (used in) provided by investing activities	(1,538,973)	200,764
Cash flows (used in) provided by financing activities		
Payments on capital lease obligations	(32,149)	(36,406)
Payments of debt obligations	(916,667)	(5,962,355)
Repurchase of common stock	(156,386)	(33,113)
Proceeds from term loan	—	6,000,000
Proceeds from the exercise of options	—	82,516
Net cash (used in) provided by financing activities	(1,105,202)	50,642
Net decrease in cash and cash equivalents	(3,656,241)	(6,604,456)
Cash and cash equivalents—beginning of period	17,464,040	14,116,969
Cash and cash equivalents—end of period	$ 13,807,799	$ 7,512,513
Supplemental disclosure of cash flow information		
Cash paid for interest	$ 157,371	$ 31,474
Cash paid for income taxes	$ 198,425	$ 2,808
Non-cash investing and financing activities		
Shares of common stock issued for business combination	—	11,872,557
Dividend on preferred stock, 39,646 shares of common stock issuable for the six months ended June 30, 2016 and 2015, respectively	$ 45,790	$ 46,581
Capital expenditures funded by capital lease borrowings	$ 157,246	$ —

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

Luna Innovations Incorporated
Notes to Unaudited Consolidated Financial Statements

1. Basis of Presentation and Significant Accounting Policies

Nature of Operations

Luna Innovations Incorporated (“we,” “Luna Innovations” or the “Company”), headquartered in Roanoke, Virginia, was incorporated in the Commonwealth of Virginia in 1990 and reincorporated in the State of Delaware in April 2003. We develop, manufacture and market fiber optic sensing, test & measurement products and are focused on bringing new and innovative technology solutions to measure, monitor, protect and improve critical processes in the aerospace, automotive, energy, composite, telecommunications and defense industries. Following our merger with Advanced Photonix, Inc. ("API") in 2015 (See Note 2), we also package optoelectronic semiconductors into high speed optical receivers ("HSOR" products), custom optoelectronic subsystems and Terahertz instrumentation. We are organized into two business segments, which work closely together to turn ideas into products: our Technology Development segment and our Products and Licensing segment. Our business model is designed to accelerate the process of bringing new and innovative technologies to market. We have a history of net losses from operations beginning in 2005. We have historically managed our liquidity through cost reduction initiatives, debt financings, capital markets transactions and the sale of assets.

Unaudited Interim Financial Information

The accompanying unaudited consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United Stated of America (“U.S. GAAP”) for interim financial statements and Article 10 of Regulation S-X of the Securities Exchange Act of 1934, as amended. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for annual 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 June 30, 2016, results of operations for the three and six months ended June 30, 2016 and 2015, and cash flows for the six months ended June 30, 2016 and 2015. The results of operations for the three and six months ended June 30, 2016, are not necessarily indicative of the results that may be expected for the year ending December 31, 2016.

The consolidated interim financial statements, including our significant accounting policies, should be read in conjunction with the audited Consolidated Financial Statements and the notes thereto for the year ended December 31, 2015, included in our Annual Report on Form 10-K as filed with the Securities and Exchange Commission (“SEC”) on March 29, 2016.

Business Combinations

We apply the provisions of Accounting Standards Codification 805, *Business Combinations* ("ASC 805"), in the accounting for acquisitions. ASC 805 requires us to recognize separately from goodwill the assets acquired and the liabilities assumed at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed. While we use our best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date as well as contingent consideration, where applicable, these estimates are inherently uncertain and subject to refinement. Any and all adjustments have been made as of the reporting period reflected in this report. Upon the conclusion of the measurement period or final determination of the values of the assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded in our Consolidated Statements of Operations. Accounting for business combinations requires management to make significant estimates and assumptions, especially at the acquisition date, including estimates for intangible assets, contractual obligations assumed, restructuring liabilities, pre-acquisition contingencies and contingent consideration, where applicable. Although we believe the assumptions and estimates we have made have been reasonable and appropriate, they are based in part on historical experience and information obtained from management of the acquired companies and are inherently uncertain. Critical estimates in valuing certain of the intangible assets we have acquired include: future expected cash flows from product sales; customer contracts and acquired technologies; expected costs to develop in-process research and development into commercially viable products and estimated cash flows from the projects when completed; and discount rates. Unanticipated events and circumstances may occur that may affect the accuracy or validity of such assumptions, estimates, or actual results.

Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market in an orderly transaction between marketplace participants. Various valuation approaches can be used to

determine fair value, each requiring different valuation inputs. The following hierarchy classifies the inputs used to determine fair value into three levels:

- Level 1—Quoted prices for identical instruments in active markets
- Level 2—Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets
- Level 3—Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable

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

Net Loss Per Share

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

The effect of 5.8 million and 6.4 million common stock equivalents (which include outstanding warrants, preferred stock and stock options) are not included for the three months ended June 30, 2016 and 2015, respectively, as they are anti-dilutive to earnings per share due to our net loss. The effect of 5.7 million and 5.9 million common stock equivalents are not included for the six months ended June 30, 2016 and 2015, respectively, as they are considered anti-dilutive to earnings per share due to our net loss.

Recently Issued Accounting Pronouncements

In April 2016, the Financial Accounting Standards Board ("FASB") amended the FASB Accounting Standards Codification and created a new Topic 606, and issued Accounting Standards Update ("ASU") No. 2016-10, *Revenue from contracts with customers: Identifying Performance Obligations and Licensing*. This amendment prescribes that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The amendment supersedes the revenue recognition requirements in Topic 605, *Revenue Recognition*, and most industry-specific guidance throughout the Industry Topics of the Accounting Standards Codification, and is effective for annual and interim reporting periods beginning after December 15, 2017. We are currently determining the transition method and assessing the impact the amendments may have on our financial condition, results of operations or cash flows as a result of adopting this standard.

In March 2016, the FASB issued ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accountin*g. The amendments apply to several aspects of accounting for share-based compensation including the recognition of excess tax benefits and deficiencies and their related presentation in the statement of cash flows as well as accounting for forfeitures. ASU No. 2016-09 is effective for fiscal years beginning after December 15, 2016, including interim periods and allows for prospective, retrospective or modified retrospective adoption, depending on the area covered in the update, with early adoption permitted. We are currently determining the transition method and assessing the impact the amendments may have on our financial condition, results of operations or cash flows as a result of adopting this standard.

In February 2016, the FASB issued ASU No. 2016-02, *Leases*, which requires a lessee to recognize in its statement of financial position an asset and liability for most leases with a term greater than 12 months. Lessees should recognize a liability to make lease payments and a right-of-use asset representing the lessee's right to use the underlying asset for the lease term. The amendment is effective for fiscal years ending after December 15, 2018, including interim periods within those fiscal years. We are currently evaluating the impact the adoption of this standard will have on our consolidated financial statements.

In November 2015, the FASB issued ASU No. 2015-17, *Balance Sheet Classification of Deferred Taxes*, which simplifies the presentation of deferred taxes by requiring that deferred tax assets and liabilities be classified as noncurrent in any classified balance sheet rather than being separated into current and non-current amounts. The amendment is effective for reporting periods beginning

after December 15, 2016. We do not expect the adoption of this standard to have a significant impact on our consolidated financial statements.

In September 2015, the FASB issued ASU No. 2015-16, *Simplifying the Accounting for Measurement Period Adjustments*, which requires that an acquirer recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amounts are determined. The amendment is effective for fiscal years beginning after December 15, 2015 and requires acquirer to record, in the same period's financial statements, the effect on earnings of changes in depreciation, amortization, or other income effects, if any, as a result of the change to the provisional amounts, calculated as if the accounting had been completed at the acquisition date. Additionally, an entity is to present separately on the face of the income statement or disclose in the notes the portion of the amount recorded in current-period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date. We adopted this standard for periods beginning January 1, 2016 and did not experience a significant impact on our consolidated financial statements.

In April 2015, the FASB issued ASU No. 2015-03, *Interest- Imputation of Interest,* which requires debt issuance costs to be presented on the balance sheet as a direct deduction from the associated debt liability. The guidance is effective for annual reporting periods and interim periods within those annual reporting periods beginning after December 15, 2015. Early adoption is permitted. We adopted this standard for periods beginning January 1, 2016 and did not experience a significant impact on our consolidated financial statements.

2. Merger with API

On May 8, 2015, we completed our merger with API (the "Merger") pursuant to the Agreement and Plan of Merger (the "Merger Agreement") for a total purchase consideration of $15.9 million. In accordance with the terms of the Merger Agreement, API shareholders received 0.31782 shares of our common stock for each share of API common stock they owned. The Merger has been accounted for under the acquisition method of accounting in accordance with ASC 805, with Luna treated as the accounting acquirer. We incurred $1.7 million and $3.5 million in Merger-related costs for the three and six months ended June 30, 2015, respectively. Merger-related costs are included within selling, general and administrative expenses in the Consolidated Statement of Operations. We did not incur Merger-related costs for the three and six months ended June 30, 2016.

The total purchase consideration of $15.9 million consisted of the following:

		Purchase Consideration
Fair value of Luna common stock issued to API shareholders	$	15,671,775
Fair value of vested API options assumed by Luna		187,879
Total purchase consideration	$	15,859,654

Under the acquisition method of accounting, the total estimated purchase consideration is allocated to the acquired tangible and intangible assets and assumed liabilities based on their estimated fair values as of the acquisition date. Any excess of the fair value of assets acquired and liabilities assumed over the fair value of the acquisition consideration is recognized as a gain by the acquirer. We completed an allocation of the purchase consideration with the assistance of a third-party valuation expert, as represented in the table below.

		Allocation of Purchase Consideration
Cash	$	374,517
Accounts receivable		3,314,994
Inventory		5,246,000
Other current assets		541,726
Property and equipment		3,601,850
Identifiable intangible assets		11,100,000
Goodwill		2,348,331
Other assets		86,953
Accounts payable and accrued expenses		(5,508,789)
Debt		(5,212,355)
Other liabilities		(33,573)
Total purchase consideration	$	15,859,654

The identifiable intangible assets acquired and their estimated lives were as follows:

		Estimated Fair Value	Estimated Useful Life
Developed technology	$	4,500,000	2-10 years
In-process research and development		3,900,000	Indefinite
Customer base		1,300,000	9-11 years
Trade names		1,000,000	10 years
Backlog		400,000	1 year
	$	11,100,000	

Developed technologies acquired primarily consist of API's existing technologies related to HSOR products, Optoelectronic systems, modules and components, and Terahertz solutions. The developed technologies of API were valued using both the "relief-from-royalty" method and the "multi-period excess earnings" method, under the income approach. This multi-period excess earnings method reflects the present value of the projected cash flows that are expected to be generated by the developed technologies less charges representing the contribution of other assets to those cash flows. A discount rate of 32.5% was used to discount the cash flows to the present value.

In-process research and development represents the estimated fair values of incomplete API research and development projects that had not reached technological feasibility as of the closing date of the Merger. On September 1, 2015, technologies associated with $1.6 million of in-process research and development were placed into service. In the future, the fair value of each project at the date of the closing of the Merger will be either amortized or impaired depending on whether the projects are completed or abandoned. The fair value of in-process research and development was determined using the multi-period excess earnings method. A discount rate of 37.5% was used to discount the cash flows to the present value.

Customer relationships represent the fair value of projected cash flows that will be derived from the sale of products to API's existing customers as of the closing date of the Merger. Customer relationships were valued utilizing both a multi-period excess earnings method and the "distributor" method, under the income approach. Under this premise, the margin of a distributor within the industry is deemed to be the margin attributable to customer relationships. This isolates the cash flows attributable to the customer relationships that a market participant would be willing to pay for. A discount rate of 32.5% was used to discount the cash flows to the present value.

Trade names and trademarks are considered a type of guarantee of a certain level of quality or performance represented by the Picometrix brand. Trade names and trademarks were valued using the "relief-from-royalty" method of income approach. This method is based on the assumption that in lieu of ownership, a market participant would be willing to pay a royalty in order to exploit the related benefits of this asset. A discount rate of 24.5% was used to discount the cash flows to the present value.

Customer backlog represents the fair value of projected cash flows that will be derived from the sale of products under existing contracts and customer orders as of the closing date of the Merger. The fair value of the customer backlog was determined using the multi-period excess earnings method. A discount rate of 21.5% was used to discount the cash flows to the present value.

Goodwill

Goodwill represents the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed in connection with the Merger. During 2015 and the first six months of 2016, we recognized various measurement period adjustments to the value of assets acquired and liabilities assumed in the Merger. These adjustments primarily related to the estimated value of trade names acquired, certain deferred compensation and claims reserve liabilities assumed, with an offsetting increase to the recorded value of goodwill.

Goodwill as of January 1, 2014	$	—
Goodwill recorded at acquisition date of API		614,184
Measurement period adjustments		1,659,928
Goodwill as of December 31, 2015	$	2,274,112
Measurement period adjustments		74,219
Goodwill as of June 30, 2016	$	2,348,331

Pro forma consolidated results of operations

The following unaudited pro forma financial information presents combined results of operations for each of the periods presented as if the Merger had been completed on January 1, 2015. The pro forma information includes adjustments to depreciation expense for property and equipment acquired, amortization expense for the intangible assets acquired, interest expense for the new debt facility, and elimination of the Merger-related transaction expenses recognized in each period. The pro forma data is for informational purposes only and is not necessarily indicative of the consolidated results of operations of the combined business had the Merger actually occurred on January 1, 2015 or the results of future operations of the combined business. For instance, planned or expected operational synergies following the Merger are not reflected in the pro forma information. Consequently, actual results will differ from the unaudited pro forma information presented below.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(unaudited)		(unaudited)	
Revenue	$ 14,647	$ 12,444	$ 28,634	$ 24,232
Net loss	$ (739)	$ (1,818)	$ (2,116)	$ (3,889)

4. Inventory

Inventory consists of finished goods, work-in-process and raw materials valued at the lower of cost (determined on the first-in, first-out basis) or market. We write down inventory for estimated obsolescence or unmarketable inventory in an amount

equal to the difference between the cost of the inventory and the estimated market value based upon assumptions about future demand and market conditions.

Components of inventory were as follows:

	June 30, 2016	December 31, 2015
	(unaudited)	
Finished goods	$ 3,837,604	$ 1,938,466
Work-in-process	1,304,509	1,227,270
Raw materials	3,246,982	5,697,431
Total inventory	$ 8,389,095	$ 8,863,167

5. Accrued Liabilities

Accrued liabilities at June 30, 2016 and December 31, 2015 consisted of the following:

	June 30, 2016	December 31, 2015
	(unaudited)	
Accrued compensation	$ 4,508,246	$ 4,719,533
Claims reserve	1,577,123	1,752,904
Accrued sub-contracts	421,199	351,847
Accrued professional fees	101,419	133,847
Accrued income tax	—	160,438
Deferred rent	153,946	137,889
Royalties	152,763	351,003
Warranty reserve	179,925	173,687
Accrued liabilities - other	429,948	523,538
Total accrued liabilities	$ 7,524,569	$ 8,304,686

6. Debt

Silicon Valley Bank Facility

We currently have a Loan and Security Agreement with SVB under which we have a term loan with an original borrowing amount of $6.0 million (the “Term Loan” or “Credit Facility”). Prior to the amendment to the Credit Facility in connection with our Merger with API as described above, the Term Loan was to be repaid by us in 48 monthly installments, plus accrued interest payable monthly in arrears, and unless earlier terminated, was scheduled to mature on May 1, 2015. The Term Loan carried a floating annual interest rate equal to SVB’s prime rate then in effect plus 2%.

On May 8, 2015, we entered into the Sixth Loan Modification Agreement with SVB, under which we executed a new term loan in the principal amount of $6.0 million and used the proceeds principally to repay the previously outstanding indebtedness of API and other transaction related costs. The Term Loan bears interest at a floating rate of prime plus 2% and is to be repaid in 48 monthly installments of $125,000 plus accrued interest. In September 2015, we entered into the Waiver and Seventh Loan Modification Agreement, which provides an additional $1 million of available financing for purchases of equipment through December 31, 2015, provides a waiver of any breach of the minimum liquidity covenant in periods prior to the amendment, and requires us to maintain at each month end a ratio of cash plus 60% of accounts receivable greater than or equal to 1.5 times the outstanding principal balance of the Term Loan. In addition, the Waiver and Seventh Loan Modification requires us to achieve a minimum Adjusted EBITDA, as defined therein, on a quarterly basis. The Credit Facility also requires us to observe a number of additional operational covenants, including protection and registration of intellectual property rights,

and certain customary negative covenants. As of June 30, 2016, we were in compliance with all covenants under the Credit Facility.

Amounts due under the Credit Facility are secured by substantially all of our assets, including intellectual property, personal property and bank accounts. In addition, the Credit Facility contains customary events of default, including nonpayment of principal, interest or other amounts, violation of covenants, material adverse change, an event of default under any subordinated debt documents, incorrectness of representations and warranties in any material respect, bankruptcy, judgments in excess of a threshold amount, and violations of other agreements in excess of a threshold amount. If any event of default occurs SVB may declare due immediately all borrowings under the Credit Facility and foreclose on the collateral. Furthermore, an event of default under the Credit Facility would result in an increase in the interest rate on any amounts outstanding. As of June 30, 2016, there were no events of default on the Credit Facility.

As of June 30, 2016, we have drawn all of the additional $1.0 million of available financing. The balance under the Term Loan at June 30, 2016 and December 31, 2015, was $5.2 million and $6.1 million, respectively. The effective rate of our Term Loan at June 30, 2016 was 5.5%.

The following table presents a summary of debt outstanding as of June 30, 2016 and December 31, 2015:

	June 30, 2016	December 31, 2015
	(unaudited)	
Silicon Valley Bank Term Loan	$ 5,208,333	$ 6,125,000
Less: current portion	1,833,333	1,833,333
Total long-term debt	$ 3,375,000	$ 4,291,667

The schedule of remaining principal payments under our term loan is as follows:

2016	916,661
2017	1,833,336
2018	1,833,336
2019	625,000
	$ 5,208,333

7. Capital Stock and Share-Based Compensation

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

The fair value of each option granted during the six months ended June 30, 2016 and 2015 was estimated as of the grant date using the Black-Scholes-Merton option pricing model with the following assumptions:

	Six Months Ended June 30,	
	2016	2015
Risk-free interest rate	1.5%	1.88%
Expected life of options (in years)	7.5	7.5
Expected stock price volatility	73%	103%
Executive turnover rates	—%	—%
Non-executive turnover rates	14%	40%
Expected dividend yield	—%	—%

A summary of the activity for our 2003 Stock Plan, 2006 Equity Incentive Plan and 2016 Equity Incentive Plan is presented below for the six months ended June 30, 2016:

	Options Outstanding				Options Exercisable		
	Number of Shares	Price per Share Range	Weighted Average Exercise Price	Aggregate Intrinsic Value (1)	Number of Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value (1)
Balance, January 1, 2016	3,800,728	$0.61 - $8.43	$ 2.17	$ 111,314	3,045,150	$ 2.39	$ 103,603
Granted	20,000	$ 1.15	$ 1.15				
Canceled	(525,726)	$1.18 - $7.30	$ 2.35				
Balance, June 30, 2016	3,295,002	$0.61 - $7.30	$ 2.14	$ 64,918	2,891,233	$ 1.93	$ 62,644

(1) The intrinsic value of an option represents the amount by which the market value of the stock exceeds the exercise price of the option of in-the-money options only. The aggregate intrinsic value is based on the closing price of our common stock on the NASDAQ Capital Market, as applicable, on the respective dates.

At June 30, 2016, the outstanding stock options to purchase an aggregate of 3.3 million shares had a weighted-average remaining contractual term of 5.2 years, and the exercisable stock options to purchase an aggregate of 2.9 million shares had a weighted-average remaining contractual term of 4.9 years.

For the six months ended June 30, 2016 and 2015 we recognized $0.5 million and $0.6 million in share-based compensation expense, respectively, which is included in our selling, general and administrative expense in the accompanying consolidated financial statements. We expect to recognize $0.5 million in share-based compensation expense over the weighted-average remaining service period of 1.0 years for stock options outstanding as of June 30, 2016.

The following table summarizes the unvested value of our restricted stock awards:

	Number of Unvested Shares	Weighted Average Grant Date Fair Value	Aggregate Value of Unvested Shares
Balance at January 1, 2016	$ 669,625	$ 1.23	$ 823,639
Granted	319,000	$ 1.15	572,700
Vested	(303,246)	$ 1.25	(379,058)
Repurchased	(73,675)	$ 1.14	(83,990)
Balance at June 30, 2016	$ 611,704	$ 1.18	$ 933,291

The following details our equity transactions during the six months ended June 30, 2016:

	Preferred Stock		Common Stock		Treasury Stock		Additional Paid-in Capital
	Shares	$	Shares	$	Shares	$	$
Balance at January 1, 2016	1,321,514	1,322	27,477,181	28,178	167,652	(184,934)	81,461,907
Share-based compensation	—	—	—	—	—	—	465,028
Non-cash compensation	—	—	—	24	—	—	24,976
Stock dividends to Carilion Clinic[1]	—	—	—	39	—	—	45,751
Repurchase of common stock	—	—	—	—	132,675	(156,386)	—
Balance at June 30, 2016	1,321,514	1,322	27,477,181	28,241	300,327	(341,320)	81,997,662

(1) The stock dividends payable in connection with Carilion Clinic's Series A Preferred Stock will be issued subsequent to June 30, 2016. For the period from January 12, 2010, the original issue date of the Series A Preferred Stock, through June 30, 2016, the Series A Preferred Stock issued to Carilion has accrued $1,003,954 in dividends. The accrued and unpaid dividends as of June 30, 2016 will be paid by the issuance of 512,755 shares of our common stock upon Carilion's written request.

Stock Repurchase Program

In May 2016, our board of directors authorized us to repurchase up to $2,000,000 of our common stock through May 31, 2017. Our stock repurchase program does not obligate us to acquire any specific number of shares. Under the program, shares may be repurchased in privately negotiated or open market transactions, including under plans complying with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended. The following chart details our share repurchases during each month since the adoption of the stock repurchase program:

	Total Number of Shares Repurchased	Average Price Paid per Share
April 2016	—	—
May 2016	—	—
June 2016	59,000	$ 1.22

We currently maintain these repurchased shares as treasury stock.

8. Operating Segments

Our operations are divided into two operating segments—"Technology Development" and "Products and Licensing".

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

The Products and Licensing segment derives its revenues from product sales, funded product development and technology licenses.

Through June 30, 2016, our Chief Executive Officer and his direct reports collectively represented our chief operating decision makers, and they evaluated segment performance based primarily on revenues and operating income or loss. The accounting policies of our segments are the same as those described in the summary of significant accounting policies (see Note 1 to our Financial Statements, "Organization and Summary of Significant Accounting Policies," presented in our Annual Report on Form 10-K as filed with the SEC on March 29, 2016).

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(unaudited)		(unaudited)	
Revenues:				
Technology development	$ 4,137,382	$ 3,728,271	$ 7,860,644	$ 6,603,786
Products and licensing	10,509,522	6,297,475	20,773,273	8,761,062
Total revenues	$ 14,646,904	$ 10,025,746	$ 28,633,917	$ 15,364,848
Technology development operating income (loss)	$ 313,208	$ (1,096,127)	$ (177,108)	$ (2,947,684)
Products and licensing operating loss	(964,789)	(1,026,776)	(1,826,643)	(1,790,274)
Total operating loss	$ (651,581)	$ (2,122,903)	$ (2,003,751)	$ (4,737,958)
Depreciation, technology development	$ 91,127	$ 104,217	$ 186,784	$ 203,854
Depreciation, products and licensing	$ 263,514	$ 189,276	$ 517,011	$ 225,803
Amortization, technology development	$ 44,501	$ 37,434	$ 117,838	$ 57,222
Amortization, products and licensing	$ 522,660	$ 328,242	$ 1,039,969	$ 337,371

The table below presents assets for reportable segments:

	June 30, 2016	December 31, 2015
	(unaudited)	
Total segment assets:		
Technology development	$ 16,672,200	$ 21,203,211
Products and licensing	37,587,521	36,928,602
Total assets	$ 54,333,940	$ 58,131,813
Property plant and equipment, and intangible assets, technology development	$ 2,798,472	$ 2,917,448
Property plant and equipment, and intangible assets, products and licensing	$ 16,328,806	$ 16,375,215

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

The U.S. government accounted for 28% and 37% of total consolidated revenues for the three months ended June 30, 2016 and 2015, respectively, and for 28% and 45% of total consolidated revenues for the six months ended June 30, 2016 and 2015, respectively.

International revenues (customers outside the United States) accounted for approximately 29% and 17% of total consolidated revenues for the three months ended June 30, 2016 and 2015, respectively, and approximately 32% and 16% of total consolidated revenues for the six months ended June 30, 2016 and 2015, respectively. Revenues from customers in China represented approximately 19% and 20% of total revenues for the three and six months ended June 30, 2016, respectively. No single country, outside of the United States, represented more than 10% of total revenues in the three and six months ended June 30, 2015.

9. Contingencies and Guarantees

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

In September 2014, we received a preliminary audit report from the Defense Contract Audit Agency (the "DCAA"), with respect to our 2007 incurred cost submission and questioning $0.8 million of claimed costs that the DCAA believes are expressly unallowable under the Federal Acquisition Regulations and, therefore, subject to potential penalty. In June 2015, we received from the Defense Contract Management Agency (the "DCMA") a final determination and demand for payment of penalties, interest, and over billing in the aggregate amount of $1.1 million. In July 2015, we filed an appeal with the Armed Services Board of Contract Appeals. Because of the early stage of the appeal process, we are unable to estimate the amount of loss, if any, that may be realized.

In the second quarter of 2015 we executed two non-cancelable purchase orders totaling $1.4 million for multiple shipments of tunable lasers to be delivered over an 18-month period. At June 30, 2016, approximately $0.1 million of this commitment remained.

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

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

CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

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

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

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

Merger with Advanced Photonix, Inc.

On May 8, 2015, we completed a merger with Advanced Photonix, Inc. ("API"), pursuant to the Agreement and Plan of Merger and Reorganization (the "Merger Agreement"), dated as of January 30, 2015, by and among Luna, API and API Merger Sub, Inc., our wholly-owned subsidiary ("API Merger Sub"). In accordance with the terms of the Merger Agreement, upon the completion of the merger, API Merger Sub merged with and into API, with API surviving as our wholly-owned subsidiary. In the merger, former API stockholders received 0.31782 shares of our common stock for each share of API common stock they owned at the effective time of the merger. The merger is being accounted for under the acquisition method of accounting in accordance with Financial Accounting Standards Board Accounting Standard Topic 805, *Business Combinations* with Luna treated as the accounting acquirer.

The merger results in a combined company with a stronger position as a leader in optical technology. The merger essentially doubles the revenue base of each of the companies on a stand-alone basis, and provides the opportunity to leverage a shared infrastructure and achieve significant cost savings by combining two public companies into one.

Overview of Our Business

We develop, manufacture and market fiber optic sensing and test & measurement products and are focused on bringing new and innovative technology solutions to measure, monitor, protect and improve critical processes in the aerospace, automotive, energy, composite, telecommunications and defense industries. As a result of our merger with API, we also package optoelectronic semiconductors into high-speed optical receivers ("HSOR" products), custom optoelectronic subsystems ("Optoelectronics" products), and Terahertz ("THz") instrumentation. Our HSOR transmission products are deployed in the internet infrastructure to enable the high-speed bandwidth necessary to support video and data. Our Optoelectronics products are sold to scientific instrumentation manufacturers for various applications such as metrology, currency validation, flame monitoring, and temperature sensing. In addition, we provide applied research services, typically under research programs funded by the U.S. government, in areas of advanced materials, sensing and healthcare applications. Our business model is designed to accelerate the process of bringing new and innovative products to market. We use our in-house technical expertise across a range of technologies to perform applied research services for companies and government-funded projects. We continue to invest in product development and commercialization, which we anticipate will lead to increased product sales growth.

We are organized into two main business segments, the Products and Licensing segment and the Technology Development segment. Our Products and Licensing segment develops, manufactures and markets fiber optic sensing products, as well as test & measurement products, and also conducts applied research in the fiber optic sensing area for both corporate and government customers. We are continuing to develop and commercialize our fiber optic technology for strain and temperature sensing applications for the aerospace, automotive, and energy industries. Our Products and Licensing segment revenues represented 72% and 63% of our total revenues for the three months ended June 30, 2016 and 2015, respectively, and 73% and 57% of our total revenues for the six months ended June 30, 2016 and 2015, respectively. The change in revenue mix was primarily a result of the merger, inasmuch as the substantial majority of revenues from API's legacy business relates to product sales.

The Technology Development segment performs applied research principally in the areas of sensing and instrumentation, advanced materials and health sciences. This segment comprised 28% and 37% of total revenues for the three months ended June 30, 2016 and 2015, respectively, and 27% and 43% of our total revenues for the six months ended June 30, 2016 and 2015, respectively. Most of the government funding for our Technology Development segment is derived from the Small Business Innovation Research ("SBIR") program coordinated by the U.S. Small Business Administration ("SBA"). The Technology Development segment revenues have historically accounted for a large portion of total revenues, and we expect that they will continue to represent a significant portion of total revenues for the foreseeable future. The Technology Development segment revenues were $4.1 million and $3.7 million for the three months ended June 30, 2016 and 2015, respectively, and were $7.9 million and $6.6 million for the six months ended June 30, 2016 and 2015, respectively. Within the Technology Development segment, we have historically had a backlog of contracts for which work has been scheduled, but for which a specified portion of work has not yet been completed. We define backlog as the dollar amount of obligations payable to us under negotiated contracts upon completion of a specified portion of work that has not yet been completed, exclusive of revenues previously recognized for work already performed under these contracts, if any. Total backlog includes funded backlog, which is the amount for which money has been directly authorized by the U.S. government and for which a purchase order has been received by a commercial customer, and unfunded backlog, representing firm orders for which funding has not yet been appropriated. Indefinite delivery and quantity contracts and unexercised options are not reported in total backlog. The approximate value of our Technology Development segment backlog was $18.6 million at June 30, 2016 and $16.7 million at December 31, 2015. The approximate value of our Products and Licensing segment backlog was $10.1 million at June 30, 2016 and $10.7 million at December 31, 2015.

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

We may also grow our business in part through acquisitions of additional companies and complementary technologies, which could cause us to incur transaction expenses, amortization or write-offs of intangible assets and other acquisition-related expenses.

Reductions in government spending may impact the availability of new program awards in the future. For example, the Budget Control Act commits the U.S. government to reduce the federal deficit by $1.2 trillion over ten years through a combination of automatic, across-the-board spending cuts and caps on discretionary spending, or sequestration. Automatic across-the-board cuts required by sequestration could have a material adverse effect on our Technology Development segment revenues and, consequently, our results of operations. While the exact manner in which sequestration will impact our business is unclear, funding for programs in which we participate could be reduced, delayed or canceled. Our ability to obtain new contract awards also could be negatively affected.

Description of Revenues, Costs and Expenses

Revenues

We generate revenues from technology development, product sales and commercial product development and licensing activities. We derive Technology Development segment revenues from providing research and development services to third parties, including government entities, academic institutions and corporations, and from achieving milestones established by some of these contracts and in collaboration agreements. In general, we complete contracted research over periods ranging from six months to three years, and recognize these revenues over the life of the contract as costs are incurred. The Technology Development segment revenues represented 28% and 37% of total revenues for the three months ended June 30, 2016 and 2015, respectively, and 27% and 43% of our total revenues for the six months ended June 30, 2016 and 2015, respectively. Technology Development segment revenues declined as a percentage of total revenues following our merger with API in May 2015, as API's legacy revenues primarily consist of product revenues.

The Products and Licensing segment revenues reflect amounts that we receive from sales of our products or development of products for third parties and, to a lesser extent, fees paid to us in connection with licenses or sublicenses of certain patents and other intellectual property, and represented 72% and 63% of our total revenues for the three months ended June 30, 2016 and 2015, respectively, and 73% and 57%of our total revenues for the six months ended June 30, 2016 and 2015, respectively.

Cost of Revenues

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

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

Operating Expense

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

Interest Expense

Interest expense is composed of interest paid under our bank loans as well as interest accrued on our capital lease obligations.

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 of America. The preparation of these financial statements requires us to make estimates, assumptions and judgments that affect the amounts reported in our financial statements and the accompanying notes. We base our estimates on historical experience and

on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or judgments.

Our critical accounting policies are described in the Management's Discussion and Analysis section and the notes to our audited consolidated financial statements previously included in our Annual Report on Form 10-K for the period ended December 31, 2015, as filed with the Securities and Exchange Commission ("SEC") on March 29, 2016. There have been no other material changes to the descriptions therein.

Results of Operations

Three Months Ended June 30, 2016 Compared to Three Months Ended June 30, 2015

Revenues

	Three Months Ended June 30,			
	2016	2015	$ Difference	% Difference
Revenues:				
Technology development	$ 4,137,382	$ 3,728,271	$ 409,111	11%
Products and licensing	10,509,522	6,297,475	4,212,047	67%
Total revenues	$ 14,646,904	$ 10,025,746	$ 4,621,158	46%

Revenues from our Technology Development segment for the three months ended June 30, 2016 increased $0.4 million, or 11%, to $4.1 million compared to $3.7 million for the three months ended June 30, 2015. The increase in Technology Development segment revenues was primarily driven by growth in our biomedical group and our intelligent systems group.

Our Products and Licensing segment includes revenues from sales of test & measurement systems, primarily representing sales of our ODiSI, Optical Vector Analyzer, and Optical Backscatter Reflectometer platforms, in addition to the sale of HSOR products and other optical components and sub-assemblies and THz sensing systems following our merger with API in 2015. Products and Licensing segment revenues increased $4.2 million, or 67%, to $10.5 million for the three months ended June 30, 2016 compared to $6.3 million for the three months ended June 30, 2015. The increase in Products and Licensing segment revenues was primarily driven by growth in sales of our HSOR products, specifically related to our supply agreement for our 2.5G avalanche photodiode product. API revenues were also incorporated for the full three months ended June 30, 2016, compared to the period from May 8, 2015, the closing date of the merger, through June 30, 2015, contributing to the increase in Products and Licensing segment revenues.

Cost of Revenues and Gross Profit

	Three Months Ended June 30,			
	2016	2015	$ Difference	% Difference
Cost of revenues:				
Technology development	$ 3,181,447	$ 2,576,145	$ 605,302	23%
Products and licensing	6,294,607	3,252,627	3,041,980	94%
Total cost of revenues	9,476,054	5,828,772	3,647,282	63%
Gross profit	$ 5,170,850	$ 4,196,974	$ 973,876	23%

The cost of Technology Development segment revenues for the three months ended June 30, 2016 increased $0.6 million, or 23%, to $3.2 million compared to $2.6 million for the three months ended June 30, 2015. Cost of Technology Development segment revenues grew at a higher rate than Technology Development segment revenues due to an increase in costs to complete certain development contracts related to our THz technology.

The cost of revenues associated with our Products and Licensing segment increased by $3.0 million, or 94%, to $6.3 million for the three months ended June 30, 2016 compared to $3.3 million for the three months ended June 30, 2015. Products and Licensing segment cost of revenues increased in accordance with the revenue increase over the same time period, and

resulted from the gross margin of the product mix being more heavily weighted to historical API products. As the product sales associated with the operations of API typically have a lower gross margin than the sales of our legacy test & measurement products, our overall gross margin for the three months ended June 30, 2016 decreased to 35% compared to 42% for the three months ended June 30, 2015.

Operating Expense

	Three Months Ended June 30,			
	2016	2015	$ Difference	% Difference
Operating expense:				
Selling, general and administrative	$ 4,581,776	$ 5,518,656	$ (936,880)	(17)%
Research, development and engineering	1,240,655	801,221	439,434	55 %
Total operating expense	$ 5,822,431	$ 6,319,877	$ (497,446)	(8)%

Our selling, general and administrative expense decreased $0.9 million, or 17%, to $4.6 million for the three months ended June 30, 2016 compared to $5.5 million for the three months ended June 30, 2015. The decrease in selling, general and administrative expense is due to $1.7 million of merger-related costs for the three months ended June 30, 2015. In contrast, we did not incur any merger-related costs in the three months ended June30, 2016. Selling, general and administrative expenses related to API operations increased by $1.4 million for the three months ended June 30, 2016 compared to the three months ended June 30, 2015 due to inclusion of API results for the full three months ended June 30, 2016.

Research, development and engineering expense increased $0.4 million, or 55%, to $1.2 million for the three months ended June 30, 2016 compared to $0.8 million for the three months ended June 30, 2015. Research, development and engineering expenses associated with the operations of API were $0.8 million for the three months ended June 30, 2016, compared to $0.3 million for the three months ended June 30, 2015. This increase was primarily driven by API operations being included for the full three months ended June 30, 2016 compared to the period from May 8, 2015 through June 30, 2015.

Interest Expense

Interest expense for the three months ended June 30, 2016 was $78,906 compared to interest expense of $49,966 during the three months ended June 30, 2015. In connection with our merger with API in May 2015, we entered into a new term loan in the original principal amount of $6.0 million. The increase in interest expense was driven primarily by the loan balance being outstanding for the full three months ended June 30, 2016 compared to the period from May 8, 2015 through June 30, 2015. During the three months ended June 30, 2016, our average outstanding balance on our term loan was $5.5 million as compared to $5.9 million for the three months ended June 30, 2015.

Six Months Ended June 30, 2016 Compared to Six Months Ended June 30, 2015

Revenues

	Six Months Ended June 30,			
	2016	2015	$ Difference	% Difference
Revenues:				
Technology development	$ 7,860,644	$ 6,603,786	$ 1,256,858	19%
Products and licensing	20,773,273	8,761,062	12,012,211	137%
Total revenues	$ 28,633,917	$ 15,364,848	$ 13,269,069	86%

Technology Development segment revenues increased $1.3 million, or 19%, to $7.9 million for the six months ended June 30, 2016 compared to $6.6 million for the six months ended June 30, 2015. Technology Development segment revenues from historical API operations were $0.5 million for the six months ended June 30, 2016 compared to $0.4 million for the six months ended June 30, 2015. The remaining $1.2 million increase in Technology Development segment revenues was experienced in our legacy business, driven primarily by growth within our biomedical and intelligent systems groups.

Products and Licensing segment revenues increased $12.0 million, or 137%, to $20.8 million for the six months ended June 30, 2016 compared to $8.8 million for the six months ended June 30, 2015. Products and Licensing segment revenues associated with the historical operations of API for the period from the closing of our merger on May 8, 2015 through June 30, 2015 were $3.6 million, compared to $16.3 million for the six months ended June 30, 2016. Products and Licensing segment revenues associated with our legacy operations decreased $0.7 million, or 13%, primarily due to decreased sales of our legacy test and measurement products.

Cost of Revenues and Gross Profit

	Six Months Ended June 30,			
	2016	2015	$ Difference	% Difference
Cost of revenues:				
Technology development	$ 6,061,282	$ 4,659,769	$ 1,401,513	30%
Products and licensing	12,558,180	4,219,317	8,338,863	198%
Total cost of revenues	18,619,462	8,879,086	9,740,376	110%
Gross profit	$ 10,014,455	$ 6,485,762	$ 3,528,693	54%

Costs of Technology Development segment revenues increased $1.4 million, or 30%, to $6.1 million for the six months ended June 30, 2016, compared to $4.7 million the six months ended June 30, 2015. This increase was primarily driven by the increase in revenues over the same period combined with costs of revenues growing at a higher rate due to an increase in the costs to complete certain development contracts related to our THz technology.

Costs of Products and Licensing segment revenues increased $8.3 million, or 198%, to $12.6 million for the six months ended June 30, 2016 compared to $4.2 million for the six months ended June 30, 2015. Products and Licensing segment costs increased in accordance with the increase in revenues over the same period, taking into account the gross margin effect of the product mix. As the product sales associated with the historical operations of API typically have a lower gross margin than the sales of our legacy test & measurement products, our overall gross margin for the six months ended June 30, 2016 decreased to 35% compared to 42% for the six months ended June 30, 2015.

Operating Expense

	Six Months Ended June 30,			
	2016	2015	$ Difference	% Difference
Operating expense:				
Selling, general and administrative	$ 9,227,060	$ 10,087,609	$ (860,549)	(9)%
Research, development and engineering	2,791,146	1,136,111	1,655,035	146 %
Total operating expense	$ 12,018,206	$ 11,223,720	$ 794,486	7 %

Selling, general and administrative expenses decreased $0.9 million, or 9%, to $9.2 million for the six months ended June 30, 2016 compared to $10.1 million for the six months ended June 30, 2015. The decrease in selling, general and administrative expense is due to $3.5 million of merger-related costs for the six months ended June 30, 2015. In contrast, we did not incur any merger-related costs for the six months ended June 30, 2016. Selling, general and administrative expenses related to API operations increased by $1.4 million for the six months ended June 30, 2016 compared to the six months ended June 30, 2015 due to inclusion of API for the full six months ended June 30, 2016.

Research, development and engineering expense increased $1.7 million, or 146%, to $2.8 million for the six months ended June 30, 2016 compared to $1.1 million for the six months ended June 30, 2015. Research, development, and engineering expense associated with the operations of API were $1.7 million for the six months ended June 30, 2016, compared to $0.4 million for the period from May 8, 2015 through June 30, 2015. This increase was partially offset by a $0.3 million decrease in research, development and engineering expenses from our legacy operations during the six months ended June 30, 2016 compared to the six months ended June 30, 2015.

Interest Expense

Interest expense for the six months ended June 30, 2016 was $0.2 million compared to interest expense of $0.1 million for the six months ended June 30, 2015. In connection with our merger with API in May 2015, we entered into a new term loan in the original principal amount of $6.0 million. During the first six months of 2016, our average outstanding loan balance was $5.7 million, and with the new loan executed in May 2015, our average outstanding loan balance for the first six months of 2015 was $3.4 million.

Liquidity and Capital Resources

At June 30, 2016, our total cash and cash equivalents were $13.8 million.

We currently have a Loan and Security Agreement with Silicon Valley Bank ("SVB") under which we have two term loans with an aggregate original borrowing amount of $7.0 million. As of June 30, 2016, these term loans had an aggregate balance of $5.2 million. One term loan, with a balance of $0.8 million as of June 30, 2016, matures on December 1, 2018. The other term loan, with a balance of $4.4 million as of June 30, 2016, matures on May 1, 2019. The term loans bear interest at a floating rate of prime plus 2%. We may prepay amounts due under the term loans at any time, subject to prepayment penalties of up to 2% of the amount of prepayment. Amounts due under the term loans are secured by substantially all of our assets, including intellectual property, personal property and bank accounts. The term loans contain customary events of default, including nonpayment of principal, interest or other amounts, violation of covenants, material adverse change, an event of default under any subordinated debt documents, incorrectness of representations and warranties in any material respect, bankruptcy, judgments in excess of a threshold amount, and violations of other agreements in excess of a threshold amount. If any event of default occurs, SVB may declare due immediately all borrowings under the credit facility and foreclose on the collateral. Furthermore, an event of default under the credit facility would result in an increase in the interest rate on any amounts outstanding. As of June 30, 2016, we were in compliance with all covenants under the Loan and Security Agreement.

We believe that our cash balance as of June 30, 2016 will provide adequate liquidity for us to meet our working capital needs over the next twelve months. Additionally, we believe that should we have the need for increased capital spending to support our planned growth, we will be able to fund such growth through either third-party financing on competitive market terms or through our available cash.

Discussion of Cash Flows

Recent Activity

	Six Months Ended June 30,		
	2016	2015	$ Difference
Net cash used in operating activities	$ (1,012,066)	$ (6,855,862)	$ 5,843,796
Net cash (used in) provided by investing activities	(1,538,973)	200,764	(1,739,737)
Net cash (used in) provided by financing activities	(1,105,202)	50,642	(1,155,844)
Net decrease in cash and cash equivalents	$ (3,656,241)	$ (6,604,456)	$ 2,948,215

During the first six months of 2016, operations used $1.0 million of cash, as compared to the same period in 2015 in which operations used $6.9 million of cash. During the first six months of 2016, our net loss of $2.2 million was primarily the result of charges for depreciation and amortization of $1.9 million and share-based compensation of $0.5 million. Additionally, changes in working capital resulted in a net cash outflow of $1.2 million, principally driven by a reduction in accounts payable and accrued liabilities of $1.1 million, resulting primarily from the payment of the settlement of API shareholder litigation related to the merger and the payment of accrued royalties for product sales in 2015, an increase in other assets of $0.3 million, an increase in deferred revenue of $0.1 million and an increase of $0.2 million in accounts receivable due to the timing differences between recognizing a sale and collecting the cash payment for the sale.

During the first six months of 2015, our net loss of $4.8 million was primarily the result of expenses recorded in relation to the merger with API of $3.5 million, charges for depreciation and amortization of $0.8 million, and share-based compensation of $0.6 million. Additionally, changes in working capital resulted in a net cash outflow of $2.6 million, principally driven by an increase in inventory purchases of $1.3 million in anticipation of future product revenue growth, a reduction in accounts payable and accrued liabilities of $1.3 million and an increase of $0.3 million in accounts receivable due to the timing differences between recognizing a sale and collecting the cash payment for the sale.

Our cash used in investing activities for the six months ended June 30, 2016 included purchases of equipment and capitalized costs associated with the prosecution of patents. Our cash provided by investing activities for the six months ended June 30, 2015 included $0.4 million of cash on hand at API at the time of our merger, partially offset by purchases of equipment and capitalized costs associated with the prosecution of patents. We expect capital spending to increase in future periods as we expand our manufacturing capacity for HSOR products.

Net cash used in financing activities during the six months ended June 30, 2016 included the repayment of the long term debt, repayments of capital lease obligations and repurchases of our common stock. In the aggregate, these activities resulted in net cash outflows of $1.1 million for the first six months of 2016. Net cash provided by financing activities during the six months ended June 30, 2015 included the repayment of the long term debt we assumed in connection with our merger with API, the refinancing of that debt with a new $6.0 million term loan, the scheduled repayments of principal for our debt and lease obligations, and cash we received from the exercise of employee stock options. In the aggregate, these activities resulted in net cash inflows of $0.1 million for the six months ended June 30, 2015.

Off-Balance Sheet Arrangements

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

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

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

Interest Rate Risk

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

We are exposed to interest rate fluctuations as a result of our term loan with SVB having a variable interest rate. We do not currently use derivative instruments to alter the interest rate characteristics of our debt. For the principal amount of $5.2 million outstanding under the term loan as of June 30, 2016, a change in the interest rate by one percentage point for one year would result in a change in our annual interest expense of $52,000.

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

Foreign Currency Exchange Rate Risk

As of June 30, 2016, all payments made under our research contracts have been denominated in U.S. dollars. Our product sales to foreign customers are also generally denominated in U.S. dollars, and we generally do not receive payments in foreign currency. As such, we are not directly exposed to significant currency gains or losses resulting from fluctuations in foreign exchange rates.

ITEM 4. *CONTROLS AND PROCEDURES*

Evaluation of Disclosure Controls and Procedures

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

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

Under the supervision and with the participation of our management, including our principal executive officer and our principal financial officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report. Based on this evaluation, our principal executive officer and our principal financial officer have concluded that, as of June 30, 2016, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the three months ended June 30, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. *LEGAL PROCEEDINGS*

For additional information regarding our legal proceedings, please refer to our Annual Report on Form 10-K for the year ended December 31, 2015, as filed with the SEC on March 29, 2016, and our Quarterly Report on Form 10-Q for the three months ended March 31, 2016, as filed with the SEC on May 11, 2016.

ITEM 1A. *RISK FACTORS*

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

RISKS RELATING TO OUR BUSINESS

General

Our technology is subject to a license from Intuitive, which is revocable in certain circumstances. Without this license, we cannot continue to market, manufacture or sell our fiber-optic products.

As a part of the sale of our assets to Intuitive, we entered into a license agreement with Intuitive pursuant to which we received rights to use all of our transferred technology outside the field of medicine and in respect of our existing non-shape sensing products in certain non-robotic medical fields. This license back to us is revocable if after notice and certain time periods, we were to (i) challenge the validity or enforceability of the transferred patents and patent applications, (ii) commercialize our fiber optical shape sensing and localization technology in the field of medicine (except to perform on a development and supply project for Hansen), (iii) violate our obligations related to our ability to sublicense in the field of medicine or (iv) violate our confidentiality obligations in a manner that advantages a competitor in the field of medicine and not cure such violation. Maintaining this license is necessary for us to conduct our fiber-optic products business, both for our telecom products and our ODiSI sensing products. If this license were to be revoked by Intuitive, we would no longer be able to market, manufacture or sell these products which would severely limit our ability to continue operations.

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

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

We depend upon outside contract manufacturers for a portion of the manufacturing process for some of our products. Our operations and revenue related to these products could be adversely affected if we encounter problems with these contract manufacturers.

Many of our products are manufactured internally. However we also rely upon contract manufacturers to produce the finished portion of some of our optoelectronic components and certain lasers. Our reliance on contract manufacturers for these products makes us vulnerable to possible capacity constraints and reduced control over delivery schedules, manufacturing yields, manufacturing quality control and costs. If the contract manufacturer for our products were unable or unwilling to manufacture our products in required volumes and at high quality levels or to continue our existing supply arrangement, we would have to identify, qualify and select an acceptable alternative contract manufacturer or move these manufacturing operations to internal manufacturing facilities. An alternative contract manufacturer may not be available to us when needed or may not be in a position to satisfy our quality or production requirements on commercially reasonable terms, including price. Any significant interruption in manufacturing our products would require us to reduce the supply of products to our customers, which in turn would reduce our revenue, harm our relationships with the customers of these products and cause us to forego potential revenue opportunities.

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

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

In addition, U.S. government agencies, including the Defense Contract Audit Agency and the Department of Labor, routinely audit and investigate government contractors. These agencies review a contractor’s performance under its contracts, cost structure and compliance with applicable laws, regulations and standards. The U.S. government also may review the adequacy of, and a contractor’s compliance with, its internal control systems and policies, including the contractor’s purchasing, property, estimating, compensation and management information systems. Any costs found to be improperly allocated to a specific contract will not be reimbursed, while such costs already reimbursed must be refunded. If an audit uncovers the inclusion of certain claimed costs deemed to be expressly unallowable, or 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 June 2015, we received a determination from the Defense Contract Management Agency (the "DCMA") of expressly unallowable costs included in our claimed costs for the 2007 contract year. As a result of that determination, DCMA assessed us penalties, interest and over billings of $1.1 million. We have appealed that assessment, and our appeal is currently pending. Depending on the outcome of this appeal, we could be required to make payments that have a material adverse effect on our financial position.

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

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

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

We compete as a small business for some of our government contracts. Our revenues derived from the SBIR program account for a significant portion of our consolidated total revenues, and contract research, including SBIR contracts, will remain a significant portion of our consolidated total revenues for the foreseeable future. For the six months ended June 30, 2016 and 2015, revenues generated under the SBIR program represented 23% and 33%, respectively, of our total revenues.

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

In order to be eligible for SBIR contracts and grants, under current SBA rules we must be more than 50% owned and controlled by individuals who are U.S. citizens or permanent resident aliens, and/or other small business concerns (each of which is more than 50% owned and controlled by individuals who are U.S. citizens or permanent resident aliens) or certain qualified investment companies. In the event our institutional ownership significantly increases, either because of increased buying by institutions or selling by individuals, we could lose eligibility for new SBIR contracts and grants.

Also, in order to be eligible for SBIR contracts and grants, the number of our employees, including those of any entities that are considered to be affiliated with us, cannot exceed 500. As of June 30, 2016, we had approximately 250 full-time employees. In determining whether we are affiliated with any other entity, the SBA may analyze whether another entity controls or has the power to control us. Carilion Clinic ("Carilion") is our largest institutional stockholder. Since early 2011, a formal size determination by the SBA that focused on whether or not Carilion is or was our affiliate has been outstanding. Although we do not believe that Carilion has or had the power to control our company, we cannot assure you that the SBA will interpret its regulations in our favor on this question. If the SBA were to make a determination that we are or were affiliated with Carilion, we would exceed the size limitations, as Carilion has over 500 employees. In that case, we would lose eligibility for new SBIR contracts and grants and other awards that are set aside for small businesses based on the criterion of number of employees, and the relevant government agency would have the discretion to suspend performance on existing SBIR grants. The loss of our eligibility to receive SBIR awards would have a material adverse impact on our revenues, cash flows and our ability to fund our growth.

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

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

Technology Development segment revenues, which consist primarily of government-funded research, accounted for 27% and 43% of our total revenues for the six months ended June 30, 2016 and 2015, respectively. As a result, we are vulnerable to adverse changes in our revenues and cash flows if a significant number of our research contracts and subcontracts were to be simultaneously delayed or canceled for budgetary, performance or other reasons. For example, the U.S. government may cancel these contracts at any time without cause and without penalty or may change its requirements, programs or contract budget, any of which could reduce our revenues and cash flows from U.S. government research contracts. Our revenues and cash flows from U.S. government research contracts and subcontracts could also be reduced by declines or other changes in U.S. defense, homeland security and other federal agency budgets. In addition, we compete as a small business for some of these contracts, and in order to maintain our eligibility to compete as a small business, we, together with any affiliates, must continue to meet size and revenue limitations established by the U.S. government.

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

In addition, the Budget Control Act commits the U.S. government to reduce the federal deficit by $1.2 trillion over ten years through a combination of automatic, across-the-board spending cuts and caps on discretionary spending. This "sequestration" under the Budget Control Act, which is split equally between defense and non-defense programs, went into effect on March 1, 2013. Any spending cuts required by "sequestration" could have a material adverse effect on our Technology Development segment revenues and, consequently, our results of operations. While the exact manner in which this "sequestration" may impact our business remains unclear, funding for programs in which we participate could be reduced, delayed or canceled. Our ability to obtain new contract awards also could be negatively affected.

In addition to contract cancellations and changes in agency budgets, our future financial results may be adversely affected by curtailment of or restrictions on the U.S. government's use of contract research providers, including curtailment due to government budget reductions and related fiscal matters or any legislation or resolution limiting the number or amount of awards we may receive. These or other factors could cause U.S. defense and other federal agencies to conduct research internally rather than through commercial research organizations or direct awards to other organizations, to reduce their overall contract research requirements or to exercise their rights to terminate contracts. Alternatively, the U.S. government may discontinue the SBIR program or its funding altogether. Also, SBIR regulations permit increased competition for SBIR awards from companies that may not have previously been eligible, such as those backed by venture capital operating companies,

hedge funds and private equity firms. Any of these developments could limit our ability to obtain new contract awards and adversely affect our revenues, cash flows and ability to fund our growth.

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

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

We provide certain services to the U.S. government that require us to maintain a facility security clearance and for certain of our employees and our board chairman to hold security clearances. In general, the failure for necessary persons to obtain or retain sufficient security clearances, any loss by us of a facility security clearance or any public reprimand related to security matters could result in a U.S. government customer terminating an existing contract or choosing not to renew a contract or prevent us from bidding on or winning certain new government contracts.

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

Our business is subject to the cyclical nature of the markets in which we compete and any future downturn may reduce demand for our products and revenue.

Many factors beyond our control affect our business, including consumer confidence in the economy, interest rates, fuel prices and the general availability of credit. The overall economic climate and changes in Gross National Product growth have a direct impact on some of our customers and the demand for our products. We cannot be sure that our business will not be adversely affected as a result of an industry or general economic downturn.

Our customers may reduce capital expenditures and have difficulty satisfying liquidity needs because of continued turbulence in the U.S. and global economies, resulting in reduced sales of our products and harm to our financial condition and results of operations.

In particular, API's historical results of operations have been subject to substantial fluctuations, and we may experience substantial period-to-period fluctuations in future results of operations. Any future downturn in the markets in which we compete could significantly reduce the demand for our products and therefore may result in a significant reduction in revenue or increase the volatility of the price of our common stock. Our revenue and results of operations may be adversely affected in the future due to changes in demand from customers or cyclical changes in the markets utilizing our products.

In addition, the telecommunications industry has, from time to time, experienced, and may again experience, a pronounced downturn. To respond to a downturn, many service providers may slow their capital expenditures, cancel or delay new developments, reduce their workforces and inventories and take a cautious approach to acquiring new equipment and technologies from original equipment manufacturers, which would have a negative impact on our business. Weakness in the global economy or a future downturn in the telecommunications industry may cause our results of operations to fluctuate from quarter-to-quarter and year-to-year, harm our business, and may increase the volatility of the price of our common stock.

Customer acceptance of our products is dependent on our ability to meet changing requirements, and any decrease in acceptance could adversely affect our revenue.

Customer acceptance of our products is significantly dependent on our ability to offer products that meet the changing requirements of our customers, including telecommunication, military, medical and industrial corporations, as well as government agencies. Any decrease in the level of customer acceptance of our products could harm our business.

Our products must meet exacting specifications, and defects and failures may occur, which may cause customers to return or stop buying our products.

Our customers generally establish demanding specifications for quality, performance and reliability that our products must meet. However, our products are highly complex and may contain defects and failures when they are first introduced or as new versions are released. Our products are also subject to rough environments as they are integrated into our customer products for use by the end customers. If defects and failures occur in our products, we could experience lost revenue, increased costs, including warranty expense and costs associated with customer support, delays in or cancellations or rescheduling of orders or shipments, product returns or discounts, diversion of management resources or damage to our reputation and brand equity, and in some cases consequential damages, any of which would harm our operating results. In addition, delays in our ability to fill product orders as a result of quality control issues may negatively impact our relationship with our customers. We cannot assure you that we will have sufficient resources, including any available insurance, to satisfy any asserted claims.

Rapidly changing standards and regulations could make our products obsolete, which would cause our revenue and results of operations to suffer.

We design products to conform to our customers' requirements and our customers' systems may be subject to regulations established by governments or industry standards bodies worldwide. Because some of our products are designed to conform to current specific industry standards, if competing or new standards emerge that are preferred by our customers, we would have to make significant expenditures to develop new products. If our customers adopt new or competing industry standards with which our products are not compatible, or the industry groups adopt standards or governments issue regulations with which our products are not compatible, our existing products would become less desirable to our customers and our revenue and results of operations would suffer.

The markets for many of our products are characterized by changing technology which could cause obsolescence of our products, and we may incur substantial costs in delivering new products.

The markets for many of our products are characterized by changing technology, new product introductions and product enhancements, and evolving industry standards. The introduction or enhancement of products embodying new technology or the emergence of new industry standards could render existing products obsolete, and result in a write down to the value of our inventory, or result in shortened product life cycles. Accordingly, our ability to compete is in part dependent on our ability to continually offer enhanced and improved products.

The success of our new product offerings will depend upon several factors, including our ability to:

- accurately anticipate customer needs;
- innovate and develop new technologies and applications;
- successfully commercialize new technologies in a timely manner;
- price products competitively and manufacture and deliver products in sufficient volumes and on time; and
- differentiate our product offerings from those of our competitors.

Some of our products are used by our customers to develop, test and manufacture their products. We therefore must anticipate industry trends and develop products in advance of the commercialization of our customers' products. In developing any new product, we may be required to make a substantial investment before we can determine the commercial viability of the new product. If we fail to accurately foresee our customers' needs and future activities, we may invest heavily in research and development of products that do not lead to significant revenues.

Our inability to find new customers or retain existing customers could harm our business.

Our business is reliant on our ability to find new customers and retain existing customers. In particular, customers normally purchase the legacy API products and incorporate them into products that they, in turn, sell in their own markets on an ongoing basis. As a result, the historical sales or these products have been dependent upon the success of our customers' products and the future performance of the legacy API business is dependent upon our success in finding new customers and receiving new orders from existing customers.

In several markets, the quality and reliability of our products are a major concern for our customers, not only upon the initial manufacture of the product, but for the life of the product. Many of our products are used in remote locations for higher value assembly, making servicing of our products unfeasible. Any failure of the quality or reliability of our products could harm our business.

If our customers do not qualify our products or if their customers do not qualify their products, our results of operations may suffer.

Most of our customers do not purchase our HSOR and Optoelectronics products prior to qualification of the products and satisfactory completion of factory audits and vendor evaluation. Our existing products, as well as each new product, must pass through varying levels of qualification with our customers. In addition, because of the rapid technological changes in some markets, a customer may cancel or modify a design project before we begin large-scale manufacturing and receiving revenues from the customer. It is unlikely that we would be able to recover the expenses for cancelled or unutilized custom design projects. It is difficult to predict with any certainty whether our customers will delay or terminate product qualification or the frequency with which customers will cancel or modify their projects. Any such delay, cancellation or modification could have a negative effect on our results of operations.

In addition, once a customer qualifies a particular supplier's product or component, these potential customers design the product into their system, which is known as a design-in win. Suppliers whose products or components are not designed in are unlikely to make sales to that customer until at least the adoption of a future redesigned system. Even then, many customers may be reluctant to incorporate entirely new products into their new systems, as doing so could involve significant additional redesign efforts and increased costs. If we fail to achieve design-in wins in potential customers' qualification processes, we will likely lose the opportunity for significant sales to those customers for a lengthy period of time.

If the end user customers that purchase systems from our customers fail to qualify or delay qualifications of any products sold by our customers that contain our products, our business could be harmed. The qualification and field testing of our customers' systems by end user customers is long and unpredictable. This process is not under our control or that of our customers and, as a result, the timing of our sales may be unpredictable. Any unanticipated delay in qualification of one of our customers' products could result in the delay or cancellation of orders from our customers for products included in their equipment, which could harm our results of operations.

Customer demand for our products is difficult to accurately forecast and, as a result, we may be unable to optimally match production with customer demand, which could adversely affect our business and financial results.

We make planning and spending decisions, including determining the levels of business that we will seek and accept, production schedules, inventory levels, component procurement commitments, personnel needs and other resource requirements, based on our estimates of customer requirements. The short-term nature of commitments by many of our customers and the possibility of unexpected changes in demand for their products reduce our ability to accurately estimate future customer requirements. On occasion, customers may require rapid increases in production, which can strain our resources, cause our manufacturing to be negatively impacted by materials shortages, necessitate higher or more restrictive procurement commitments, increase our manufacturing yield loss and scrapping of excess materials, and reduce our gross margin. We may not have sufficient capacity at any given time to meet the volume demands of our customers, or one or more of our suppliers may not have sufficient capacity at any given time to meet our volume demands. Conversely, a downturn in the markets in which our customers compete can cause, and in the past have caused, API's legacy customers to significantly reduce or delay the amount of products ordered or to cancel existing orders, leading to lower utilization of our facilities. Because many of our costs and operating expenses are relatively fixed, reduction in customer demand due to market downturns or other reasons would have a negative effect on our gross margin, operating income and cash flow.

Customer orders and forecasts are subject to cancellation or modification at any time which could result in higher manufacturing costs.

Our sales are made primarily pursuant to standard purchase orders for delivery of products. However, by industry practice, some orders may be canceled or modified at any time. When a customer cancels an order, they are responsible for all finished goods, all costs, direct and indirect, incurred by us, as well as a reasonable allowance for anticipated profits. No assurance can be given that we will receive these amounts after cancellation. Furthermore, uncertainty in customer forecasts of their demands and other factors may lead to delays and disruptions in manufacturing, which could result in delays in product shipments to customers and could adversely affect our business.

Fluctuations and changes in customer demand are common in the legacy API business. Such fluctuations, as well as quality control problems experienced in manufacturing operations, may cause delays and disruptions in our manufacturing process and overall operations and reduce output capacity. As a result, product shipments could be delayed beyond the shipment schedules requested by our customers or could be canceled, which would negatively affect our sales, operating income, strategic position at customers, market share and reputation. In addition, disruptions, delays or cancellations could cause inefficient production which in turn could result in higher manufacturing costs, lower yields and potential excess and obsolete inventory or manufacturing equipment. In the past, API experienced such delays, disruptions and cancellations.

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

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

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

We realized a net loss of $2.2 million and $4.8 million for the six months ended June 30, 2016 and 2015, respectively. We expect to continue to incur significant expenses as we pursue our strategic initiatives, including increased expenses for research and development, sales and marketing and manufacturing. We may also grow our business in part through acquisitions of additional companies and complementary technologies which could cause us to incur greater than anticipated transaction expenses, amortization or write-offs of intangible assets and other acquisition-related expenses. As a result, we expect to incur net losses for the foreseeable future, and these losses could be substantial. At a certain level, continued net losses could impair our ability to comply with NASDAQ continued listing standards, as described further below.

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

We have obtained capital by borrowing money under a term loan and we might require additional capital to support and expand our business; our term loan has various loan covenants with which we must comply.

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

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

We have a term loan with SVB, which requires us to observe certain financial and operational covenants, including maintenance of a specified minimum liquidity ratio, protection and registration of intellectual property rights, and certain customary negative covenants, as well as other customary events of default. If any event of default occurs SVB may declare due immediately all borrowings under our term loan and foreclose on the collateral. Furthermore, an event of default would result in an increase in the interest rate on any amounts outstanding.

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

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

While we believe that none of our current products contain chemicals known by us to be hazardous or subject to environmental regulation, it is possible that our current or future products, particularly carbon-based nanomaterials, may

become subject to environmental or other regulation. We intend to develop and sell carbon-based nanomaterials as well as nanotechnology-enabled products, which are products that include nanomaterials as a component to enhance those products' performance. Nanomaterials and nanotechnology-enabled products have a limited historical safety record. Because of their size or shape or because they may contain harmful elements, such as gadolinium and other rare-earth metals, our products could pose a safety risk to human health or the environment. These characteristics may also cause countries to adopt regulations in the future prohibiting or limiting the manufacture, distribution or use of nanomaterials or nanotechnology-enabled products. Such regulations may inhibit our ability to sell some products containing those materials and thereby harm our business or impair our ability to develop commercially viable products.

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

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

We face and will face substantial competition from a variety of companies in several different markets. As we focus on developing marketing and selling fiber optic sensing products, we may also face substantial and entrenched competition in that market.

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 revenues may fail to increase or may decline.

Intense competition in our markets could result in aggressive business tactics by our competitors, including aggressively pricing their products or selling older inventory at a discount. If our current or future competitors utilize aggressive business tactics, including those described above, demand for our products could decline, we could experience delays or cancellations of customer orders, or we could be required to reduce our sales prices.

Decreases in average selling prices of our products may increase operating losses and net losses, particularly if we are not able to reduce expenses commensurately.

The market for optical components and subsystems continues to be characterized by declining average selling prices resulting from factors such as increased price competition among optical component and subsystem manufacturers, excess capacity, the introduction of new products and increased unit volumes as manufacturers continue to deploy network and storage systems. In recent years, API observed a significant decline of average selling prices, primarily in the telecommunications market. We anticipate that average selling prices will continue to decrease in the future in response to product introductions by competitors or by us, or in response to other factors, including price pressures from significant customers. In order to sustain profitable operations, we must, therefore, reduce the cost of our current designs or continue to develop and introduce new products on a timely basis that incorporate features that can be sold at higher average selling prices. Failure to do so could cause our sales to decline and operating losses to increase.

Our cost reduction efforts may not keep pace with competitive pricing pressures. To remain competitive, we must continually reduce the cost of manufacturing our products through design and engineering changes. We may not be successful in redesigning our products or delivering our products to market in a timely manner. We cannot assure you that any redesign will result in sufficient cost reductions enabling us to reduce the price of our products to remain competitive or positively contribute to operating results.

Shifts in product mix may result in declines in gross profit.

Our gross profit margins vary among our product platforms, and are generally highest on our test & measurement products. Our overall gross profit may fluctuate from period to period as a result of a variety of factors including shifts in product mix, the introduction of new products, and decreases in average selling prices for older products. If our customers decide to buy more of our products with low gross profit margins or fewer of our products with high gross profit margins, our total gross profits could be harmed.

Risks Relating to our Operations and Business Strategy

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

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

Failure to develop, introduce and sell new products or failure to develop and implement new technologies, could adversely impact our financial results.

Our success will depend on our ability to develop and introduce new products that customers choose to buy. The new products the market requires tend to be increasingly complex, incorporating more functions and operating at faster speeds than old products. If we fail to introduce new product designs or technologies in a timely manner or if customers do not successfully introduce new systems or products incorporating our products , our business, financial condition and results of operations could be materially harmed.

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

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

We may not be successful in identifying market needs for new technologies or in developing new products.

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

Our growth strategy requires that we also develop successful commercial products to address market needs. We face several challenges in developing successful new products. Many of our existing products and those currently under development 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 face risks associated with our international business.

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

- having to comply with U.S. export control regulations and policies that restrict our ability to communicate with non-U.S. employees and supply foreign affiliates and customers;
- changes in or interpretations of foreign regulations that may adversely affect our ability to sell our products, perform services or repatriate profits to the United States;
- the imposition of tariffs;
- hyperinflation or economic or political instability in foreign countries;
- imposition of limitations on, or increase of withholding and other taxes on remittances and other payments by foreign subsidiaries or joint ventures;
- conducting business in places where business practices and customs are unfamiliar and unknown;
- the imposition of restrictive trade policies;
- the imposition of inconsistent laws or regulations;
- the imposition or increase of investment and other restrictions or requirements by foreign governments;
- uncertainties relating to foreign laws and legal proceedings;
- having to comply with a variety of U.S. laws, including the Foreign Corrupt Practices Act ("FCPA"); 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.

We may dispose of or discontinue existing product lines and technology developments, which may adversely impact our future results.

On an ongoing basis, we evaluate our various product offerings and technology developments in order to determine whether any should be discontinued or, to the extent possible, divested. In addition, if we are unable to generate the amount of cash needed to fund the future operations of our business, we may be forced to sell one or more of our product lines or technology developments.

We cannot guarantee that we have correctly forecasted, or that we will correctly forecast in the future, the right product lines and technology developments to dispose or discontinue or that our decision to dispose of or discontinue various investments, products lines and technology developments is prudent if market conditions change. In addition, there are no assurances that the discontinuance of various product lines will reduce operating expenses or will not cause us to incur material charges associated with such decision. Furthermore, the discontinuance of existing product lines entails various risks, including the risk that we will not be able to find a purchaser for a product line or the purchase price obtained will not be equal to at least the book value of the net assets for the product line. Other risks include managing the expectations of, and maintaining good relations with, our historical customers who previously purchased products from a disposed or discontinued product line, which could prevent us from selling other products to them in the future. We may also incur other significant liabilities and costs associated with disposal or discontinuance of product lines, including employee severance costs and excess facilities costs.

We may be liable for damages based on product liability claims relating to defects in our products, which might be brought against us directly, or against our customers in their end-use markets. Such claims could result in a loss of customers in addition to substantial liability in damages.

Our products are complex and undergo quality testing as well as formal qualification, both by our customers and by us. However, defects may occur from time to time. Our customers' testing procedures may be limited to evaluating our products under likely and foreseeable failure scenarios and over varying amounts of time. For various reasons, such as the occurrence of performance problems that are unforeseeable in testing or that are detected only when products age or are operated under peak stress conditions, our products may fail to perform as expected long after customer acceptance. Failures could result from faulty components or design, problems in manufacturing or other unforeseen reasons. As a result, we could incur significant costs to repair or replace defective products under warranty, particularly when such failures occur in installed systems. In addition, we may in certain circumstances honor warranty claims after the warranty has expired or for problems not covered by warranty in order to maintain customer relationships. Any significant product failure could result in lost future sales of the affected product and other products, as well as customer relations problems, litigation and damage to our reputation.

In addition, many of our products are embedded in, or deployed in conjunction with, our customers' products, which incorporate a variety of components, modules and subsystems and may be expected to interoperate with modules produced by third parties. As a result, not all defects are immediately detectable, and, when problems occur, it may be difficult to identify the source of the problem. These problems may cause us to incur significant damages or warranty and repair costs, divert the attention of our engineering personnel from internal product development efforts and cause significant customer relations problems or loss of customers, all of which would harm our business.

Furthermore, many of our products may provide critical performance attributes to our customers' products that will be sold to end users who could potentially bring product liability suits in which we could be named as a defendant. The sale of these products involves the risk of product liability claims. If a person were to bring a product liability suit against one of our customers, this customer may attempt to seek contribution from us. A person may also bring a product liability claim directly against us. A successful product liability claim or series of claims against us in excess of our insurance coverage for payments, for which we are not otherwise indemnified, could have a material adverse effect on our financial condition or results of operations.

We could be negatively affected by a security breach, either through cyber-attack, cyber-intrusion or other significant disruption of our IT networks and related systems.

We face the risk, as does any company, of a security breach, whether through cyber-attack or cyber-intrusion over the Internet, malware, computer viruses, attachments to e-mails, persons inside our organization or persons with access to systems inside our organization, or other significant disruption of our IT networks and related systems. The risk of a security breach or disruption, particularly through cyber-attack or cyber-intrusion, including by computer hackers, foreign governments and cyber terrorists, has increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased.

As a technology company, and particularly as a government contractor, we may face a heightened risk of a security breach or disruption from threats to gain unauthorized access to our proprietary, confidential or classified information on our IT networks and related systems. These types of information and IT networks and related systems are critical to the operation of our business and essential to our ability to perform day-to-day operations, and, in some cases, are critical to the operations of certain of our customers. In addition, as certain of our technological capabilities become widely known, it is possible that we may be subjected to cyber-attack or cyber-intrusion as third parties seek to gain improper access to information regarding these capabilities and cyber-attacks or cyber-intrusion could compromise our confidential information or our IT networks and systems generally, as it is not practical as a business matter to isolate all of our confidential information and trade secrets from email and internet access. There can be no assurance that our security efforts and measures will be effective or that attempted security breaches or disruptions would not be successful or damaging.

A security breach or other significant disruption involving these types of information and IT networks and related systems could disrupt the proper functioning of these networks and systems and therefore our operations, compromise our confidential information and trade secrets, or damage our reputation among our customers and the public generally. Any of these developments could have a negative impact on our results of operations, financial condition and cash flows.

Risks Relating to our Regulatory Environment

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

Our operations, particularly our international sales, subject us to numerous U.S. and foreign laws and regulations, including, without limitation, regulations relating to imports, exports (including the Export Administration Regulations and the International Traffic in Arms Regulations), technology transfer restrictions, anti-boycott provisions, economic sanctions and the FCPA. The number of our various emerging technologies, the development of many of which has been funded by the Department of Defense, presents us with many regulatory challenges. Failure by us or our sales representatives or consultants to comply with these laws and regulations could result in administrative, civil, or criminal liabilities and could result in suspension of our export privileges, which could have a material adverse effect on our business. Changes in regulation or political environment may affect our ability to conduct business in foreign markets including investment, procurement and repatriation of earnings.

Environmental regulations could increase operating costs and additional capital expenditures and delay or interrupt operations.

The photonics industry, as well as the semiconductor industry, are subject to governmental regulations for the protection of the environment, including those relating to air and water quality, solid and hazardous waste handling, and the promotion of occupational safety. Various federal, state and local laws and regulations require that we maintain certain environmental permits. While we believe that we have obtained all necessary environmental permits required to conduct our manufacturing processes, if we are found to be in violation of these laws, we could be subject to governmental fines and liability for damages resulting from such violations.

Changes in the aforementioned laws and regulations or the enactment of new laws, regulations or policies could require increases in operating costs and additional capital expenditures and could possibly entail delays or interruptions of our operations.

Our healthcare and medical products are and may continue to be subject to a lengthy and uncertain domestic regulatory approval process. If we do not obtain and maintain the necessary domestic regulatory approvals or clearances, we will not be able to market and sell our products for clinical use in the United States. Complying with applicable regulations is an expensive and time-consuming process and any failure to fully comply with such regulations could subject us to enforcement actions.

Certain of our current and potential products could require regulatory clearances or approvals prior to commercialization. For example, any nanomaterial-based MRI contrast agent is likely to be considered a drug under the Federal Food, Drug and Cosmetic Act (the "FDC Act"). Drugs and some medical devices are subject to rigorous preclinical testing and other approval requirements by the U.S. Food and Drug Administration (the "FDA"), pursuant to the FDC Act, and regulations under the FDC Act, as well as by similar health authorities in foreign countries.

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

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

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

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

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

To be able to market and sell medical products in other countries, we must obtain regulatory approvals and comply with the regulations of those countries. These regulations, including the requirements for approvals and the time required for regulatory review, vary from country to country. Obtaining and maintaining foreign regulatory approvals are expensive, and we cannot be certain that we will have the resources to be able to pursue such approvals or whether we would receive regulatory

approvals in any foreign country in which we plan to market our products. For example, the European Union requires that manufacturers of medical products obtain the right to affix the CE mark to their products before selling them in member countries of the European Union, which we have not yet obtained and may never obtain. If we fail to obtain regulatory approval in any foreign country in which we plan to market our products, our ability to generate revenues will be harmed.

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

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

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 cannot predict the extent to which future legislation and regulation could cause us to incur additional operating expenses, capital expenditures or restrictions and delays in the development of our products and properties.

Risks Relating to our Intellectual Property

Our proprietary rights may not adequately protect our technologies.

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

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

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

Patents may not be issued for any pending or future pending patent applications owned by or licensed to us, and claims allowed under any issued patent or future issued patent owned or licensed by us may not be valid or sufficiently broad to

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

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

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

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

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

Various U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in our technology areas. Such third parties may claim that we infringe their patents. Because patent applications can take several years to result in a patent issuance, there may be currently pending applications, unknown to us, which may later result in issued patents that our technologies may infringe. For example, we are aware of competitors with patents in technology areas applicable to our optical test equipment products. Such competitors may allege that we infringe these patents. There could also be existing patents of which we are not aware that our technologies may inadvertently infringe. We have from time to time been, and may in the future be, contacted by third parties, including patent assertion entities or intellectual property advisors, about licensing opportunities that also contain claims that we are infringing on third party patent rights. If third parties assert these claims against us, we could incur extremely 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. Even if we believe we have not infringed on a third party's patent rights, we may have to settle a claim on unfavorable terms because we cannot afford to litigate the claim. In addition, if third parties assert claims against us and we are unsuccessful in defending against these claims, these third parties may be awarded substantial damages as well as injunctive or other equitable relief against us, which could effectively block our ability to make, use, sell, distribute or market our products and services in the United States or abroad.

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

challenge those patents. However, we may be unable to obtain these licenses on commercially reasonable terms, if at all, and our challenge of the patents may be unsuccessful. Our failure to obtain the necessary licenses or other rights could prevent the sale, manufacture or distribution of our products and, therefore, could have a material adverse effect on our business, financial condition and results of operations.

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

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

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

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

If we fail to obtain the right to use the intellectual property rights of others which are necessary to operate our business, and to protect their intellectual property, our business and results of operations will be adversely affected.

In the past, we have licensed certain technologies for use in our products. In the future, we may choose, or be required, to license technology or intellectual property from third parties in connection with the development of our products. We cannot assure you that third-party licenses will be available on commercially reasonable terms, if at all. Our competitors may be able to obtain licenses, or cross-license their technology, on better terms than we can, which could put us at a competitive disadvantage. Also, we often enter into confidentiality agreements with such third parties in which we agree to protect and maintain their proprietary and confidential information, including at times requiring our employees to enter into agreements protecting such information. There can be no assurance that the confidentiality agreements will not be breached by any of our employees or that such third parties will not make claims that their proprietary information has been disclosed.

RISKS RELATING TO THE MERGER WITH API

If we are unable to successfully integrate API’s business it could have an adverse effect on our future results and the market price of our common stock.

The success of our recently completed merger with API will depend, in large part, on sales of the combined company’s products and on our ability to realize the anticipated benefits, including annual net operating synergies and cost reductions from combining our business with API’s business. To realize these anticipated benefits, we must successfully integrate API’s business. This integration will be complex and time-consuming.

The failure to successfully integrate and manage the challenges presented by the integration process may result in our failure to achieve some or all of the anticipated benefits of the merger. Potential difficulties that may be encountered in the integration process include the following:

- lost sales and customers as a result of customers of either of the two companies deciding not to do business with the combined company;
- complexities associated with managing the larger combined company with distant business locations;
- integrating personnel from the two companies while maintaining focus on providing consistent, high quality products;
- the loss of key employees;
- potential unknown liabilities and unforeseen expenses associated with the merger; and
- performance shortfalls at one or both of the companies as a result of the diversion of management's attention caused by completing the merger and integrating the companies' operations.

If any of these events were to occur, the ability of the combined company to maintain relationships with customers, suppliers and employees or our ability to achieve the anticipated benefits of the merger could be adversely affected, or could reduce our future earnings or otherwise adversely affect our business and financial results and, as a result, adversely affect the market price of our common stock.

Customer uncertainties related to our operations after the merger could adversely affect our businesses, revenues and gross margins.

If there is uncertainty among our customers, including customers of API, regarding the operation of Luna following the merger, they may delay or defer purchasing decisions or elect to switch to other suppliers. In particular, prospective customers could be reluctant to purchase the products and services due to uncertainty about the direction of the combined company's offerings and willingness to support existing products. To the extent that the merger has created, or in the future creates, uncertainty among those persons and organizations contemplating purchases such that customers delay, defer or change purchase decisions in connection with the merger, our revenues would be adversely affected. Customer assurances may be made by us to address their customers' uncertainty about the direction of the combined company's product and related support offerings, which may result in additional obligations. As a result of any of these actions, our quarterly revenues and net earnings could be substantially below market expectations and a decline in our stock price could result.

The future market price for shares of our common stock may be affected by factors different from those affecting the market price for shares of our common stock prior to the merger.

The risks associated with Luna following the completion of the merger may affect the results of operations of the combined company differently than they affected the results of operations of each of Luna and API as separate companies. Additionally, our future results of operations may be affected by additional or different factors than those that historically affected our results of operations, including, but not limited to: complexities associated with managing the larger, more complex, combined business; integrating personnel from the two companies while maintaining focus on providing products and services; and potential performance shortfalls resulting from the diversion of management's attention caused by integrating the companies' operations.

RISKS RELATING TO OUR COMMON STOCK

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

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

Pursuant to an Investor Rights Agreement, we filed a Form S-3 registration statement in 2014 registering the potential resale of an aggregate of up to approximately 6.3 million shares of our common stock by our then two largest stockholders, Carilion and Dr. Kent Murphy. This registration statement has been declared effective by the SEC, and Dr. Murphy has sold substantially all of his approximately 2.8 million shares included in the registration statement. Carilion continues to hold its approximately 3.5 million shares covered by the registration statement (including approximately 1.3 million shares issuable to Carilion upon conversion of shares of Series A Convertible Preferred Stock that Carilion holds). Because the registration statement is effective, these shares may be sold freely in the public market. Any sales of these shares, or the perception that

future sales of shares may occur by Carilion or any of our other significant stockholders, may have a material adverse effect on the market price of our stock. Any such continuing material adverse effect on the market price of our stock could impair our ability to comply with NASDAQ's continuing listing standards in respect of our minimum stock price, as further described below.

Furthermore, the common stock we issued in the merger has been registered with the SEC on a Form S-4 registration statement. As a result, those shares are immediately available for resale in the public market. Former API common stockholders, collectively, received a number of Luna shares equal to 44% of the number of outstanding shares of our common stock prior to the merger. Former API stockholders may sell the stock they received in the merger in the public markets. If this occurs, or if there is a perception in the market that such sales may occur, the market price of our common stock may decline.

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

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

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

Our common stock is listed on The NASDAQ Capital Market. In order to maintain that listing, we must satisfy minimum financial and other continued listing requirements and standards. One such requirement is that we maintain a minimum bid price of at least $1.00 per share for our common stock. Although we currently comply with the minimum bid requirement, in the recent past, our minimum bid price has fallen below $1.00 per share, and it could again do so in the future. If our bid price falls below $1.00 per share for 30 consecutive business days, we will receive a deficiency notice from NASDAQ advising us that we have 180 days to regain compliance by maintaining a minimum bid price of at least $1.00 for a minimum of ten consecutive business days. Under certain circumstances, NASDAQ could require that the minimum bid price exceed $1.00 for more than ten consecutive days before determining that a company complies.

In the event that our common stock is not eligible for continued listing on NASDAQ or another national securities exchange, trading of our common stock could be conducted in the over-the-counter market or on an electronic bulletin board established for unlisted securities such as the Pink Sheets or the OTC Bulletin Board. In such event, it could become more difficult to dispose of, or obtain accurate price quotations for, our common stock, and there would likely also be a reduction in our coverage by security analysts and the news media, which could cause the price of our common stock to decline further. Also, it may be difficult for us to raise additional capital if we are not listed on a major exchange.

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

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

- sales of our common stock by our significant stockholders, or the perception that such sales may occur, including sales pursuant to the Form S-3 registration statement or sales of shares issued in the merger with API, as described above;
- changes in earnings estimates, investors' perceptions, recommendations by securities analysts or our failure to achieve analysts' earnings estimates;
- changes in our status as an entity eligible to receive SBIR contracts and grants;
- quarterly variations in our or our competitors' results of operations;
- general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors;
- announcements by us, or by our competitors, of acquisitions, new products, significant contracts, commercial relationships or capital commitments;
- pending or threatened litigation;
- any major change in our board of directors or management or any competing proxy solicitations for director nominees;

- changes in governmental regulations or in the status of our regulatory approvals;
- announcements related to patents issued to us or our competitors;
- a lack of, limited or negative industry or securities analyst coverage;
- discussions of our company or our stock price by the financial and scientific press and online investor communities such as chat rooms; and
- general developments in our industry.

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

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

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

We evaluate our existing internal control over financial reporting based on the framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. During the course of our ongoing evaluation of the internal controls, we may identify areas requiring improvement, and may have to design enhanced processes and controls to address issues identified through this review. In connection with our recent merger with API, we have assumed API's legacy accounting and information systems. Although we are developing plans to integrate the legacy API systems with our own systems, until we do so, we may be at increased risk of internal control deficiencies. Remedying any deficiencies, significant deficiencies or material weaknesses that we identify may require us to incur significant costs and expend significant time and management resources. We cannot assure you that any of the measures we implement to remedy any such deficiencies will effectively mitigate or remedy such deficiencies. Investors could lose confidence in our financial reports, and our stock price may be adversely affected, if our internal controls over financial reporting are found not to be effective by management or if we make disclosure of existing or potential significant deficiencies or material weaknesses in those controls.

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

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

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

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

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.

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

(a) Unregistered Sales of Equity Securities during the Three Months Ended June 30, 2016

Common Stock Dividend Payable to Carilion

We issued 1,321,514 shares of Series A Preferred Stock, par value $0.001 per share, to Carilion Clinic in January 2010, which shares were issued in reliance on the exemptions from registration under the Securities Act provided by Sections 3(a)(9) and 4 (a)(2) thereof. The Series A Preferred Stock accrues dividends at the rate of $0.2815 per share per annum, payable quarterly in arrears. Accrued dividends are payable in shares of our common stock, with the number of shares being equal to the quotient of (i) the cumulative aggregate balance of accrued but unpaid dividends on each share of Series A Preferred Stock divided by (ii) the conversion price of the Series A Preferred Stock, which is currently $4.69159 per share. For the period from January 12, 2010, the original issue date of the Series A Preferred Stock, through June 30, 2016, the Series A Preferred Stock issued to Carilion has accrued $1,003,954 in dividends. The accrued dividend as of June 30, 2016 will be paid by the issuance of 512,755 shares of our common stock, which we will issue at Carilion's written request. As the Series A Preferred Stock was issued in reliance on the exemption provided by Section 3(a)(9), the shares of common stock payable as dividends will also be exempt from registration in reliance on Section 3(a)(9) of the Securities Act.

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

Not applicable.

(c) Purchases of Equity Securities by the Registrant

The following table summarizes repurchases of our common stock during June 2016. There were no purchases during April 2016 or May 2016.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of a Publicly Announced Program (1)	Approximate Dollar Value of Shares that May Yet be Purchased Under the Program
6/1/2016 - 6/30/2016	132,675 (2)	$ 1.18	59,000	$ 1,928,020

(1) On June 9, 2016, we announced that our board of directors approved a stock repurchase program, authorizing the repurchase of up to $2.0 million of our common stock. Unless extended, the stock repurchase program expires on May 31, 2017.

(2) Includes 73,675 shares of common stock repurchased from employees to satisfy tax withholding obligations triggered upon the vesting of restricted stock awards.

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

None.

ITEM 4. ***MINE SAFETY DISCLOSURES***

Not applicable.

ITEM 5. ***OTHER INFORMATION***

None.

ITEM 6. ***EXHIBITS***

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

SIGNATURES

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

			Luna Innovations Incorporated
Date:	August 10, 2016	By:	/s/ Dale Messick
			Dale Messick
			Chief Financial Officer **(principal financial and accounting officer and duly authorized officer)**

EXHIBIT INDEX

Exhibit Number	Description
10.1	Form of Restricted Stock Award Grant Notice and Restricted Stock Award Agreement under 2016 Equity Incentive Plan.
31.1	Certification of the Principal Executive Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Principal Financial Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following materials from the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets at June 30, 2016 and December 31, 2015, (ii) Consolidated Statements of Operations for the three and six months ended June 30, 2016 and 2015, (iii) Consolidated Statements of Cash Flows for the six months ended June 30, 2016 and 2015 and (iv) Notes to Unaudited Consolidated Financial Statements.

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

EXHIBIT 10.1

LUNA INNOVATIONS INCORPORATED
RESTRICTED STOCK AWARD GRANT NOTICE
(2016 EQUITY INCENTIVE PLAN)

Luna Innovations Incorporated (the "***Company***"), pursuant to its 2016 Equity Incentive Plan (the "***Plan***"), hereby awards to Participant a restricted stock award covering the number of shares of the Company's Common Stock set forth below. The Company acknowledges the receipt from Participant of consideration with respect to the par value of the shares of the Company's Common Stock in the form of cash, past or future services rendered to the Company by Participant or such other form of consideration as is acceptable to the Board. The restricted stock award and the shares of Common Stock awarded hereunder are subject to all of the terms, conditions and restrictions as set forth herein, in the Restricted Stock Award Agreement and the Plan, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Restricted Stock Award Agreement will have the same definitions as in the Plan or the Restricted Stock Award Agreement, as applicable. If there is any conflict between the terms herein and the Plan, the terms of the Plan will control.

Participant: __
Date of Grant: __
Vesting Commencement Date: __
Number of Shares Subject to Award: __

Vesting Schedule: The Unvested Shares subject to this Award will vest and become Vested Shares in accordance with the vesting schedule below (each such vesting date specified below, a "***Vesting Date***"):

[Insert applicable vesting schedule]

In the event Participant's Continuous Service terminates for any reason, all Unvested Shares as of the date of such termination of Continuous Service shall immediately and automatically be forfeited and returned to the Company without any payment of consideration therefor and without any required action by or notice to Participant.

Additional Terms/Acknowledgements: The undersigned Participant acknowledges receipt of, and understands and agrees to, this Restricted Stock Award Grant Notice, the Restricted Stock Award Agreement and the Plan. Participant acknowledges and agrees that this Restricted Stock Award Grant Notice and the Restricted Stock Award Agreement may not be modified, amended or revised except as provided therein or in the Plan. Participant acknowledges his or her obligation to satisfy any tax withholding obligations imposed on the Company with respect to the restricted stock award, or vesting or delivery of the underlying Common Stock subject to the restricted stock award, as a condition to the receipt of any shares of Common Stock hereunder, including by requiring a cash payment to the Company by Participant. Participant further acknowledges that as of the Date of Grant, this Restricted Stock Award Grant Notice, the Restricted Stock Award Agreement and the Plan set forth the entire understanding between Participant and the Company regarding the acquisition of stock in the Company and supersede all prior oral and written agreements, promises and/or representations on that subject with the exception of (i) equity awards previously granted and delivered to Participant, and (ii) any compensation recovery policy that is or may be adopted by the Company or is otherwise required by applicable law, (iii) the Company's stock ownership guidelines and (iv) any written employment, offer letter or severance agreement, or any written severance plan or policy that would provide for vesting acceleration of this restricted stock award upon the terms and conditions set forth therein. By accepting this restricted stock award, Participant acknowledges having received and read this Restricted Stock Grant Notice, the Restricted Stock Award Agreement and the Plan, and agrees to all of the terms and conditions set forth in these documents. Participant consents to receive this Restricted Stock Grant Notice, the Restricted Stock Agreement, the Plan, the prospectus for the Plan and any other Plan-related documents by electronic delivery and to participate in the Plan through an on-line or electronic system to the extent established and maintained by the Company or another third party designated by the Company.

LUNA INNOVATIONS INCORPORATED	**PARTICIPANT:**
By:__ Signature	__ Signature
Title:__	Date:__
Date:__	

ATTACHMENTS: Restricted Stock Award Agreement; 2016 Equity Incentive Plan

ATTACHMENT I

LUNA INNOVATIONS INCORPORATED

RESTRICTED STOCK AWARD AGREEMENT
(2016 EQUITY INCENTIVE PLAN)

Pursuant to the Restricted Stock Award Grant Notice (the "***Grant Notice***") and this Restricted Stock Award Agreement (the "***Agreement***" and together with the Grant Notice, the "***Award***") and its 2016 Equity Incentive Plan (the "***Plan***"), Luna Innovations Incorporated (the "***Company***") has awarded you the number of shares of the Company's Common Stock subject to the Award as indicated in the Grant Notice. Capitalized terms not explicitly defined in this Agreement but defined in the Plan will have the same definitions as in the Plan. If there is any conflict between the terms in this Agreement and the Plan, the terms of the Plan will control.

The details of your Award, in addition to those set forth in the Grant Notice and the Plan, are as follows:

1. VESTING. Subject to the limitations contained herein, your Award will vest pursuant to the Vesting Schedule in the Grant Notice, provided that vesting will cease upon the termination of your Continuous Service. "***Vested Shares***" will mean shares subject to your Award that have vested in accordance with the Vesting Schedule and with respect to which the forfeiture conditions and restrictions set forth in Sections 2 and 3 have lapsed, and "***Unvested Shares***" will mean shares subject to your Award that have not vested in accordance with the Vesting Schedule that remain subject to such risk of forfeiture and restrictions on transfer as set forth in sections 2 and 3 of this Agreement.

2.

FORFEITURE OF UNVESTED SHARES. Except as may be expressly provided in the Grant Notice or otherwise determined by the Board in its sole discretion, in the event your Continuous Service terminates for any reason, all Unvested Shares as of the date of your termination of Continuous Service shall immediately and automatically be forfeited and returned to the Company without any payment to you and without any required action or notice to you. You hereby agree to take whatever action the Company deems necessary to effectuate the Company's reacquisition of the Unvested Shares and the return of such shares to the Company. Following such forfeiture and return to the Company, the Company will become the legal and beneficial owner of the Unvested Shares and all rights and interests in and related to such shares, and the Company will have the right to transfer to its own name the Unvested Shares without further action by you.

3.

RESTRICTIONS AND CONDITIONS.

(a)

In addition to any other limitation on transfer created by applicable securities laws, you may not sell, assign, hypothecate, donate, encumber or otherwise dispose of all or any part of the Unvested Shares or any interest in the Unvested Shares; *provided, however*, that an interest in the Unvested Shares may be transferred pursuant to a domestic relations order as defined in the Code. In the case of Vested Shares, you will not sell, assign, hypothecate, donate, encumber or otherwise dispose of all or any part of the Vested Shares or any interest in the Vested Shares except in compliance with this Agreement, the Company's bylaws and applicable securities laws.

(b)

In order to implement the provisions of this award, the Company may at its election either (i) after the Date of Grant, issue a certificate representing the shares of Common Stock subject to this Award and place a legend on and stop transfer notice describing the restrictions on and forfeitability of the Unvested Shares subject to this Award, in which case the Company may retain such certificates unless and until the Unvested Shares represented by such certificate have vested and may cancel such certificate if and to the extent that the Unvested Shares are forfeited and returned to the Company or (ii) not issue any certificate representing shares of Common Stock subject to this Award and instead document your interest in such shares of Common Stock by registering such shares of Common Stock with the Company's transfer agent (or another custodian selected by the Company) in book entry form in your name with the applicable restrictions noted in the book-entry system, in which case certificate(s) representing all or a part of shares of Common Stock will not be issued unless and until Unvested Shares become Vested Shares hereunder. The Company may provide for delay in the issuance or delivery of Vested Shares as it determines appropriate in order to effectuate Section 9(b) of this Agreement.

(c)

Unvested Shares, together with any other assets or securities in respect of such Unvested Shares (e.g., dividends), shall be remitted to the Company and subject to forfeiture and restriction on transfer pursuant to Sections 2 and 3 of this Agreement and all other restrictions of the Grant Notice, this Agreement and the Plan. Subject to the provisions of Sections 2 and 3 of this Agreement, all Vested Shares (and any other vested assets and securities attributable thereto) shall be released by the Company within sixty (60) days following the date of their vesting. At all times prior to the release of such shares of Common Stock pursuant to the foregoing sentence, the certificates or book entries representing such shares shall remain in the Company's possession or control. If the Unvested Shares are to be certificated in accordance with Section 3(b)(i), you shall deliver to the Company a duly executed blank stock power in a form to be provided by the Company.

4.

RIGHTS AS STOCKHOLDER. Subject to the provisions of this Award, you will exercise all rights and privileges of a stockholder of the Company with respect to the shares of Common Stock subject to this award. You will be deemed to be the holder of the shares for purposes of receiving any dividends that may be paid with respect to such shares (which will be subject to the same vesting and forfeiture restrictions as apply to the shares to which they relate) and for purposes of exercising any voting rights relating to such shares.

5.

RESTRICTIVE LEGENDS. All certificates and/or book entries representing the Common Stock issued under your Award will be endorsed with appropriate legends determined by the Company in its sole discretion (in addition to any other legend that may be required by other agreements between you and the Company).

6.

CAPITALIZATION ADJUSTMENTS. The number of shares and/or class of securities subject to your Award may be adjusted from time to time for Capitalization Adjustments.

7.

SECURITIES LAW COMPLIANCE. In no event may you be issued any shares of Common Stock under your Award unless the shares are either then registered under the Securities Act or, if not registered, the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Your Award and the issuance of shares of Common Stock under your Award also must comply with all other applicable laws and regulations, and you will not receive any shares of Common Stock under your Award if the Company determines that such receipt would not be in material compliance with such laws and regulations.

8.

AWARD NOT A SERVICE CONTRACT. Your Award is not an employment or service contract, and nothing in your Award will be deemed to create in any way whatsoever any obligation on your part to continue in the employ of the Company or an Affiliate, or on the part of the Company or an Affiliate to continue your employment. In addition, nothing in your Award will obligate the Company or an Affiliate, their respective stockholders, boards of directors, Officers or Employees to continue any relationship that you might have as a Director or Consultant for the Company or an Affiliate.

9.

WITHHOLDING OBLIGATIONS.

(a)

At the time your Award is made, or at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or an Affiliate, if any, which arise in connection with your Award (the "***Withholding Taxes***"). The Company may, in its sole discretion, satisfy all or any portion of the Withholding Taxes obligation relating to your Award by any of the following means or by a combination of such means: (i) withholding from any amounts otherwise payable to you by the Company; (ii) causing you to tender a cash payment; (iii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to you in connection with the Award with a Fair Market Value equal to the amount of such Withholding Taxes or (iv) permitting or requiring you to enter into a "same day sale" commitment, if applicable, with a broker-dealer that is a member of the Financial Industry Regulatory Authority (a "***FINRA Dealer***") whereby you irrevocably elect to sell a portion of the shares subject to your Award to satisfy the Withholding Taxes and whereby the FINRA Dealer irrevocably commits to forward the proceeds necessary to satisfy the Withholding Taxes directly to the Company and/or its Affiliates; *provided, however*, that the number of such shares of Common Stock withheld may not exceed the amount necessary to satisfy the Company's required tax withholding obligations using the minimum statutory withholding rates for federal, state, local and foreign tax purposes, including payroll taxes, that are applicable to supplemental taxable income; and *provided*, further, that to the extent necessary to qualify for an exemption from application of Section 16(b) of the Exchange Act, if applicable, such share withholding procedure will be subject to the express prior approval of the Company's Compensation Committee.

(b)

Unless the tax withholding obligations of the Company and any Affiliate are satisfied, the Company will have no obligation to issue a certificate for such shares, delivery of such shares and/or release such shares from any escrow (as applicable) provided for in this Agreement.

(c)

In the event the Company's obligation to withhold arises prior to the delivery or release to you of Common Stock or it is determined after the delivery of Common Stock to you that the amount of the Company's withholding obligation was greater than the amount withheld by the Company, you agree to indemnify and hold the Company harmless from any failure by the Company to withhold the proper amount.

10.

TAX CONSEQUENCES. The Company has no duty or obligation to minimize the tax consequences to you of this Award and shall not be liable to you for any adverse tax consequences to you arising in connection with this Award. You are hereby advised to consult with your own personal tax, financial and/or legal advisors regarding the tax consequences of this Award and by signing the Grant Notice, you have agreed that you have done so or knowingly and voluntarily declined to do so. You understand that you (and not the Company) shall be responsible for your own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement. You agree to review with your own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Agreement. You will rely solely on such advisors and not on any statements or representations of the Company or any of its agents. You understand that Section 83 of the Code taxes as ordinary income to you the fair market value of the shares of Common Stock issued to you pursuant to the Award as of the date any restrictions on such shares lapse (that is, as of the date on which part or all of such shares vest). You understand that you may elect to be taxed at the time the Common Stock is issued to you pursuant to your Award, rather than when and as applicable restrictions lapse, by filing an election under Section 83(b) of the Code (an "***83(b) Election***") with the Internal Revenue Service within thirty (30) days after the date you acquire shares of Common Stock pursuant to your Award. Even if the fair market value of the Common Stock at the time of grant of

your Award equals the amount paid for the Common Stock, the 83(b) Election must be made to avoid income under Section 83(a) in the future. You understand that failure to file such an 83(b) Election in a timely manner may result in adverse tax consequences for you. You acknowledge that the foregoing is only a summary of the effect of U.S. federal income taxation with respect to issuance of the Common Stock pursuant to your Award, and does not purport to be complete. You further acknowledge that the Company has directed you to seek independent advice regarding the applicable provisions of the Code, the income tax laws of any municipality, state or foreign country in which you may reside, and the tax consequences of your death. You assume all responsibility for filing an 83(b) Election and paying all taxes resulting from such election or the lapse of the restrictions on the Common Stock. **YOU ACKNOWLEDGE THAT IT IS YOUR OWN RESPONSIBILITY, AND NOT THE COMPANY'S, TO FILE A TIMELY ELECTION UNDER SECTION 83(B) OF THE CODE. THE COMPANY AND ITS LEGAL COUNSEL CANNOT ASSUME RESPONSIBILITY FOR FAILURE TO FILE THE 83(B) ELECTION IN A TIMELY MANNER UNDER ANY CIRCUMSTANCES. YOU ASSUME ALL RESPONSIBILTY FOR PAYING ALL TAXES RESULTING FROM SUCH ELECTION OR THE LAPSE OF THE RESTRICTIONS ON THE COMMON STOCK.**

11.

NOTICES. Any notices provided for in your Award or the Plan will be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by the Company to you, five days after deposit in the U.S. mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this Award by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this Award, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

12.

GOVERNING PLAN DOCUMENT. Your Award is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your Award, and is further subject to all interpretations, amendments, rules and regulations which may from time to time be promulgated and adopted pursuant to the Plan. In the event of any conflict between the provisions of your Award and those of the Plan, the provisions of the Plan will control. In addition, your Award (and any compensation paid or shares issued under your Award) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law.

13.

OTHER DOCUMENTS. You hereby acknowledge receipt of and the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Plan prospectus. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

14.

EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of this Award will not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

15.

SEVERABILITY. If all or any part of this Award or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Award or the Plan not declared to be unlawful or invalid. Any Section of this Award (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

16.

MISCELLANEOUS.

(a)

The rights and obligations of the Company under your Award are transferable by the Company to any one or more persons or entities, and all covenants and agreements hereunder will inure to the benefit of, and be enforceable by the Company's successors and assigns. Your rights and obligations under your Award may only be assigned with the prior written consent of the Company and subject to the terms and conditions of this Agreement and the Plan.

(b)

You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your Award.

(c)

You acknowledge and agree that you have reviewed your Award in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your Award and fully understand all provisions of your Award.

*   *   *

This Restricted Stock Award Agreement will be deemed to be signed by the Company and Participant upon the signing by Participant of the Restricted Stock Award Grant Notice to which it is attached or (to the extent established and permitted by the Company) by acceptance of this Award through the Company's electronic stock plan administration system.

ATTACHMENT II

2016 EQUITY INCENTIVE PLAN

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, My E. Chung, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: August 10, 2016

/S/ MY E. CHUNG

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

Exhibit 31.2

CERTIFICATION OF PRINCIPAL 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

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

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

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

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

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

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

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

Date: August 10, 2016

/S/ DALE E. MESSICK

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

Exhibit 32.1

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

In connection with the quarterly report of Luna Innovations Incorporated (the "Company") on Form 10-Q for the quarter ended June 30, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, My E. Chung, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

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

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

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

/S/ MY E. CHUNG

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

August 10, 2016

Exhibit 32.2

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

In connection with the quarterly report of Luna Innovations Incorporated (the "Company") on Form 10-Q for the quarter ended June 30, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Dale E. Messick, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

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

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

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

/S/ DALE E. MESSICK

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

August 10, 2016

Exhibit 99.1

News Release
Luna Innovations Incorporated
301 1st Street, SW, Suite 200
Roanoke, VA 24011

Luna Innovations Incorporated Reports Second Quarter 2016 Financial Results

Revenues grew $4.6 million for the second quarter of 2016 above the $10.0 million reported for second quarter of 2015. Net loss also improved by $1.4 million during the second quarter of 2016 compared to the second quarter of 2015.

(ROANOKE, VA, August 9, 2016) – Luna Innovations Incorporated (NASDAQ: LUNA) today announced its financial results for the three and six months ended June 30, 2016.

Following Luna's merger with Advanced Photonix, Inc. ("API") in May 2015, for the three months ended June 30, 2016, revenues increased by $4.6 million, net loss improved by $1.4 million, and adjusted earnings before interest, taxes, depreciation and amortization ("Adjusted EBITDA") decreased by $0.1 million, compared to the three months ended June 30, 2015. A reconciliation of net loss to Adjusted EBITDA can be found in the schedules included in this release.

“We are pleased with the inter-divisional interactions and financial results from the API merger. This quarter we had strong growth in the sales of our high speed optical receivers and our distributed fiber optic sensing test systems," said My Chung, president and chief executive officer of Luna. "The second quarter continued to deliver strong demand for our 100G optical receivers for the long haul data transmission market, 2.5G avalanche photodiodes for the fiber to the premise market and increasing adoption of our ODiSI systems for the measurement of strain in composite materials. We continue to believe that our focus on these strategic initiatives will provide significant growth opportunities for us, providing enhanced value to our customers and to our stockholders."

Second Quarter Financial Summary

Total revenues for the three months ended June 30, 2016, were $14.6 million compared to $10.0 million for the three months ended June 30, 2015. This reflects an 18% increase over the combined revenues of $12.4 million for Luna and API for the second quarter of 2015. Product and licensing revenues grew to $10.5 million for the three months ended June 30, 2016, compared to $6.3 million for the three months ended June 30, 2015. Products and licensing revenues grew 22% compared to the combined products and licensing revenues of $8.6 million for Luna and API combined for the second quarter of 2015. Technology development revenues were $4.1 million for the three months ended June 30, 2016, compared to $3.7 million for the three months ended June 30, 2015. Technology development revenues grew 5% compared to the combined technology development revenues of $3.9 million for Luna and API for the three months ended June 30, 2015.

Gross profit increased to $5.2 million, or 35% of total revenues, for the three months ended June 30, 2016, compared to gross profit of $4.2 million, or 42% of total revenues, for the three months ended June 30, 2015. The decrease in the gross margin percentage in the second quarter of 2016 resulted from a greater proportion of revenues being generated from the sales of high speed optical receiver ("HSOR") products, which typically have a lower gross margin percentage than the test & measurement products of Luna's historical business.

Selling, general and administrative expenses were $4.6 million for the three months ended June 30, 2016, compared to $5.5 million for the three months ended June 30, 2015. Selling, general and administrative expenses for the three months ended June 30, 2016 included $0.5 million of amortization of intangible assets recognized from the merger with API. Selling, general and administrative expenses for the three months ended June 30, 2015 included $1.7 million in non-recurring merger-related expenses.

Research, development and engineering expenses increased to $1.2 million for the second quarter of 2016 compared to $0.8 million for the second quarter of 2015. The operations of API were not included in our research, development and engineering expenses prior to the closing of our merger on May 8, 2015, resulting in this increase in research development and engineering expense.

Operating loss improved to $(0.7) million for the three months ended June 30, 2016, compared to an operating loss of $(2.1) million for the three months ended June 30, 2015. Net loss attributable to common stockholders improved to $(0.8) million for the three months ended June 30, 2016, compared to a net loss attributable to common stockholders of $(2.2) million for the

three months ended June 30, 2015. Adjusted EBITDA decreased to $0.4 million for the three months ended June 30, 2016 compared to $0.6 million for the three months ended June 30, 2015.

Year to Date Financial Summary

For the six months ended June 30, 2016, total revenues were $28.6 million compared to $15.4 million for the six months ended June 30, 2015. Total revenues of $28.6 million for the six months ended June 30, 2016 reflect an increase of 18% compared to total combined revenues of $24.2 million for Luna and API for the six months ended June 30, 2015.

Gross profit increased to $10.0 million, or 35% of total revenues, for the six months ended June 30, 2016 compared to $6.5 million, or 42% of total revenues, for the first six months of 2015. The decline in the gross margin percentage is attributable to a greater proportion of revenues being generated from the sales of HSOR products, which typically carry a lower gross margin than the test & measurement products of Luna's historical business.

Selling, general and administrative expenses decreased to $9.2 million for the six months ended June 30, 2016 compared to $10.1 million for the six months ended June 30, 2015. Selling, general and administrative expenses for the first six months of 2015 included $3.6 million of non-recurring merger-related expenses. Research, development and engineering expenses were $2.8 million for the six months ended June 30, 2016 compared to $1.1 million for the first six months of 2015. The operations of API were not included in our research, development, and engineering expenses prior to the closing of our merger on May 8, 2015, resulting in this increase in research, development and engineering expense.

Net loss attributable to common stockholders was $(2.3) million for the six months ended June 30, 2016 compared to net income attributable to common stockholders of $(4.8) million for the six months ended June 30, 2015. Adjusted EBITDA improved to $0.3 million for the six months ended June 30, 2016 compared to $0.2 million for the six months ended June 30, 2015.

Non-GAAP Measures

In evaluating the operating performance of its business, Luna's management considers Adjusted EBITDA, which excludes certain charges and credits that are required by generally accepted accounting principles ("GAAP"). Adjusted EBITDA provides useful information to both management and investors by excluding the effect of certain non-cash expenses and items that Luna believes may not be indicative of its operating performance, because either they are unusual and Luna does not expect them to recur in the ordinary course of its business or they are unrelated to the ongoing operation of the business in the ordinary course, including expenses incurred in connection with Luna's merger with API. Adjusted EBITDA should be considered in addition to results prepared in accordance with GAAP, but should not be considered a substitute for, or superior to, GAAP results. Adjusted EBITDA has been reconciled to the nearest GAAP measure in the table following the financial statements attached to this press release.

Conference Call Information

As previously announced, Luna will conduct an investor conference call at 5:00 p.m. (EDT) today to discuss its financial results for the three and six months ended June 30, 2016 and recent business developments. The call can be accessed by dialing 844.578.9643 domestically or 270.823.1522 internationally prior to the start of the call. The participant access code is 60786823**.** Investors are advised to dial in at least five minutes prior to the call to register. The conference call will also be webcast live over the Internet. The webcast can be accessed by logging on to the "Investor Relations" section of the Luna website, www.lunainc.com, prior to the event. The webcast will be archived under the "Webcasts and Presentations" section of the Luna website for at least 30 days following the conference call.

About Luna

Luna Innovations Incorporated (www.lunainc.com) develops high speed optics and high performance fiber optic test products that provide unique capabilities for the aerospace, automotive, energy, defense, and telecommunications industries. Luna develops, manufactures and markets high definition fiber optic sensing products and fiber optic test and measurement instrumentation, and packages optoelectronic semiconductors into HSOR products, custom optoelectronic subsystems (Optoelectronics products) and Terahertz (THz) instrumentation. Luna is organized into two business segments, which work closely together to turn ideas into products: a Technology Development segment and a Products and Licensing segment. Luna's business model is designed to accelerate the process of bringing new and innovative technologies to market.

Forward-Looking Statements

The statements in this release that are not historical facts constitute “forward-looking statements” made pursuant to the safe harbor provision of the Private Securities Litigation Reform Act of 1995 that involve risks and uncertainties. These statements include Luna's expectations regarding Luna’s future financial performance, continuing synergies following the merger with API, and potential growth opportunities. Management cautions the reader that these forward-looking statements are only predictions and are subject to a number of both known and unknown risks and uncertainties, and actual results, performance, and/or achievements of Luna may differ materially from the future results, performance, and/or achievements expressed or implied by these forward-looking statements as a result of a number of factors. These factors include, without limitation, failure of demand for Luna's products and services to meet expectations, integration or other operational issues related to the merger, technological challenges and those risks and uncertainties set forth in Luna’s periodic reports and other filings with the Securities and Exchange Commission ("SEC"). Such filings are available on the SEC’s website at www.sec.gov and on Luna’s website at www.lunainc.com. The statements made in this release are based on information available to Luna as of the date of this release and Luna undertakes no obligation to update any of the forward-looking statements after the date of this release.

Luna Innovations Incorporated
Consolidated Statements of Operations

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(unaudited)		(unaudited)	
Revenues:				
Technology development	$ 4,137,382	$ 3,728,271	$ 7,860,644	$ 6,603,786
Products and licensing	10,509,522	6,297,475	20,773,273	8,761,062
Total revenues	14,646,904	10,025,746	28,633,917	15,364,848
Cost of revenues:				
Technology development	3,181,447	2,576,145	6,061,282	4,659,769
Products and licensing	6,294,607	3,252,627	12,558,180	4,219,317
Total cost of revenues	9,476,054	5,828,772	18,619,462	8,879,086
Gross profit	5,170,850	4,196,974	10,014,455	6,485,762
Operating expense:				
Selling, general and administrative	4,581,776	5,518,656	9,227,060	10,087,609
Research, development and engineering	1,240,655	801,221	2,791,146	1,136,111
Total operating expense	5,822,431	6,319,877	12,018,206	11,223,720
Operating loss	(651,581)	(2,122,903)	(2,003,751)	(4,737,958)
Other income (expense):				
Other (expense) income, net	(39,489)	4,264	(35,545)	4,109
Interest expense	(78,906)	(49,966)	(165,079)	(59,103)
Total other expense	(118,395)	(45,702)	(200,624)	(54,994)
Loss before income taxes	(769,976)	(2,168,605)	(2,204,375)	(4,792,952)
Income tax expense	1,000	—	26,175	2,808
Net loss	(770,976)	(2,168,605)	(2,230,550)	(4,795,760)
Preferred stock dividend	24,580	20,021	45,790	46,581
Net loss attributable to common stockholders	$ (795,556)	$ (2,188,626)	$ (2,276,340)	$ (4,842,341)
Net loss per share attributable to common stockholders:				
Basic and diluted	$ (0.03)	$ (0.10)	$ (0.08)	$ (0.26)
Weighted average common shares and common equivalent shares outstanding:				
Basic and diluted	27,557,960	21,997,768	27,517,792	18,577,006

Luna Innovations Incorporated
Consolidated Balance Sheets

	June 30, 2016 (unaudited)	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	$ 13,807,799	$ 17,464,040
Accounts receivable, net	11,151,791	11,034,557
Inventory	8,389,095	8,863,167
Prepaid expenses and other current assets	1,694,810	1,388,439
Total current assets	35,043,495	38,750,203
Property and equipment, net	7,362,464	6,614,238
Intangible assets, net	9,490,702	10,404,312
Goodwill	2,348,331	2,274,112
Other assets	88,948	88,948
Total assets	$ 54,333,940	$ 58,131,813
Liabilities and stockholders' equity		
Liabilities:		
Current Liabilities:		
Current portion of long-term debt obligations	$ 1,833,333	$ 1,833,333
Current portion of capital lease obligations	50,335	31,459
Accounts payable	3,889,383	4,054,425
Accrued liabilities	7,524,569	8,304,686
Deferred revenue	1,027,929	1,109,759
Total current liabilities	14,325,549	15,333,662
Long-term deferred rent	1,481,824	1,564,229
Long-term debt obligations	3,375,000	4,291,667
Long-term capital lease obligations	141,457	35,237
Total liabilities	19,323,830	21,224,795
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value $0.001, 1,321,514 shares authorized, issued and outstanding at June 30, 2016 and December 31, 2015	1,322	1,322
Common stock, par value $0.001, 100,000,000 shares authorized, 27,988,103 and 27,644,832 shares issued, 27,692,776 and 27,477,181 shares outstanding at June 30, 2016 and December 31, 2015	28,241	28,178
Treasury stock at cost, 300,327 and 167,652 shares at June 30, 2016 and December 31, 2015	(341,320)	(184,934)
Additional paid-in capital	81,997,662	81,461,907
Accumulated deficit	(46,675,795)	(44,399,455)
Total stockholders' equity	35,010,110	36,907,018
Total liabilities and stockholders' equity	$ 54,333,940	$ 58,131,813

Luna Innovations Incorporated
Consolidated Statements of Cash Flows

	Six Months Ended June 30,	
	2016	2015
	(unaudited)	
Cash flows used in operating activities		
Net loss	$ (2,230,550)	$ (4,795,760)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation and amortization	1,861,603	824,251
Share-based compensation	465,028	571,439
Bad debt expense	50,515	10,375
Change in assets and liabilities		
Accounts receivable	(167,749)	(335,811)
Inventory	474,072	(1,345,687)
Other current assets	(306,371)	(358,794)
Accounts payable and accrued expenses	(1,076,784)	(1,271,686)
Deferred revenue	(81,830)	(154,189)
Net cash used in operating activities	(1,012,066)	(6,855,862)
Cash flows (used in) provided by investing activities		
Acquisition of property and equipment	(1,294,775)	(50,175)
Intangible property costs	(244,198)	(123,578)
Cash acquired in business combination	—	374,517
Net cash (used in) provided by investing activities	(1,538,973)	200,764
Cash flows (used in) provided by financing activities		
Payments on capital lease obligations	(32,149)	(36,406)
Payments of debt obligations	(916,667)	(5,962,355)
Repurchase of common stock	(156,386)	(33,113)
Proceeds from term loan	—	6,000,000
Proceeds from the exercise of options	—	82,516
Net cash (used in) provided by financing activities	(1,105,202)	50,642
Net decrease in cash or cash equivalents	(3,656,241)	(6,604,456)
Cash and cash equivalents-beginning of period	17,464,040	14,116,969
Cash and cash equivalents-end of period	$ 13,807,799	$ 7,512,513

Luna Innovations Incorporated
Reconciliation of Net Loss to EBITDA and Adjusted EBITDA

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(unaudited)		(unaudited)	
Net loss	$ (770,976)	$ (2,168,605)	$ (2,230,550)	$ (4,795,760)
Interest expense	78,906	49,966	165,079	59,103
Tax expense	1,000	—	26,175	2,808
Depreciation and amortization	921,804	659,170	1,861,603	824,251
EBITDA	230,734	(1,459,469)	(177,693)	(3,909,598)
Share-based compensation	206,225	300,362	465,028	571,439
Non-recurring merger-related charges	—	1,740,286	—	3,541,502
Adjusted EBITDA	$ 436,959	$ 581,179	$ 287,335	$ 203,343

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