

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington D.C. 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, 2017**

or

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

For the transition period from _____ to _____.

XG SCIENCES, INC.

(Exact name of registrant as
specified in its
charter)

Michigan

(State or other jurisdiction of
incorporation or organization)

333-209131

(Commission File No.)

20-4998896

(I.R.S. Employer Identification
No.)

**3101 Grand Oak Drive
Lansing, MI 48911**

(Address of principal executive offices) (zip code)

(517) 703-1110

(Issuer Telephone number)

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

(Note: Registrant is a voluntary filer of reports required to be filed by certain companies under Sections 13 and 15(d) of the Securities Exchange Act of 1934 and has filed all reports that would have been required during the preceding 12 months, had it been subject to such filing requirements.)

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

Large accelerated filer

Non-accelerated filer

(Do not check if a smaller
reporting company)

Accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by checkmark if the registrant has not elected to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

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

As of August 11, 2017, there were 2,100,225 shares outstanding of the registrant's common stock.

XG SCIENCES, INC.
FORM 10-Q
June 30, 2017
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FORWARD-LOOKING STATEMENTS

The information in this Quarterly Report on Form 10-Q contains “forward-looking statements” and information within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) relating to XG Sciences, Inc., a Michigan corporation and its subsidiary, XG Sciences IP, LLC, a Michigan corporation (collectively referred to as “we”, “us”, “our”, “XG Sciences”, “XGS”, or the “Company”), which are subject to the “safe harbor” created by those sections. These forward-looking statements include, but are not limited to, statements concerning our strategy, future operations, future financial position, future revenue, projected costs, prospects and plans and objectives of management. The words “anticipates,” “believes,” “estimates,” “expects,” “intends,” “may,” “plans,” “projects,” “will,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. These forward-looking statements involve known and unknown risks and uncertainties that could cause our actual results, performance or achievements to differ materially from those expressed or implied by the forward-looking statements, including, without limitation, the risks set forth on beginning on page 14 under the section entitled “Risk Factors” in Post-Effective Amendment No. 5 (declared effective April 14, 2017)) to our registration statement on Form S-1 (File No. 333-209131) as filed with the Securities and Exchange Commission (the “SEC”) on April 12, 2016, and originally declared effective on April 13, 2016 (the “Existing Registration Statement”).

XG SCIENCES, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS

	June 30, 2017	December 31, 2016
	<u>(unaudited)</u>	
ASSETS		
CURRENT ASSETS		
Cash	\$ 431,107	\$ 1,785,343
Accounts receivable, less allowance for doubtful accounts of \$10,000 at June 30, 2017 and December 31, 2016	131,607	99,078
Inventory	193,109	205,973
Incentive refunds receivable	—	165,635
Other current assets	213,789	174,495
Total current assets	<u>969,612</u>	<u>2,430,524</u>
PROPERTY, PLANT AND EQUIPMENT, NET	2,799,346	2,886,421
RESTRICTED CASH FOR LETTER OF CREDIT	195,644	195,499
INTANGIBLE ASSETS, NET	551,462	478,019
TOTAL ASSETS	<u>\$ 4,516,064</u>	<u>\$ 5,990,463</u>
LIABILITIES AND STOCKHOLDERS' DEFICIT		
CURRENT LIABILITIES		
Accounts payable and other liabilities	\$ 750,359	\$ 964,757
Deferred revenue	7,120	6,428
Current portion of capital lease obligations	200,768	268,667
Total current liabilities	<u>958,247</u>	<u>1,239,852</u>
LONG TERM LIABILITIES		
Long term portion of capital lease obligations	59,867	115,106
Long term debt	1,918,461	1,862,120
Derivative liability – warrants	7,798,653	7,900,249
Total long term liabilities	<u>9,776,981</u>	<u>9,877,475</u>
TOTAL LIABILITIES	<u>10,735,228</u>	<u>11,117,327</u>
STOCKHOLDERS' DEFICIT		
Series A convertible preferred stock, 3,000,000 shares authorized, 1,843,536 and 1,829,256 shares issued and outstanding, liquidation value of \$22,122,432 and \$21,951,072 at June 30, 2017 and December 31, 2016, respectively	21,805,940	21,634,597
Series B Preferred Stock, 1,500,000 shares authorized, 0 shares issued and outstanding, liquidation value of \$0 at June 30, 2017 and December 31, 2016	—	—
Common stock, no par value, 25,000,000 shares authorized, 2,100,225 and 1,885,175 shares issued and outstanding at June 30, 2017 and December 31, 2016, respectively	17,134,739	15,647,839
Additional paid in capital	6,666,972	6,490,230
Accumulated deficit	(51,826,815)	(48,899,530)
Total stockholders' deficit	<u>(6,219,164)</u>	<u>(5,126,864)</u>
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	<u>\$ 4,516,064</u>	<u>\$ 5,990,463</u>

See notes to unaudited condensed consolidated financial statements

XG SCIENCES, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE THREE AND SIX MONTHS ENDED JUNE 30, 2017 AND 2016 (unaudited)

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
REVENUE				
Product sales	\$ 259,079	\$ 82,035	\$ 416,779	\$ 141,777
Grants	—	137,055	99,489	158,365
Licensing revenue	25,000	25,000	50,000	50,000
Total revenue	<u>284,079</u>	<u>244,090</u>	<u>566,268</u>	<u>350,142</u>
COST OF GOODS SOLD				
Direct costs	93,542	25,020	210,312	57,052
Unallocated manufacturing expenses	415,152	404,232	786,302	747,947
Total cost of goods sold	<u>508,694</u>	<u>429,252</u>	<u>996,614</u>	<u>804,999</u>
GROSS LOSS	<u>(224,615)</u>	<u>(185,162)</u>	<u>(430,346)</u>	<u>(454,857)</u>
OPERATING EXPENSES				
Research and development	227,062	419,007	490,626	635,357
Sales, general and administrative	923,765	625,381	1,920,352	1,721,603
Total operating expenses	<u>1,150,827</u>	<u>1,044,388</u>	<u>2,410,978</u>	<u>2,356,960</u>
OPERATING LOSS	<u>(1,375,442)</u>	<u>(1,229,550)</u>	<u>(2,841,324)</u>	<u>(2,811,817)</u>
OTHER INCOME (EXPENSE)				
Interest expense, net	(54,445)	(101,123)	(113,533)	(184,774)
Gain (Loss) from change in fair value of derivative liability – warrants	(53,056)	142,848	101,596	232,614
Government incentives, net	(74,000)	24,000	(74,024)	48,000
Total other income (expense)	<u>(181,501)</u>	<u>65,725</u>	<u>(85,961)</u>	<u>95,840</u>
NET LOSS	<u>\$ (1,556,943)</u>	<u>\$ (1,163,825)</u>	<u>\$ (2,927,285)</u>	<u>\$ (2,715,977)</u>
WEIGHTED AVERAGE NUMBER OF SHARES OUTSTANDING –				
Basic and diluted	<u>2,054,193</u>	<u>887,595</u>	<u>1,986,834</u>	<u>862,069</u>
NET LOSS PER SHARE – Basic and diluted	<u>\$ (0.76)</u>	<u>\$ (1.31)</u>	<u>\$ (1.47)</u>	<u>\$ (3.15)</u>

See notes to unaudited condensed consolidated financial statements

XG SCIENCES, INC.
CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' (DEFICIT) FOR
THE SIX MONTHS ENDED JUNE 30, 2017
(unaudited)

	Preferred stock (A)		Preferred stock (B)		Common stock		Additional	Accumulated	Total
	Shares	Amount	Shares	Amount	Shares	Amount	paid-in capital	deficit	
Balances, December 31, 2016	1,829,256	\$21,634,597	—	\$ —	1,885,175	\$15,647,839	\$ 6,490,230	\$ (48,899,530)	\$(5,126,864)
Stock issued for cash	—	—	—	—	215,050	1,720,400	—	—	1,720,400
Stock issuance fees and expenses	—	—	—	—	—	(233,500)	—	—	(233,500)
Preferred stock issued to pay capital lease obligations	14,280	171,343	—	—	—	—	—	—	171,343
Stock-based compensation	—	—	—	—	—	—	176,742	—	176,742
Net loss	—	—	—	—	—	—	—	(2,927,285)	(2,927,285)
Balances, June 30, 2017	<u>1,843,536</u>	<u>\$21,805,940</u>	<u>—</u>	<u>\$ —</u>	<u>2,100,225</u>	<u>\$17,134,739</u>	<u>\$ 6,666,972</u>	<u>\$ (51,826,815)</u>	<u>\$(6,219,164)</u>

See notes to unaudited condensed consolidated financial statements

XG SCIENCES, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE SIX MONTHS ENDED JUNE 30, 2017 AND 2016 (unaudited)

	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	\$ (2,927,285)	\$ (2,715,977)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	439,078	456,133
Amortization of intangible assets	21,180	17,904
Stock-based compensation expense	176,742	228,126
Non-cash interest expense	114,295	157,903
Gain from change in fair value of derivative liability - warrants	(101,596)	(232,614)
(Increase) Decrease in:		
Accounts receivable	(32,529)	5,930
Inventory	12,864	12,624
Other current and non-current assets	126,196	(79,461)
Increase (Decrease) in:		
Accounts payable and other liabilities	(213,705)	371,606
NET CASH USED IN OPERATING ACTIVITIES	<u>(2,384,760)</u>	<u>(1,777,826)</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchases of property and equipment	(352,003)	(39,314)
Purchases of intangible assets	(94,623)	(53,647)
NET CASH USED IN INVESTING ACTIVITIES	<u>(446,626)</u>	<u>(92,961)</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
Repayments of capital lease obligations	(9,750)	(2,832)
Repayments of short-term notes	—	(750,000)
Advances on short-term notes	—	574,750
Proceeds from issuance of common stock	1,720,400	2,285,032
Common stock issuance fees and expenses	(233,500)	(336,600)
NET CASH PROVIDED BY FINANCING ACTIVITIES	<u>1,477,150</u>	<u>1,770,350</u>
NET DECREASE IN CASH	(1,354,236)	(100,437)
CASH AT BEGINNING OF PERIOD	<u>1,785,343</u>	<u>1,060,224</u>
CASH AT END OF PERIOD	<u>\$ 431,107</u>	<u>\$ 959,787</u>
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid for interest	\$ —	\$ 77,646
SUPPLEMENTAL DISCLOSURE OF NON-CASH INVESTING AND FINANCING:		
Value of preferred stock issued for AAOF capital lease obligations	\$ 171,343	\$ 171,343

See notes to unaudited condensed consolidated financial statements

XG SCIENCES, INC.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
JUNE 30, 2017

NOTE 1 - NATURE OF BUSINESS AND BASIS OF PRESENTATION

XG Sciences, Inc., a Michigan company located in Lansing, Michigan and its subsidiary, XG Sciences IP, LLC (collectively referred to as “we”, “us”, “our”, or the “Company”) manufactures graphene nanoplatelets made from graphite, using two proprietary manufacturing processes to split natural flakes of crystalline graphite into very small and thin particles, which we sell as xGnP® graphene nanoplatelets. We sell our nanoparticles in the form of bulk powders or dispersions to other companies for use as additives to make composite and other materials with specially engineered characteristics. We also manufacture and sell integrated, value-added products containing these graphene nanoplatelets such as greases, composites, thin sheets, inks and coating formulations that we sell to other companies. Additionally, we license our technology to other companies in exchange for royalties and other fees.

Basis of Presentation

The accompanying interim condensed consolidated financial statements are unaudited and have been prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”) for interim financial information and the instructions to Form 10-Q and do not include all of the information and footnotes required by GAAP for complete financial statements. All intercompany transactions have been eliminated in consolidation.

Certain information and footnote disclosures normally included in our annual audited consolidated financial statements and accompanying notes have been condensed or omitted in these interim condensed consolidated financial statements. Accordingly, the unaudited condensed consolidated financial statements included herein should be read in conjunction with the audited consolidated financial statements for the year ended December 31, 2016, as filed with the Securities and Exchange Commission (“SEC”) on Form 10-K on March 31, 2017.

The results of operations presented in this quarterly report are not necessarily indicative of the results of operations that may be expected for any future periods. In the opinion of management, these unaudited condensed consolidated financial statements include all adjustments and accruals, consisting only of normal recurring adjustments that are necessary for a fair statement of the results of all interim periods reported herein.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Liquidity

We have historically incurred losses from operations and we may continue to generate negative cash flows as we implement our business plan. Our condensed consolidated financial statements are prepared using US GAAP as applicable to a going concern, which contemplates the realization of assets and liquidation of liabilities in the normal course of business.

In December 2016, we entered into a draw loan note and agreement (the “Dow Facility”) with The Dow Chemical Company (“Dow”) to provide up to \$10 million of secured debt financing at an interest rate of 5% per year, drawable at our request under certain conditions. We received \$2 million at closing and an additional \$1 million on July 18, 2017. We currently have \$2 million of additional funding available on or before December 1, 2017 under the Dow Facility. After December 1, 2017, an additional \$5 million becomes available under the Dow Facility if we have raised \$10 million of equity capital after October 31, 2016.

As of July 31, 2017, we had cash on hand of \$1,000,702, and currently available funds of \$2 million under the Dow Facility, which we believe will fund our operations for at least the next 12 months. We also have a commitment from a shareholder group, dated March 27, 2017, to provide up to \$1 million of additional equity capital in the event we are unable to raise such funds from third party investors through the sale of our common stock in our initial public offering conducted pursuant to a Registration Statement on S-1 (Registration No. 333-209131) (the “IPO”). Our financial projections show that we may need to raise an additional \$15 million or more before we are capable of achieving sustainable free cash flow after capital expenditures. We intend that the primary means for raising such funds will be through our IPO, the additional \$2 million of currently available funds under the Dow Facility, and up to an additional \$5 million of proceeds from the Dow Facility in the event that we raise \$10 million of additional equity capital after October 31, 2016. Thus far, we have raised \$2.6 million through the sale of 323,578 shares of common stock between November 1, 2016 and June 30, 2017 towards the requirement to raise \$10 million of additional equity capital in order to open up the remaining \$5 million of availability on the Dow Facility. There can be no assurance that we will be able to raise additional equity capital in the IPO or in subsequent equity offerings or that the terms and conditions of any future financings will be workable or acceptable to us and our stockholders.

XG SCIENCES, INC.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
JUNE 30, 2017

In the event we are unable to fund our operations from existing cash on hand, operating cash flows, additional borrowings or raising equity capital, we may be forced to reduce our expenses, slow down our growth rate, or discontinue operations. Our condensed consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should we be unable to continue as a going concern.

Use of Estimates

The preparation of our condensed consolidated financial statements in conformity with GAAP requires us to make estimates, judgments and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, together with amounts disclosed in the related notes to the financial statements. Actual results and outcomes may differ from our estimates, judgments and assumptions. Significant estimates, judgments and assumptions used in these condensed consolidated financial statements include, but are not limited to, those related to revenue, accounts receivable and related allowances, contingencies, useful lives and recovery of long-term assets, income taxes, the fair value of stock-based compensation and derivative financial instrument liabilities. These estimates, judgments, and assumptions are reviewed periodically and the effects of material revisions in estimates are reflected in the financial statements prospectively from the date of the change in estimate.

Inventory

Inventory consists of raw materials, work-in-process and finished goods, all of which are valued at standard cost, which approximates average cost.

The following amounts were included in inventory at the end of the period:

	June 30, 2017	December 31, 2016
Raw materials	\$ 37,411	\$ 45,964
Finished goods	155,698	160,009
Total	<u>\$ 193,109</u>	<u>\$ 205,973</u>

Derivative Financial Instruments

We do not use derivative instruments to hedge exposures to cash flow, market or foreign currency risk. The terms of convertible preferred stock and convertible notes that we issue are reviewed to determine whether or not they contain embedded derivative instruments that are required by ASC 815: "Derivatives and Hedging" to be accounted for separately from the host contract, and recorded at fair value. In addition, freestanding warrants are also reviewed to determine if they achieve equity classification. Certain stock warrants that we have issued did not meet the conditions for equity classification and are classified as derivative instrument liabilities measured at fair value. The fair values of these derivative liabilities are revalued at each reporting date, with the change in fair value recognized in earnings. See Note 5 for additional information.

Fair Value Measurements

The following is a reconciliation of the beginning and ending balances for liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) during the six months ended June 30, 2017 and 2016:

	2017	2016
Balance at January 1	\$ 7,900,249	\$ 8,235,163
Warrants reclassified to equity	—	(51,417)
Gain recognized in earnings	(101,596)	(232,614)
Balance at June 30	<u>\$ 7,798,653</u>	<u>\$ 7,951,132</u>

XG SCIENCES, INC.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
JUNE 30, 2017

NOTE 3 — FINANCING AGREEMENTS

Dow Facility

In December 2016, we entered into the Dow Facility which provides us with up to \$10 million of secured debt financing at an interest rate of 5% per year, drawable at our request under certain conditions. We received \$2 million at closing and an additional \$1 million on July 18, 2017. We currently have \$2 million of additional funding available on or before December 1, 2017 under the Dow Facility. After December 1, 2017, an additional \$5 million becomes available if we have raised \$10 million of equity capital after October 31, 2016.

The Dow Facility is senior to most of our other debt, and is secured by all of our assets (Dow is subordinate only to the capital leases with AAOF, see note 9). The loan does not mature until December 1, 2021 (subject to certain mandatory prepayments based on our equity financing activities). Interest is payable beginning January 1, 2017 although we may elect to capitalize interest through January 1, 2019. Dow received warrant coverage of one share of common stock for each \$40 in loans received by us, equating to 20% warrant coverage, with an exercise price of \$8.00 per share for the warrants issued at closing with the initial \$2 million draw. After the initial closing, future warrants are subject to adjustment if we sell shares of common stock at a lower price. As of June 30, 2017, we had issued 50,000 warrants to Dow, which are exercisable on or before the expiration date of December 1, 2023.

The warrants meet the criteria for classification within stockholders' equity. During the six months ended June 30, 2017, amortization expense of \$56,340 was recognized resulting in a carrying value of \$1,918,461 for the Dow Facility as of June 30, 2017.

The Dow Facility entitles Dow to appoint an observer to our board of directors (the "Board"). Dow will maintain their observation right until the later of December 1, 2019; or when the amount of principal and interest outstanding under the Dow Facility is less than \$5 million.

NOTE 4 — PRIVATE PLACEMENT AND PREEMPTIVE RIGHTS

Private Placement

In April 2015, we commenced a private placement offering of Series B Units consisting of shares of Series B Preferred Stock and warrants to purchase common stock at an offering price of \$16.00 per Series B Unit. During the period April 2015 through December 2016, we sold 266,887 shares of Series B Convertible Preferred Stock and Warrants to purchase 222,262 shares of common stock, for aggregate gross proceeds of \$4,270,192.

The private placement Series B Unit offering was terminated on February 25, 2016. As a result of our IPO and pursuant to certain exchange rights granted to participants in the Series B Unit offering, holders of Series B Preferred Stock received the right to exchange each share of Series B Preferred Stock they owned into two shares of common stock. As of December 31, 2016, all holders of Series B Preferred Stock had exercised their Series B exchange rights, and as a result we issued 539,974 shares of restricted common stock in exchange for the 269,987 shares of Series B Preferred Stock that had been previously outstanding. All of the previously issued Series B Preferred Stock was cancelled. However, as of June 30, 2017, all of the 224,897 warrants issued in connection with the Series B Units remain outstanding. Such warrants have an exercise price of \$16.00 per share and expire between April 21 and June 30, 2022.

NOTE 5 – DERIVATIVE LIABILITY WARRANTS

The Series A Convertible Preferred Stock warrants issued in conjunction with convertible notes issued in 2013 (subsequently converted into Series A Preferred Stock), equipment financing leases procured in 2013 and 2014, and certain other pre-emptive rights and the common stock warrants issued in connection with the 2015 Series B Unit offering are derivative liabilities which require re-measurement at fair value each reporting period. Liability classification is required because the terms of the underlying Series A Convertible Preferred Stock have a conversion price reset in the event we offer shares below the then current price of our common stock, and the exchange rights issued in connection with the Series B Unit offering are not consistent with the definition for financial instruments indexed only to a company's own stock.

XG SCIENCES, INC.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
JUNE 30, 2017

The initial value of the stock warrants issued as consideration for the equipment financing leases in 2013 and 2014 was recorded as a reduction of the capital lease obligation and is being amortized as part of the effective interest cost on the capital lease obligation (see Note 8).

In 2014 when we entered into financing agreements with Samsung, AAOF and XGS II, we provided our shareholders with preemptive rights to purchase shares of Series A Convertible Preferred Stock for every two shares of Series A Convertible Preferred Stock or Common Stock owned by the shareholder. In addition, for every two shares of Series A Convertible Preferred Stock purchased by a shareholder, we issued such shareholder a warrant to purchase one additional share of Series A Convertible Preferred Stock with the same terms as the warrants issued to AAOF and XGS II.

Also, as part of our private placement in April 2015, shareholders and holders of our convertible notes were provided the right to purchase their pro rata share of any class of stock that the Company sells or issues. The sale of Series B Preferred Stock in the April 2015 offering triggered the preemptive rights resulting in the issuance of shares of Series B Preferred Stock and warrants. As of June 30, 2017, the total number of Stock Warrants issued due to the preemptive rights offerings was 58,689.

Warrant shares indexed to derivative liabilities as of June 30, 2017 were as follows:

	Type of shares indexed	Exercise Price	Indexed Shares
Warrants issued with Secured Convertible Notes	Series A PS	\$ 6.40	833,333
Warrants issued with equipment financing leases	Series A PS	\$ 6.40	83,333
Warrants issued with Series A preemptive rights	Series A PS	\$ 6.40	56,054
Warrants issued with Series B preemptive rights	Common	\$ 16.00	2,635
Warrants issued with Series B Units	Common	\$ 16.00	222,262
Total shares indexed to derivative liabilities			<u>1,197,617</u>

The following table summarizes the fair value of the derivative liabilities as of June 30, 2017 and December 31, 2016:

	June 30, 2017	December 31, 2016
Warrants issued with Secured Convertible Notes	\$ 6,464,160	\$ 6,554,160
Warrants issued with equipment financing leases	646,418	655,418
Warrants issued with preemptive rights	437,775	443,790
Warrants issued with 2015 Series B Unit private placement	250,300	246,881
Total derivative liabilities	<u>\$ 7,798,653</u>	<u>\$ 7,900,249</u>

We estimated the fair value of their warrant derivative liabilities as of June 30, 2017 and December 31, 2016, using a lattice model and the following assumptions:

	June 30, 2017	December 31, 2016
Fair value of underlying stock	\$8.00 - \$12.64	\$7.63 - \$12.64
Equivalent risk free interest rate	1.43% - 1.56%	1.27% - 1.46%
Expected term (in years)	4.84 - 6.55	5.33 - 7.04
Equivalent stock price volatility	37.49% - 37.69%	37.44% - 37.92%
Expected dividend yield	—	—

XG SCIENCES, INC.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
JUNE 30, 2017

The value of the warrants is estimated using a binomial lattice model. Equivalent amounts reflect the net results of multiple modeling simulations that the lattice model applies to underlying assumptions. Because we are not publicly traded on a national exchange or to our knowledge, an over-the-counter market, the expected volatility of our common stock was developed using historical volatility for a peer group for a period equal to the expected term of the warrants. The fair value of the warrants will be significantly influenced by the fair value of our common stock, stock price volatility, and the risk-free interest components of the lattice technique.

Changes in the fair value of Derivative Liabilities, carried at fair value, are reported as “Change in fair value of derivative liability — warrants” in the Statement of Operations, and were as follows:

	For the Three Months Ended		For the Six Months Ended	
	June 30,		June 30,	
	2017	2016	2017	2016
Warrants issued with Secured Convertible Notes	\$ (17,500)	\$ 103,084	\$ 90,000	\$ 178,671
Warrants issued with equipment financing leases	(1,750)	10,308	9,000	17,862
Warrants issued with preemptive rights	(1,559)	7,197	6,015	12,281
Warrants issued with 2015 private placement	(32,247)	22,259	(3,419)	22,541
Warrants issued with Bridge Financings	—	—	—	1,259
Total Derivative Gain (Loss)	<u>\$ (53,056)</u>	<u>\$ 142,848</u>	<u>\$ 101,596</u>	<u>\$ 232,614</u>

NOTE 6 – STOCK WARRANTS ACCOUNTED FOR AS EQUITY INSTRUMENTS

The following table summarizes the warrants outstanding at June 30, 2017, which are accounted for as equity instruments, all of which are exercisable:

Date Issued	Expiration Date	Exercise Price	Number of Warrants
7/1/2009	7/1/2019	\$ 8.00	6,000
10/8/2012	10/8/2027	\$ 12.00	5,000
12/14/2016	12/1/2023	\$ 8.00	50,000
			61,000

NOTE 7 – EQUITY INCENTIVE PLAN

We previously established the 2007 Stock Option Plan (the “2007 Plan”), which was scheduled to expire on October 30, 2017 and under which we granted key employees and directors options to purchase shares of our common stock at not less than fair market value as of the grant date. On May 4, 2017, the Board approved the 2017 Equity Incentive Plan (the “2017 Plan”) to replace the 2007 Stock Option Plan, which became effective upon the approval of the stockholders holding a majority of the voting power in the Company on July 18, 2017. The 2017 Plan replaces the 2007 Plan and authorizes us to issue awards (stock options and restricted stock) with respect of a maximum of 1,200,000 shares of our common stock, which equals the number of shares authorized under the 2007 Plan, as amended.

On July 24, 2017, certain stock options from the prior incentive stock option plan were cancelled and replacement stock options were awarded. The new stock option awards have an exercise price of \$8 per share, a seven-year term, are vested to the same extent as the cancelled stock options, and are subject to certain other terms. The cancellation and reissuance of the stock options were treated as a modification under ASC 718, *Compensation-Stock Compensation*. The incremental value resulting from the modification, is estimated to be approximately \$330,000, which will be recorded as compensation cost on the date of cancellation (for vested awards) or over the remaining requisite service period (for unvested awards).

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The fair values of options granted are estimated on the dates of grant using the Black Scholes option-pricing model. As of June 30, 2017, 369,750 options to acquire shares have been granted cumulatively. Vesting of the options granted range from immediately to 20% per year, with most new options vesting on a straight-line basis over a four year period from the date issued. Rights to exercise the options that would have vested in any current service year vest immediately upon a change in control of the Company. The options expire at various dates through October 2023.

NOTE 8 – CAPITAL LEASES

As of June 30, 2017 and December 31, 2016, we have capital lease obligations as follows:

	<u>June 30, 2017</u>	<u>December 31, 2016</u>
Capital lease obligations	\$ 295,340	\$ 449,368
Unamortized warrant discount	(34,705)	(65,595)
Net obligations	<u>260,635</u>	<u>383,773</u>
Short-term portion of obligations	(200,768)	(268,667)
Long-term portion of obligations	<u>\$ 59,867</u>	<u>\$ 115,106</u>

Our AAOF capital lease obligations are four year leases starting on January 1, 2014 and January 1, 2015. Our other capital leases expire at various dates in 2018, have average effective interest rates of 0% and contain bargain purchase options that allow us to purchase the leased property for a minimal amount upon the expiration of the lease term.

NOTE 9 — CUSTOMER, SUPPLIER, COUNTRY, AND PRODUCT CONCENTRATIONS

Grants and Licensing Revenue Concentration

There was no grant revenue for the three months ended June 30, 2017. During the six months ended June 30, 2017, one grantor accounted for 94% of total grant revenue. During the three months ended June 30, 2016 and the six months ended June 30, 2016, one grantor accounted for 100% of the total grant revenue in each period. Our licensing revenue for the three months ended June 30, 2017 and 2016, and for the six months ended June 30, 2017 and 2016 came from one licensor.

Product Concentration

Concentrations of product sales greater than 10% of total product sales are shown in the table below. We attempt to minimize the risk associated with product concentrations by continuing to develop new products to add to our portfolio.

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
Grade C-300 HP	39%	*	24%	*
Grade C-500	*	*	15%	*
Grade C-750	*	11%	*	11%
Grade R-10	15%	14%	12%	12%
Grade M-15	*	*	*	16%
Grade M-25	*	10%	*	*

* Denotes less than 10% of product sales.

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Customer Concentration

During the three months ended June 30, 2017 we had two customers whose purchases accounted for 34% and 24% of product sales. During the three months ended June 30, 2016 we had one customer who accounted for 30% of product sales.

For the six months ended June 30, 2017 we had two customers whose purchases accounted for 15%, and 11% of product sales. During the six months ended June 30, 2016 we had two customers whose purchases accounted for 17% and 15% of product sales.

At June 30, 2017, there were two customers who each had an accounts receivable balance greater than 10% of our total outstanding receivable balance. At June 30, 2016, there was only one customer who had an accounts receivable balance greater than 10% of our total outstanding receivable balance.

Country Concentration

We sell our products on a worldwide basis. All of these sales are denominated in U.S. dollars.

International sales for the three months ended June 30, 2017 were 50% of product sales as compared with 72% for the three months ended June 30, 2016. One country, China, accounted for 25% of product sales for the three months ended June 30, 2017 and one country, South Korea, accounted for 40% of product sales for the three months ended June 30, 2016.

International sales for the six months ended June 30, 2017 were 60% of product sales as compared with 74% for the six months ended June 30, 2016. Three countries, China, South Korea, and the United Kingdom accounted for approximately 15%, 16%, and 14%, respectively, of product sales for the six months ended June 30, 2017 and one country, South Korea, accounted for 37% of product sales for the six months ended June 30, 2016.

Suppliers

We buy raw materials used in manufacturing from several sources. These materials are available from a large number of sources. Thus, we believe a change in suppliers would have no material effect on our operations. We did not have any purchases from one supplier that were more than 10% of total purchases for the three months and six months ended June 30, 2017 and 2016.

NOTE 10 - RELATED PARTY TRANSACTIONS

We have a licensing agreement for exclusive use of patents and pending patents with Michigan State University (“MSU”), a shareholder of the Company via the MSU Foundation. During the three months ended June 30, 2017 and 2016 we recorded licensing expense of \$12,500 per quarter. During the six months ended June 30, 2017 and 2016 we recorded licensing expense of \$25,000 in each period.

We have also entered into product licensing agreements with, POSCO, a shareholder. See below for POSCO. Other than MSU and POSCO, there were no other royalty expenses or revenue recognized during the three or six months ended June 30, 2017 and 2016.

Beginning in 2014, POSCO, a licensee and shareholder of the Company, has had a contractual obligation to pay a minimum royalty of \$100,000 per year to license certain technologies. This obligation is due annually on February 28 of the following year. We record this license revenue at a rate of \$25,000 per quarter. POSCO is disputing its obligation to pay the minimum royalty and has not paid the royalty in any prior year. We filed a demand for arbitration in the International Court of Arbitration (ICA) on March 9, 2016 in an effort to resolve the dispute. The ICA has assigned an arbitrator, but no decision has been reached in the dispute. Allowances in the amounts of \$175,000 and \$150,000 were recorded at June 30, 2017 and December 31, 2016, respectively, to reflect an estimate of the portion of the 2017, 2016, 2015 and 2014 royalties that we believe may not be collectible. The accrued royalty and allowance are netted together and reflected in other current assets on the condensed consolidated balance sheet.

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On March 18, 2013, we entered into a series of agreements with two private investment funds: Aspen Advanced Opportunity Fund, LP (“AAOF”) and XGS II, LLC (“XGS II”), and pursuant to a Shareholders’ Agreement dated March 18, 2013 (as amended on February 26, 2016), a principal of each private fund serves as a member of our Board of Directors. These financing agreements were amended and restated on July 12, 2013 to provide for expanded financing commitments from AAOF and XGS II. Pursuant to these agreements, AAOF and XGS II agreed to provide \$10 million of financing to the Company in the form of Secured Convertible Notes and AAOF agreed to provide an additional \$1.0 million of lease financing arrangements. All of the principal and accrued interest on the Secured Convertible Notes issued to AAOF and XGS II were converted into Series A Preferred Stock in December 2016.

During the three months ended June 30, 2017 and 2016 we issued 7,140 shares per period of Series A Preferred stock to AAOF as payment for lease financing obligations under the terms of the Master Lease Agreement, dated March 18, 2013. For the six months ended June 30, 2017 and 2016 we issued a total of 14,280 shares per period as payment for lease obligations.

See also Note 3, the Dow Facility.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Forward-Looking Statements

In this Quarterly Report on Form 10-Q, unless otherwise indicated, the words “we”, “us”, “our”, “XG”, “XGS”, “XG Sciences” or the “Company” refer to XG Sciences, Inc. and its wholly owned subsidiary, XG Sciences IP, LLC, a Michigan limited liability company.

Introduction

The following discussion and analysis should be read in conjunction with the unaudited condensed consolidated financial statements, and the notes thereto included herein. The information contained below includes statements of the Company’s or management’s beliefs, expectations, hopes, goals and plans that, if not historical, are forward-looking statements subject to certain risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. For a discussion on forward-looking statements, see the information set forth in the introductory note to this quarterly report on Form 10-Q under the caption “Forward-Looking Statements”, which information is incorporated herein by reference.

Overview of our Business

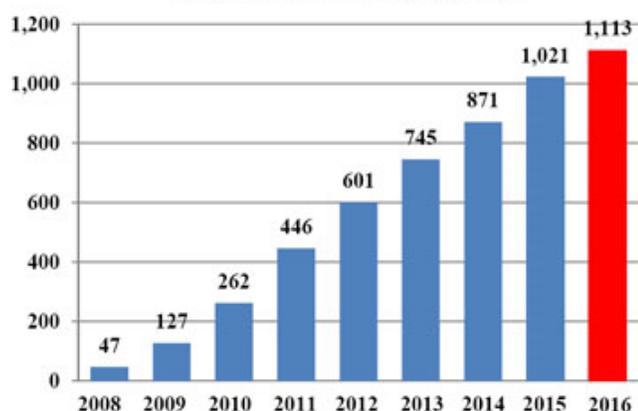
XG Sciences was formed in May 2006 for the purpose of commercializing certain technology to produce graphene nanoplatelets. First isolated and characterized in 2004, graphene is a single layer of carbon atoms configured in an atomic-scale honeycomb lattice. Among many noted properties, monolayer graphene is harder than diamonds, lighter than steel but significantly stronger, and conducts electricity better than copper. Graphene nanoplatelets are particles consisting of multiple layers of graphene. Graphene nanoplatelets have unique capabilities for energy storage, thermal conductivity, electrical conductivity, barrier properties, lubricity and the ability to impart physical property improvements when incorporated into plastics or other matrices.

We believe the unique properties of graphene and graphene nanoplatelets will enable numerous new product applications and the market for such products will quickly grow to be a significant market opportunity. Our business model is to design, manufacture and sell advanced materials we call xGnP[®] graphene nanoplatelets and value-added products based on these nanoplatelets. We currently have hundreds of customers trialing our products for numerous applications, including, but not limited to lithium ion batteries, lead acid batteries, thermally conductive adhesives, composites, thermal transfer fluids, thermal management and heat transfer, inks and coatings, printed electronics, construction materials, cement, and military uses. We believe our proprietary processes have enabled us to be a low-cost producer of high quality, graphene nanoplatelets and value-added integrated products containing graphene nanoplatelets and that we are well positioned to address a wide range of end-use applications.

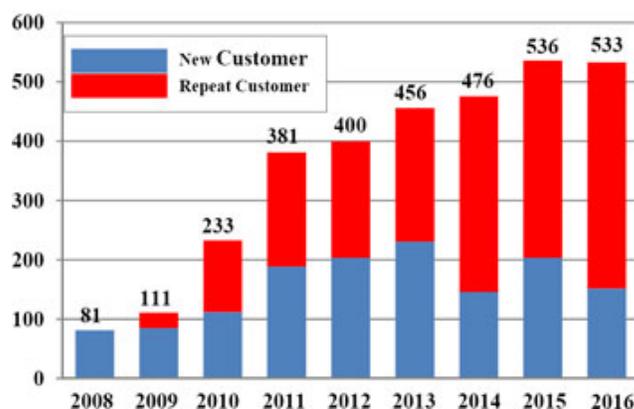
Our Customers

We sell products to customers around the world and have sold materials to over 1,000 customers in 47 countries since 2008. Some of these customers are research organizations and some are commercial organizations. Our customers have included well-known automotive and OEM suppliers around the world (Ford, Johnson Controls, Magna, Honda Engineering) world-scale lithium ion battery manufacturers in the US, South Korea and China (Samsung SDI, LG Chemical, Lishen, A123) and diverse specialty material companies (3M, BASF, Henkel, Dow Chemical, DuPont) as well as leading research centers such as Lawrence Livermore National Laboratory and Oakridge National Laboratory. We have also licensed some of our base manufacturing technology to other companies and we consider technology licensing a component of our business model. Our licensees include POSCO, the fourth largest steel manufacturer in the world by volume of output, and Cabot Corporation (“Cabot”), a leading global specialty chemicals and performance materials company. These licensees further extend our technology through their customer networks. Ultimately, we believe we will benefit in terms of royalties on sales of xGnP[®] nanoplatelets produced and sold by our licensees. The below bar charts show the number of customers and total orders fulfilled by year based on actual purchases of our materials and orders for free samples or materials used in joint development programs.

Cumulative Customers, by Year



Total Orders, by Year and Customer Type



Our Products

Bulk Materials. We target our xGnP® nanoplatelets for use in a wide range of large and growing end-use markets. Our proprietary manufacturing processes allow us to produce nanoplatelets with varying performance characteristics that can be tuned to specific end-use applications based on customer requirements. We currently offer four commercial “grades” of bulk graphene nanoplatelet materials, each of which is available in various particle sizes, which allows for surface areas ranging from 50 to 800 square meters per gram of material depending on the product. Other grades may be made available, depending on the needs for specific applications. In addition, we sell our xGnP graphene nanoplatelets in the form of pre-dispersed mixtures with water, alcohol, or other organic solvents and resins. In addition to selling bulk nanoplatelets, we also offer the following integrated, value-added products that contain our graphene nanoplatelets in various forms.

Energy Storage Materials. These consist of specialty advanced materials that have been formulated for specific applications in the energy storage segment. Chief among these is our proprietary, specially formulated silicon-graphene composite material (also referred to as “SiG” or “XG SiG®”) for use in lithium-ion battery anodes. XG SiG® targets the never-ending need for higher battery capacity and longer life. In several customer trials, our SiG material has demonstrated the potential to increase battery energy storage capacity by 3-5x what is currently available with conventional lithium ion batteries today. Additionally, we offer various bulk materials for use as conductive additives for cathodes and anodes in lithium-ion batteries, as an additive to anode slurries for lead-carbon batteries, as a component in coatings for current collectors in lithium-ion batteries and we are investigating the use of our materials as part of other battery components.

Composites. These consist of an aqueous-based composition of specially designed xGnP® graphene nanoplatelets formulated to be easily dispersed in concrete and targeted specifically for consumer and industrial applications. Use of our GNP® Concrete Additive in cement mixtures results in improved barrier resistance, durability, toughness and corrosion protection. The graphene nanoplatelets promote the formation of more uniform and smaller grain structure in the cement. This fine-grain and uniform structure gives concrete improvements in flexural and compressive strength. In addition, the embedded graphene nanoplatelets will stop cracks from forming and retard crack propagation, should any cracks form – the combination of which will improve lifetime and durability. We intend to further extend our integrated composites portfolio to include pre-compounded resins derived from a range of thermoplastics as well as mother batches of resins and xGnP® nanoplatelets and their combination with resins and fibers for use various end-use applications. In addition we offer various bulk materials with demonstrated efficacy in plastic composites to impart improved physical performance to such matrices.

Thermal Management Materials. These consist mainly of two types of products, our XG Leaf® sheet products and various thermal interface materials (“TIM”) in the form of custom greases or pastes. XG Leaf® is a family of sheet products ideally suited for use in thermal management in portable electronics, which may include cell phones, tablets and notebook PC’s. As these devices continue to adopt faster electronics, higher data management capabilities, brighter displays with ever increasing definition, they generate more and more heat. Managing that heat is a key requirement for the portable electronics market and our XG Leaf® product line is well suited to address the need. These sheets are made using special formulations of xGnP® graphene nanoplatelets as precursors, along with other materials for specific applications. There are several different types of XG Leaf® available in various thicknesses, depending on the end-use requirements for thermal conductivity, electrical conductivity, or resistive heating. Our custom TIM greases and pastes are also designed to be used in various high temperature environments. Additionally, we offer various bulk materials for use as active components in liquids, coatings and plastic composites to impart improved thermal management performance to such matrices.

Inks and Coatings. These consist of specially-formulated dispersions of xGnP® together with solvents, binders, and other additives to make electrically or thermally conductive products designed for printing or coating and which are showing promise in diverse customer applications such as advanced packaging, electrostatic dissipation and thermal management. We also offer a set of standardized ink formulations suitable for printing. These inks offer the capability to print electrical circuits or antennas, or might be suitable for other electrical or thermal applications. All of these formulations can be customized for specific customer requirements.

Our Focus Areas

We believe we are a “platform play” in advanced materials, because our proprietary processes allow us to produce varying grades of graphene nanoplatelets that can be mapped to a variety of applications in many market segments. However, we are prioritizing our efforts in specific areas and with specific customers that we believe represent opportunities for either relatively near-term revenue or especially large and attractive markets. At this time, we are focused on three high priority areas: Energy Storage, Thermal Management and Composites. The following table shows examples of the types of applications we are pursuing, the expecting timing of revenue and the addressable market size of selected market opportunities.

XGS Market/Application Focus Areas & 2018 Market Size

Key Markets	Energy Storage			Thermal Management		Composites
Application	<u>Lithium Ion Battery</u> Next-Generation Anode	<u>Lithium Ion Battery</u> Cathode Conductive Additive	<u>Pb-Carbon Battery</u> Anode Slurry Additive	<u>Portable Electronics</u> Heat Management Powders/Film	<u>Semi Packaging</u> Heat Management Paste/Adhesive	<u>Specialty Plastics</u> Multi-Function Performance Additive
Performance Driver	Higher Energy Storage Capacity	Increased Rate Performance	Longer Cycle Life, Faster Charge Acceptance	Lower and More Stable Operating Temperatures	Improved Heat Transfer	Improved Thermal, Electrical and Physical Properties
Business Model	Silicon Graphene Composite ("XG SIG®") Sales	xGnP® Powder Sales	xGnP® Powder Sales	xGnP® Powder & Graphene Paper Sales ("XG Leaf®")	Formulated Products Sales	xGnP® Powder Sales
Timing	Near Term to Medium Term	Near Term	Near Term	Near Term to Medium Term	Near Term to Medium Term	Medium Term to Longer Term
Potential Market Size	\$26.5 Bn (Li-ion Battery Cell - 2020) ¹	\$5.2 Bn (LiB Cathode Active Materials - 2020) ¹	\$9-\$12 Bn (Start-Stop Batteries - 2020) ³	\$2,976 Bn (Consumer Electronics - 2020) ⁵	\$28 Bn (Semiconductor Packaging - 2020) ⁷	\$654 Bn (Worldwide Plastics Market - 2020) ⁹
Anticipated Addressable Market Size	\$1.3 Bn (LiB Anode Materials - 2018) ¹	\$200 Mn (LiB Cathode Additives - 2018) ²	\$140 Mn (Anode Slurry Additives - 2018) ⁴	\$900 Mn (Graphitic Heat Spreaders - 2018) ⁶	\$780 Mn (Polymeric Thermal Interface - 2018) ⁸	\$9.1 Bn (Composite Additives - 2018) ¹⁰

- (1) Avicenne Energy, “The Worldwide Rechargeable Battery Market 2014 – 2025”, 24th Edition — V3, July 2015.
- (2) Avicenne Energy, “The Worldwide Rechargeable Battery Market 2014 – 2025”, 24th Edition — V3, July 2015 & Internal Estimates.
- (3) ArcActive via Nanalyze, April 3, 2015.
- (4) ArcActive via Nanalyze, April 3, 2015 & Internal Estimates.
- (5) Future Markets Insights, “Consumer Electronics Market: Global Industry Analysis and opportunity Assessment 2015 – 2020”, May 8, 2015.
- (6) Prismark, “Market Assessment: Thin Carbon-Based Heat Spreaders”, August 2014.
- (7) Reporterlink.com, “Semiconductor & IC Packaging Materials Market...”, May 2014.
- (8) Prismark, 2015.
- (9) Grand View Research, “Global Plastics Market Analysis...”, August 2014.
- (10) From (9) and internal estimates: 2018 = 305 million tons of plastic, if 10% of the market adopted xGnP to enhance their properties, and at only 1% by weight as an additive, then in 2018 305,000 tons or 305,000,000 kilos of xGnP would be required. At \$30 a Kg - the value is \$9.1 Bn per year.

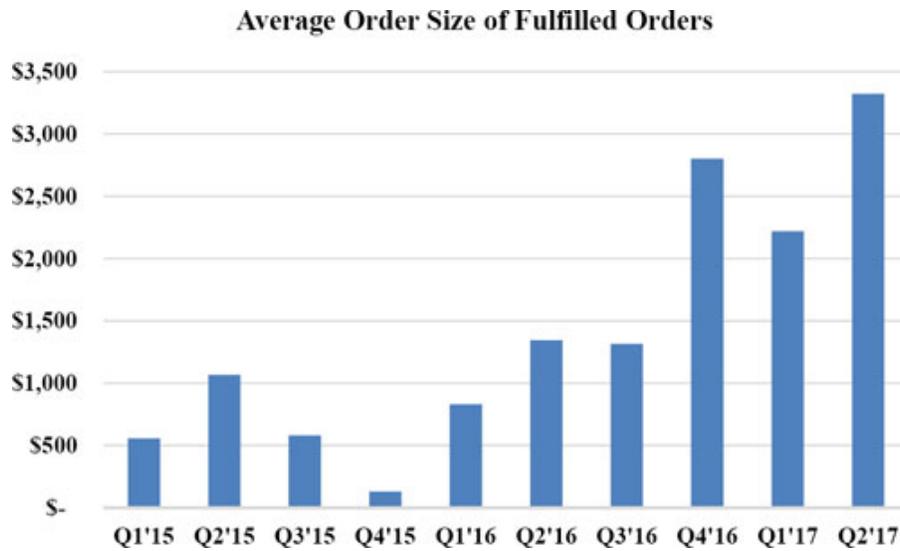
Commercialization Process

Because graphene is a new material, most of our customers are still developing applications that use our products. Commercialization is a process, the exact timing of which is often difficult to predict. It starts with our own internal R&D to validate performance for an identified market or customer-specific need. Our customers then validate the performance of our materials and determine whether our products can be incorporated into their manufacturing processes. This is initially done at the pilot scale. Our customers then have to introduce products that incorporate our materials to their own customers to validate performance. After their customers have validated performance, our customers will then move to commercial scale production. Every customer goes through the same process, but will do so at varying speeds, depending on the customer, the product and the end-use market. Thus, we are not always able to predict when our customers will begin ordering commercial volumes of our materials or their expected volumes over time. However, as customers move through the process, we generally receive feedback and gain greater insights regarding their commercialization plans. The following are examples of where our products are providing value to our customers at levels that we believe will warrant their use on a commercial basis (see also Exhibit 99.1 to Post-Effective Amendment No. 5 to the Existing Registration Statement for our Summary Customer Pipeline validating the value of our products in various end-use markets and applications):

- Lead acid battery manufacturer demonstrating approximately 90% improvement in measured cycle life, appreciable improvement in capacity and charge acceptance and without any loss in water retention performance, and
- Light emitting diode module and product company demonstrated approximately 50% improvement in thermal management capability when compared to existing commercial thermal management products, translating into a 15% improvement in thermal management at the device level, and
- Automotive parts supplier demonstrating improvements in thermal stability for polymer composites incorporating our materials, allowing for approximately 20% higher operating temperatures and a 50% improvement in strength at the elevated temperature, and
- Industrial refrigeration equipment supplier demonstrating improved heat transfer efficiency and energy savings when our xGnP[®] graphene nanoplatelets are incorporated as a component in the thermal-transfer fluids, and
- Construction company demonstrating less than one weight percent of our product in construction material composites improves flexural strength by more than 30%, and
- Plastics composite part manufacturer demonstrating 7-30% improvement in strength and 40% improvement in modulus when used in sheet molding compound, and
- Engineering design firm for automotive manufacturers found approximately 20% reduction in operating temperature and in thermal uniformity when XG Leaf[®] replaces standard cooling fins in lithium ion battery packs, and
- Plastic composite parts manufacturer demonstrating 25% increase in tensile strength and 15% improvement in flex modulus for high-density polyethylene composite.

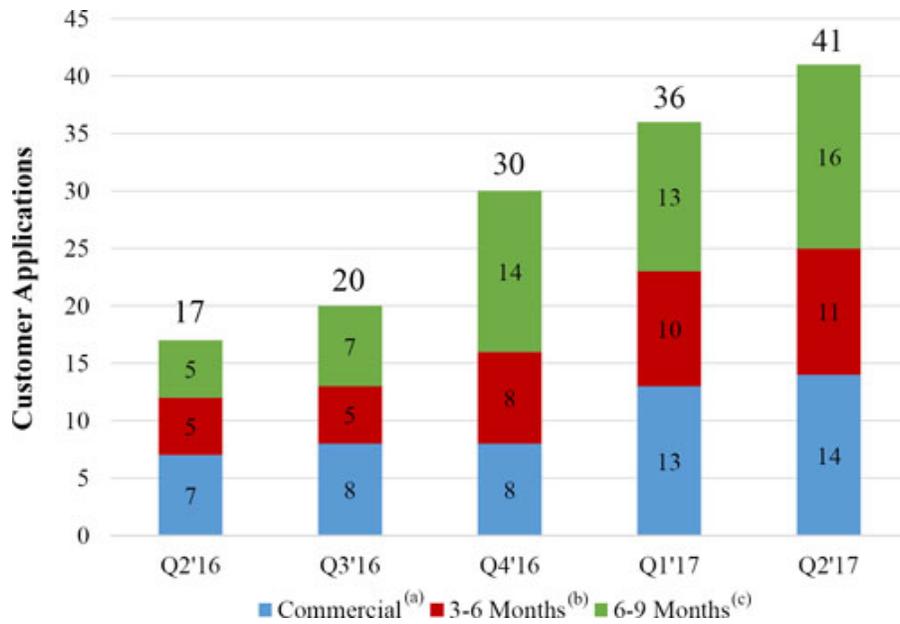
The process of “designing-in” new materials is relatively complex and involves the use of relatively small amounts of the new material in laboratory and engineering development for an extended period of time. Following successful development, customers that incorporate our materials into their products will then order much larger quantities of material to support commercial production. Although our customers are under no obligation to report to us on the usage of our materials, some have indicated that they have introduced or will soon introduce commercial products that use our materials. Thus, while many of our customers are currently purchasing our materials in kilogram (one or two pound) quantities, some are now ordering at ton quantities and we believe many will require tens of tons or even hundreds of tons of material when they commercialize products that incorporate our materials. We also believe that those customers already in production will increase their order volume as demand increases and others will begin to move into commercial volume production as they gain more experience in working with our materials and engage new customers. For example, we shipped a 1 metric ton order in Q4 2016 to a customer who is currently moving into larger scale production and had previously used smaller quantities. In the first quarter of 2017 we shipped 1.6 metric tons of dry powder for various end-use customers and another 1.8 metric tons in the second quarter. As our customers ramp production, we have known customer demand of 15 metric tons of product in the second half of 2017 with upside to about 20 metric tons. This demand profile is further evidence that we are transitioning into a higher-volume production mode, and we expect further, sizable increases into 2018.

We have been reporting average order size as a further indicator of commercial traction. The majority of our customers are still ordering in smaller quantities consistent with their development and engineering qualification work. The average order sizes, by quarter from Q1 2015 through Q2 2017 are given below. These data represent orders shipped in the respective quarter and exclude no charge orders targeted mainly for R&D purposes. The data show that the average order size has increased steadily over the last two years, and we believe that it will continue to increase in the second half of 2017 and in 2018 as more customers commercialize products using our materials.



2017 and 2018 Revenue

We are tracking the commercial and development status of more than 100 different customer applications using our materials with some customers pursuing multiple applications. As of June 30, 2017, we had fourteen specific customer applications where our materials are incorporated into our customer’s products and such customers are actively promoting or selling these products to their customers. In addition, we have another eleven customer applications where our customers have indicated that they expect to begin shipping product incorporating our materials in the next 3 – 6 months, and we have another sixteen customer applications where our customers have indicated intent to commercialize in the next 6 – 9 months. We also have numerous additional customers with whom we are working that have not yet indicated an exact date for commercialization, but we believe have the potential to contribute to revenue in 2018. The following graphic demonstrates the trend over the past 5 quarters as an increasing number of customers indicate their intent to commercialize and move into actively selling or promoting products for future sales. We anticipate that the average order size for these customers will increase in the second half of 2017 and 2018 as their demand grows. As a result, we believe we will begin shipping significantly greater quantities of our products, and thus begin scaling revenue in the second half 2017 and 2018. Based on the status of current discussions with customers and their feedback on the performance of our materials in their products, we believe we will exit 2017 with a greater than \$5 million annualized revenue run rate, and we will be able to recognize approximately \$15 – \$30 million of revenue in 2018.

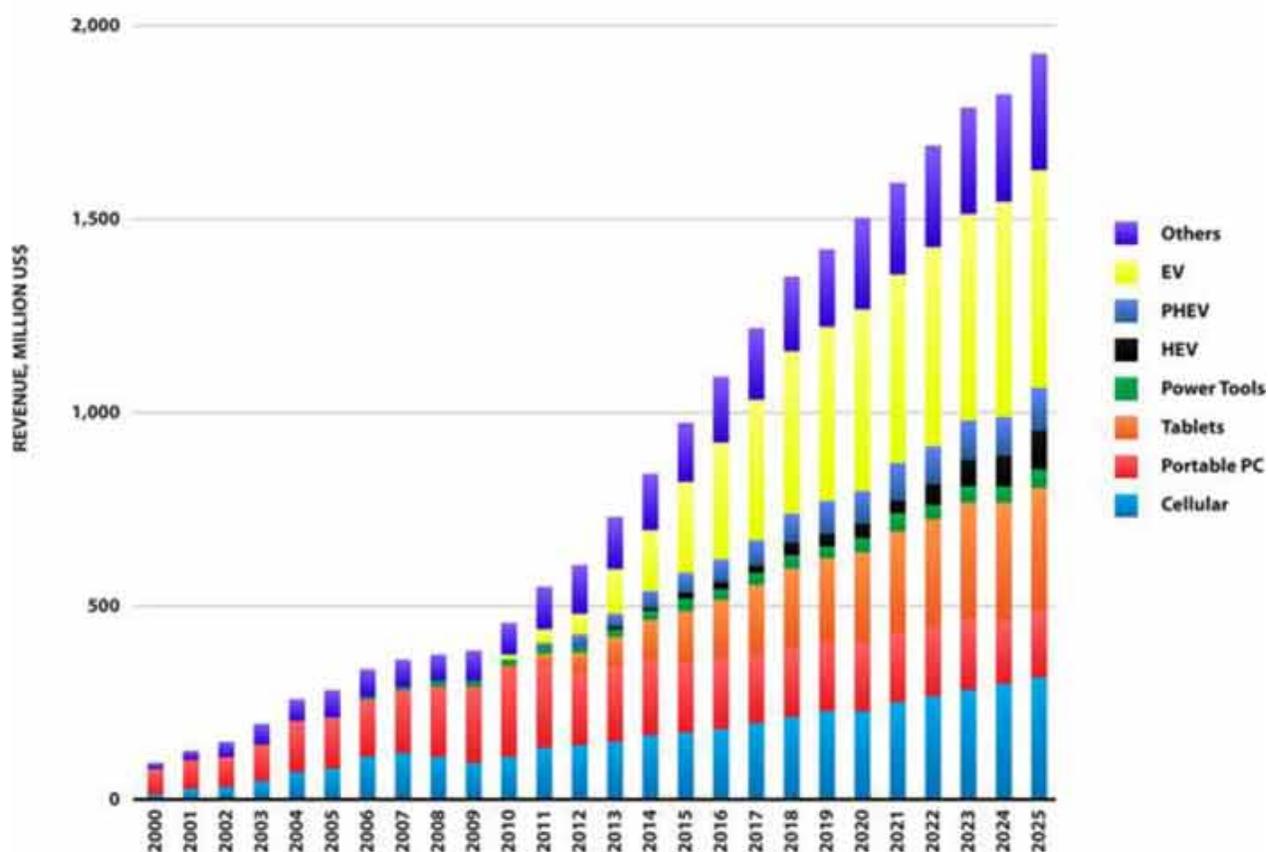


- (a) Customer applications where our materials are used in customer products and they are actively promoting or selling them to their customers.
 - (b) Customer applications where our customers are indicating that they expect to begin shipping products incorporating our materials in the next 3-6 months.
 - (c) Customer applications where our customers are indicating an intent to commercialize in the next 6-9 months.
- Additional 10's of customers demonstrating efficacy and moving through qualification process.

Addressable Markets

The markets that we serve are large and rapidly growing. For example, as shown in the figure below, Avicenne Energy (“The Rechargeable Battery Market, 2014 – 2025”, July 2015) estimates that the market for materials used in lithium ion battery anodes is currently approximately \$1 billion, but is expected to approximately double over the next ten years. We believe our ability to address next generation anode materials represents a significant opportunity for us.

LITHIUM ION BATTERY ANODE MATERIALS



According to Prismark Partners, LLC, a leading electronics industry consulting firm specializing in advanced materials, the 2014 market for finished graphitic heat spreaders as sold to the OEM and EMS companies with adhesive, PET, and/or copper backing for selected portable applications was \$600 million, and is expected to reach \$900 million in 2018. The market is currently in a significant expansion period driven by the demand for portable devices. In a press release dated June 30, 2016, Gartner, Inc., a leading research organization, estimated the 2016 global smartphone market at 1.9 billion units and worldwide combined shipments of devices (PC's, tablets, ultraphones and mobile devices are expected to reach 2.4 billion units in 2016). Every cell phone has some form of thermal management system, and we believe many of the new smart phones and other portable devices being developed can benefit from the thermal management properties of our XG Leaf[®] product line. In August 2016, International Data Corporation (IDC) in their Worldwide Quarterly Tablet Tracker, estimated the global shipment of tablets in 2016 at 183.4 million units. Thus, we believe our XG Leaf[®] product line is well positioned to address a very large and rapidly growing market.

Our Intellectual Property

Some of our proprietary manufacturing processes were developed at Michigan State University (MSU) and licensed to us in 2006. We licensed three U.S. patents and patent applications from MSU. However, over time, our scientists and engineers have made many further discoveries and inventions that are embodied in the form of (and as of June 30, 2017): six additional U.S. patents, three China patents, one Taiwan patent, one European patent, one Japan patent, 16 additional U.S. patent applications, and numerous trade secrets. For each patent application filed in the U.S., we make a determination on the nature and value of the patent. For many of the applications filed in the U.S., additional filings are made in other countries such as the European Union, Japan, South Korea, China, Taiwan or other applicable countries. As of June 30, 2017, we maintain 36 international patent applications. These filings and analyses are made on a case-by-case basis. Typically, patents that are defensive in nature are not filed abroad, while those that are protective of active XGS products or applications are filed in relevant countries abroad. Our general IP strategy is to keep as trade secrets those manufacturing processes that are difficult to enforce should they be disclosed and to seek patent coverage for other manufacturing processes, materials derived from those processes, unique combinations of materials and end uses of materials containing graphene nanoplatelets. We believe that the combination of our rights under the MSU license, our patents and patent applications, and our trade secrets create a strong intellectual property position.

Operating Segment

We have one reportable operating segment that manufactures xGnP[®] graphene nanoplatelets and value-added products produced therefrom, conducts research on graphene nanoplatelets and related products, and licenses our technology as appropriate. As of June 30, 2017, we shipped products on a worldwide basis, but all of our assets were located within the United States.

Results of Operations for the Three and Six Months Ended June 30, 2017 Compared with the Three and Six Months Ended June 30, 2016

Summary Income Statement	For the Three Months Ended June 30,			For the Six Months Ended June 30,		
	2017	2016	Change	2017	2016	Change
Total Revenue	\$ 284,079	\$ 244,090	\$ 39,989	\$ 566,268	\$ 350,142	\$ 216,126
Cost of Goods Sold	508,694	429,252	79,442	996,614	804,999	191,615
Gross Loss	(224,615)	(185,162)	(39,453)	(430,346)	(454,857)	24,511
Research & Development Expense	227,062	419,007	(191,945)	490,626	635,357	(144,731)
Sales, General & Administrative Expense	923,765	625,381	298,384	1,920,352	1,721,603	198,749
Total Operating Expense	1,150,827	1,044,388	106,439	2,410,978	2,356,960	54,018
Operating Loss	(1,375,442)	(1,299,550)	(145,892)	(2,841,324)	(2,811,817)	(29,507)
Other Income (Expense)	(181,501)	65,725	(247,226)	(85,961)	95,840	(181,801)
Net Loss	\$ (1,566,943)	\$ (1,163,825)	\$ (393,118)	\$ (2,927,285)	\$ (2,715,977)	\$ (211,308)

Revenue

Revenue for the three and six months ended June 30, 2017 and 2016, by category, are shown below.

Summary of Revenue	For the Three Months Ended June 30,			For the Six Months Ended June 30,		
	2017	2016	Change	2017	2016	Change
Product Sales	\$ 259,079	\$ 82,035	\$ 177,044	\$ 416,779	\$ 141,777	\$ 275,002
Grants	—	137,055	(137,055)	99,489	158,365	(58,876)
Licensing	25,000	25,000	—	50,000	50,000	—
Net Loss	\$ 284,079	\$ 244,090	\$ 39,989	\$ 566,268	\$ 350,142	\$ 216,126

Product sales consist of two broad categories: (1) material sold to customers for research or development purposes; and (2) production orders for customers. Typically, the order sizes for the first category are relatively small, however we expect orders in the second category to be much larger in the future. For the three months ended June 30, 2017, product sales increased by \$177,044, or 216% from the comparable period in the prior year. For the six months ended June 30, 2017, product sales increased by \$275,002, or 194% from the comparable period in the prior year. The main reason for the increase was customers moving through development programs towards commercialization, requiring larger quantities of our materials for advanced testing, pilot production and commercial-scale production activities. We believe that those customers already in production will increase their order volume as demand increases and others will begin to move into commercial volume production as they gain more experience in working with our materials and engage their own customers. As a result of this movement, we shipped 1.6 metric tons of bulk powders in the first quarter of 2017, 1.8 metric tons of bulk powders in the second quarter of 2017, and we expect to ship 15 to 20 metric tons of bulk powders in the second half of 2017.

We ship our products from our Lansing, MI manufacturing facilities to customers around the world. During the three months ended June 30, 2017, we shipped materials to customers in 19 countries, as compared to 15 countries during the same three month period in 2016. During the first six months ended June 30, 2017, we shipped materials to customers in 25 different countries, versus 21 countries in 2016. For the three months ended, June 30, 2017 and 2016, shipments to only one country accounted for more than 10% of product sales, China and South Korea, respectively. Shipments to three countries other than the United States accounted for more than 10% of product sales during the first six months ended June 30, 2017 and only one country in 2016. Those countries, China, South Korea and the United Kingdom accounted for approximately 46% of total product sales during the first six months ended June 30, 2017 and South Korea accounted for 37% of total product sales during the first six months ended June 30, 2016.

Order Summary

The table below shows a comparison of domestic and international orders fulfilled (note that this does not include orders for free samples). The table also includes the average order size for product sales. These numbers indicate that our customer base remains active with research and development projects that use our materials and the breadth of our geographic coverage. The average order size for the product revenue during the first six months ended June 30, 2017 increased by 164% as compared to the same period in 2016. Although the average size of these orders is still relatively small, we have begun shipping in metric ton quantities to multiple customers.

Order Summary	For the Three Months Ended			For the Six Months Ended		
	June 30,			June 30,		
	2017	2016	Change	2017	2016	Change
Number of orders - domestic	36	23	13	66	51	15
Number of orders - international	42	39	3	83	83	0
Number of orders - total	78	62	16	149	134	15
Average order size for product sales recorded in our Statement of Operations	\$ 3,322	\$ 1,323	\$ 1,998	\$ 2,797	\$ 1,058	\$ 1,739
% change			151%			164%

Grant Revenue

Grant revenue for the three and six months June 30, 2017 and 2016 consisted of proceeds from sources as shown in the table below:

	For the Three Months Ended June 30,				For the Six Months Ended June 30,			
	2017		2016		2017		2016	
	% of Revenue	% of Revenue	% of Revenue	% of Revenue				
US Department of Energy	\$ —	0%	\$ 137,055	100%	\$ 93,747	94%	\$ 158,365	100%
Daimler / University of Michigan	—	0%	—	0%	5,742	6%	—	0%
Total	\$ —	0%	\$ 137,055	100%	\$ 99,489	100%	\$ 158,365	100%

Licensing Revenue

Licensing revenues during the three and six months ended June 30, 2017 and 2016 were accrued based on minimum royalty payments from a license to certain of the Company's technology granted in 2011, which stipulates a minimum of \$100,000 in royalties are due starting in 2014 and annually thereafter. These revenues are being accrued at the rate of \$25,000 per quarter. However, a dispute has arisen regarding interpretation of the licensing agreement, so we reserved half of these revenues as a potential bad debt. This expense is included in selling, general, and administrative expenses. The net amount, \$12,500 per quarter is the net result included in our statement of operations.

Cost of Goods Sold

We use a standard cost system to estimate the direct costs of products sold. Direct costs include estimates of raw material costs, packaging, freight charges net of those billed to customers, and an allocation for direct labor and manufacturing overhead. Because of the nature of our production processes, there is a substantial fixed manufacturing expense requirement that represents the ongoing cost of maintaining production facilities that are not directly related to products sold, so we use a "full capacity" allocation of overhead based on an estimate of what product costs would be if the manufacturing facilities were operating on a full-time basis and producing products at the designed capacity. This estimate involves estimating both the level of expenses as well as production amounts as if the manufacturing facility were operating on a continuous 24 hour per day, 5 day per week production schedule.

Gross Profit Summary

The following table shows the relationship of direct costs to product sales for the three and six months ended June 30, 2017 and 2016:

Gross Profit Summary	For the Three Months Ended			For the Six Months Ended		
	June 30,			June 30,		
	2017	2016	Change	2017	2016	Change
Product Sales	\$ 259,079	\$ 82,035	\$177,044	\$ 416,779	\$ 141,777	\$275,002
Direct Costs	93,542	25,020	68,522	210,312	57,052	153,260
Direct Cost Margin	\$ 165,537	\$ 57,015	\$108,522	\$ 206,467	\$ 84,725	\$121,742
% of Sales	63.9%	69.5%		49.5%	59.8%	
Unallocated Manufacturing Expense	415,152	404,232	10,920	786,302	747,947	38,355
Gross Loss on Product Sales	\$ (249,615)	\$ (347,217)	\$ 97,602	\$ (579,835)	\$ (663,222)	\$ 83,387

We believe that the fluctuations in gross loss on product sales and direct cost from period to period are not indicative of future margins because of the relatively small size of our sales in comparison to our future expectations. Direct costs vary depending on the size of an order, the specific products being ordered, and other factors like shipping destination (which on small orders can represent a significant percentage of the cost).

Costs associated with grant revenue tend to be a mixture of facilities use, management time, labor from scientists, technicians and manufacturing personnel, and some supplies. Because of the difficulty of developing and maintaining an administrative system to gather direct costs for grants, together with the relatively small size of grant revenue, we do not track direct costs for grant revenue as a separate cost category. Therefore, we do not calculate direct cost margins associated with grant revenue but, rather, we view this revenue as being supported by indirect corporate expenses.

Costs associated with licensing revenue tend to be a mixture of IP costs as well as management and administrative expenses that are indirect in nature. As such, we do not assign direct costs to licensing revenue. Where revenue from a license agreement can be assigned to specific product revenue, we classify this revenue as product sales and, using our standard cost system, assign direct costs to those sales.

The remaining “non-direct” costs of operating our manufacturing facilities are recorded as unallocated manufacturing expenses. These expenses include personnel costs, rent, utilities, indirect supplies, depreciation, and related indirect expenses. Unallocated manufacturing expenses are expensed as incurred. We allocate these costs to direct product costs based on the proportion of these expenses that would be representative direct product costs if we were operating our factory at full capacity.

For the three months ended June 30, 2017, unallocated manufacturing expenses increased by 3% to \$415,152 as compared to \$404,231 during the same period in 2016, an increase of \$10,920. Higher levels of manufacturing overhead expense will be incurred as we prepare for anticipated volume increases.

For the six months ended June 30, 2017, unallocated manufacturing expenses increased by 5% to \$786,302 as compared to \$747,947 during the same period in 2016, an increase of \$38,355. In the first two quarters of 2017 we have incurred some higher levels of manufacturing overhead expense as we prepare for anticipated volume increases.

Sales, General and Administrative Expenses

During the three months ended June 30, 2017 we incurred selling, general and administrative expenses (SGA) of \$923,765. This is an increase of \$298,383 or 48% from the same period in 2016. During the three months ended June 30, 2016, we incurred \$182,146 for inter-departmental charges that were expensed to the Research and Development cost center for time and charges related to the DOE Phase I SBIR grant. This resulted in a reduction of SGA expenses in 2016 that did not occur in 2017. As we continue to grow and gain traction in the marketplace our SGA expenses will fluctuate but should stabilize and become more fixed in nature as we achieve economies of scale.

During the six months ended June 30, 2017 we incurred selling, general and administrative expenses (SGA) of \$1,920,352. This is an increase of approximately \$198,749 or 12% from the same period in 2016. During the six months ended June 30, 2016, we incurred \$188,896 for inter-departmental charges that were expensed to the Research and Development cost center for time and charges related to the DOE Phase I SBIR grant. This resulted in a reduction of SGA expenses in 2016 that did not occur in 2017. As we continue to grow and gain traction in the marketplace our SGA expenses will fluctuate but should stabilize and become more fixed in nature as we achieve economies of scale.

Research and Development Expenses

Research and Development expenses for the three months ended June 30, 2017 were \$227,062 as compared to \$419,007 for the same period in 2016. The decrease of \$191,944 or 46% is largely due to higher expenses in 2016 to work on and complete the DOE Phase I SBIR grant (which was completed by June 30, 2016).

Research and Development expenses for the six months ended June 30, 2017 were \$490,626 as compared to \$635,357 for the same period ended June 30, 2016. The decrease of \$144,731 or 23% is largely due to higher expenses in 2016 to work on and complete the DOE Phase I SBIR grant.

Other Income (Expense)

The following table shows a comparison of other income and expense by major component for the three and six months ended June 30, 2017 and 2016:

Other Income (Expense)	For the Three Months Ended June 30,			For the Six Months Ended June 30,		
	2017	2016	Change	2017	2016	Change
Interest expense, net	\$ (54,445)	\$ (101,123)	\$ 46,678	\$ (113,533)	\$ (184,774)	\$ 71,241
Gain (loss) from change in fair value of derivative liability - warrants	(53,056)	142,848	(195,904)	101,596	232,614	(131,018)
Gov't incentives, net	(74,000)	24,000	(98,000)	(74,024)	48,000	(122,024)
Total	<u>\$ (181,501)</u>	<u>\$ 65,725</u>	<u>\$ (247,226)</u>	<u>\$ (85,961)</u>	<u>\$ 95,840</u>	<u>\$ (181,801)</u>

Interest expense, net of interest income in the three and six month periods ending June 30, 2017, decreased by \$46,678 and \$71,241, respectively from the comparable periods in the prior year as a result of paying down the balance on our lease financing arrangements.

Gain/(loss) from changes in the fair value of derivative liability warrants from the previous valuation period are characterized as other (expense)/other income on our Statement of Operations as a result of the GAAP requirement to use variable accounting for such instruments. These values fluctuate from period to period as a result of updating inputs used in the trinomial lattice model used to value such warrants, including risk free rate, volatility, remaining term of each warrant, and the underlying stock price assumption used in such calculations.

Government incentives include accruals for incentive awards from state and local government entities relating to new hires during the period indicated, net of any true up of previous accruals to reflect actual payments. In 2016, we accrued \$74,000 of such accruals for expected incentive awards from the Michigan Economic Growth Authority ("MEGA"), based on our experience in receiving such incentive awards over the previous four years for our hiring practices. Upon review by MEGA in May 2017, our 2016 incentive was declined, because of our failure to meet a baseline assumed hiring threshold, which we missed by two full-time equivalent employees by December 31, 2016. Since 2016 was the final year for this incentive award program, we wrote off this previously accrued award in the three months ended June 30, 2017.

Cash Flow Summary

The following condensed cash flow statement compares cash flow from operating, investing, and financing activities for the six months ended June 30, 2017 and 2016.

	For the Six Months Ended June 30,		Change 2016 – 2017	
	2017	2016	\$	%
Cash, beginning of period	\$ 1,785,343	\$ 1,060,224	\$ 725,119	68%
Net Cash provided by (used in):				
Operating activities	(2,384,760)	(1,777,826)	(606,934)	34
Investing Activities	(446,626)	(92,961)	(353,665)	380
Financing Activities	1,477,150	1,770,350	(293,200)	(17)
Net increase (decrease) in cash	<u>(1,354,236)</u>	<u>(100,437)</u>	<u>(1,253,799)</u>	<u>1248</u>
Cash, end of period	<u>\$ 431,107</u>	<u>\$ 959,787</u>	<u>\$ (528,680)</u>	<u>(55)%</u>

Net cash used in operating activities for the six months ended June 30, 2017 and 2016 was \$2,384,760 and \$1,777,826, respectively. The increase of 34% or \$606,934 is largely attributable to current year initiatives to pay down and keep current on accounts payable and other liabilities.

Investing activities for the six months ended June 30, 2017 included net capital expenditures for the purchase of property and equipment of \$352,003 and \$94,623 for intellectual property as compared with \$39,314 for property and equipment and \$53,647 for intellectual property during the same period in 2016. These levels of capital expenditures are higher as we have begun to update and install equipment necessary to increase production capacity to meet anticipated customer orders for those customers who are moving into commercialization of products containing our materials.

Financing activities provided a net increase in cash of \$1,477,150 and \$1,770,350 for the six months ended June 30, 2017 and 2016, respectively. For the first six months ended June 30, 2017 gross proceeds from the issuance of common stock was \$1,720,400 and stock issuance expenses were \$233,500 as compared to proceeds from the issuance of common stock as of June 30, 2016 of \$2,285,032 and stock issuance expenses of \$336,600.

Liquidity and Capital Expenditures

As of July 31, 2017, we had cash on hand of \$1,000,702, and currently available funds of \$2 million under the Dow Facility, which we believe will fund our operations for at least the next 12 months. We also have a commitment from a shareholder group, dated March 27, 2017, to provide up to \$1 million of additional equity capital in the event we are unable to raise such funds from third party investors through the sale of our common stock in the IPO. Our financial projections show that we may need to raise an additional \$15 million or more before we are capable of achieving sustainable free cash flow after capital expenditures. We intend that the primary means for raising such funds will be through our IPO, the additional \$2 million of currently available funds under the Dow Facility, and up to an additional \$5 million of proceeds from the Dow Facility in the event that we raise \$10 million of additional equity capital in the period after October 31, 2016. Thus far, we have raised \$2.6 million through the sale of 323,578 shares of common stock between November 1, 2016 and June 30, 2017 towards the requirement to raise \$10 million of additional equity capital in order to open up the remaining \$5 million of availability on the Dow Facility. There can be no assurance that we will be able to raise additional equity capital in the IPO or in subsequent equity offerings or that the terms and conditions of any future financings will be workable or acceptable to us and our stockholders.

Critical Accounting Estimates

In preparing the condensed consolidated financial statements in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"), we have adopted various accounting policies. Our most significant accounting policies are disclosed in Note 2 to the consolidated financial statements included in our Form 10-K for the year ended December 31, 2016.

The preparation of the condensed consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. Our estimates and assumptions, including those related to inventories, intangible assets, property, plant and equipment, legal proceedings, research and development, warranty obligations, product liability, fair valued liabilities, sales returns and discounts, and income taxes are updated as appropriate, which in most cases is at least quarterly. We base our estimates on historical experience, or various judgements about the reported values of assets, liabilities, revenue and expenses. Actual results may materially differ from these estimates.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Smaller reporting companies are not required to provide this information.

Item 4. Controls and Procedures

(a) *Evaluation of disclosure controls and procedures.* We maintain disclosure controls and procedures designed to ensure that information required to be disclosed in reports filed under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives.

As required by SEC Rule 15d-15, our management carried out an evaluation, under the supervision and with the participation of our principal executive officer and principal financial officer, of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on that evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective at a reasonable assurance level as of the end of the period covered by this report.

(b) *Changes in internal controls.* There were no changes in our internal control over financial reporting that occurred during the three months ended June 30, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings.

Since 2014, POSCO, a shareholder and licensee of certain technology, has had a contractual obligation to pay us a minimum royalty of \$100,000 per year as consideration for our license agreement. This obligation is due annually on February 28 of the following year. We record this license revenue at a rate of \$25,000 per quarter. POSCO is disputing its obligation to pay the minimum royalty and has not paid the royalty in any prior years. We filed a demand for arbitration in the International Court of Arbitration (ICA) on March 9, 2016 in an effort to resolve the dispute. The ICA has assigned an arbitrator, but no decision has been reached in the dispute.

Item 1A. Risk Factors.

Smaller reporting companies are not required to provide this information.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

None.

Item 5. Other Information.

None

Item 6. Exhibits.

EXHIBIT NUMBER	DESCRIPTION	LOCATION
10.1	Updated Form of Subscription Agreement for Primary Offering	Incorporated by reference to the Company's Form S-1, as amended, filed with the SEC on April 13, 2017
10.3	2017 Equity Incentive Plan	Incorporated by reference to the Company's current report on Form 8-K filed with the SEC on July 25, 2017
31.1	<u>Certifications of the Chief Executive Officer and Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>	Filed herewith
32.1	<u>Certification Pursuant To 18 U.S.C. Section 1350. As Adopted Pursuant To Section 906 of the Sarbanes-Oxley Act Of 2002*</u>	Filed herewith
101. INS	XBRL Instance Document	Filed herewith
101. CAL	XBRL Taxonomy Extension Calculation Link base Document	Filed herewith
101. DEF	XBRL Taxonomy Extension Definition Link base Document	Filed herewith
101. LAB	XBRL Taxonomy Label Link base Document	Filed herewith
101. PRE	XBRL Extension Presentation Link base Document	Filed herewith
101. SCH	XBRL Taxonomy Extension Scheme Document	Filed herewith

SIGNATURES

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

XG SCIENCES, INC.

Dated: August 11, 2017

By: /s/ Philip L. Rose
Name: Philip L. Rose
Title: Chief Executive Officer, President,
Treasurer, Principal Executive Officer and
Principal Financial Officer

Dated: August 11, 2017

By: /s/ Corinne Lyon
Name: Corinne Lyon
Title: Controller and Principal Accounting Officer