

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: **March 31, 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

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 May 8, 2017, there were 2,053,875 shares outstanding of the registrant's common stock.

---

**XG SCIENCES, INC.**  
**FORM 10-Q**  
**March 31, 2017**  
**INDEX**

<b>PART I</b>		
ITEM 1.	<a href="#">FINANCIAL STATEMENTS</a>	4
ITEM 2.	<a href="#">MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</a>	16
ITEM 3.	<a href="#">QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK</a>	27
ITEM 4.	<a href="#">CONTROLS AND PROCEDURES</a>	27
<b>PART II</b>		
ITEM 1.	<a href="#">LEGAL PROCEEDINGS</a>	28
ITEM 1A.	<a href="#">RISK FACTORS</a>	28
ITEM 2.	<a href="#">UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS</a>	28
ITEM 3.	<a href="#">DEFAULTS UPON SENIOR SECURITIES</a>	28
ITEM 4.	<a href="#">MINE SAFETY DISCLOSURES</a>	28
ITEM 5.	<a href="#">OTHER INFORMATION</a>	28
ITEM 6.	<a href="#">EXHIBITS</a>	29
	<a href="#">SIGNATURES</a>	30

## 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 revenues, 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 declared effective on April 13, 2016 (the “Existing Registration Statement”).

**XG SCIENCES, INC.**  
**CONDENSED CONSOLIDATED BALANCE SHEETS**

	<u>March 31,</u> <u>2017</u>	<u>December 31,</u> <u>2016</u>
	<u>(unaudited)</u>	
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash	\$ 1,148,681	\$ 1,785,343
Accounts receivable, less allowance for doubtful accounts of \$10,000 at March 31, 2017 and December 31, 2016	84,398	99,078
Inventories	197,744	205,973
Incentive refunds receivable	74,000	165,635
Other current assets	162,500	174,495
Total current assets	<u>1,667,323</u>	<u>2,430,524</u>
<b>PROPERTY, PLANT AND EQUIPMENT, NET</b>	<b>2,875,315</b>	<b>2,886,421</b>
<b>RESTRICTED CASH FOR LETTER OF CREDIT</b>	<b>195,571</b>	<b>195,499</b>
<b>INTANGIBLE ASSETS, NET</b>	<b>505,198</b>	<b>478,019</b>
<b>TOTAL ASSETS</b>	<b><u>\$ 5,243,407</u></b>	<b><u>\$ 5,990,463</u></b>
<b>LIABILITIES AND STOCKHOLDERS' DEFICIT</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and other liabilities	\$ 988,760	\$ 964,757
Deferred revenue	—	6,428
Current portion of capital lease obligations	236,249	268,667
Total current liabilities	<u>1,225,009</u>	<u>1,239,852</u>
<b>LONG TERM LIABILITIES</b>		
Long term portion of capital lease obligations	88,497	115,106
Long term debt	1,890,081	1,862,120
Derivative liability – warrants	7,745,597	7,900,249
Total long term liabilities	<u>9,724,175</u>	<u>9,877,475</u>
<b>TOTAL LIABILITIES</b>	<b><u>10,949,184</u></b>	<b><u>11,117,327</u></b>
<b>STOCKHOLDERS' DEFICIT</b>		
Series A convertible preferred stock, 3,000,000 shares authorized, 1,836,396 and 1,829,256 shares issued and outstanding, liquidation value of \$22,036,752 and \$21,951,072 at March 31, 2017 and December 31, 2016, respectively	21,720,269	21,634,597
Series B Preferred Stock, 1,500,000 shares authorized, 0 shares issued and outstanding, liquidation value of \$0 at March 31, 2017 and December 31, 2016	—	—
Common stock, no par value, 25,000,000 shares authorized, 1,981,650 and 1,885,175 shares issued and outstanding at March 31, 2017 and December 31, 2016, respectively	16,265,226	15,647,839
Additional paid in capital	6,578,600	6,490,230
Accumulated deficit	(50,269,872)	(48,899,530)
Total stockholders' deficit	<u>(5,705,777)</u>	<u>(5,126,864)</u>
<b>TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT</b>	<b><u>\$ 5,243,407</u></b>	<b><u>\$ 5,990,463</u></b>

See notes to unaudited condensed consolidated financial statements

**XG SCIENCES, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**  
**FOR THE THREE MONTHS ENDED MARCH 31, 2017 AND 2016 (unaudited)**

	<u>2017</u>	<u>2016</u>
<b>REVENUES</b>		
Product sales	\$ 157,700	\$ 59,742
Grants	99,489	21,310
Licensing revenue	25,000	25,000
Total revenues	<u>282,189</u>	<u>106,052</u>
<b>COST OF GOODS SOLD</b>		
Direct costs	116,770	32,032
Unallocated manufacturing expenses	371,150	343,716
Total cost of goods sold	<u>487,920</u>	<u>375,748</u>
<b>GROSS LOSS</b>	<u>(205,731)</u>	<u>(269,696)</u>
<b>OPERATING EXPENSES</b>		
Research and development	263,564	216,350
Selling, general and administrative	996,587	1,096,220
Total operating expenses	<u>1,260,151</u>	<u>1,312,570</u>
<b>OPERATING LOSS</b>	<u>(1,465,882)</u>	<u>(1,582,266)</u>
<b>OTHER INCOME (EXPENSE)</b>		
Incentive refund and interest income	368	24,153
Interest expense	(59,480)	(83,801)
Gain from change in fair value of derivative liability – warrants	154,652	89,765
Total other expense	<u>95,540</u>	<u>30,117</u>
<b>NET LOSS</b>	<u>\$ (1,370,342)</u>	<u>\$ (1,552,149)</u>
<b>WEIGHTED AVERAGE NUMBER OF SHARES OUTSTANDING – Basic and diluted</b>	<u>1,920,090</u>	<u>836,225</u>
<b>NET LOSS PER SHARE – Basic and diluted</b>	<u>\$ (0.71)</u>	<u>\$ (1.86)</u>

See notes to unaudited condensed consolidated financial statements

**XG SCIENCES, INC.**  
**CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' (DEFICIT) FOR THE THREE MONTHS**  
**ENDED MARCH 31, 2017**  
**(unaudited)**

	Preferred stock (A)		Preferred stock (B)		Common stock		Additional paid-in capital	Accumulated deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount			
<b>Balances, December 31, 2016</b>	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	—	—	—	—	96,475	771,800	—	—	771,800
Stock issuance fees and expenses	—	—	—	—	—	(154,413)	—	—	(154,413)
Preferred stock issued to pay capital lease obligations	7,140	85,672	—	—	—	—	—	—	85,672
Employee stock option expense	—	—	—	—	—	—	88,370	—	88,370
Net loss	—	—	—	—	—	—	—	(1,370,342)	(1,370,342)
<b>Balances, December 31, 2016</b>	<u>1,836,396</u>	<u>\$21,720,269</u>	<u>—</u>	<u>\$ —</u>	<u>1,981,650</u>	<u>\$16,265,226</u>	<u>\$ 6,578,600</u>	<u>\$ (50,269,872)</u>	<u>\$(5,705,777)</u>

See notes to unaudited condensed consolidated financial statements

**XG SCIENCES, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**FOR THE THREE MONTHS ENDED MARCH 31, 2017 AND 2016 (unaudited)**

	2017	2016
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net loss	\$ (1,370,342)	\$ (1,552,149)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	214,770	213,739
Amortization of intangible assets	10,590	7,035
Stock based compensation expense	88,370	114,063
Non-cash interest expense	59,480	83,762
Gain from change in fair value of derivative liability - warrants	(154,652)	(89,765)
(Increase) Decrease in:		
Accounts receivable	14,680	32,346
Inventory	8,229	13,361
Other current and non-current assets	103,558	(29,811)
Increase (Decrease) in:		
Accounts payable and other liabilities	17,576	189,804
<b>NET CASH USED IN OPERATING ACTIVITIES</b>	<u>(1,007,741)</u>	<u>(1,017,615)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Purchases of property and equipment	(203,664)	(13,873)
Purchases of intangible assets	(37,769)	(24,836)
<b>NET CASH USED IN INVESTING ACTIVITIES</b>	<u>(241,433)</u>	<u>(38,709)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Advances on short-term notes	-	530,000
Repayments of capital lease obligations	(4,875)	(1,409)
Proceeds from issuance of common stock	771,800	-
Common stock issuance fees and expenses	(154,413)	-
<b>NET CASH PROVIDED BY FINANCING ACTIVITIES</b>	<u>612,512</u>	<u>528,591</u>
<b>NET DECREASE IN CASH</b>	(636,662)	(527,733)
<b>CASH AT BEGINNING OF PERIOD</b>	<u>1,785,343</u>	<u>1,060,224</u>
<b>CASH AT END OF PERIOD</b>	<u>\$ 1,148,681</u>	<u>\$ 532,491</u>
<b>SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:</b>		
Cash paid for interest	\$ -	\$ 40
<b>SUPPLEMENTAL DISCLOSURE OF NON-CASH INVESTING AND FINANCING:</b>		
Value of preferred stock issued for AAOF capital lease obligations	\$ 85,672	\$ 85,672

See notes to unaudited condensed consolidated financial statements

**XG SCIENCES, INC.**  
**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**MARCH 31, 2017**

**NOTE 1 - NATURE OF BUSINESS AND BASIS OF PRESENTATION**

XG Sciences, Inc., a Michigan company located in Lansing, Michigan and its subsidiary, XGS IP, LLC (collectively referred to as “we”, “us”, “our”, or the “Company”) manufactures graphene nanoplatelets made from graphite, using a proprietary manufacturing process to split natural flakes of crystalline graphite into very small and thin particles, which we sell as xGnP® graphene nanoplatelets. These particles are then used in products like battery electrodes, thin sheets, films, inks and coatings that we sell to other companies. We also 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. 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 the Company’s 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 10K 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.

As of March 31, 2017, we had cash on hand of \$1,148,681 and currently available funds of \$3,000,000 under the Dow Facility, which we believe is sufficient to fund our operations through December 2017. We believe that we will need an approximately, additional \$1 million to sustain us for the next 12 months for which we have a commitment from a shareholder group to provide in the event we are unable to raise such funds from third parties. Our financial projections show that we may need to raise an additional \$15 million or more before we are capable of achieving sustainable cash flow from operations. We intend that the primary means for raising such funds will be through our IPO, the additional \$3 million of currently available funds under the Dow Facility, and up to an additional \$5 million of proceeds from the Dow Facility after we have raised \$10 million of additional equity capital in the period beginning on November 1, 2016. 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.

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 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.

**XG SCIENCES, INC.**  
**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**MARCH 31, 2017**

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, revenues 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 revenues, 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:

	<b>March 31, 2017</b>	<b>December 31, 2016</b>
Raw materials	\$ 48,854	\$ 45,964
Finished goods	148,890	160,009
<b>Total</b>	<b>\$ 197,744</b>	<b>\$ 205,973</b>

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 three months ended March 31, 2017 and 2016:

	<u>2017</u>	<u>2016</u>
Balance at January 1	\$ 7,900,249	\$ 8,235,163
Warrants issued with Bridge Financings	—	21,815
Gain recognized in earnings	(154,652)	(89,765)
<b>Balance at March 31</b>	<b>\$ 7,745,597</b>	<b>\$ 8,167,213</b>

**NOTE 3 — WARRANTS AND FINANCING AGREEMENTS**

Bridge Financings

From December 31, 2015 through April 7, 2016, we entered into private placement bridge financings, executed using 15 separate short-term promissory notes totaling \$1,124,750 (the “Bridge Financings”). Seven of these notes were executed by three board members. The Bridge Financings had maturity dates ranging from June 30, 2016 through December 31, 2016 and the interest rate was 8%.

**XG SCIENCES, INC.**  
**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**MARCH 31, 2017**

The investors in the Bridge Financings received common stock warrant coverage of 30% for investments made prior to December 31, 2015 with an exercise price of \$8.00 per share, and 20% coverage thereafter with an exercise price of \$10.00 per share.

The Company issued warrants indexed to 32,120 shares of common stock with a five year term and an exercise price of \$8.00 per share. During the period from closing of the offering and ending on the earlier of i) December 31, 2017 and ii) the date the Company consummates the sale of new securities resulting in gross proceeds of at least \$18 million, the warrant holders have the right to exchange their Warrants on a price per share basis into the new security on the relative price per share terms as the new securities are sold to the third party. Due to the Exchange Rights, the Warrants did not meet the conditions for equity classification and require classification as liabilities at fair value. The proceeds of the financing were allocated first to the derivative liabilities resulting from the Stock Warrants, at their fair value, with the residual allocated to the debt instrument as follows:

	<u>2015</u> <u>Allocation</u>	<u>2016</u> <u>Allocation</u>	<u>Total</u> <u>Bridge Financing</u> <u>Allocation</u>
Derivative liabilities- warrants	\$ 52,676	\$ 550,691	\$ 603,367
Bridge financing notes	497,324	24,059	521,383
Total allocated proceeds	<u>\$ 550,000</u>	<u>\$ 574,750</u>	<u>\$ 1,124,750</u>

During June 2016, we repaid i) outstanding principal of \$750,000 plus accrued interest of \$27,032 to the Bridge Financing investors. These investors, who are also members of the board of directors of the Company, used the proceeds from repayment of their notes, plus additional funds, to purchase 199,879 additional shares of the Company's common stock for approximately \$1.6 million.

During December 2016, we repaid the remaining \$374,750 of outstanding principal plus accrued interest of \$21,253. Members of the board of directors and their affiliates provided \$800,000 of the principal for such Bridge Financings, and upon repayment they re-invested all of the principal plus an additional \$1,013,032 to purchase 226,629 shares of the Company's common stock.

Dow Loan

In December 2016, we entered into a draw loan note and agreement (the "Dow Loan") with The Dow Chemical Company ("Dow") to provide up to \$10 million of secured debt financing to the Company at an interest rate of 5% per year, drawable at our request under certain conditions. We received \$2 million at closing, with \$3 million in additional funding available on or before December 1, 2017. 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 Loan is senior to most of our other debt, and is secured by the Company's 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 will receive warrant coverage of one share of common stock for each \$40 received by the Company, equating to 20% warrant coverage, with an exercise price of \$8.00 per share for the warrants issued at closing with the exercise price of future warrants subject to adjustment if the Company sells shares of common stock at a lower price. As of December 31, 2016, we 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. The fair value of the warrants was determined using a lattice model with the following inputs: Stock price \$7.63, strike price \$8.00, equivalent volatility 38.38%, equivalent risk free rate 1.53%. The relative fair value of the warrants totaled approximately \$143,146 which was recorded as a debt discount and is being amortized to interest expense over the life of the loan. During the fiscal year ended December 31, 2016, amortization expense of \$5,266 was recognized resulting in a carrying value of \$1,862,120 for the Dow Loan as of December 31, 2016. As of March 31, 2017, amortization expense of \$27,960 was recognized resulting in a carrying value of \$1,890,081 for the Dow Loan as of March 31, 2017.

**XG SCIENCES, INC.**  
**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**MARCH 31, 2017**

The Loan entitles Dow to appoint an observer to the Company's board of directors. They will maintain their observation right until the later of December 1, 2019 or when the amount of principal and interest outstanding under the Loan is less than \$5 million.

**NOTE 4 — PRIVATE PLACEMENT AND PREEMPTIVE RIGHTS**

Private Placement

In April 2015, we commenced a private placement offering of up to \$18,000,000 in Series B Units consisting of up to 1,125,000 shares of Series B Preferred Stock and warrants to purchase common stock at an offering price of \$16.00 per Series B Unit. As of February 25, 2016, we had 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 Series B Preferred Stock has a stated value of \$16.00 per share and is convertible, at the option of the holder, at a conversion price of \$16.00 per share, subject to adjustments for stock dividends, splits, combinations and similar events. The Warrants have an exercise price of \$16.00 per share and expire in 7 years. During the period from closing of the offering and ending on the earlier of i) December 31, 2017 and ii) the date the Company consummates the sale of new securities resulting in gross proceeds of at least \$18 million, the holder has the right to exchange their Series B Preferred Stock and Warrants on a price per share basis into the new security on the relative price per share terms as the new securities were sold to the third party.

The cash proceeds from the private placement were allocated first to the derivative liabilities resulting from warrants, at their fair values, with the residual being allocated to the Series B Preferred Stock. The warrants issued in the private placement required derivative liability accounting and are required to be marked to fair value each reporting period.

The private placement Series B Unit offering was terminated on February 25, 2016. As a result of our IPO and pursuant to the exchange rights, 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 the Company 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 March 31, 2017, all of the warrants issued in connection with the Series B Units remain outstanding.

**NOTE 5 – DERIVATIVE LIABILITY WARRANTS**

The Stock Warrants issued in conjunction with the convertible notes issued in 2013, the equipment financing leases procured in 2013 and 2014, the 2015 private placement transaction and the preemptive rights are derivative liabilities which require re-measurement at fair value each reporting period. Liability classification is required because the conversion price reset protection terms in the underlying Series A Convertible Preferred Stock, and the Exchange Rights are not consistent with the definition for financial instruments indexed only to a company's own stock. The initial value of the Stock Warrants issued as consideration for the equipment financing leases 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 9).

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 preemptive shares purchased, the Company issued the 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 March 31, 2017, the total number of Stock Warrants issued due to the preemptive rights offerings was 58,689.

**XG SCIENCES, INC.**  
**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**MARCH 31, 2017**

The Bridge Financing Warrants issued in December 2015 provided the holder with the right to exchange their warrants on a price per share basis into a new security on the same relative price per share terms as any new securities sold to third parties resulting in gross proceeds of at least \$18,000,000. As a result of these exchange rights, the December 2015 Bridge Financing warrants did not achieve equity classification at inception and were recorded as derivative liabilities, at fair value. During the second quarter of 2016, the warrant holders agreed to waive their exchange rights at which time the warrants were reclassified to equity and \$51,418 of derivative liabilities related to such December 2015 Bridge Financing warrants was reclassified to equity.

Shares indexed to derivative liabilities as of March 31, 2017 and December 31, 2016 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 March 31, 2017 and December 31, 2016:

	March 31, 2017	December 31, 2016
Warrants issued with Secured Convertible Notes	\$ 6,446,660	\$ 6,554,160
Warrants issued with equipment financing leases	644,668	655,418
Warrants issued with preemptive rights	436,216	443,790
Warrants issued with 2015 Series B Unit private placement	218,053	246,881
Total derivative liabilities	<u>\$ 7,745,597</u>	<u>\$ 7,900,249</u>

The Company estimated the fair value of their warrant derivative liabilities as of March 31, 2017 and December 31, 2016, using a lattice model and the following assumptions:

	March 31, 2017	December 31, 2016
Fair value of underlying stock	\$7.63 - \$12.64	\$7.63 - \$12.64
Equivalent risk free interest rate	1.34%- 1.51%	1.27%- 1.46%
Expected term (in years)	5.08- 6.80	5.33- 7.04
Equivalent stock price volatility	36.41%- 36.57%	37.44%- 37.92%
Expected dividend yield	—	—

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 the Company is not publicly traded on a national exchange or to our knowledge, an over-the-counter market, the expected volatility of the Company's 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:

	Three months ended March 31,	
	2017	2016
Warrants issued with Secured Convertible Notes	\$ 107,500	\$ 75,587
Warrants issued with equipment financing leases	10,750	7,554
Warrants issued with preemptive rights	7,574	5,084
Warrants issued with 2015 private placement	28,828	282
Warrants issued with Bridge Financings	—	1,258
Total Derivative Gain	<u>\$ 154,652</u>	<u>\$ 89,765</u>

**XG SCIENCES, INC.**  
**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**MARCH 31, 2017**

**NOTE 6 — CONVERTIBLE PREFERRED STOCK**

**Series A Convertible Preferred Stock**

The Company is authorized to issue up to 3,000,000 shares of Series A Convertible Preferred Stock (“Series A Preferred”). Each share of the Series A Preferred, which has a liquidation preference of \$12.00 per share, is convertible at any time, at the option of the holder, into one share of Common Stock at the lower of: (a) \$12.00 per share, or (b) 80% of the price at which the Company sells any equity or equity-linked securities in the future. The Series A Preferred also contains typical anti-dilution provisions that provide for adjustment of the conversion price to reflect stock splits, stock dividends, or similar events. The Series A Preferred is subject to mandatory conversion into Common Stock upon the listing of the Company’s Common Stock on a Qualified National Exchange.

When the Company issued Warrants for \$8.00 per share in conjunction with the December 2015 Bridge Financing, the conversion price of the Series A Preferred reduced from \$12.00 to \$6.40 (80% of \$8.00).

**Series B Convertible Preferred Stock**

As of March 31, 2017, 1,500,000 shares have been designated as Series B Convertible Preferred Stock (“Series B Preferred”), of which none are issued and outstanding. Each share of the Series B Preferred, which has a liquidation preference of \$16 per share, is convertible at any time, at the option of the holder, into one share of Common Stock at \$16 per share. The Series B Preferred also contains typical anti-dilution provisions that provide for adjustment of the conversion price to reflect stock splits, stock dividends, or similar events. Each share of Series B Preferred is subject to mandatory conversion into common stock at the then-effective Series B conversion rate upon the public listing by the Company of its Common Stock on a Qualified National Exchange. However, the Series B Preferred is not subject to the mandatory conversion until all outstanding Convertible Securities are also converted into common stock.

The Series B Preferred ranks senior to all other equity or equity equivalent securities of the Company other than those securities which are explicitly senior or pari passu in rights and liquidation preference to the Series B Preferred and pari passu with the Company’s Series A Preferred.

The Series A and B Preferred are not redeemable for cash and the Company concluded that they are more akin to equity-type instruments than debt-type instruments. Accordingly, the embedded conversion option in each agreement is clearly and closely related to an equity-type host and the conversion option does not require classification and measurement as a derivative financial instrument. Therefore, the securities meet the conditions for stockholders’ equity classification.

**NOTE 7 - INCENTIVE STOCK OPTION PLAN**

We have established an incentive stock option plan (the “Plan”) under which the Company may grant key employees and directors options to purchase common stock of the Company at not less than fair market value as of the grant date. Options for up to 600,000 shares may be awarded under the Plan. Each option is exercisable into one share of common stock of the Company. The Plan expires in December 2017. The fair value of the options granted was estimated on the dates of grant using the Black Scholes option-pricing model. As of March 31, 2017, 369,750 option shares have been granted cumulatively. Vesting of the options ranges from immediately to 20% per year, with most options vesting on a straight-line basis over a three or four year period from the date issued. Rights to exercise the options vest immediately upon a change in control of the Company or termination of the employee’s continuous service due to death or disability. The options expire at various dates through October 2023.

**NOTE 8 –STOCK WARRANTS**

In addition to the warrants described in Note 5, which are accounted for as derivative liabilities, we had 42,694 common stock warrants that were issued in 2012 and prior years which are accounted for as equity instruments. During the period from July 2014 to July 2015, 30,294 of these warrants expired unexercised and 1,400 of the warrants were exercised in May 2015. The remaining 11,000 warrants have exercise prices ranging from \$8.00 to \$12.00 and expire at various dates through 2027.

**XG SCIENCES, INC.**  
**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**MARCH 31, 2017**

The following table summarizes the warrants outstanding at March 31, 2017, 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
			<u>11,000</u>

**NOTE 9 – CAPITAL LEASES**

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

	<u>March 31, 2017</u>	<u>December 31, 2016</u>
Capital lease obligations	\$ 373,698	\$ 449,368
Unamortized warrant discount	(48,952)	(65,595)
Net obligations	324,746	383,773
Short-term portion of obligations	(236,249)	(268,667)
Long-term portion of obligations	<u>\$ 88,497</u>	<u>\$ 115,106</u>

The 83,333 common stock warrants issued as consideration for the equipment financing leases are recorded as derivative liabilities at fair value. The initial value of these warrants 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 obligations.

Our AAOF capital lease obligations are four year leases starting on January 1, 2014 and January 1, 2015. The effective interest rates on the leases are 50% and 32% for the leases executed in 2015 and 2014, respectively. The present value of the lease payments are more than 90% of the fair value of the equipment and therefore the leases were capitalized. 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 10 — CUSTOMER, SUPPLIER, COUNTRY, AND PRODUCT CONCENTRATIONS**

Grants and Licensing Revenue Concentration

Two grantors accounted for 94% and 6% respectively of total grant revenue in the first quarter of 2017. During the first quarter of 2016, one grantor accounted for 100% of the revenue. The company's licensing revenue in the first quarter of both 2017 and 2016 came from one licensor.

Product Concentration

During the first quarter of 2017, we had concentrations of product revenue from only one product that was greater than 10% of total product revenues. Revenue from one of the Company's graphene nanoplatelets materials, Grade C 500 m<sup>2</sup>/g, was 29%. During the first quarter of 2016, we had concentrations of revenue from three products that were each greater than 10% of total revenue, Grade M 15um was 26%, Grade C 750 m<sup>2</sup>/g was 11% and Grade R 10um as 10%. We attempt to minimize the risk associated with product concentrations by continuing to develop new products to add to our portfolio.

**XG SCIENCES, INC.**  
**NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**MARCH 31, 2017**

Customer Concentration

During the first quarter of 2017, we had two customers whose purchases accounted for 29% and 22% of total product revenues. During the first quarter of 2016 we had another customer that represented 27% of total product revenues. At March 31, 2017 there were two customers who each had an accounts receivable balance greater than 10% of our total outstanding receivable balance, at March 31, 2016 there was only one customer who had an accounts receivable balance greater than 10% of our total outstanding balance.

Country Concentration

We sell our products on a worldwide basis. International revenues during the first quarter of 2017 were 40% as compared with 77% during the first quarter of 2016. All of these sales are denominated in U.S. dollars.

Two countries, the United Kingdom and South Korea accounted for approximately 24% and 16%, respectively, of total product revenue during the quarter ended March 31, 2017. During the first quarter of 2016, three countries, Germany, Japan and South Korea accounted for approximately 11%, 13% and 33%, respectively, of total product revenue.

Suppliers

We buy raw materials used in manufacturing from several sources. These materials are available from a large number of sources. A change in suppliers has no material effect on the Company's operations. We did not have any purchases to one supplier that was more than 10% of total purchases in the quarters ended March 31, 2017 and 2016.

**NOTE 11 - 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 March 31, 2017 and 2016 we incurred expenses of \$12,500 and \$12,500, respectively. We have also entered into product licensing agreements with certain other shareholders. No royalty revenue or expenses have been recognized related to these agreements during the three months ended March 31, 2017 and 2016.

Beginning in 2014, POSCO Corporation ("POSCO"), one of our shareholders, has a contractual obligation to pay us a minimum of \$100,000 per year to license certain technologies we license from MSU. 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 that they are obligated to pay the royalties. A petition for arbitration has been filed for this matter by the Company on March 9, 2016. On July 7, 2016 we received a letter from the International Court of Arbitration and they have assigned an arbitrator to the case. No assessment or decision has made by the arbitrator as of the filing date of these financial statements. An allowance in the amount of \$162,500 and \$150,000 were recorded at March 31, 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.

The financing arrangements as previously disclosed were provided by AAOF and XGS II, two private funds that were formed for the sole purpose of investing in the Company by two investors affiliated with ASC-XGS, LLC, a shareholder of the Company. Pursuant to the Company's Shareholders' Agreement dated March 18, 2013 (as amended on February 26, 2016), a principal of each private fund serves as a director of the Company.

The Bridge Financings discussed in Note 3 above included loans from entities controlled by existing shareholders. Three of these shareholders are also directors of the Company. In conjunction with these short-term borrowings, the Company issued Warrants (see also discussed in Note 5).

During the quarters ended March 31, 2017 and 2016 we issued 28,560 and 28,560 shares, respectively, of Series A Preferred stock to AAOF as payment for lease financing obligations under the terms of the Master Agreement.

**NOTE 11 – SUBSEQUENT EVENTS**

During the period from April 1 through May 8, 2017, we received common stock proceeds of \$577,800 for the sale of 72,225 shares.

## **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.

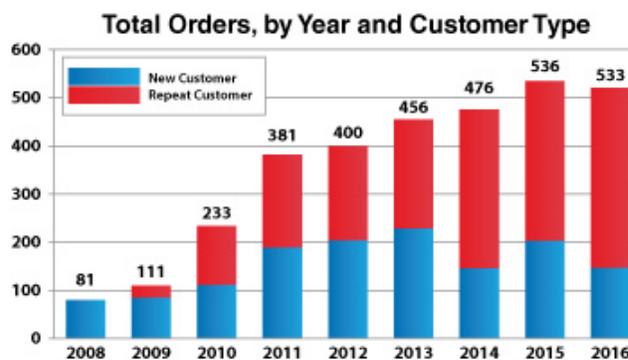
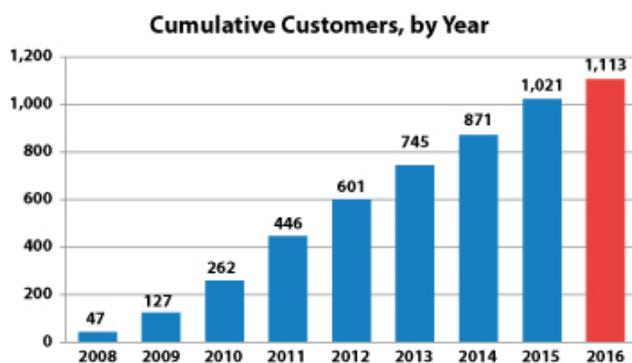
### **Overview of our Business**

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 strength 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<sup>®</sup> 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, supercapacitors, thermal shielding 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 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<sup>®</sup> 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.



## Our Products

We target our xGnP<sup>®</sup> 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 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 material in the form of pre-dispersed mixtures with water, alcohol, or other organic solvents and resins. In addition to selling bulk graphene nanoplatelets, we also offer the following 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<sup>®</sup>”) for use in lithium-ion battery anodes. XG SiG<sup>®</sup> 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, and we are investigating the use of our materials as part of other battery components.

**Thermal Management Materials.** These consist mainly of two types of products, our XG Leaf<sup>®</sup> sheet products and various thermal interface materials (“TIM”) in the form of custom greases or pastes. XG Leaf<sup>®</sup> 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<sup>®</sup> product line is well suited to address the need. These sheets are made using special formulations of xGnP<sup>®</sup> graphene nanoplatelets as precursors, along with other materials for specific applications. There are several different types of XG Leaf<sup>®</sup> 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<sup>®</sup> 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
	Lithium Ion Battery Next-Generation Anode	Lithium Ion Battery Cathode Conductive Additive	Pb-Carbon Battery Anode Slurry Additive	Portable Electronics Heat Management Powders/Film	Semi Packaging Heat Management Paste/Adhesive	Specialty Plastics 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) <sup>1</sup>	\$5.2 Bn (LiB Cathode Active Materials - 2020) <sup>1</sup>	\$9-\$12 Bn (Start-Stop Batteries - 2020) <sup>3</sup>	\$2,976 Bn (Consumer Electronics - 2020) <sup>5</sup>	\$28 Bn (Semiconductor Packaging - 2020) <sup>7</sup>	\$654 Bn (Worldwide Plastics Market - 2020) <sup>9</sup>
Anticipated Addressable Market Size	\$1.3 Bn (LiB Anode Materials - 2018) <sup>1</sup>	\$200 Mn (LiB Cathode Additives - 2018) <sup>2</sup>	\$140 Mn (Anode Slurry Additives - 2018) <sup>4</sup>	\$900 Mn (Graphitic Heat Spreaders - 2018) <sup>6</sup>	\$780 Mn (Polymeric Thermal Interface - 2018) <sup>8</sup>	\$9.1 Bn (Composite Additives - 2018) <sup>9</sup>

- (1) Avicenne Energy, "The Worldwide Rechargeable Battery Market 2014 – 2025", 24<sup>th</sup> Edition — V3, July 2015.
- (2) Avicenne Energy, "The Worldwide Rechargeable Battery Market 2014 – 2025", 24<sup>th</sup> 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

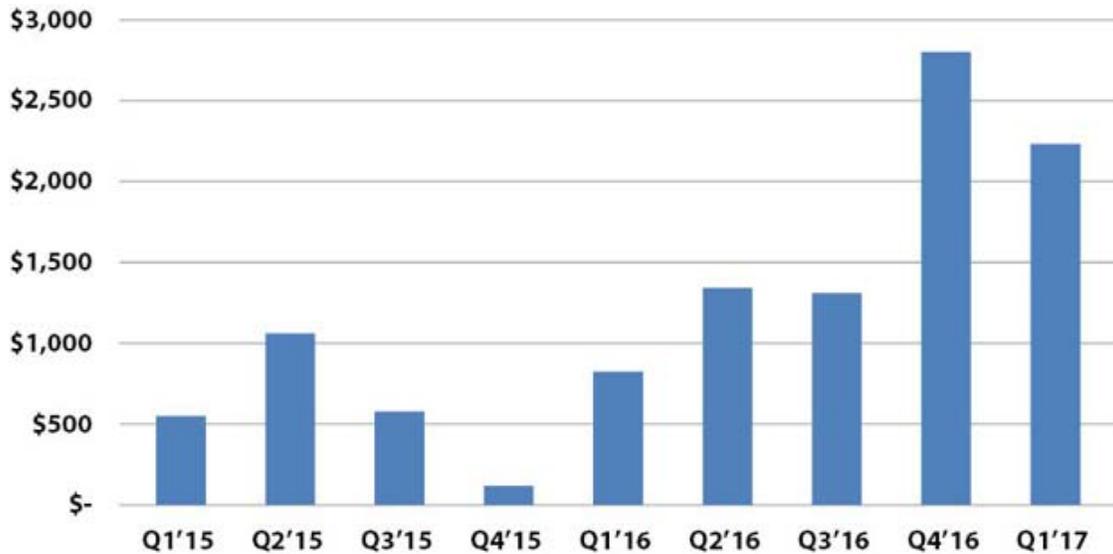
Because graphene is a new material, most of our customers are still developing applications that use our products. Commercialization is a process, the exact timing of which is often difficult to predict. It starts with our own internal R&D to validate performance for an identified market or customer-specific 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 recent 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 our 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
- Large oil and lubricant supplier showing gear and friction improvements when incorporated into industrial and automotive greases, 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
- Auto manufacturer showing increased tensile and flexural strength and reduced weight in automotive composites.

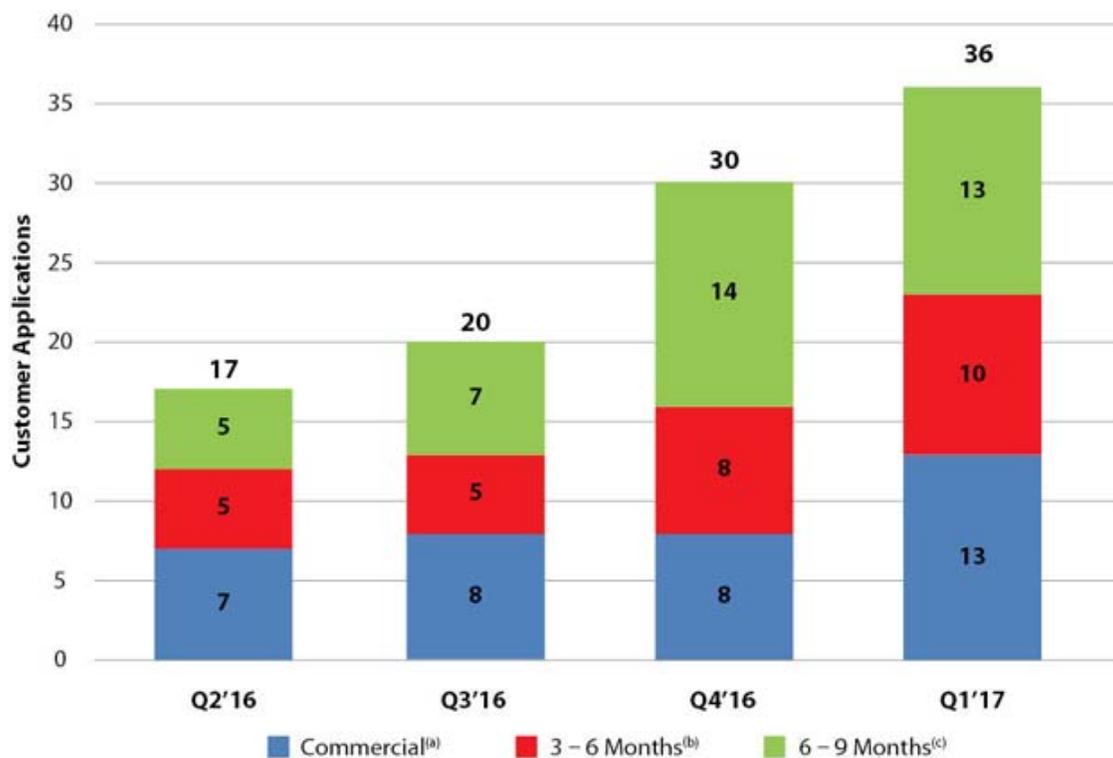
The process of “designing-in” new materials is relatively complex and involves the use of relatively small amounts of the new material in laboratory and engineering development for an extended period of time. Following successful development, we believe customers that incorporate our materials into their 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, we believe many will require tons or even hundreds of tons of material when they commercialize products that incorporate our materials. 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 new customers. For example, we shipped a 1 ton order in Q4 2016 to a customer who is currently moving into larger scale production and had previously used smaller quantities. We shipped another 1 ton order in Q1 2017 to a second customer who is also anticipating moving into larger scale production. The average order size for fulfilled orders (excluding no charge orders) has increased steadily over the last two years and we believe that it will continue to increase in 2017 and 2018 as more customers commercialize products using our products. The average order size in Q1 2017 is lower because variability measured quarter to quarter does fluctuate when measuring this ratio in our early stages of commercial operations. As mentioned, we do expect this average to increase over time as our sales activity increases.

### Average Order Size of Fulfilled Orders



### 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 March 31, 2017, we had thirteen specific customer applications where our materials are incorporated into our customer's products and they are actively selling them to their customers or actively promoting them for future sales. In addition, we have another ten customer applications where our customers have indicated that they expect to begin shipping product incorporating our materials in the next 3 – 6 months, and have another thirteen customer applications where our customers have indicated an intent to commercialize in the next 6 – 9 months. We also have tens of 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 2017. The following graphic demonstrates the trend over the past 3 quarters as increasingly more 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 2017 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 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 be able to recognize approximately \$5 – 10 million of revenue in 2017 and approximately \$20 – \$30 million of revenue in 2018.

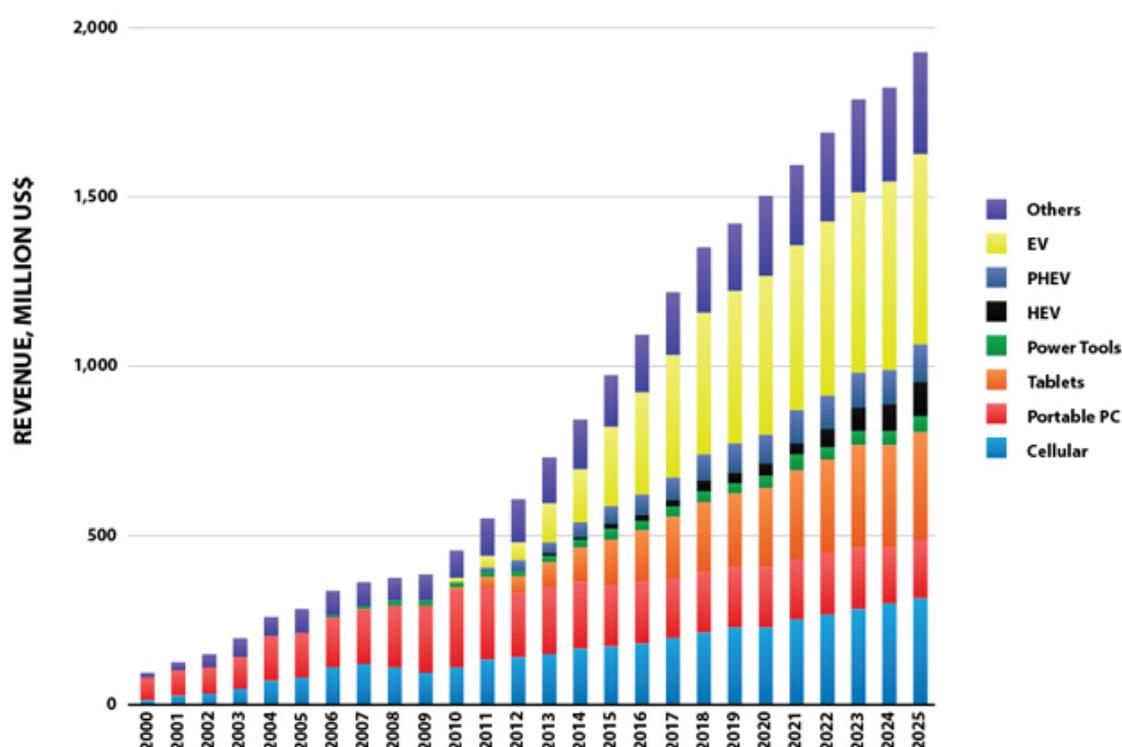


- (a) Customer applications where our materials are used in customer products and they are actively selling them to their customers or actively promoting them for future sales.
- (b) Customer applications where our customers are indicating that they expect to begin shipping products incorporating our 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<sup>(1)</sup> 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 March 31, 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<sup>®</sup> 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<sup>®</sup> 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 March 31, 2017): five additional U.S. patents, three China patents, one Taiwan patent, 17 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 March 31, 2017, the Company maintains 38 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<sup>®</sup> graphene nanoplatelets and value-added products produced therefrom, conducts research on graphene nanoplatelets and related products, and licenses our technology as appropriate. As of March 31, 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 Months Ended March 31, 2017 Compared with the Three Months Ended March 31, 2016

The following table summarizes the results of our operations for the three months ended March 31, 2017 and 2016.

	For the Three Months Ended March 31,		Change 2016 – 2017	
	2017	2016	\$	%
Total Revenues	\$ 282,189	\$ 106,052	176,137	166.1
Cost of Goods Sold	487,920	375,748	112,172	29.9
Gross Loss	(205,731)	(269,696)	63,965	23.7
Research & Development Expense	263,564	216,350	47,214	21.8
Sales, General & Administrative Expense	996,587	1,096,220	(99,633)	(9.1)
Total Operating Expense	1,260,151	1,312,570	(52,419)	(4.0)
Operating Loss	(1,465,882)	(1,582,266)	116,384	7.4
Other Income (Expense)	98,333	30,117	65,423	217.2
Net Loss	\$ (1,370,342)	\$ (1,552,149)	181,807	11.7

## Revenues

Revenues for the three months ended March 31, 2017 and 2016, by category, are shown below.

	For the Three Months Ended March 31,		Change 2016 – 2017	
	2017	2016	\$	%
Product Sales	\$ 157,700	\$ 59,742	97,958	164.0
Grants	99,489	21,310	78,179	366.9
Licensing Revenues	25,000	25,000	0	0.0
Total	\$ 282,189	\$ 106,052	176,137	166.1

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 March 31, 2017, product sales were up \$97,958, or 164%. The main reason for the increase was customers moving through development programs towards commercialization, requiring larger quantities of our materials for advanced testing and pilot 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 new customers. As a result of this movement, we filled a one ton order in Q1 2017 from a customer who is anticipating moving into larger scale production. The table below shows a comparison of product sales by product line.

### Product Sales Summary

Product	For the Three Months Ended March 31,		Change 2016 – 2017	
	2017	2016	\$	%
xGnP <sup>®</sup> Bulk Material	\$ 147,004	\$ 47,450	99,553	209.8
Battery Anode Materials (XG SiG <sup>™</sup> )	6,300	6,550	(250)	(3.8)
XG Leaf <sup>®</sup>	1,272	1,617	(345)	(21.3)
Inks and Coatings	3,124	4,125	(1,001)	(24.3)
Total	\$ 157,700	\$ 59,742	97,958	164.0

We ship our products from our Lansing manufacturing facilities to customers around the world. During the first three months ended March 31, 2017, we shipped materials to customers in 20 different countries, versus 19 countries in 2016. Shipments to two countries other than the United States accounted for more than 10% of product revenues during the first three months ended March 31, 2017 and only one country in 2016. Those countries, South Korea and the United Kingdom accounted for approximately 40% of total product revenues during the first three months ended March 31, 2017 and South Korea accounted for 39% of total product revenues during the first three months ended March 31, 2016.

#### Order Summary

The table below shows a comparison of domestic and international orders fulfilled, excluding no charge orders. The table also includes the average order size for product sales reflected in our Statement of Operations. These numbers indicate that our customer base remains active with development or research projects that use our materials and the breadth of our geographic coverage. The average order size for the product revenue reflected in our statement of operations during the first three months ended March 31, 2017 increased by 168% as compared to the same period in 2016. Although the average size of these orders is still relatively small, we are encouraged that the trend is increasing. The current average order size indicated that most of our orders are for R&D and development activity. For example, we shipped a one ton order in Q4 2016 to a customer who is currently moving into larger scale production and we shipped another one ton order in Q1 2017 to a second customer who is also anticipating moving into larger scale production, both of which had previously used smaller quantities during their design stage. We expect that our average order size will begin to increase significantly once our customers continue to commercialize products that incorporate our materials within them and existing customers ramp up production volume.

	For the Three Months Ended March 31,		Change 2016 – 2017	
	2017	2016		%
Number of orders – domestic	30	28	2	7.1
Number of orders – international	41	44	(3)	(6.8)
Number of orders – total	71	72	(1)	(1.4)
Average order size – \$	\$ 2,221	\$ 830	\$ 1,391	167.7

#### Grant Revenue

Grant revenues of \$99,489 during the first three months ended March 31, 2017 consisted of proceeds from sources as shown in the table below. During the first quarter, the main source of grant revenue in both 2017 and 2016 came from DOE. In June 2016, a \$150,000, nine month, DOE Phase I Small Business Innovation Research grant was awarded to develop and demonstrate a composite anode material that delivers improved capacity retention during full Lithium-ion battery charge to further the nation's energy strategy to reduce reliance on fossil fuels and improve the environment. As of the grant expiration date of March 14, 2017, \$149,979 had been billed against it. The grant is considered billed in full and completed. The table below shows the components of grant revenue.

	For the Three Months Ended March 31,	
	2017	2016
US Department of Energy Grant	\$ 93,747	\$ 21,310
Daimler / University of Michigan	5,742	—
Total	\$ 99,489	\$ 21,310

#### Licensing Revenue

Licensing revenues during the first three months ended March 31, 2017 and 2016 were accrued based on minimum royalty payments from a production license granted in 2011, which stipulates a minimum of \$100,000 in royalties are due to XGS 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, three-shift, production basis.

The following table shows the relationship of direct costs to product sales for the three months ended March 31, 2017 and 2016:

## Gross Profit Summary

	For the Three Months Ended March 31,		Change 2016 – 2017	
	2017	2016	\$	%
Product Sales	\$ 157,700	\$ 59,742	97,958	164.0
Direct Costs	116,770	32,032	84,738	264.5
Direct Cost Margin	40,930	27,710	13,220	47.7
% of Sales	26.0%	46.4%		
Unallocated Manufacturing Expense	371,150	343,716	27,434	8.0
Gross Loss on Product Sales	\$ (330,220)	\$ (316,006)	(14,214)	4.5
% of Sales	(209.4)%	(529.4)%		

We believe that the fluctuations in gross loss on product sales and direct cost from period to period are not indicative of overall performance or 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). For Q1 2017 the direct margin of 26% is lower because of a large one ton order we sold to a customer below cost for strategic reasons.

Costs associated with grant revenues 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 revenues, we do not track direct costs for grant revenues as a separate cost category. Therefore, we do not calculate direct cost margins associated with grant revenues but, rather, we view these revenues 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 revenues. Where revenues from a license agreement can be assigned to specific product revenues, we classify these revenues 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 as direct product costs on the basis of the proportion of these expenses that would be representative product costs if we were operating our factory at full capacity.

For the three months ended March 31, 2017, unallocated manufacturing expenses increased by 8% to \$371,150 as compared to \$343,716 during the same period in 2016, an increase of \$27,434. In the current year we have incurred some higher levels of manufacturing overhead expense as we prepare for anticipated volume increases.

## Research and Development Expenses

Research and Development expenses for the three months ended March 31, 2017 increased by 22% to \$263,564 as compared to \$216,350 for the three months ended March 31, 2016. The increase of \$47,214 is largely due to the addition of a lab technician, an increase in utility costs, and additional expenses to work on and complete the DOE Phase I SBIR grant. The increased utility costs represent a change the landlord made to install a dedicated utility meter to the space we occupy. Previously all the tenants in the building split the utilities using a proration calculated as the percentage of square feet occupied, now we are charged on actual usage.

## Sales, General and Administrative Expenses

During the first three months ended March 31, 2017 we incurred selling, general and administrative expenses (SGA) of \$996,587. This is a decrease of approximately \$99,633 or 9% from the same period in 2016. For the three months ended March 31, 2017 compensation and related expenses of \$626,055 accounted for approximately 63% of the total SGA expenses as compared to \$621,811 or 57% for the three months ended March 31, 2016. During the first quarter of 2017, compensation related expenses remained relatively the same from the same period in 2016. Overall SGA decreases in the first quarter of 2017 were largely driven by continued cost containment measures adopted in prior years and maintained. 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.

## Other Income (Expense)

The following table shows a comparison of other income and expense by major expense component for the three months ended March 31, 2017 and 2016:

	For the Three Months Ended March 31,		Change 2016 – 2017	
	2017	2016	\$	%
Incentive Refund & Interest Income	\$ 368	\$ 24,153	(23,785)	(98.5)
Interest Expense	(59,480)	(83,801)	24,321	(29.0)
Gain (loss) from change in fair value of derivative liability – warrants	154,652	89,765	64,887	72.3
Total	<u>\$ 95,540</u>	<u>\$ 30,117</u>	<u>65,423</u>	<u>217.2</u>

## Cash Flow Summary

The following condensed cash flow statement compares cash flow from operating, investing, and financing activities for the three months ended March 31, 2017 and 2016. Net cash used by operating activities stayed stable decreasing only 1% during the three months ended March 31, 2017 as compared to the same period in 2016.

	For the Three Months Ended March 31,		Change 2016 – 2017	
	2017	2016	\$	%
Cash, beginning of period	\$ 1,785,343	\$ 1,060,224	725,119	68.4
Net Cash provided (used) by:				
Operating activities	(1,007,570)	(1,017,615)	9,875	(1.0)
Investing Activities	(241,433)	(38,709)	(202,724)	523.7
Financing Activities	612,512	528,591	83,921	15.9
Net increase (decrease) in cash	<u>(636,661)</u>	<u>(527,733)</u>	<u>(108,928)</u>	<u>20.6</u>
Cash, end of period	<u>\$ 1,148,681</u>	<u>\$ 532,491</u>	<u>616,191</u>	<u>115.7</u>

Investing activities for the three months ended March 31, 2017 included net capital expenditures for the purchase of property and equipment of \$203,664 and \$37,769 for intellectual property as compared with \$13,873 for property and equipment and \$24,836 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 larger scale production.

Financing activities provided a net increase in cash of \$612,512 and \$528,591 during the first quarters in 2017 and 2016, respectively. For the first three months ended March 31, 2017 gross proceeds from the issuance of common stock was \$774,408 and stock issuance expenses were \$157,021. During the three first months ended March 31, 2016 financing proceeds from short-term promissory notes totaled \$530,000. There were no proceeds from the sale of common stock for the three months ended March 31, 2016 (our IPO became effective April 13, 2016).

## Liquidity and Capital Expenditures

As of March 31, 2017, we had cash on hand of \$1,148,681 and currently available funds of \$3,000,000 under the Dow Facility, which we believe is sufficient to fund our operations through December 2017. We believe that we will need an approximately, additional \$1 million to sustain us for the next 12 months for which we have a commitment from a shareholder group to provide in the event we are unable to raise such funds from third parties. Our financial projections show that we may need to raise an additional \$15 million or more before we are capable of achieving sustainable cash flow from operations. We intend that the primary means for raising such funds will be through our IPO, the additional \$3 million of currently available funds under the Dow Facility, and up to an additional \$5 million of proceeds from the Dow Facility after we have raised \$10 million of additional equity capital in the period beginning on November 1, 2016. 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 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 financial statements are also included in Post-Effective Amendment No. 5, of our Existing Registration Statement on Form S-1 which became effective April 14, 2017).

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the amounts reported in the 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, revenues 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.* At the conclusion of the period ended March 31, 2017, we carried out an evaluation, under the supervision and with the participation of our management, including our Principal Executive Officer/Principal Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15 (e) under the Securities Exchange Act of 1934 (the "Exchange Act")). Based upon that evaluation, our Principal Executive Officer/Principal Financial Officer concluded that as of March 31, 2017, our disclosure controls and procedures were effective and adequately designed to ensure that the information required to be disclosed by us in the reports we submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the applicable rules and forms and that such information was accumulated and communicated to our Principal Executive Officer/Principal Financial Officer, in a manner that allowed for timely decisions regarding required disclosure.

We do not expect that our disclosure controls and procedures will prevent all errors and all instances of fraud. Disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the disclosure controls and procedures are met. Further, the design of disclosure controls and procedures must reflect the fact that there are resource constraints, and the benefits must be considered relative to their costs. Because of the inherent limitations in all disclosure controls and procedures, no evaluation of disclosure controls and procedures can provide absolute assurance that we have detected all our control deficiencies and instances of fraud, if any. The design of disclosure controls and procedures also is based partly on 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.

Management assessed the effectiveness of the Company's internal control over financial reporting as of March 31, 2017 and December 31, 2016. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control-Integrated Framework published in 2013. Based on this assessment, and on those criteria, management concluded that the Company's internal control over financial reporting was not effective as of March 31, 2017 and December 31, 2016 for the following reasons:

The Company's accounting department consists of a limited number of personnel which does not provide for an adequate segregation of duties and we do not have a chief financial officer.

In an effort to remediate the identified weaknesses and enhance our internal controls, we have initiated, or plan to initiate, the following measures:

Assuming we are able to secure additional working capital and as our business grows, we will create positions to segregate duties consistent with control objectives in our accounting department and will hire a CFO.

This quarterly report does not include an attestation report of the Company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's registered public accounting firm pursuant to rules of the Securities and Exchange Commission.

(b) *Changes in internal controls.* There were no changes in our internal control over financial reporting that occurred during our last fiscal quarter 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.**

Beginning in 2014, POSCO, one of our licensees and a shareholder, has had a contractual obligation to pay us a minimum fee 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 that they are obligated to pay the royalties. A petition for arbitration has been filed for this matter by the Company on March 9, 2016. On July 7, 2016 we received a letter from the International Court of Arbitration and they have assigned an arbitrator to the case. No assessment or decision has made by the arbitrator as of the issuance date of this report.

### **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.**

<b>EXHIBIT NUMBER</b>	<b>DESCRIPTION</b>	<b>LOCATION</b>
3.1	Second Restated Bylaws dated March 3, 2017	Incorporated by reference to the Company's current report on Form 8-K filed with the SEC on March 3, 2017
10.1	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
10.2	Employment Agreement, dated March 22, 2017, by and between XG Sciences, Inc. and Bamidele Ali	Incorporated by reference to the Company's current report on Form 8-K filed with the SEC on March 28, 2017
31.1	<a href="#"><u>Certifications of the Chief Executive Officer and Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u></a>	Filed herewith
32.1	<a href="#"><u>Certification Pursuant To 18 U.S.C. Section 1350, As Adopted Pursuant To Section 906 of the Sarbanes-Oxley Act Of 2002*</u></a>	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: May 8, 2017

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

Dated: May 8, 2017

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