Lightwave Logic, Inc.
Form 10-Q
November 09, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

_____

FORM 10-Q

_____

(Mark One)

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

For the quarterly period ended September 30, 2018

OR

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

For the transition period from _____to _____

Commission File Number 0-52567

Lightwave Logic, Inc.

(Exact name of registrant as specified in its charter)

Nevada	**82-049-7368**
(State or other jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

369 Inverness Parkway, Suite 350	
Englewood, CO	**80112**
(Address of principal executive offices)	(Zip Code)

(720) 340-4949

(Registrant s telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes þ No ¨

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

Large accelerated filer ¨	Accelerated filer þ
Non-accelerated filer ¨	Smaller reporting company þ
	Emerging growth company ¨

If an emerging growth company, indicate by checkmark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ¨

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

The number of shares of the registrant s Common Stock outstanding as of November 8, 2018 was 78,459,838.

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Forward-Looking Statements

This report on Form 10-Q contains, and our officers and representatives may from time to time make, "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as: "anticipate," "intend," "plan," "goal," "seek," "believe," "project," "estimate," "expect," continuing, ongoing, "strategy," "future," "likely," "may," "should," could, "will" and similar references to future periods. Examples of forward-looking statements include, among others, statements we make regarding expected operating results, such as anticipated revenue; anticipated levels of capital expenditures for our current fiscal year; our belief that we have, or will have, sufficient liquidity to fund our business operations during the next 12 months; strategy for gaining customers, growth, product development, market position, financial results and reserves.

Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results and financial condition may differ materially from those indicated in the forward-looking statements. Therefore, you should not rely on any of these forward-looking statements. Important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements include, among others, the following: lack of available funding; general economic and business conditions; competition from third parties; intellectual property rights of third parties; regulatory constraints; changes in technology and methods of marketing; delays in completing various engineering and manufacturing programs; changes in customer order patterns; changes in product mix; success in technological advances and delivering technological innovations; shortages in components; production delays due to performance quality issues with outsourced components; and other factors beyond the Company's control.

The ultimate correctness of these forward-looking statements depends upon a number of known and unknown risks and events. We discuss our known material risks under Item 1.A Risk Factors contained in the Company s Annual Report on Form 10-K for the year ended December 31, 2017 and under Part II- Item 1.A Risk Factors contained in this report on Form 10-Q. Many factors could cause our actual results to differ materially from the forward-looking statements. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

The forward-looking statements speak only as of the date on which they are made, and, except as required by law, we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events.

PART I FINANCIAL INFORMATION

Item 1

Financial Statements

LIGHTWAVE LOGIC, INC.

FINANCIAL STATEMENTS

SEPTEMBER 30, 2018

(UNAUDITED)

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LIGHTWAVE LOGIC, INC.

BALANCE SHEETS

	September 30, 2018 (Unaudited)	December 31, 2017 (Audited)
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 2,204,317	$ 3,482,327
Prepaid expenses and other current assets	316,359	584,919
	2,520,676	4,067,246
PROPERTY AND EQUIPMENT - NET	1,784,400	1,176,749
OTHER ASSETS		
Intangible assets - net	932,139	605,775
TOTAL ASSETS	$ 5,237,215	$ 5,849,770
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 22,598	$ 54,208
Current portion of equipment purchase	297,421	493,597
Accounts payable and accrued expenses - related parties	52,732	8,770
Accrued expenses	45,881	92,186
	418,632	648,761
LONG TERM EQUIPMENT PURCHASE PAYABLE - NET OF CURRENT PORTION		184,294
TOTAL LIABILITIES	418,632	833,055
STOCKHOLDERS' EQUITY		
Preferred stock, $0.001 par value, 1,000,000 authorized, No shares issued or outstanding		
Common stock $0.001 par value, 250,000,000 authorized, 77,635,666 and 74,068,259 issued and outstanding at September 30, 2018 and December 31, 2017	77,636	74,068
Additional paid-in-capital	61,006,130	56,698,658
Accumulated deficit	(56,265,183)	(51,756,011)
TOTAL STOCKHOLDERS' EQUITY	4,818,583	5,016,715

TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$	5,237,215	$	5,849,770

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

STATEMENTS OF OPERATIONS

FOR THE THREE MONTHS AND NINE MONTHS ENDING SEPTEMBER 30, 2018 AND 2017

(UNAUDITED)

	For the Three Months Ending September 30,		For the Nine Months Ending September 30,	
	2018	**2017**	**2018**	**2017**
NET SALES	$	$	$	$
COST AND EXPENSE				
Research and development	984,760	821,331	2,830,785	2,388,861
General and administrative	458,774	384,601	1,543,241	1,643,462
	1,443,534	1,205,932	4,374,026	4,032,323
LOSS FROM OPERATIONS	(1,443,534)	(1,205,932)	(4,374,026)	(4,032,323)
OTHER INCOME (EXPENSE)				
Interest income	63	63	187	187
Commitment fee	(54,230)	(74,636)	(135,333)	(128,557)
NET LOSS	$ (1,497,701)	$ (1,280,505)	$ (4,509,172)	$ (4,160,693)
Basic and Diluted Loss per Share	$ (0.02)	$ (0.02)	$ (0.06)	$ (0.06)
Basic and Diluted Weighted Average Number of Shares	76,985,304	70,871,809	75,694,887	70,128,995

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

STATEMENT OF STOCKHOLDERS EQUITY

SEPTEMBER 30, 2018

	Number of Shares	Common Stock	Additional Paid-in Capital	Accumulated Deficit	Total
BALANCE AT DECEMBER 31, 2017 (AUDITED)	74,068,259	$ 74,068	$ 56,698,658	$ (51,756,011)	$ 5,016,715
Common stock issued to institutional investor	3,250,000	3,250	3,609,150		3,612,400
Common stock issued for additional commitment shares	117,407	118	135,215		135,333
Exercise of options	100,000	100	99,900		100,000
Exercise of warrants	100,000	100	61,400		61,500
Options issued for services			339,076		339,076
Warrants issued for services			62,731		62,731
Net loss for the nine months ending September 30, 2018				(4,509,172)	(4,509,172)
BALANCE AT SEPTEMBER 30, 2018 (UNAUDITED)	77,635,666	$ 77,636	$ 61,006,130	$ (56,265,183)	$ 4,818,583

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

STATEMENTS OF CASH FLOW

FOR THE NINE MONTHS ENDING SEPTEMBER 30, 2018 AND 2017

(UNAUDITED)

	For the Nine Months Ending September 30,	
	2018	**2017**
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (4,509,172)	$ (4,160,693)
Adjustments to reconcile net loss to net cash used in operating activities		
Warrants issued for services	62,731	175,621
Stock options issued for services	339,076	694,621
Common stock issued for services and fees	135,333	136,557
Depreciation and amortization and noncash patent expenses	322,495	214,573
(Gain) loss on disposal of property and equipment	10,084	
(Increase) decrease in assets		
Prepaid expenses and other current assets	268,560	(38,839)
(Decrease) increase in liabilities		
Accounts payable	(31,610)	19,591
Accounts payable and accrued expenses- related parties	43,962	12,303
Accrued expenses	(46,305)	72,668
Net cash used in operating activities	(3,404,846)	(2,873,598)
CASH FLOWS FROM INVESTING ACTIVITIES		
Cost of intangibles	(371,320)	(38,662)
Purchase of property and equipment	(897,774)	(88,649)
Sale of property and equipment	2,500	
Net cash used in investing activities	(1,266,594)	(127,311)
CASH FLOWS FROM FINANCING ACTIVITIES		
Exercise of options and warrants	161,500	502,500
Issuance of common stock, institutional investor	3,612,400	3,439,060
Repayment of equipment purchase payable	(380,470)	(17,839)
Net cash provided by financing activities	3,393,430	3,923,721
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(1,278,010)	922,812

CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD		3,482,327		1,956,844
CASH AND CASH EQUIVALENTS - END OF PERIOD	$	2,204,317	$	2,879,656
Supplemental Disclosure of Non-cash investing and financing activities:				
Equipment acquisition funded by liability	$		$	107,033
Common stock for service, paid in advance	$		$	36,250

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 2018 AND 2017

NOTE 1 NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Financial Statements

The accompanying unaudited financial statements have been prepared by Lightwave Logic, Inc. (the Company). These statements include all adjustments (consisting only of its normal recurring adjustments) which management believes necessary for a fair presentation of the statements and have been prepared on a consistent basis using the accounting polices described in the Summary of Accounting Policies included in the 2017 Annual Report. Certain financial information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States have been condensed or omitted pursuant to the rules and regulations of the Securities and Exchange Commission, although the Company firmly believes that the accompanying disclosures are adequate to make the information presented not misleading. The financial statements should be read in conjunction with the financial statements and notes thereto included in the Company s Annual Report on Form 10-K for the year ended December 31, 2017, as filed with the Securities and Exchange Commission. The interim operating results for the three and nine months ending September 30, 2018 may not be indicative of operating results expected for the full year.

Nature of Business

Lightwave Logic, Inc. is a technology company focused on the development of next generation photonic devices and non-linear optical polymer materials systems for applications in high speed fiber-optic data communications. Currently the Company is in various stages of photonic device and materials development and evaluation with potential customers and strategic partners. The Company expects to obtain a revenue stream from datacom and telecom devices, sales of non-linear optical polymers, and product development agreements prior to moving into full-scale production.

The Company s current development activities are subject to significant risks and uncertainties, including failing to secure additional funding to operationalize the Company s technology now under development.

Stock-based Payments

The Company accounts for stock-based compensation under the provisions of Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 718, "Compensation - Stock Compensation", which requires the measurement and recognition of compensation expense for all stock-based awards made to employees and directors based on estimated fair values on the grant date. The Company estimates the fair value of stock-based awards on the date of grant using the Black-Scholes model. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the shorter of the vesting period or the requisite service periods using the straight-line method. The Company accounts for stock-based compensation awards to nonemployees in accordance with FASB ASC 505-50, "Equity-Based Payments to Non-Employees (ASC 505-50). Under ASC 505-50, the Company determines the fair value of the warrants or stock-based compensation awards granted as either the fair value of the consideration received or the fair value of the equity instruments issued, whichever is more reliably measurable. All issuances of stock options or other equity instruments to non-employees as consideration for goods or services received by the Company are accounted for based on the fair value of the equity instruments issued. Any stock options issued to non-employees are recorded as an expense and additional paid in capital in stockholders equity over the applicable service periods. Non-employee equity based payments are recorded as an expense over the service period, as if the Company had paid cash for the services. At the end of each financial reporting period, prior to vesting or prior to the completion of the services, the fair value of the equity based payments will be re-measured and the non-cash expense recognized during the period will be adjusted accordingly. Since the fair value of equity based payments granted to non-employees is subject to change in the future, the amount of the future expense will include fair value re-measurements until the equity based payments are fully vested or the service completed. As of June 30, 2018 the Company changed its accounting policy for non-employee equity based payments by adopting FASB ASU 2018-07.

LIGHTWAVE LOGIC, INC.

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 2018 AND 2017

NOTE 1 NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Loss per Share

The Company follows FASB ASC 260, Earnings per Share , resulting in the presentation of basic and diluted earnings per share. Because the Company reported a net loss in 2018 and 2017, common stock equivalents, including stock options and warrants were anti-dilutive; therefore, the amounts reported for basic and dilutive loss per share were the same.

Comprehensive Income

The Company follows FASB ASC 220.10, Reporting Comprehensive Income. Comprehensive income is a more inclusive financial reporting methodology that includes disclosure of certain financial information that historically has not been recognized in the calculation of net income (loss). Since the Company has no items of other comprehensive income, comprehensive income (loss) is equal to net income (loss).

Recently Issued Accounting Pronouncements Not Yet Adopted

As of September 30, 2018, there are no recently issued accounting standards not yet adopted which would have a material effect on the Company s financial statements through 2018.

Recently Adopted Accounting Pronouncements

In June 2018, the FASB issued ASU No. 2018-07, Compensation Stock Compensation (Topic 718), Improvements to Nonemployee Share-Based Payment Accounting. The amendments in this Update expand the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. Prior to this Update, Topic 718 applied only to share-based transactions to employees. Consistent with the accounting requirement for employee share-based payment awards, nonemployee share-based payment awards within the scope of Topic 718 are measured at grant-date fair value of the equity instruments that an entity is obligated to issue when the good has been delivered or the service has been rendered and any other conditions necessary to earn the right to benefit from the instruments have been satisfied. The amendments in this Update are effective for public business entities for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. Early adoption is permitted, but no earlier than an entity s adoption date of Topic 606. The adoption of this pronouncement on June 30, 2018 had no material impact on the Company s financial statements.

Reclassifications

Certain reclassifications have been made to the 2017 financial statement in order to conform to the 2018 financial statement presentation.

NOTE 2 MANAGEMENT S PLANS

As a technology company focusing on the development of the next generation photonic devices and non-linear optical polymer materials systems, substantial net losses have been incurred since inception. The Company has satisfied capital requirements since inception primarily through the issuance and sale of its common stock. As of November 9, 2018, the Company has a cash position of approximately $2,470,000. Based upon the current cash position and expenditures of approximately $490,000 per month and no debt service, management believes the Company has sufficient funds to finance its operations through March 2019. In January 2016, the Company signed a purchase agreement (Purchase Agreement) with an institutional investor to sell up to $20,000,000 of common stock. Under the Purchase Agreement and at Company's sole discretion, the institutional investor has committed to invest up to $20,000,000 in common stock over a 36-month period with the remaining available amount of $8,368,625. The Company has raised $10,887,650 as of September 30, 2018. Since October 1, 2018, the Company has raised an additional $743,725.

LIGHTWAVE LOGIC, INC.

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 2018 AND 2017

NOTE 3 PREPAID EXPENSES AND OTHER CURRENT ASSETS

Prepaid expenses and other current assets consist of the following:

	September 30, 2018	December 31, 2017
Insurance	$ 109,245	$ 79,403
Rent	81,016	254,978
Other	67,895	20,992
Prepaid materials	46,120	
Stock award	12,083	30,208
Deposits		199,338
	$ 316,359	$ 584,919

NOTE 4 PROPERTY AND EQUIPMENT

Property and equipment consists of the following:

	September 30, 2018	December 31, 2017
Office equipment	$ 78,229	$ 82,453
Lab equipment	2,375,505	1,695,604
Furniture	33,128	32,693
Leasehold Improvements	220,390	231,859
	2,707,252	2,042,609
Less: Accumulated depreciation	922,852	865,860
	$ 1,784,400	$ 1,176,749

Depreciation expense for the nine months ending September 30, 2018 and 2017 was $277,539 and $136,950. Depreciation expense for the three months ending September 30, 2018 and 2017 was $120,856 and $47,037. During the nine months ending September 30, 2018, the Company sold equipment for proceeds of $2,500 and a gain of $2,500. During the nine months ending September 30, 2018, the Company retired property and equipment and recorded a loss on the retirement of $12,584. During the three months ended September 30, 2018, the Company did not sell or retire property and equipment. During the three and nine months ended September 30, 2017, the Company did not sell or retire property and equipment.

LIGHTWAVE LOGIC, INC.

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 2018 AND 2017

NOTE 5 INTANGIBLE ASSETS

This represents legal fees and patent fees associated with the prosecution of patent applications. The Company has recorded amortization expense on patents granted, which are amortized over the remaining legal life. Maintenance patent fees are paid to a government patent authority to maintain a granted patent in force. Some countries require the payment of maintenance fees for pending patent applications. Maintenance fees paid after a patent is granted are expensed, as these are considered ongoing costs to maintain a patent . Maintenance fees paid prior to a patent grant date are capitalized to patent costs, as these are considered patent application costs . No amortization expense has been recorded on the remaining patent applications since patents have yet to be granted.

On June 11, 2018, the Company purchased patents for $315,000.

Patents consist of the following:

	September 30, 2018	December 31, 2017
Patents	$ 1,158,723	$ 787,403
Less: Accumulated amortization	226,584	181,628
	$ 932,139	$ 605,775

Amortization expense for the nine months ending September 30, 2018 and 2017 was $44,956 and $77,623. Amortization expense for the three months ending September 30, 2018 and 2017 was $20,059 and $14,722. There were no patent costs written off for the three and nine months ending September 30, 2018 and 2017.

NOTE 6 LONG TERM EQUIPMENT PURCHASE PAYABLE

Outstanding long term equipment purchase payable is comprised of the following

Final Year of Maturity	Classification	Interest Rate	September 30, 2018	December 31, 2017
	Current	0.00%	$ 297,421	$ 493,597
2019	Long term	0.00%		184,294
			$ 297,421	$ 677,891

NOTE 7 COMMITMENTS

On October 30, 2017, the Company entered into a new lease to lease approximately 13,420 square feet of office, laboratory and research and development space located in Colorado for the Company s new principal executive offices and research and development facility. The term of the lease is sixty- one (61) months, beginning on November 1, 2017 and ending on November 30, 2022. The term shall be extended for an additional twenty-four (24) months, subject to certain conditions, waivable solely by Landlord in its sole and absolute discretion. Base rent for the first year of the lease term is approximately $168,824, with an increase in annual base rent of approximately 3% in each subsequent year of the lease term. As specified in the lease, the Company paid the landlord (i) all base rent for the period November 1, 2017 and ending on October 31, 2019, in the sum of $347,045; and (ii) the estimated amount of tenant s proportionate share of operating expenses for the same period in the sum of $186,293.

LIGHTWAVE LOGIC, INC.

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 2018 AND 2017

NOTE 7 COMMITMENTS (CONTINUED)

Commencing on November 1, 2019, monthly installments of base rent and one-twelfth of landlord s estimate of tenant s proportionate share of annual operating expenses shall be due on the first day of each calendar month. The lease also provides that (i) on November 1, 2019 landlord shall pay the Company for the cost of the cosmetic improvements in the amount of $3.00 per rentable square foot of the premises, and (ii) on or prior to November 1, 2019, the Company shall deposit with Landlord the sum of $36,524 as a security deposit which shall be held by landlord to secure the Company s obligations under the lease. On October 30, 2017, the Company entered into an agreement with the tenant leasing the premise from the landlord (Original Lessee) whereby the Original Lessee agreed to pay the Company the sum of $260,000 in consideration of the Company entering into the lease and landlord agreeing to the early termination of the Original Lessee s lease agreement with landlord. The consideration of $260,000 was received on November 1, 2017.

The Company is obligated under an operating lease for office and laboratory space. The aggregate minimum future lease payments under the operating leases are as follows:

YEARS ENDING DECEMBER 31,	AMOUNT
2018	$
2019	32,432
2020	195,574
2021	201,501
2022	189,837
TOTAL	$ 619,344

In June 2018, the lease for the facility located in Longmont Colorado was terminated.

Rent expense amounting to $122,829 and $43,023 is included in research and development and general and administrative expenses for the nine months ended September 30, 2018. Rent expense amounting to $77,503 and $14,604 is included in research and development and general and administrative expenses for the nine months ended

September 30, 2017. Rent expense amounting to $26,302 and $8,767 is included in research and development and general and administrative expenses for the three months ended September 30, 2018. Rent expense amounting to $26,190 and $4,899 is included in research and development and general and administrative expenses for the three months ended September 30, 2017.

NOTE 8 INCOME TAXES

There is no income tax benefit for the losses for the three and nine months ended September 30, 2018 and 2017 since management has determined that the realization of the net deferred tax asset is not assured and has created a valuation allowance for the entire amount of such benefits.

The Company s policy is to record interest and penalties associated with unrecognized tax benefits as additional income taxes in the statement of operations. As of January 1, 2018, the Company had no unrecognized tax benefits, or any tax related interest or penalties. There were no changes in the Company s unrecognized tax benefits during the period ended September 30, 2018. The Company did not recognize any interest or penalties during 2017 related to unrecognized tax benefits. With few exceptions, the U.S. and state income tax returns filed for the tax years ending on December 31, 2014 and thereafter are subject to examination by the relevant taxing authorities.

LIGHTWAVE LOGIC, INC.

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 2018 AND 2017

NOTE 9 STOCKHOLDERS EQUITY

Preferred Stock

Pursuant to the Company s Articles of Incorporation, the Company s board of directors is empowered, without stockholder approval, to issue series of preferred stock with any designations, rights and preferences as they may from time to time determine. The rights and preferences of this preferred stock may be superior to the rights and preferences of the Company s common stock; consequently, preferred stock, if issued could have dividend, liquidation, conversion, voting or other rights that could adversely affect the voting power or other rights of the common stock. Additionally, preferred stock, if issued, could be utilized, under special circumstances, as a method of discouraging, delaying or preventing a change in control of the Company s business or a takeover from a third party.

Common Stock Options and Warrants

In January 2016, the Company signed a Purchase Agreement with an institutional investor to sell up to $20,000,000 of common stock. The Company also entered into a registration rights agreement with the institutional investor whereby the Company agreed to file a registration statement related to the transaction with the U.S. Securities and Exchange Commission registering 5,000,000 shares of the Company s common stock. The registration statement was filed on March 25, 2016. The registration statement became effective April 7, 2016. The Company registered an additional 5,000,000 shares pursuant to a registration statement filed on April 19, 2017 which became effective June 15, 2017. The Company registered an additional 5,000,000 shares pursuant to a registration statement filed on May 2, 2018 which became effective May 11, 2018. Under the Purchase Agreement and at Company's sole discretion, the institutional investor has committed to invest up to $20,000,000 in common stock over a 36-month period. The Company issued 350,000 shares of restricted common stock to the institutional investor as an initial commitment fee valued at $237,965, fair value, and 650,000 shares of common stock are reserved for additional commitment fees to the institutional investor in accordance with the terms of the Purchase Agreement. During the period August 2016 through September 30, 2018, the institutional investor purchased 10,950,000 shares of common stock for proceeds of $10,887,650 and the Company issued 353,862 shares of common stock as additional commitment fee, valued at $395,346, fair value, leaving 296,138 in reserve for additional commitment fees. During the nine month period ending September 30, 2018, the institutional investor purchased 3,250,000 shares of common stock for proceeds of $3,612,400 and the Company issued 117,407 shares of common stock as additional commitment fee, valued at $135,333, fair value. During the three month period ending September 30, 2018, the institutional investor purchased 1,350,000 shares of common stock for proceeds of $1,475,700 and the Company issued 47,960 shares of common

stock as additional commitment fee, valued at $54,230, fair value. During October and November, the institutional investor purchased 800,000 shares of common stock for proceeds of $743,725 and the Company issued 24,172 shares of common stock as additional commitment fee, valued at $24,089, fair value, leaving 271,966 in reserve for additional commitment fees.

NOTE 10 STOCK BASED COMPENSATION

During 2007, the Board of Directors of the Company adopted the 2007 Employee Stock Plan (2007 Plan) that was approved by the shareholders. Under the Plan, the Company is authorized to grant options to purchase up to 10,000,000 shares of common stock to directors, officers, employees and consultants who provide services to the Company. The Plan is intended to permit stock options granted to employees under the 2007 Plan to qualify as incentive stock options under Section 422 of the Internal Revenue Code of 1986, as amended (Incentive Stock Options). All options granted under the 2007 Plan, which are not intended to qualify as Incentive Stock Options are deemed to be non-qualified options (Non-Statutory Stock Options). Effective June 24, 2016, the 2007 Plan was terminated. As of September 30, 2018, options to purchase 4,520,000 shares of common stock have been issued and are outstanding.

LIGHTWAVE LOGIC, INC.

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 2018 AND 2017

NOTE 10 STOCK BASED COMPENSATION (CONTINUED)

During 2016, the Board of Directors of the Company adopted the 2016 Equity Incentive Plan (2016 Plan) that was approved by the shareholders at the 2016 annual meeting of shareholders on May 20, 2016. Under the 2016 Plan, the Company is authorized to grant awards of incentive and non-qualified stock options and restricted stock to purchase up to 3,000,000 shares of common stock to employees, directors and consultants. As of September 30, 2018, options to purchase 2,245,000 shares of common stock have been issued and are outstanding and 755,000 shares of common stock remain available for grants under the 2016 Plan.

Both plans are administered by the Board of Directors or its compensation committee which determines the persons to whom awards will be granted, the number of awards to be granted, and the specific terms of each grant. Subject to the provisions regarding Ten Percent Shareholders, the exercise price per share of each option cannot be less than 100% of the fair market value of a share of common stock on the date of grant. Options granted under the 2016 Plan are generally exercisable for a period of 10 years from the date of grant and may vest on the grant date, another specified date or over a period of time.

The Company uses the Black-Scholes option pricing model to calculate the grant-date fair value of an award, with the following assumptions for 2018: no dividend yield in all years, expected volatility, based on the Company s historical volatility, 60% to 90%, risk-free interest rate between 1.89% to 3.06% and expected option life of 5.0 to 10 years. Prior to May 2018, the expected life is based on the estimated average of the life of options using the simplified method, as prescribed in FASB ASC 718, due to insufficient historical exercise activity during recent years. Starting in May 2018, the expected life is based on the legal contractual life of options.

As of September 30, 2018, there was $395,712 of unrecognized compensation expense related to non-vested market-based share awards that is expected to be recognized through August 30, 2020.

Share-based compensation was recognized as follows:

	For the Three Months Ending		For the Nine Months Ending	

	September 30,		September 30,	
	2018	**2017**	**2018**	**2017**
2007 Employee Stock Option Plan	$ 3,617	$ 12,062	$ 15,149	$ 12,084
2016 Equity Incentive Plan	92,323	116,956	323,927	682,537
Warrants	15,659	28,807	62,731	175,621
Total share-based compensation	$ 111,599	$ 157,825	$ 401,807	$ 870,242

LIGHTWAVE LOGIC, INC.

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 2018 AND 2017

NOTE 10 STOCK BASED COMPENSATION (CONTINUED)

The following tables summarize all stock option and warrant activity of the Company during the nine months ended September 30, 2018:

	Non-Qualified Stock Options and Warrants Outstanding and Exercisable		
	Number of Shares	Exercise Price	Weighted Average Exercise Price
Outstanding, December 31, 2017	18,629,867	$ 0.57 - $1.69	$ 0.90
Granted	720,000	$ 1.07 - $1.27	$ 1.19
Expired			$
Forfeited	(175,000)	$ 0.90 - $0.92	$ 0.91
Exercised	(200,000)	$ 0.615 - $1.00	$ 0.81
Outstanding, September 30, 2018	18,974,867	$ 0.57 - $1.69	$ 0.91
Exercisable, September 30, 2018	18,377,991	$ 0.57 - $1.69	$ 0.90

The aggregate intrinsic value of options and warrants outstanding and exercisable as of September 30, 2018 was $3,232,369. The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying options and warrants and the closing stock price of $1.03 for the Company s common stock on September 30, 2018. During the nine month period ending September 30, 2018, 100,000 warrants were exercised for proceeds of $61,500. During the nine month period ending September 30, 2018, 100,000 options were exercised for proceeds of $100,000. During the three month period ending September 30, 2018, 100,000 options were exercised for proceeds of $100,000.

	Non-Qualified Stock Options and Warrants Outstanding		
Range of	Number Outstanding	Weighted Average Remaining	Weighted Average

Exercise Prices	Currently Exercisable at September 30, 2018	Contractual Life	Exercise Price of Options and Warrants Currently Exercisable
$0.57 - $1.69	18,377,991	3.78	$0.90

NOTE 11 RELATED PARTY

At September 30, 2018 the Company had a legal accrual to related party of $25,897, service and expense reimbursement to a related party of $13,362 and travel and office expense accruals of officers in the amount of $13,473. At December 31, 2017 the Company had a legal, accounting and computer service accrual to related party of $4,725 and travel and office expense accruals of officers in the amount of $4,045.

During July 2017, the Company issued a warrant to purchase 150,000 shares of common stock at a purchase price of $1.48 per share for professional services to be rendered over a twelve month period commencing July 1, 2017. The warrant was valued at $124,788, fair value upon issuance, using the Black-Scholes Option Pricing Formula. The warrant was re-valued at $93,069, fair value at June 30, 2018. The expense is being recognized based on service terms of the agreement over a twelve month period. For the nine month period ending September 30, 2018, the Company recognized $47,072 of expense.

LIGHTWAVE LOGIC, INC.

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 2018 AND 2017

NOTE 11 RELATED PARTY (CONTINUED)

During July 2018, the Company issued a warrant to purchase 100,000 shares of common stock at a purchase price of $1.15 per share for professional services to be rendered over a twelve month period commencing July 1, 2018. The warrant was valued at $62,637, fair value upon issuance, using the Black-Scholes Option Pricing Formula. The expense is being recognized based on service terms of the agreement over a twelve month period. For the nine month period ending September 30, 2018, the Company recognized $15,659 of expense.

NOTE 12 RETIREMENT PLAN

The Company established a 401(k) retirement plan covering all eligible employees beginning November 15, 2013. For the nine months ending September 30, 2018 and 2017, a contribution of $16,564 and $15,181 was charged to expense for all eligible non-executive participants. For the three months ending September 30, 2018 and 2017, a contribution of $6,801 and $5,382 was charged to expense for all eligible non-executive participants.

Item 2

Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis should be read in conjunction with our financial statements, included herewith. This discussion should not be construed to imply that the results discussed herein will necessarily continue into the future, or that any conclusion reached herein will necessarily be indicative of actual operating results in the future. Such discussion represents only the best present assessment of our management. This information should also be read in conjunction with our audited historical financial statements which are included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the Securities and Exchange Commission on March 16, 2018.

Overview

Lightwave Logic, Inc. is a development stage company whose P^2IC^{TM} technology addresses advanced telecommunication, data communications, and data center markets utilizing its advanced organic electro-optic polymer systems. The Company currently has development activities in both polymer materials as well as device design.

General information about us can be found on our website at www.lightwavelogic.com. The information on our website is for informational purposes only and should not be relied on for investment purposes. The information on our website is not incorporated by reference into this report on Form 10-Q and should not be considered part of this or any other report that we file with the Securities and Exchange Commission.

Materials Development

The Company designs and synthesizes organic chromophores for use in its own proprietary electro-optic *polymer systems* and photonic device designs. A polymer system is not solely a material, but also encompasses various technical enhancements necessary for its implementation. These include host polymers, poling methodologies, and molecular spacer systems that are customized to achieve specific optical properties. Our organic electro-optic polymer systems compounds are mixed into solution form that allows for thin film application. Our proprietary electro-optic polymers are designed at the molecular level for potentially superior performance, stability and cost-efficiency. We believe they have the potential to replace more expensive, higher power consuming, slower-performance materials and devices used in fiber-optic communication networks.

Our patented and patent pending molecular architectures are based on a well-understood chemical and quantum mechanical occurrence known as *aromaticity*. Aromaticity provides a high degree of molecular stability that enables our core molecular structures to maintain stability under a broad range of operating conditions.

We expect our patented and patent-pending optical materials along with trade secrets and licensed materials, to be the core of and the enabling technology for future generations of optical devices, modules, sub-systems and systems that we will develop or potentially out-license to electro-optic device manufacturers. The Company contemplates future applications that may address the needs of semiconductor companies, optical network companies, Web 2.0 media companies, high performance computing companies, telecommunications companies, aerospace companies, and government agencies.

Device Design and Development

Electro-optic Modulators

The Company designs its own proprietary electro-optical modulation devices. Electro-optical modulators convert data from electric signals into optical signals that can then be transmitted over high-speed fiber-optic cables. Our modulators are electro-optic, meaning they work because the optical properties of the polymers are affected by electric fields applied by means of electrodes. Modulators are key components that are used in fiber optic telecommunications, data communications, and data centers networks etc., to convey the high data flows that have been driven by applications such as pictures, video streaming, movies etc., that are being transmitted through the internet. Electro-optical modulators are expected to continue to be an essential element as the appetite and hunger for data increases every year.

Polymer Photonic Integrated Circuits (P^2IC^{TM})

The Company also designs its own proprietary polymer photonic integrated circuits (otherwise termed a polymer PIC). A polymer PIC is a photonic device that integrates several photonic functions on a single chip. We believe that our technology can enable the ultra-miniaturization needed to increase the number of photonic functions residing on a semiconductor chip to create a progression like what was seen in the computer integrated circuits, commonly referred to as Moore s Law. One type of integration is to combine several instances of the same photonic functions such as a plurality of modulators to create a 4 channel polymer PIC. In this case, the number of photonic components would increase by a factor of 4. Another type is to combine different types of devices including from different technology bases such as the combination of a semiconductor laser with a polymer modulator. Our P^2IC platform encompasses both these types of architecture.

Current photonic technology today is struggling to reach faster device speeds. Our modulator devices, enabled by our electro-optic polymer material systems, work at extremely high frequencies (wide bandwidths) and possess inherent advantages over current crystalline electro-optic material contained in most modulator devices such as lithium niobate (LiNbO3), indium phosphide (InP), silicon (Si), and gallium arsenide GaAs). Our advanced electro-optic polymer platform is creating a new class of modulators and associated PIC platforms that can address higher data rates in a lower cost, lower power consuming manner, with much simpler modulation techniques.

Our electro-optic polymers can be integrated with other materials platforms because they can be applied as a thin film coating in a fabrication clean room such as may be found in semiconductor foundries. Our polymers are unique in that they are stable enough to seamlessly integrate into existing CMOS, Indium Phosphide (InP), Gallium Arsenide (GaAs), and other semiconductor manufacturing lines.

Business Strategy

Our business strategy anticipates that our revenue stream will be derived from one or some combination of the following: (i) technology licensing for specific product application; (ii) joint venture relationships with significant industry leaders; or (iii) the production and direct sale of our own electro-optic device components. Our objective is to be a leading provider of proprietary technology and know-how in the electro-optic device market. In order to meet this objective, we intend to:

- Further the development of proprietary organic electro-optic polymer material systems
- Develop photonic devices based on our P^2IC^{TM} technology
- Continue to develop proprietary intellectual property

- Grow our commercial device development capabilities
- Grow our product reliability and quality assurance capabilities
- Grow our optoelectronic packaging and testing capabilities
- Grow our commercial material manufacturing capabilities
- Maintain/develop strategic relationships with major telecommunications and data communications companies to further the awareness and commercialization of our technology platform
- Continue to add high-level personnel with industrial and manufacturing experience in key areas of our materials and device development programs.

Create Organic Polymer-Enabled Electro-Optic Modulators

We intend to utilize our proprietary optical polymer technology to create an initial portfolio of commercial electro-optic polymer product devices with applications for various markets, including telecommunications, data communications and data centers. These product devices will be part of our proprietary photonics integrated circuit (PIC) technology platform.

We expect our initial modulator products will operate at data rates at least 50 Gbaud (capable of 50 Gbps with standard data encoding of NRZ and 100 Gbps with more complex PAM-4 encoding). Our devices are highly linear, enabling the performance required to take advantage of the more advance complex encoding schemes. We are currently developing our polymer technology to operate at the next industry node of 100Gbaud.

Our P2IC platform will have the flexibility to allow multiple channels through integration. For example, where 4 modulated channels are expected each to operate at least 50 Gbaud per channel, the aggregate optical signal output could carry 400 Gbps with PAM-4 advanced data encoding, and potentially 100Gbaud per channel. Pulse-Amplitude Modulation (PAM-4) is an industry standard encoding scheme that can double the amount of data that can be transmitted with a given device speed. This relationship between baudrate and bitrate by encoding scheme is described in a number of places, including in a white paper publicly available on our website. We believe the capability of the electro-optic polymer technology up to these speeds will be highly attractive to potential customers seeking to assure their own product roadmaps. This will allow our Company to participate in opportunities that range up to 800Gbaud using a 4 channel P2IC platform, and potentially 1600Gbaud (or 1.6Tbaud) with an 8 channel P2IC platform.

Continue to Expand Our Intellectual Property Portfolio and Reliance on Trade Secrets

We plan to continuously advance the development of unique organic electro-optic polymer materials along with proprietary designs and device configurations. We intend to protect our technology by filing patent applications where appropriate or by obtaining exclusive technology rights where available. However, in some cases, we will refrain from protecting certain proprietary information with patents in favor of trade secrets.

Continue to Recruit Technical Expertise

In December 2011, we retained Dr. Frederick Leonberger, PhD as our Senior Advisor. Dr. Leonberger is the former Chief Technology Officer of JDS Uniphase, Inc. We previously retained EOvation Advisors LLC, a technology and business advisory firm founded by Dr. Frederick Leonberger, as a consultant to the Company. Dr. Leonberger is presently assisting our Company with strategic planning and the design of optical modulators that we intend to develop. In May 2017, Dr. Leonberger was elected to our Board of Directors and serves as a member of the operations committee and assists with the technical direction and strategy of the Company.

In July 2018 we retained Dr. Karen Liu, a former industry analyst and marketing executive in datacom and telecom fiber optic communications, as our Vice President of Sales and Marketing to advance our customer-facing position in the datacom and telecom markets and to assist with engaging with customers on our 400Gbps and 800Gbps prototypes.

Our Proprietary Products in Development

As part of a two-pronged marketing strategy, our Company is developing several optical devices, which are in various stages of development and that utilize our polymer optical materials. They include:

Ridge Waveguide Modulator

Our ridge electro-optic waveguide modulator was designed and fabricated in our in-house laboratory. The fabrication of our first in-house device is significant to our entire device program and is an important starting point for modulators that are being developed for target markets. We have multiple generations of new materials that we will soon be optimizing for this specific design. In September 2017 we announced that our initial alpha prototype ridge waveguide modulator, enabled by our P^2IC polymer system, demonstrated bandwidth performance levels that will enable 50 Gbaud modulation in fiber-optic communications. This device demonstrated true amplitude (intensity) modulation in a Mach-Zehnder modulator structure incorporating our polymer waveguides. This important achievement will allow users to utilize arrays of 4 x 50 Gbaud (4x 100 Gbps) polymer modulators using PAM-4 encoding to access 400 Gbps data rate systems. These ridge waveguide modulators are currently being packaged with our partner into prototype packages. We showed an example packaged modulator at our Annual Shareholders Meeting in May 2018.

These prototype packages will enable potential customers to evaluate the performance at 50 Gbaud. Once a potential customer generates technical feedback on our prototype, we expect to be asked to optimize the performance to their specifications. Assuming this is successful, we expect to enter a qualification phase where our prototypes will be evaluated more fully.

In parallel, we are developing modulators for scalability to higher data rates above 50 Gbaud. In September 2018, we showed in conference presentations the potential of our polymer modulator platform to operate at over 100 GHz bandwidth. This preliminary result corresponds to 100 Gbaud data rates using a simple NRZ data encoding scheme or 200 Gbps with PAM-4 encoding. With 4 channel arrays in our P^2IC platform, the Company thus has the potential to address both 400 Gbps and 800 Gbps markets. While customers may start the engagement at 50 Gbaud, we believe potential customers recognize that scalability to higher speeds is an important differentiator of the polymer technology.

The ridge waveguide modulator represents our first commercially viable device and targets the fiber optics communications market. We have completed internal market analysis and are initially targeting interconnect reach distances of greater than 10km. In these markets, the system network companies are looking to implement modulator-based transceivers that can handle aggregated data rates 100 Gbps and above. The market opportunity for greater than 10km is worth over $1B over the next decade.

Advanced Modulator Structures

As part of supporting further improvement and scalability of our platform, we continue to explore more advanced device structures. Our functional polymer photonics slot waveguide modulator utilizes an existing modulator structure with one of our proprietary electro-optic polymer material systems as the enabling material layer and is functional as an operating prototype device.

Preliminary testing and initial data on our polymer photonics slot waveguide modulators demonstrated several promising characteristics. The tested polymer photonic chip had a 1-millimeter square footprint, enabling the possibility of sophisticated integrated optical circuits on a single silicon substrate. In addition, the waveguide structure was approximately 1/20 the length of a typical inorganic-based silicon photonics modulator waveguide.

With the combination of our proprietary electro-optic polymer material and the extremely high optical field concentration in the slot waveguide modulator, the test modulators demonstrated less than 2.2 volts to operate. Initial speeds exceeded 30-35 GHz in the telecom, 1550 nanometer frequency band. This is equivalent to 4 x 10Gbps, inorganic, lithium niobate modulators that would require approximately 12-16 volts to move the same amount of information.

We continued with our collaborative development of our polymer photonic slot waveguide modulator in 2014 and continued our collaboration with an associated third-party research group in 2017 and 2018. We are now designing slot modulators to operate at data rates greater than 50 Gbaud.

Our Long-Term Device Development Goal - Multichannel Polymer Photonic Integrated Circuit (P^2IC)

Our P^2IC platform is positioned to address markets with aggregated data rates of 100 Gbaud, 400 Gbaud, 800 Gbaud and beyond. Our P^2IC platform will contain a number of photonic devices that may include, over and above polymer-based modulators, photonic devices such as lasers, multiplexers, demultiplexers, detectors, fiber couplers.

While our polymer-based ridge waveguide and slot modulators are currently under development to be commercially viable products, our long-term device development goal is to produce a platform for the 400 Gbps and beyond transceiver market. This has been stated in our photonics product roadmap that is publicly available on our website. The roadmap shows a progression from: 10 Gbaud ridge waveguide modulators; to 25 Gbaud based ridge waveguide modulators; to 50 Gbaud based ridge waveguide modulators, and potentially 100 Gbaud based ridge waveguide modulators. These modulators are then arrayed to create a multichannel P^2IC platform for the 100 Gbps, 400 Gbps, 800 Gbps, and potentially 1.6 Tbps aggregated data-rate markets. As the performance of the modulator is capable of up to 100 Gbaud, the next major milestone on our roadmap will be to create a multichannel polymer-based P^2IC platform for the 400 Gbps market. This will be composed of either 4 channels each carrying 100 Gbps, implemented either with NRZ modulation on 100 Gbaud modulators or PAM-4 modulation on 50 Gbaud modulators.

For our device goals, we are developing polymer materials that perform even faster at a serial single channel 100Gbps using a NRZ modulation format. We showed bandwidths of polymer-based modulator devices at a major international conference (ECOC European Conference on Optical Communications) this year with bandwidths that exceeded 100GHz. We noted that to achieve 100Gbaud, the polymer-based modulator only has to achieve 80GHz bandwidth. We were pleased with the polymer modulator performance, and we are now optimizing the device parameters for very low voltage operation.

Our Target Markets

Cloud computing and data centers

Big data is a general term used to describe the voluminous amount of unstructured and semi-structured data a Company creates -- data that would take too much time and cost too much money to load into a relational database for analysis. Companies are looking to cloud computing in their data centers to access all the data. Inherent speed and bandwidth limits of traditional solutions and the potential of organic polymer devices offer an opportunity to increase the bandwidth, reduce costs and improve speed of access.

Datacenters have grown to enormous sizes with hundreds of thousands and even millions of servers in a single datacenter. The number of so-called hyperscale datacenters are expected to continue to increase in number. Due to their size, a single datacenter may consist of multiple large warehouse-size buildings on a campus or even several locations distributed around a metropolitan area. Data centers are confronted with the problem of moving vast amounts of data not only around a single data center building, but also between buildings in distributed data center architecture. Links within a single datacenter building may be shorter than 500 meters, though some will require optics capable of 2 km. Between datacenter buildings, there is an increasing need for high performance interconnects over 10km in reach.

Our modulators are suitable for single-mode fiber optic links. We believe that our single mode modulator solutions will be competitive at 500m to 10km link distances, but it will be ideally suited at greater than 10km link distances.

Telecommunications/Data Communications

The telecommunications industry has evolved from transporting traditional analogue voice data over copper wire into the movement of digital voice and data. Telecommunication companies are faced with the enormous increasing challenges to keep up with the resulting tremendous explosion in demand for bandwidth. The metropolitan network is especially under stress now and into the near future. Telecommunications companies provide services to some data center customers for the inter-data center connections discussed above. 5G mobile upgrade, autonomous driving and IoT are expected to increase the need for data stored and processed close to the end user in edge data centers. This application similarly requires optics capable of very high speeds and greater than 10 km reach.

Recent Significant Events and Milestones Achieved

In December 2016 we achieved high-speed modulation in our first all-organic polymer ridge waveguide intensity modulator prototype, which constituted one of the most significant moments in the history of our Company. Our initial "alpha" prototype device, enabled by our P^2IC polymer system, demonstrated bandwidth suitable for data rates up to about 10 Gbps. This performance exceeds the telecom OC-48 standard (2.5 Gbps). This device demonstrated true amplitude (intensity) modulation in a Mach-Zehnder modulator structure incorporating our polymer waveguides.

In April 2017 we achieved bandwidth suitable for 25Gbps data rates in an all-organic polymer ridge waveguide intensity modulator prototype, a significant improvement over our initial 10Gbps device modulator prototype. This breakthrough was significant because a 25Gbps data rate is important to the optical networking industry because this data rate is a major node to achieve 100 Gbps (using 4 channels of 25 Gbps). In July 2017 we advanced our high-speed modulation performance to satisfy 28Gbps data rates for QSFP28 standards and 100Gbps data center applications.

In September 2017 we achieved outstanding performance of our ridge waveguide Mach-Zehnder modulators ahead of schedule, with bandwidth performance levels that will enable 50Gbps modulation in fiber-optic communications. This important achievement will allow users to utilize arrays of 4 x 50Gbps polymer modulators using PAM-4 encoding to access 400Gbps data rate systems. Pulse-Amplitude Modulation (PAM-4) is an encoding scheme that can double the amount of data that can be transmitted.

During February and March 2018, we moved our Newark, Delaware synthetic laboratory and our Longmont, Colorado optical testing laboratory and corporate headquarters to our new office, laboratory and research and development space located at 369 Inverness Parkway, Suite 350, Englewood, Colorado. The new 13,420 square feet Englewood facility includes fully functional 1,000 square feet of class 1,000 cleanroom, 500 square feet of class 10,000 cleanroom, chemistry laboratories, and analytic laboratories. The new Englewood facility streamlines all of our Company s research and development workflow for greater operational efficiencies.

During March 2018, our Company, together with our packaging partner, successfully demonstrated packaged polymer modulators designed for 50Gbps, which we believe will allow us to scale our P^2IC platform with our Mach-Zehnder ridge waveguide modulator design as well as other photonics devices competitively in the 100Gbps and 400Gbps datacom and telecommunications applications market. We are currently fine-tuning the performance parameters of these prototypes in preparation for customer evaluations.

During June 2018, our Company Acquired the Polymer Technology Intellectual Property Assets of BrPhotonics Productos Optoelectrónicos S.A., a Brazilian corporation, which significantly advanced our patent portfolio of electro-optic polymer technology with 15 polymer chemistry materials, devices, packaging and subsystems patent and further strengthened our design capabilities to solidify our market position as we prepare to enter the 400Gbps integrated photonics marketplace with a highly competitive, scalable alternative to installed legacy systems. Since June 2018, we have made significant progress on integrating this technology into our P^2IC (polymer photonic integrated circuit) platform.

Also, during June 2018, our Company promoted polymer PICs and Solidified Polymer PICs as Part of the Photonics Roadmap at the World Technology Mapping Forum in Enschede, Netherlands, which includes our Company s technology of polymers and polymer PICs that have the potential to drive not only 400Gbps aggregate data rate solutions, but also 800Gbps and beyond.

In August 2018 we announced the completion (ahead of schedule) of our fully equipped on-site fabrication facility, where we are expanding our high-speed test and design capabilities. We also announced the continuation of the building of our internal expertise with the hiring of world-class technical personnel with 100Gbps experience.

As we move forward to diligently to meet our goals, we continue to work closely with our packaging partner for the 50Gbaud prototypes, and we are advancing our reliability and characterization efforts to support our prototyping. We are actively engaged with test equipment manufacturers to deliver the most advanced test equipment for our state-of-the-art polymer results. We continue to engage with multiple industry bodies to promote our roadmap. We continue to fine tune our business model with target markets, customers, and technical specifications. Discussions with prospective customers are validating that our modulators are ideally suited for the datacenter and telecommunications markets that are over 10km in length. Details of what these prospective customers are seeking from a prototype are delivered to our technical team.

Capital Requirements

As a development stage company, we do not generate revenues. We have incurred substantial net losses since inception. We have satisfied our capital requirements since inception primarily through the issuance and sale of our common stock.

Results of Operations

Comparison of three months ended September 30, 2018 to three months ended September 30, 2017

Revenues

As a development stage company, we had no revenues during the three months ended September 30, 2018 and September 30, 2017. The Company is in various stages of photonic device and material development and evaluation. We expect the next revenue stream to be in product development agreements and prototype devices prior to moving into production.

Operating Expenses

Our operating expenses were $1,443,534 and $1,205,932 for the three months ended September 30, 2018 and 2017, respectively, for an increase of $237,602. This increase in operating expenses was due primarily to increases in salaries and wages, depreciation, laboratory materials and supplies, recruiting fees, travel, research and development moving expenses, accounting fees, patent amortization and patent related expenses, general and administrative office expenses, research and development rent and utility expenses and general and administrative consulting expenses offset by decreases in legal, research and development non-cash stock option amortization and laboratory material testing expense and electro-optic device development.

Included in our operating expenses for the three months ended September 30, 2018 was $984,760 for research and development expenses compared to $821,331 for the three months ended September 30, 2017, for an increase of $163,429. This is primarily due to increases in research and development salaries and wages, depreciation, laboratory materials and supplies, moving expenses, patent amortization and patent related expenses, travel and rent and utility expenses offset by decreases in research and development non-cash stock option amortization and laboratory material testing expense and electro-optic device development.

Research and development expenses currently consist primarily of compensation for employees and consultants engaged in internal research, product development activities; laboratory operations, internal material and device fabrication testing and prototype electro-optic device design, development and prototype device processing; costs; and related operating expenses.

We expect to continue to incur substantial research and development expense to develop and commercialize our photonic devices PIC development and electro-optic materials platform. These expenses will increase as a result of accelerated development effort to support commercialization of our non-linear optical polymer materials technology; to build photonic device prototypes in our in-house laboratories; hiring additional technical and support personnel; engaging a senior technical advisor; pursuing other potential business opportunities and collaborations; customer testing and evaluation; and incurring related operating expenses.

Wages and salaries increased $92,237 from $371,523 for the three months ended September 30, 2017 to $463,760 for the three months ended September 30, 2018. The reason for the variation was primarily due to an increase in full time technical personnel working on device and material development and change in research and development allocation.

Depreciation expenses increased $72,092 from $46,210 for the three months ended September 30, 2017 to $118,302 for the three months ended September 30, 2018. The primary reason for the increase was due to the addition of capital equipment in the new facility.

Laboratory materials and supplies also increased $33,973 from $65,162 for the three months ended September 30, 2017 to $99,135 for the three months ended September 30, 2018. The primary reason for the increase was fabrication of prototype wafers and devices, and electro-optic polymer material systems.

Moving expenses increased by $16,099 to $17,786 for the three months ended September 30, 2018 from $1,687 for the three months ended September 30, 2017. The primary reason for the increase was the relocation of employees to the new facility.

Patent amortization and patent related expenses increased by $10,683 to $20,059 for the three months ended September 30, 2018 from $9,376 for the three months ended September 30, 2017. The primary reason for the increase was the BrPhotonics patents purchased as part of the asset purchase agreement.

Travel expenses increased $9,373 from $17,932 for the three months ended September 30, 2017 to $27,305 for the three months ended September 30, 2018. The increase was primarily due to employee travel for relocation planning, and conferences.

Rent and utilities increased $9,285 from $31,375 for the three months ended September 30, 2017 to $40,660 for the three months ended September 30, 2018. The primary reason for the increase was due to acquiring a larger facility in order to consolidate all the Company s operations into one facility.

Research and development non-cash stock option amortization decreased $51,398 from $96,827 for the three months ended September 30, 2017 to $45,429 for the three months ended September 30, 2018. The reason for the variation in decreased amortization was the vesting schedules.

Product prototype development and material testing expense decreased $39,089 from $56,566 for the three months ended September 30, 2017 to $17,477 for the three months ended September 30, 2018. The decrease was primarily due to the move to the new facility and transitioning of outside services in-house.

General and administrative expense consists primarily of compensation and support costs for management staff, and for other general and administrative costs, including executive, sales and marketing, investor relations, accounting and finance, legal, consulting and other operating expenses.

General and administrative expenses increased $74,173 to $458,774 for the three months ended September 30, 2018 compared to $384,601 for the three months ended September 30, 2017. The increase is primarily due to increases in general and administrative salary and wages, recruiting fees, accounting fees, travel, office expenses and general and administrative consulting offset by a decrease in legal fees.

Salary and wages increased $44,480 to $160,444 for the three months ended September 30, 2018 compared to $115,964 for the three months ended September 30, 2017. The reason for the increase was hiring of key personnel.

Recruiting fees increased $24,500 to $24,500 for the three months ended September 30, 2018 compared to $0 for the three months ended September 30, 2017. The reason for the increase was hiring of key personnel.

Accounting fees increased $13,500 to $39,000 for the three months ended September 30, 2018 compared to $25,500 for the three months ended September 30, 2017. The primary reason for the increase was due to the additional work being an accelerated filer and general accounting expense.

Travel expenses increased $13,128 to $23,767 for the three months ending September 30, 2018 from $10,639 for the three months ended September 30, 2017. The primary reason for the increase was due to travel expense to the new facility and conferences.

Office expenses increased $9,455 to $18,132 for the three months ending September 30, 2018 from $8,677 for the three months ended September 30, 2017. The reason for the variation was due to relocating into a larger facility.

General and administrative consulting expenses increased $6,042 to $6,042 for the three months ending September 30, 2018 from $0 for the three months ended September 30, 2017. The primary reason for the increase was due to a non-cash consulting expense.

Legal fees decreased $57,509 to $29,448 for the three months ending September 30, 2018 from $86,957 for the three months ended September 30, 2017. The primary reason for the variance was an overall decrease in general legal work.

We expect general and administrative expense to increase in future periods as we increase the level of corporate and administrative activity, including increases associated with our operation as a public company; and significantly

increase expenditures related to the future production and sales of our products.

Other Income (Expense)

Other expense decreased $20,406 to $54,167 for the three months ended September 30, 2018 from $74,573 for the three months ended September 30, 2017, relating to the commitment fee associated with the purchase of shares by an institutional investor for sale under a stock purchase agreement.

Net Loss

Net loss was $1,497,701 and $1,280,505 for the three months ended September 30, 2018 and 2017, respectively, for an increase of $217,196, due primarily to increases in salaries and wages, depreciation, laboratory materials and supplies, recruiting fees, travel, research and development moving expenses, accounting fees, patent amortization and patent related expenses, general and administrative office expenses, research and development rent and utility expenses and general and administrative consulting expenses offset by decreases in legal, research and development non-cash stock option amortization, laboratory material testing expense and electro-optic device development and commitment fee associated with the purchase of shares by an institutional investor for resale under a stock purchase agreement.

Comparison of nine months ended September 30, 2018 to nine months ended September 30, 2017

Revenues

As a development stage company, we had no revenues during the nine months ended September 30, 2018 and September 30, 2017. The Company is in various stages of photonic device and material development and evaluation. We expect the next revenue stream to be in product development agreements and prototype devices prior to moving into production.

Our operating expenses were $4,374,026 and $4,032,323 for the nine months ended September 30, 2018 and 2017, respectively, for an increase of $341,703. This increase in operating expenses was due primarily to increases in research and development salaries and wages, depreciation, rent and utility expenses, laboratory materials and supplies, moving expenses, office expenses, travel expenses, accounting fees, auditing fees, recruiting fees, general and administrative consulting expenses, repair, other tax expenses and director and officer insurance expenses offset by decreases in non-cash stock option and warrant amortization, laboratory material testing expense and electro-optic device development, legal, general and administrative salary and wages, royalty fees and patent amortization and patent related expenses.

Included in our operating expenses for the nine months ended September 30, 2018 was $2,830,785 for research and development expenses compared to $2,388,861 for the nine months ended September 30, 2017, for an increase of $441,924. This is primarily due to increases in research and development salaries and wages, depreciation, laboratory materials and supplies, rent and utility expenses, research and development moving expenses, travel expenses, repair and office expenses offset by decreases in non-cash stock option amortization, laboratory material testing expense and electro-optic device development, royalty fees and patent amortization and patent related expenses.

Research and development expenses currently consist primarily of compensation for employees and consultants engaged in internal research, product development activities; laboratory operations, internal material and device fabrication testing and prototype electro-optic device design, development and prototype device processing; costs; and related operating expenses.

We expect to continue to incur substantial research and development expense to develop and commercialize our photonic devices PIC development and electro-optic materials platform. These expenses will increase as a result of accelerated development effort to support commercialization of our non-linear optical polymer materials technology; to build photonic device prototypes in our in-house laboratories; hiring additional technical and support personnel; engaging a senior technical advisor; pursuing other potential business opportunities and collaborations; customer testing and evaluation; and incurring related operating expenses.

Wages and salaries increased $335,112 from $967,448 for the nine months ended September 30, 2017 to $1,302,560 for the nine months ended September 30, 2018. The reason for the variation was primarily due to an increase in full time technical personnel working on device and material development and change in research and development allocation.

Depreciation expense increased $137,448 from $133,408 for the nine months ended September 30, 2017 to $270,856 for the nine months ended September 30, 2018. The primary reason for the increase was due to the addition of capital equipment in the new facility.

Laboratory materials and supplies increased $116,200 from $141,526 for the nine months ended September 30, 2017 to $257,726 for the nine months ended September 30, 2018. The primary reason for the increase was fabrication of prototype wafers and devices, and electro-optic polymer material systems.

Rent and utility expenses increased $87,400 from $93,827 for the nine months ended September 30, 2017 to $181,227 for the nine months ended September 30, 2018. The primary reason for the increase was due to acquiring a larger facility in order to consolidate all the Company s operations into one facility.

Moving expenses increased by $59,239 to $61,885 for the nine months ended September 30, 2018 from $2,646 for the nine months ended September 30, 2017. The primary reason for the increase was the relocation of employees to the new facility.

Travel expenses increased by $32,706 to $81,742 for the nine months ended September 30, 2018 from $49,036 for the nine months ended September 30, 2017. The increase was primarily due to employee travel for relocation planning, and conferences.

Repair and maintenance expenses increased by $17,705 to $41,461 for the nine months ended September 30, 2018 from $23,756 for the nine months ended September 30, 2017. The primary reason for the increase was due to general maintenance in the new Colorado facility, and repairs to Delaware facility.

Office expenses increased by $14,640 to $19,410 for the nine months ended September 30, 2018 from $4,770 for the nine months ended September 30, 2017. The increase was primarily due furnishing the new Colorado facility.

Research and development non-cash stock option amortization decreased $210,903 from $408,396 for the nine months ended September 30, 2017 to $197,493 for the nine months ended September 30, 2018. The reason for the variation in decreased amortization was the vesting schedules.

Product prototype development and material testing expense decreased $111,668 from $167,209 for the nine months ended September 30, 2017 to $55,541 for the nine months ended September 30, 2018. The decrease was primarily due to the move to the new facility and transitioning of outside services in-house.

Royalty expenses decreased $22,500 to $0 for the nine months ended September 30, 2018 from $22,500 for the nine months ended September 30, 2017. The primary reason for the decrease was the termination of a license agreement.

Patent amortization and patent related expenses decreased by $18,992 to $44,956 for the nine months ended September 30, 2018 from $63,948 for the nine months ended September 30, 2017. The primary reason for the decrease was lower cost in patent application prosecution.

General and administrative expense consists primarily of compensation and support costs for management staff, and for other general and administrative costs, including executive, sales and marketing, investor relations, accounting and finance, legal, consulting and other operating expenses.

General and administrative expenses decreased $100,221 to $1,543,241 for the nine months ended September 30, 2018 compared to $1,643,462 for the nine months ended September 30, 2017. The decrease is primarily due to decreases in general and administrative non-cash stock option and warrant amortization, legal fees and general and administrative salary and wages offset by increases in office expenses, rent and utility expenses, accounting fees, auditing fees, travel, moving expenses, recruiting fees, general and administrative consulting, other tax expenses and director and officer insurance expenses.

General and administrative non-cash stock option and warrant amortization decreased by $257,532 to $204,314 for the nine months ended September 30, 2018 from $461,846 for the nine months ended September 30, 2017. The reason for the variation was due to stock options and warrants vesting schedules.

Legal fees decreased $93,129 to $202,680 for the nine months ended September 30, 2018 from $295,809 September 30, 2017 The primary reason for the variance was an overall decrease in general legal work.

Salary and wages decreased $23,556 to $399,243 for the nine months ending September 30, 2018 from $422,799 for the nine months ending September 30, 2017. The primary reason for the variance is a decrease in management salaries and change in general and administrative allocation.

Office expenses increased $64,412 from $29,763 for the nine months ended September 30, 2017 to $94,175 for the nine months ended September 30, 2018. The reason for the variation was due to relocating into a larger facility.

Rent and utility expenses increased $46,534 from $24,823 for the nine months ended September 30, 2017 to $71,357 for the nine months ended September 30, 2018. The primary reason was due to support of the new larger facility and old operations facilities.

Accounting fees increased $27,166 to $106,750 for the nine months ended September 30, 2018 from to $79,584 for the nine months ended September 30, 2017. The primary reason for the increase was due to the additional work being an accelerated filer and general accounting expense.

Auditing fees increased $25,150 to $78,600 for the nine months ending September 30, 2018 from $53,450 for the nine months ending September 30, 2017. The primary reason for the increase was due to the Company s change in status to an accelerated filer, which requires additional testing by the auditors.

Travel expenses increased $21,177 to $49,605 for the nine months ending September 30, 2018 from $28,428 for the nine months ending September 30, 2017. The primary reason for the increase was due to travel expense to the new facility and conferences.

Moving expenses increased $20,606 to $20,606 for the nine months ending September 30, 2018 from $0 for the nine months ending September 30, 2017. The reason for the variation was due to moving to a new facility.

Recruiting fees increased $20,500 to $40,500 for the nine months ending September 30, 2018 from $20,000 for the nine months ending September 30, 2017. The reason for the increase was hiring of personnel.

General and administrative consulting expenses increased $18,125 to $18,125 for the nine months ended September 30, 2018 from $0 for the nine months ended September 30, 2017. The primary reason for the increase was due to a non-cash consulting expense.

Other tax expenses increased $14,833 to $26,694 for the nine months ended September 30, 2018 from $11,861 for the nine months ended September 30, 2017. The primary reason for the increase was due to sales and use tax on capital equipment for new facility.

Director and officer insurance expenses increased $13,781 to $109,319 for the nine months ended September 30, 2018 from $95,538 for the nine months ended September 30, 2017. The primary reason for the increase was an increase in insurance premiums.

We expect general and administrative expense to increase in future periods as we increase the level of corporate and administrative activity, including increases associated with our operation as a public company; and significantly increase expenditures related to the future production and sales of our products.

Other Income (Expense)

Other expense increased $6,776 to $135,146 for the nine months ended September 30, 2018 from $128,370 for the nine months ended September 30, 2017, relating to the commitment fee associated with the purchase of shares by an institutional investor for sale under a stock purchase agreement.

Net Loss

Net loss was $4,509,172 and $4,160,693 for the nine months ended September 30, 2018 and 2017, respectively, for an increase of $348,479, due primarily to increases in research and development, salaries and wages, depreciation, rent and utility expenses, laboratory materials and supplies, moving expenses, office expenses, travel expenses, accounting fees, auditing fees, recruiting fees, general and administrative consulting expenses, repair, other tax expenses and

director and officer insurance expenses offset by decreases in non-cash stock option and warrant amortization, laboratory material testing expense and electro-optic device development, legal, general and administrative salary and wages, royalty fees, patent amortization and patent related expenses and commitment fee associated with the purchase of shares by an institutional investor for resale under a stock purchase agreement.

Significant Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates based upon historical experience and various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our actual results may differ materially from these estimates.

We believe our significant accounting policies affect our more significant estimates and judgments used in the preparation of our financial statements. Our Annual Report on Form 10-K for the year ended December 31, 2017 contains a discussion of these significant accounting policies.

Recently Adopted Accounting Pronouncements. In June 2018, the FASB issued ASU No. 2018-07, Compensation Stock Compensation (Topic 718), Improvements to Nonemployee Share-Based Payment Accounting. The amendments in this Update expand the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. Prior to this Update, Topic 718 applied only to share-based transactions to employees. Consistent with the accounting requirement for employee share-based payment awards, nonemployee share-based payment awards within the scope of Topic 718 are measured at grant-date fair value of the equity instruments that an entity is obligated to issue when the good has been delivered or the service has been rendered and any other conditions necessary to earn the right to benefit from the instruments have been satisfied. The amendments in this Update are effective for public business entities for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. Early adoption is permitted, but no earlier than an entity s adoption date of Topic 606. The adoption of this pronouncement on June 30, 2018 had no material impact on the Company s financial statements.

Reclassifications. Certain reclassifications have been made to the 2017 financial statement in order to conform to the 2018 financial statement presentation.

See our Note 1 in our unaudited financial statements for the nine months ended September 30, 2018 as set forth herein for a more complete discussion of our Company s accounting policies.

Liquidity and Capital Resources

During the nine months ended September 30, 2018, net cash used in operating activities was $3,404,846 and net cash used in investing activities was $1,266,594, which was due primarily to the Company s research and development activities, general and administrative expenditures and capital expenditures. Net cash provided by financing activities for the nine months ended September 30, 2018 was $3,393,430. At September 30, 2018, our cash and cash equivalents totaled $2,204,317, our assets totaled $5,237,215, our liabilities totaled $418,632, and we had stockholders equity of $4,818,583.

During the nine months ended September 30, 2017, net cash used in operating activities was $2,873,598 and net cash used in investing activities was $127,311, which was due primarily to the Company s research and development activities and general and administrative expenditures. Net cash provided by financing activities for the nine months ended September 30, 2017 was $3,923,721. At September 30, 2017, our cash and cash equivalents totaled $2,879,656, our assets totaled $4,205,080, our liabilities totaled $321,642, and we had stockholders equity of $3,883,438.

Sources and Uses of Cash

Our future expenditures and capital requirements will depend on numerous factors, including: the progress of our research and development efforts; the rate at which we can, directly or through arrangements with original equipment manufacturers, introduce and sell products incorporating our polymer materials technology; the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; market acceptance of our products and competing technological developments; and our ability to establish cooperative development, joint venture and licensing arrangements. We expect that we will incur approximately $490,000 of expenditures per month over the next 12 months. Based upon our current cash position and expenditures of approximately $490,000 per month and no debt service, we believe our Company has sufficient funds to finance its operations through March 2019. Our cash requirements are expected to increase at a rate consistent with the Company s path to revenue growth as we expand our activities and operations with the objective of commercializing our electro-optic polymer technology.

On January 29, 2016, we signed a purchase agreement (the Purchase Agreement) with Lincoln Park Capital Fund, LLC (Lincoln Park) to sell up to $20,000,000 of common stock whereby subject to certain conditions and at our sole discretion, Lincoln Park has committed to purchase up to $20,000,000 of our common stock over a 36-month period. Our most recent registration statement relating to the Purchase Agreement became effective in May 2018, which registered, among other shares as described in the prospectus, an additional 5,000,000 shares of our common stock for resale by Lincoln Park under the Purchase Agreement. Pursuant to the Purchase Agreement, Lincoln Park is obligated to make purchases as the Company directs in accordance with the Purchase Agreement, which may be terminated by the Company at any time, without cost or penalty. Sales of shares will be made in specified amounts and at prices that are based upon the market prices of our common stock immediately preceding the sales to Lincoln Park. We expect this financing to provide us with sufficient funds to maintain our operations for the foreseeable future. With the additional capital, we expect to achieve a level of revenues attractive enough to fulfill our development activities and adequate enough to support our business model for the foreseeable future. We cannot assure you that we will meet the conditions of the Purchase Agreement with Lincoln Park in order to obligate Lincoln Park to purchase our shares of common stock. In the event we fail to do so, and other adequate funds are not available to satisfy long-term capital requirements, or if planned revenues are not generated, we may be required to substantially limit our operations. This limitation of operations may include reductions in capital expenditures and reductions in staff and discretionary costs.

There are no trading volume requirements or restrictions under the Purchase Agreement and we will control the timing and amount of any sales of our common stock to Lincoln Park. Lincoln Park has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. We can also accelerate the amount of common stock to be purchased under certain circumstances. There are no limitations on use of proceeds, financial or business covenants, restrictions on future funding, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement. Lincoln Park may not assign or transfer its rights and obligations under the purchase agreement.

We expect that our cash used in operations will continue to increase during 2018 and beyond as a result of the following planned activities:

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The addition of management, sales, marketing, technical and other staff to our workforce;

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Increased spending for the expansion of our research and development efforts, including purchases of additional laboratory and production equipment;

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Increased spending in marketing as our products are introduced into the marketplace;

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Developing and maintaining collaborative relationships with strategic partners;

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Developing and improving our manufacturing processes and quality controls; and

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Increases in our general and administrative activities related to our operations as a reporting public company and related corporate compliance requirements.

Analysis of Cash Flows

For the nine months ended September 30, 2018

Net cash used in operating activities was $3,404,846 for the nine months ended September 30, 2018, primarily attributable to the net loss of $4,509,172 adjusted by $62,731 in warrants issued for services, $339,076 in options issued for services, $135,333 in common stock issued for services, $322,495 in depreciation expenses and patent amortization expenses, $10,084 net loss on disposal of equipment, $268,560 in prepaid expenses and ($33,953) in accounts payable and accrued expenses. Net cash used in operating activities consisted of payments for research and development, legal, professional and consulting expenses, rent and other expenditures necessary to develop our business infrastructure.

Net cash used by investing activities was $1,266,594 for the nine months ended September 30, 2018, consisting of $371,320 in cost for intangibles and $897,774 in asset additions primarily for the new Colorado headquarter facility offset by proceeds of $2,500 on the sale of equipment.

Net cash provided by financing activities was $3,393,430 for the nine months ended September 30, 2018 and consisted of $3,612,400 in proceeds from resale of common stock to an institutional investor and $161,500 in proceeds from exercise of warrants and options offset by $380,470 repayment of equipment purchased.

For the nine months ended September 30, 2017

Net cash used in operating activities was $2,873,598 for the nine months ended September 30, 2017, primarily attributable to the net loss of $4,160,693 adjusted by $175,621 in warrants issued for services, $694,621 in options issued for services, $136,557 in common stock issued for services, $214,573 in depreciation expenses and patent amortization and noncash expenses, ($38,839) in prepaid expenses and $104,562 in accounts payable and accrued expenses. Net cash used in operating activities consisted of payments for research and development, legal, professional and consulting expenses, rent and other expenditures necessary to develop our business infrastructure.

Net cash used by investing activities was $127,311 for the nine months ended September 30, 2017, consisting of $38,662 in cost for intangibles and $88,649 in asset additions primarily for the Longmont, Colorado lab facility.

Net cash provided by financing activities was $3,923,721 for the nine months ended September 30, 2017 and consisted of $3,439,060 in proceeds from resale of common stock to an institutional investor and $502,500 from the exercise of warrants offset by $17,839 repayment of equipment purchased.

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Item 4

Controls and Procedures

Evaluation of Disclosure Controls and Procedures. The Company s management, with the participation of the Company s Principal Executive Officer and Principal Financial Officer, evaluated the effectiveness of the Company s disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of September 30, 2018. Based on this evaluation, the Company s Principal Executive Officer and Principal Financial Officer concluded that, as of September 30, 2018 the Company s disclosure controls and procedures were effective, in that they provide reasonable assurance that information required to be disclosed by the Company in the reports that it files or submits under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission s rules and forms, and is accumulated and communicated to the Company s management, including the Company s Principal Executive Officer and Principal Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting. There were no changes in our internal control over financial reporting during the quarter ended September 30, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

Item 1A

Risk Factors

We may not be successful in effectively integrating the recently acquired assets and technology into our existing business and operations.

On June 11, 2018, our Company entered into an Asset Purchase Agreement with BrPhotonics Productos Optoelectrónicos S.A., a legal entity incorporated under the laws of the Federative Republic of Brazil (BrPhotonics) and Fundação CPqD - Centro De Pesquisa e Desenvolvimento em Telecomunicações, a private non-profit association, based in the city of Campinas, São Paulo State, in the Federative Republic of Brazil as guarantor, pursuant to which our Company acquired all of the assets of BrPhotonics polymer business, including 15 patents. We have limited experience in successfully acquiring and integrating assets and technologies and we may not be successful in effectively integrating the acquired assets and technology into our existing business and operations. Additionally, we may not achieve the synergies or other benefits we expect to achieve, and we may incur write-downs, impairment charges or unforeseen liabilities that could negatively affect our financial position or could otherwise harm our business. Such unforeseen problems could divert management and employee time and resources from other matters.

Item 2

Unregistered Sales of Equity Securities and Use of Proceeds

Date	**Security/Value**
July 2018	Warrant right to buy 150,000 shares of common stock at $1.15 per share issued for services.

No underwriters were utilized, and no commissions or fees were paid with respect to any of the above transactions. We relied on Section 4(a)(2) and/or Regulation D of the Securities Act of 1933, as amended, since the transactions did not involve any public offering.

Item 6

Exhibits

The following exhibits are included herein:

Exhibit No.	Description of Exhibit	Location
31.1	Certification pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, executed by the Principal Executive Officer of the Company.	Filed herewith
31.2	Certification pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, executed by the Principal Financial Officer of the Company.	Filed herewith
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, executed by the Principal Executive Officer of the Company.	Filed herewith
32.2	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, executed by the Principal Financial Officer of the Company.	Filed herewith
101	XBRL	

SIGNATURES

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

LIGHTWAVE LOGIC, INC.

Registrant

By: /s/ Michael S. Lebby
Michael S. Lebby,
Chief Executive Officer
(Principal Executive Officer)

Date: November 9, 2018

By: /s/ James S. Marcelli
James S. Marcelli,
President, Chief Operating Officer
(Principal Financial Officer)

Date: November 9, 2018

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