

Lightwave Logic, Inc.
Form 10-Q
May 14, 2009

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON D.C. 20549

FORM 10-Q

(Mark One)

Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the quarterly period ended March 31, 2009

Transition Report Under Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from _____ to _____

Commission File 0-52567

Lightwave Logic, Inc.

(Exact name of registrant as specified in its charter)

Nevada
(State or Other Jurisdiction of Incorporation or
Organization)

82-049-7368
(I.R.S. Employer Identification Number)

121 Continental Drive, Suite 110, Newark, Delaware 19713

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(Address of Principal Executive Offices)(Zip Code)

(302) 356-2717

(Registrant's Telephone Number, Including Area Code)

(Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report)

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

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>

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

APPLICABLE ONLY TO CORPORATE ISSUERS

As of May 14, 2009, there were approximately 37,969,042 shares of common stock, \$0.001 par value, issued and outstanding.

LIGHTWAVE LOGIC, INC.

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March 31, 2009

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PART I - FINANCIAL INFORMATION

Item 1.

Financial Statements

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

BALANCE SHEETS

	March 31, 2009 (Unaudited)	December 31, 2008 (Audited)
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 195,460	\$ 88,225
Receivable for issuance of common stock	10,000	-
Prepaid expenses	10,674	12,198
	216,134	100,423
PROPERTY AND EQUIPMENT - NET	58,700	61,726
OTHER ASSETS		
Intangible assets	213,601	212,416
TOTAL ASSETS	\$ 488,435	\$ 374,565
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 34,747	\$ 62,650
Accounts payable - related party	-	7,172
Accrued expenses	42,088	98,205
CONTINGENCY		
TOTAL LIABILITIES	76,835	168,027
STOCKHOLDERS' EQUITY		
Preferred stock, \$0.001 par value, 1,000,000 authorized		

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No shares issued or outstanding	-	-
Common stock \$0.001 par value, 100,000,000 authorized		
37,971,042 and 35,911,156 issued and outstanding at March 31, 2009 and December 31, 2008	37,971	35,911
Additional paid-in-capital	15,088,630	14,196,060
Deferred charges	-	(55,330)
Accumulated deficit	(15,827)	(15,827)
Receivable for issuance of common stock	-	(12,500)
Deficit accumulated during development stage	(14,699,174)	(13,941,776)
 TOTAL STOCKHOLDERS' EQUITY	 411,600	 206,538
 TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	 \$ 488,435	 \$ 374,565

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENTS OF OPERATIONS FOR THE THREE MONTHS ENDING

MARCH 31, 2009 AND 2008 AND FOR THE PERIOD

JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO MARCH 31, 2009

(UNAUDITED)

	Cumulative Since Inception	For the Three Months Ending March 31, 2009	For the Three Months Ending March 31, 2008
NET SALES	\$ -	\$ -	\$ -
COST AND EXPENSE			
Research and development	6,711,482	449,717	375,889
General and administrative	7,941,795	307,267	590,213
	14,653,277	756,984	966,102
LOSS FROM OPERATIONS	(14,653,277)	(756,984)	(966,102)
OTHER INCOME (EXPENSE)			
Interest income	29,434	-	4,624
Dividend income	1,551	-	-
Realized gain (loss) on investment	3,911	-	-
Realized gain on disposal of assets	637	-	-
Litigation settlement	(47,500)	-	(47,500)
Interest expense	(33,930)	(414)	(842)
NET LOSS	\$ (14,699,174)	\$ (757,398)	\$ (1,009,820)
Basic and Diluted Loss per Share		\$ (0.02)	\$ (0.03)

Basic and Diluted Weighted Average Number of Shares	37,428,638	33,718,463
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See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENTS OF COMPREHENSIVE LOSS

FOR THE THREE MONTHS ENDING MARCH 31, 2009 AND 2008 AND FOR THE
 PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO MARCH 31, 2009
 (UNAUDITED)

	Cumulative	For the	For the Three
	Since	Three	Months Ending
	Inception	Months	Months Ending
		Ending	March 31, 2008
		March 31,	
		2009	
NET LOSS	\$ (14,699,174)	\$ (757,398)	\$ (1,009,820)
OTHER COMPREHENSIVE INCOME (LOSS)			
Unrealized gain on available for sale securities	-	-	32,459
COMPREHENSIVE LOSS	\$ (14,699,174)	\$ (757,398)	\$ (977,361)

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENT OF STOCKHOLDERS EQUITY

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE)
TO MARCH 31, 2009
(UNAUDITED)

	Number of Shares	Common Stock	Paid-in Capital	Subscription Receivable	Deferred Charges	Unrealized Loss on Securities	Accumulated Deficit	Deficit Accumulated During Development Stage
AT R	100	\$ 1	\$ -	\$ -	\$ -	\$ -	(15,827)	\$ -
on	706,973	706	(706)	-	-	-	-	-
AT l,	707,073	707	(706)	-	-	-	(15,827)	-
ck	13,292,927	13,293	(13,293)	-	-	-	-	-
ck	1,600,000	1,600	254,400	-	-	-	-	-
es at	2,000,000	2,000	(2,000)	-	-	-	-	-
ck	637,500	638	74,362	-	-	-	-	-

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ck								
es								
04								
e								
of								
in								
004								
e	187,500	187	29,813	-	-	-	-	-
he								
,	-	-	-	-	-	-	-	(722,146)
AT								
R	18,425,000	18,425	342,576	-	-	-	(15,827)	(722,146)
ck								
t								
of	4,000,000	4,000	996,000	-	-	-	-	-
e in								
	3,118,750	3,119	495,881	-	-	-	-	-
	-	-	-	(6,500)	-	-	-	-
ck								
es								
05,								
	210,000	210	585,290	-	-	-	-	-
ck								
es								
05,								
	200,000	200	583,800	-	-	-	-	-
ued								
n								
g								
at	-	-	37,000	-	-	-	-	-

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ued n	-	-	24,200	-	-	-	-	-
ued n 5, g	-	-	15,900	-	-	-	-	-
at	-	-	435,060	-	-	-	-	-
ued	-	-	-	-	(584,000)	-	-	-
at	-	-	-	-	265,455	-	-	-
ck es 05,	300,000	300	74,700	-	-	-	-	-
a of	-	-	-	-	-	-	-	(1,721,765)
005 e he	26,253,750	26,254	3,590,407	(6,500)	(318,545)	-	(15,827)	(2,443,911)
,	850,000	850	424,150	-	-	-	-	-
AT R ck								

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at	300,000	300	269,700	-	-	-	-	-
ck								
es								
at	400,000	400	619,600	-	-	-	-	-
ck								
es								
,	25,000	25	36,225	-	-	-	-	-
ck								
es								
at	60,000	60	29,340	-	-	-	-	-
ued								
n								
at	-	-	66,500	-	-	-	-	-
ued								
ne								
at	-	-	465,996	-	-	-	-	-
ed								
n								
06,								
g								
at	-	-	428,888	-	-	-	-	-
	-	-	35,624	-	-	-	-	-

	-	-	-	6,500	-	-	-	-
a of	-	-	-	-	318,545	-	-	-
in	-	-	-	-	-	(26,000)	-	-
he	-	-	-	-	-	-	-	(2,933,809)
,	-	-	-	-	-	-	-	(2,933,809)
AT	27,888,750	\$ 27,889	\$ 5,966,430	\$ -	\$ -	\$ (26,000)	\$ (15,827)	\$ (5,377,720)
R								

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENT OF STOCKHOLDERS' EQUITY

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE)
TO MARCH 31, 2009 (CONTINUED)
(UNAUDITED)

	Number of Shares	Common Stock	Paid-in Capital	Receivable for Issuance of Common Stock	Deferred Charges	Unrealized Loss on Securities	Accumulated Deficit	Deficit Accumulated During Development Stage	Total
ANCE									
EMBER									
006	27,888,750	\$ 27,889	\$ 5,966,430	\$ -	\$ -	(26,000)	(15,827)	(5,377,720)	574
mon issued ivate ment g 2007 50/share	2,482,000	2,482	1,238,518	-	-	-	-	-	1,241
mon issued ivate ment g 2007 60/share	1,767,540	1,768	1,058,756	-	-	-	-	-	1,060
mon ription aded g 2007 50/share	(400,000)	(400)	(199,600)	-	-	-	-	-	(200)
mon issued ture ces in	151,785	152	106,098	-	-	-	-	-	106

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ary valued 70/share									
non issued ture ces in h 2007, d at /share	1,000,000	1,000	579,000	-	-	-	-	-	580
non issued ervices									
ment for ants ble in 2007, valued 35/share	100,000	100	34,900	-	-	-	-	-	35
non issued ervices in er 2007, d at /share	150,000	150	101,850	-	-	-	-	-	102
non issued ervices in er 2007, d at /share	150,000	150	134,850	-	-	-	-	-	135
non issued ervices in mber valued 72/share	400,000	400	287,600	-	-	-	-	-	288
ants d for ces in mber vested g 2007, d at /share	-	-	36,370	-	-	-	-	-	36
ants d for ces in	-	-	52,180	-	-	-	-	-	52

h 2007, d during valued 63/share	-	-	293,476	-	-	-	-	-	293
ants d for ces in 2007, d during valued 63/share	-	-	140,490	-	-	-	-	-	140
ants d for ces in 2007, d during valued 56/share	-	-	52,946	-	-	-	-	-	52
ants d for ces in ber 2007, d during valued 61/share	-	-	61,449	-	-	-	-	-	61
ants d for ces in ber 2007, d during valued 78/share	-	-	52,292	-	-	-	-	-	52
ants d for ces in ber vested g 2007, d at /share	-	-	1,159	-	-	-	-	-	1
ns d for	-	-	17,589	-	-	-	-	-	17

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ces in ary , vested g 2007, d at /share	-	-	43,757	-	-	-	-	-	43
ns d for ces in ary , vested g 2007, d at /share	-	-	41,653	-	-	-	-	-	41
ants d for e ces in 2007, d during valued 70/share	-	-	348,000	-	-	-	-	-	348
red es for non issued ture ces in h 2007, d at /share	-	-	-	-	(928,000)	-	-	-	(928)
rtization ferred es	-	-	-	-	773,333	-	-	-	773
alized (loss) on ities	-	-	-	-	-	(32,610)	-	-	(32)
oss for ear g mber 31,	-	-	-	-	-	-	-	(4,223,449)	(4,223)

ANCE

EMBER

007

33,690,075

33,690

10,449,763

-

(154,667)

(58,610)

(15,827)

(9,601,169)

653

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENT OF STOCKHOLDERS' EQUITY

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE)
TO MARCH 31, 2009 (CONTINUED)
(UNAUDITED)

	Number of Shares	Common Stock	Paid-in Capital	Receivable for Issuance of Common Stock	Deferred Charges	Unrealized Loss on Securities	Accumulated Deficit	Deficit Accumulated During Development Stage	Total
BALANCE AT DECEMBER 31, 2007	33,690,075	33,690	10,449,763	-	(154,667)	(58,610)	(15,827)	(9,601,169)	65,399,702
Common stock issued in exchange of cash during 2008 at \$0.69 per share	690,001	690	413,310	-	-	-	-	-	414,000
Common stock issued for services in 2008, valued at \$0.74 per share	100,000	100	74,900	-	-	-	-	-	75,000
Common stock issued for services in 2008, valued at \$1.80 per share	200,000	200	359,800	-	-	-	-	-	360,000
Increase of equity components at March 31, 2009 per share	320,000	320	79,680	-	-	-	-	-	80,000
Total increase of equity components at March 31, 2009	641,080	641	159,629	-	-	-	-	-	160,649

per share, amount to number adjusted offering									
increase of units at per share	270,000	270	134,730	-	-	-	-	-	134,730
units issued for shares in number vested beginning 2008, issued at per share	-	-	27,014	-	-	-	-	-	27,014
units issued for shares in number vested beginning 2007, issued during period valued at per share	-	-	10,885	-	-	-	-	-	10,885
units issued for shares in number vested beginning 2007, issued during period valued at per share	-	-	121,713	-	-	-	-	-	121,713
units issued for shares in number vested beginning 2007, issued during period valued at per share	-	-	48,738	-	-	-	-	-	48,738
units issued for shares in May vested beginning 2008, issued at per share	-	-	31,444	-	-	-	-	-	31,444
units issued for shares in number vested	-	-	12,487	-	-	-	-	-	12,487

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g 2008, d at /share									
ns issued rvice in mber vested g 2008, d at /share	-	-	286,803	-	-	-	-	-	286,803
ns issued rvice in y 2008, d during valued at /share	-	-	30,750	-	-	-	-	-	30,750
ns issued rvice in 008, d during valued at /share	-	-	114,519	-	-	-	-	-	114,519
ns issued rvice in st 2008, d during valued at /share	-	-	525,263	-	-	-	-	-	525,263
ns issued rvice in mber vested g 2008, d at /share	-	-	6,439	-	-	-	-	-	6,439
ants l for services rch 2008, l through mber valued at /share	-	-	332,000	-	(332,000)	-	-	-	
ants l for es in May vested gh	-	-	976,193	-	-	-	-	-	976,193

Number									
valued at									
/share									
ization									
ferred									
es	-	-	-	-	431,337	-	-	-	43
available for									
issuance of									
common stock	-	-	-	(12,500)	-	-	-	-	(12
accumulated loss									
classification	-	-	-	-	-	58,610	-	-	58
loss for the									
period ending									
September 30,									
2008	-	-	-	-	-	-	-	(4,340,607)	(4,340
BALANCE AT									
SEPTEMBER									
30, 2008	35,911,156	\$ 35,911	\$ 14,196,060	\$ (12,500)	\$ (55,330)	\$ -	\$ (15,827)	\$ (13,941,776)	\$ 20

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENT OF STOCKHOLDERS EQUITY

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE)
TO MARCH 31, 2009 (CONTINUED)
(UNAUDITED)

	Number of Shares	Common Stock	Paid-in Capital	Receivable for Issuance of Common Stock	Deferred Charges	Accumulated Deficit	Deficit Accumulated During Development Stage	Total
BALANCE AT DECEMBER 31, 2008	35,911,156	\$ 35,911	\$ \$14,196,060	\$ (12,500)	\$ (55,330)	\$ (15,827)	\$ (13,941,776)	\$ 206,538
Rights to purchase shares issued in January 2009, vested during 2009, valued at \$0.33/share	-	-	132,058	-	-	-	-	132,058
Common stock issued for services in January 2009, valued at \$0.58/share	100,000	100	57,900	-	-	-	-	58,000
Common stock issued for services and as settlement for accounts payable in January 2009, valued at \$0.25/share	100,000	100	24,900	-	-	-	-	25,000

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Exercise of purchase right agreement in January 2009 at \$0.25/share	180,550	181	44,957	-	-	-	-	45,138
Exercise of warrants at \$0.25/share, pursuant to November 2008 adjusted stock offering	1,279,336	1,279	318,555					319,834
Exercise of warrants at \$0.001/share	400,000	400	-	-	-	-	-	400
Options issued for services in November 2007, vested during 2009, valued at \$0.60/share	-	-	49,126	-	-	-	-	49,126
Options issued for services in January 2008, vested during 2009, valued at \$0.60/share	-	-	2,377	-	-	-	-	2,377
Options issued for services in July 2008, vested during 2009, valued at \$1.48/share	-	-	12,039	-	-	-	-	12,039
Options issued for services in August 2008, vested during 2009, valued at \$1.36/share	-	-	138,180	-	-	-	-	138,180
Options issued for services in November 2008, vested during 2009, valued at \$0.50/share	-	-	37,630	-	-	-	-	37,630
Options issued for services in January 2009, vested during	-	-	13,136	-	-	-	-	13,136

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2009, valued at \$0.53/share									
Options issued for services in February 2009, vested during 2009, valued at \$0.38/share	-	-	9,583	-	-	-	-	-	9,583
Contribution of accrued payroll in February 2009	-	-	52,129	-	-	-	-	-	52,129
Amortization of deferred charges	-	-	-	-	55,330	-	-	-	55,330
Payment for the issuance of common stock	-	-	-	12,500	-	-	-	-	12,500
Net loss for the three months ending March 31, 2009	-	-	-	-	-	-	-	(757,398)	(757,398)
BALANCE AT MARCH 31, 2009									
(UNAUDITED)	37,971,042	\$ 37,971	\$ 15,088,630	\$ -	\$ -	(15,827)	\$ (14,699,174)	\$	411,600

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENTS OF CASH FLOW FOR THE THREE MONTHS ENDING

MARCH 31, 2009 AND 2008 AND

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO

MARCH 31, 2009

(UNAUDITED)

	Cumulative Since Inception	For the Three Months Ending March 31, 2009	For the Three Months Ending March 31, 2008
CASH FLOWS FROM OPERATING ACTIVITIES			
Net loss	\$ (14,699,174)	\$ (757,398)	\$ (1,009,820)
Adjustment to reconcile net loss to net cash used in operating activities			
Amortization of deferred charges	4,392,456	55,330	194,729
Warrants issued for services	2,062,436	-	195,060
Stock options issued for services	2,091,232	262,071	105,105
Common stock issued for services	1,038,292	73,000	75,000
Purchase right agreement amortization	132,058	132,058	-
Depreciation	63,921	3,026	3,919
Realized gain on investments	(3,911)	-	-
Realized gain on disposal of assets	(637)	-	-
(Increase) decrease in assets			
Receivables	(30,461)	-	(39)
Prepaid expenses	(10,674)	1,524	2,395
Increase (decrease) in liabilities			
Accounts payable	132,662	(17,903)	70,550

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Accounts payable - related party	-	(7,172)	-
Accrued expenses	28,702	(3,988)	(16,459)
Net cash used in operating activities	(4,803,098)	(259,452)	(379,560)
CASH FLOWS FROM INVESTING ACTIVITIES			
Cost of intangibles	(213,601)	(1,185)	(8,221)
Proceeds from sale of available for sale securities	203,911	-	-
Proceeds from receipt of note receivable	100,000	-	-
Purchase of available for sale securities	(200,000)	-	-
Purchase of equipment	(85,371)	-	(10,207)
Net cash used in investing activities	(195,061)	(1,185)	(18,428)
CASH FLOWS FROM FINANCING ACTIVITIES			
Issuance of common stock, private placement	4,140,524	-	19,000
Common stock rescinded, private placement	(200,000)	-	-
Issuance of common stock, exercise of warrants	683,004	320,234	75,000
Issuance of common stock, exercise of purchase right agreement	35,138	35,138	-
Repayment of notes payable	(14,970)	-	-
Proceeds from subscription receivable	19,000	12,500	-
Advances to stockholders	(4,933)	-	-
Proceeds from convertible notes	529,000	-	-
Advances from officers	1,498	-	-
Net cash provided by financing activities	5,188,261	367,872	94,000
NET INCREASE IN CASH AND CASH EQUIVALENTS	190,102	107,235	(303,988)
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	5,358	88,225	479,451
CASH AND CASH EQUIVALENTS - END OF PERIOD	\$ 195,460	\$ 195,460	\$ 175,463

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENTS OF CASH FLOW FOR THE THREE MONTHS ENDING

MARCH 31, 2009 AND 2008 AND

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO

MARCH 31, 2009

(UNAUDITED)

	Cumulative Since Inception	For the Three Months Ending March 31, 2009	For the Three Months Ending March 31, 2008
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION			
CASH PAID DURING THE PERIOD FOR:			
Interest	\$ 21,321	\$ 414	\$ 842
SUPPLEMENTAL DISCLOSURE OF NON-CASH INVESTING AND FINANCING ACTIVITIES			
Common stock issued in exchange for deferred charges	\$ 3,142,400	\$ -	\$ -
Warrants issued in exchange for deferred charges	\$ 1,581,056	\$ -	\$ 332,000
	\$ 39,708	\$ 10,000	\$ -

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Common stock issued as settlement for accounts payable

Increase/(Decrease) in fair value of investment securities	\$	-	\$	-	\$	(32,459)
Accrued interest contributed as capital	\$	35,624	\$	-	\$	-
Common stock issued in the conversion of notes payable	\$	529,000	\$	-	\$	-
Acquisition of automobile through loan payable	\$	24,643	\$	-	\$	-
Common stock issued upon exercise of a warrant in exchange for receivable	\$	75,000	\$	-	\$	-
Insurance company pay off of note payable	\$	9,673	\$	-	\$	-
Receivable for issuance of common stock	\$	10,000	\$	10,000	\$	-
Contribution of officer accrued payroll	\$	52,129	\$	52,129	\$	-

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 1- 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 policies described in the Summary of Accounting Policies included in the 2008 Annual Report. Certain financial information and footnote disclosures normally indicated in financial statements prepared in accordance with accounting principals generally accepted in the United States have been condensed or omitted pursuant to those rules and regulations, 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, 2008, as filed with the Securities and Exchange Commission. The interim operating results for the three months ending March 31, 2009 may not be indicative of operating results expected for the full year.

Loss Per Share

The Company follows SFAS No. 128, Earnings Per Share, resulting in the presentation of basic and diluted earnings per share. Because the Company reported a net loss in 2009 and 2008, 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.

Reclassifications

Certain reclassifications were made to the 2008 financial statements in order to conform to the 2009 financial statement presentation.

Recently Adopted Accounting Pronouncements

In May 2008, the FASB issued FSP APB 14-1, Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement), which clarifies the accounting for convertible debt instruments that may be settled in cash upon conversion, including partial cash settlement. FSP APB 14-1 specifies that an issuer of such instruments should separately account for the liability and equity components of the instruments in a manner that reflects the issuer's non-convertible debt borrowing rate when interest costs are recognized in subsequent periods. FSP APB 14-1 is effective for the Company's fiscal year beginning January 1, 2009, and retrospective application is required for all periods presented.

FSP APB 14-1 is currently not applicable to the Company.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 1- FINANCIAL STATEMENTS (CONTINUED)

Recently Adopted Accounting Pronouncements (Continued)

In June 2008, the FASB issued EITF Issue No. 07-5, Determining Whether an Instrument (or Embedded Feature) is Indexed to an Entity's Own Stock (EITF Issue No. 07-5), which is effective for financial statements for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. The Issue addresses the determination of whether an instrument (or an embedded feature) is indexed to an entity's own stock, which is the first part of the scope exception in Paragraph 11(a) of SFAS No. 133 for the purpose of determining whether the instrument is classified as an equity instrument or accounted for as a derivative instrument which would be recognized either as an asset or liability and measured at fair value. The guidance shall be applied to outstanding instruments as of the beginning of the fiscal year in which this Issue is initially applied. Any debt discount that was recognized when the conversion option was initially bifurcated from the convertible debt instrument shall continue to be amortized. The cumulative effect of the change in accounting principles shall be recognized as an adjustment to the opening balance of retained earnings. The adoption of EITF Issue No. 07-5 did not have a material impact on the Company's financial statements.

In June 2008, the FASB issued FASB Staff Position (FSP) Emerging Issues Task Force (EITF) 03-6-1, Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities. FSP EITF 03-6-1 addresses whether instruments granted in share-based payment transactions are participating securities prior to vesting and, therefore, need to be included in the earnings allocation in computing earnings per share under the two-class method as described in SFAS No. 128, Earnings Per Share. Under the guidance of FSP EITF 03-6-1, unvested share-based payment awards that contain non-forfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and must be included in the computation of earnings per share pursuant to the two-class method. All prior period earnings per share information must be adjusted retrospectively. The Company adopted FSP EITF 03-6-1 as of January 1, 2009. The Company does not currently have any share-based awards that would qualify as participating securities.

In September 2006, the FASB issued SFAS No. 157, Fair Value Measurements. SFAS No. 157 establishes a framework for measuring fair value and expands disclosures about fair value measurements. The changes to current practice resulting from the application of this statement relate to the definition of fair value, the methods used to measure fair value, and the expanded disclosures about fair value measurements. SFAS No. 157 is effective for fiscal years beginning after November 15, 2007. In February 2008, the FASB issued FSP No. SFAS No. 157-2, Effective Date of FASB Statement No. 157, which provides a one-year deferral of the effective date of SFAS No. 157 for nonfinancial assets and nonfinancial liabilities, except those that are recognized or disclosed in the financial statements at fair value at least annually. The Company adopted this statement for financial assets and financial liabilities and nonfinancial assets and nonfinancial liabilities disclosed or recognized at fair value on a recurring basis (at least annually) as of January 1, 2008. The Company adopted the statement for nonfinancial assets and nonfinancial liabilities on January 1, 2009. The adoption of this statement in each period did not have a material impact on its financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 1- FINANCIAL STATEMENTS (CONTINUED)

Recently Adopted Accounting Pronouncements (Continued)

FSA 142-3 Determination of the Useful Life of Intangible Assets

In April 2008, the FASB issued FASB Staff Position (FSP) FAS 142-3, Determination of the Useful Life of Intangible Assets, which amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, Goodwill and Other Intangible Assets. This Staff Position is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. The adoption of FSA 142-3 did not have a material impact on the Company's financial statements.

Recently Issued Accounting Pronouncements Not Yet Adopted

In April 2009, the FASB issued FASB Staff Position No. 107-1 (FSP FAS 107-1) and APB 28-1 (APB 28-1), which amends FASB Statement No. 107, Disclosures about Fair Value of Financial Instruments and APB Opinion No. 28, Interim Financial Reporting, to require disclosures about the fair value of financial instruments for interim reporting periods. FSP FAS 107-1 and APB 28-1 will be effective for interim reporting periods ending after June 15, 2009. The adoption of this staff position will not have a material impact on the Company's financial statements.

In April 2009, the FASB issued FASB Staff Position No. 157-4 (FSP FAS 157-4), which provides additional guidance in accordance with FASB No. 157, Fair Value Measurements, when the volume and level of activity for the asset or liability has significantly decreased. FSP FAS 157-4 shall be effective for interim and annual reporting periods ending after June 15, 2009. The Company is currently evaluating the potential impact the adoption of this staff position will

have on its financial statements.

In April 2009, the FASB issued FASB Staff Position No. 115-2 (FSP FAS 115-2) and FASB Staff Position No. 124-2 (FSP FAS 124-2), which amends the other-than-temporary impairment guidance for debt and equity securities. FSP FAS 115-2 and FSP FAS 124-2 shall be effective for interim and annual reporting periods ending after June 15, 2009. The Company is currently evaluating the potential impact the adoption of this staff position will have on its financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 2 GOING CONCERN

The accompanying financial statements have been prepared assuming the Company will continue as a going concern. The Company has incurred significant losses and experienced negative cash flow during the development stage. These conditions raise substantial doubt about the Company's ability to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

The Company is in the development stage at March 31, 2009. Currently, the Company has funds to maintain its operations through May 2009. The Company's development has run behind schedule however, management hopes to demonstrate a prototype by mid second quarter of 2009. Management is in the process of developing a business plan that it believes will be attractive enough to investors to raise the necessary capital. However, there can be no assurances that the Company will be able to secure the necessary financing and/or equity investment or achieve an adequate sales level. Successful completion of the Company's prototype could lead to adequate financing to fulfill its development activities and achieve a level of revenue adequate to support the Company's business plan for the foreseeable future.

NOTE 3 DEFERRED CHARGES

Deferred charges represent the unamortized fair value of the issuance of common stock and warrants for future services to non-employees which was accounted for in accordance with Emerging Issue Task Force No. 96-18, Accounting for Equity Instruments That Are Issued To Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services, as follows with the deferred charge fully amortized at March 31, 2009:

March 31, 2009

December 31, 2008

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Common stock	\$	2,811,400	\$	2,811,400
Warrants		1,581,056		1,581,056
		4,392,456		4,392,456
Less: Accumulated Amortization		4,392,456		4,337,126
		-		55,330
Less: Amount reflected as a contra-equity account for management consulting services		-		55,330
	\$	-	\$	-

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 4 EQUIPMENT

Equipment consists of the following:

	March 31, 2009	December 31, 2008
Office equipment	\$ 7,727	\$ 7,727
Lab equipment	82,105	82,105
	89,832	89,832
Less: Accumulated depreciation	31,132	28,106
	\$ 58,700	\$ 61,726

Depreciation expense for the three months ending March 31, 2009 and 2008 was \$3,026 and \$3,919.

NOTE 5 INTANGIBLE ASSETS

This represents legal fees and patent fees associated with the registration of patents. The Company has not recorded any amortization expenses since the patents have yet to be declared effective. Once issued, the cost of the patents will be amortized over their legal lives, which is generally 20 years.

NOTE 6 INCOME TAXES

There is no income tax benefit for the losses for the three months ended March 31, 2009 and 2008 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, 2009, 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 March 31, 2009. The Company did not recognize any interest or penalties during 2009 related to unrecognized tax benefits. Tax years from 2005 through 2008 remain subject to examination by major tax jurisdictions.

NOTE 7 STOCKHOLDERS EQUITY

Preferred Stock

Pursuant to our Company's Articles of Incorporation, our 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 our 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 our business or a takeover from a third party.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants

The stockholders' deficit at January 1, 2004 has been retroactively restated for the equivalent number of shares received in the reverse acquisition at July 14, 2004 (Note 1) after giving effect to the difference in par value with the offset to additional paid-in-capital.

In July 2004, the Company issued to related parties 1,600,000 shares of its common stock for professional services valued at \$256,000, fair value.

In August 2004, the Company issued 637,500 shares of its common stock for professional services to related parties valued at \$75,000, fair value.

In December 2004, the Company converted a note payable of \$30,000 into 187,500 shares of common stock at a conversion price of \$0.16 per share.

In April 2005, the Company issued 4,000,000 shares of its common stock in a private placement for proceeds of \$1,000,000.

On May 4, 2005, the Company converted the notes payable of \$499,000 into 3,118,750 shares of common stock at a conversion price of \$0.16 per share. An unpaid note payable in the amount of \$6,500 has been reflected as a subscription receivable. During 2006, the Company deemed this \$6,500 outstanding subscription receivable to be uncollectible.

During August 2005, the Company issued 210,000 shares of common stock for professional services rendered valued at \$585,500, fair value. Consulting expense of \$375,500 was recognized during 2005, and at December 31, 2005, the remaining balance of \$210,000 is reflected as a deferred charge on the balance sheet. During 2006, consulting expense of \$210,000 was recognized. This agreement ended in May 2006.

In August 2005, in conjunction with a management services contract with a related party, the Company issued 200,000 shares of common stock valued at \$584,000. Management expense of \$265,455 was recognized during 2005, and at December 31, 2005, the remaining balance of \$318,545 is reflected as a deferred charge in a contra-equity account. During 2006, management expense of \$318,545 was recognized. This agreement ended in June 2006.

During May 2005, the Company issued Stock Purchase Warrants to purchase 100,000 shares of common stock at an exercise price of \$2.10 in exchange for consulting services. The warrants are exercisable until May 2008 and vest as follows: 50,000 shares during the first year of the agreement, 25,000 shares during the second year of the agreement, and 25,000 shares during the third year. In accordance with the fair value method, the Company used the Black-Scholes model to calculate the grant-date fair value, with the following assumptions: no dividend yield, expected volatility of 60%, risk-free interest rate of 3.8% and expected life of option of three years. The fair market value of the warrants was \$113,250. In accordance with the fair value method as described in accounting requirements of SFAS No. 123, the Company recognized consulting expense of \$37,000 in 2005. This warrant was cancelled during 2006.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During September 2005, the Company issued Stock Purchase Warrants to purchase 100,000 shares of common stock at an exercise price of \$2.00 in exchange for consulting services. The warrants expire in September 2008 and vest as follows: 50,000 shares during the first year of the agreement, 25,000 shares during the second year of the agreement, and 25,000 shares during the third year of the agreement. In accordance with the fair value method, the Company used the Black-Scholes model to calculate the grant-date fair value, with the following assumptions: no dividend yield, expected volatility of 60%, risk-free interest rate of 3.8% and expected life of option of three years. The fair market value of the warrants was \$145,100. The Company recognized consulting expense of \$27,014, \$36,370, \$66,500 and \$24,200 for the years ended December 31, 2008, 2007, 2006 and 2005 in conjunction with this agreement. These warrants expired in September 2008.

On October 15, 2005, the Company issued Stock Purchase Warrants to purchase 30,000 shares of common stock at an exercise price of \$1.40 in exchange for consulting services. The warrants expire in October 2006 and are exercisable immediately. In accordance with the fair value method, the Company used the Black-Scholes model to calculate the grant-date fair value, with the following assumptions: no dividend yield, expected volatility of 60%, risk-free interest rate of 4.15% and expected life of option of one year. The fair market value of the warrants was \$15,900. In accordance with the fair value method as described in accounting requirements of SFAS No. 123, the Company recognized consulting expense of \$15,900 during 2005. These warrants expired in October 2006.

In December 2005, in conjunction with a consulting contract, the Company issued Stock Purchase Warrants to purchase 300,000 shares of common stock at an exercise price of \$0.25 per share valued at \$435,060, fair value. The warrants expire in December 2007 and were exercisable immediately. In accordance with the fair value method, the Company used the Black-Scholes model to calculate the grant-date fair value, with the following assumptions: no dividend yield, expected volatility of 60%, risk-free interest rate of 4.41% and expected life of option of two years. In accordance with the fair value method as described in accounting requirements of SFAS No. 123, the Company recognized consulting expense of \$199,435, and at December 31, 2005, the remaining balance in deferred charges amounted to \$235,625. The 300,000 warrants were fully exercised on December 31, 2005 for \$75,000. The Company recognized \$18,128 and \$217,497 in consulting expense in conjunction with this agreement for the years ended December 31, 2007 and 2006, which was cancelled during 2007.

During 2006, the Company issued 850,000 shares of common stock and warrants to purchase 425,000 shares of common stock for proceeds of \$425,000 in accordance to a private placement memorandum amended December 18, 2006. Pursuant to the terms of the amended offering, up to 20 units were offered at the offering price of \$50,000 per unit, with each unit comprise of 100,000 shares and a warrant to purchase 50,000 shares of common stock at \$0.50 per share. In November 2007, 400,000 shares of common stock and warrants to purchase 200,000 shares of common stock were rescinded. As of December 31, 2008, warrants to purchase 210,000 shares of common stock were fully exercised for proceeds of \$105,000, and warrants to purchase 15,000 shares expired.

During February 2006, the Company issued 300,000 shares of common stock for professional services rendered valued at \$270,000, fair value. The Company recognized consulting expense of \$16,875 and \$118,125 and legal expense of \$16,875 and \$118,125 during 2007 and 2006. The contracts expired during 2007. The legal services were provided by a related party.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During May 2006, the Company issued 400,000 shares of common stock for professional services rendered valued at \$620,000, fair value. The Company recognized consulting expense of \$258,333 and \$361,667 during 2007 and 2006, and at December 31, 2006. The contracts expired during 2007.

During June 2006, the Company issued 25,000 shares of common stock to a related party for professional services rendered valued at \$36,250, fair value. The Company recognized legal expense of \$16,615 and \$19,635 during 2007 and 2006, and at December 31, 2006. The contracts expired during 2007.

During November 2006, the Company issued 60,000 shares of common stock for professional services valued at \$29,400, fair value. The Company recognized investor relations expense of \$25,480 and \$3,920 during 2007 and 2006. The contract expired during 2007.

In June 2006, in conjunction with an addendum to an existing consulting contract effective December 2005, the Company issued Stock Purchase Warrants to purchase 300,000 shares of common stock at an exercise price of \$0.25 per share. The warrants expire in June 2008 and were exercisable immediately. In accordance with the fair value method, the Company used the Black-Scholes model to calculate the grant-date fair value, with the following assumptions: no dividend yield, expected volatility of 186%, risk-free interest rate of 4.41% and expected life of option of two years. The fair market value of the warrants was \$465,996. During 2007 and 2006, the Company recognized consulting expense of \$330,948 and \$135,048 in conjunction with this agreement. The contract was cancelled during 2007. The 300,000 warrants were fully exercised on March 12, 2008 for proceeds of \$75,000.

During 2006, the Company cancelled a warrant issued during May 2005 to purchase 100,000 shares of the Company's common stock at an exercise price of \$2.10, and issued an option to purchase 500,000 shares of the Company's

common stock at an exercise price of \$1 per share and the same option's expiration and vesting terms were modified during November 2006. This option expired in June 2007. The incremental cost of the modified option was \$394,030 and will be expensed over the vesting terms. The Company recognized \$17,589 and \$406,215 as a consulting expense in 2007 and 2006, which includes \$337,290 of the incremental cost of the modified option.

During February 2006, the Company awarded an employee with an option to purchase 200,000 shares of common stock at an exercise price of \$1.00 per share under the 2005 Employee Stock Option Plan. These options were valued at \$217,628 using the Black-Scholes Option Pricing Formula. The employee compensation expense recognized during 2007 and 2006 is \$43,757 and \$22,673. In June 2007, the employee was terminated and the vesting ceased. After September 2007, the vested options expired.

During 2006, the Company recognized contributed capital of \$35,624 related to the conversion of accrued interest payable.

During 2006, the Company deemed a May 2005 outstanding subscription receivable of \$6,500 to be uncollectible.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During 2007, the Company issued 2,482,000 shares of common stock and warrants to purchase 1,241,000 shares of common stock for proceeds of \$1,241,000 in accordance to a private placement memorandum amended December 18, 2006. Pursuant to the terms of the amended offering, up to 20 units were offered at the offering price of \$50,000 per unit, with each unit comprised of 100,000 shares and a warrant to purchase 50,000 shares of common stock at \$0.50 per share. During the three month period ending March 31, 2009, 143,000 of these warrants expired. As of March 31, 2009, warrants to purchase 457,000 shares of common stock are still outstanding.

During 2007, the Company issued 1,767,540 shares of common stock and warrants to purchase 883,770 shares of common stock for proceeds of \$1,060,524 in accordance to a private placement memorandum issued on October 3, 2007. Pursuant to the terms of the offering, up to 20 units were offered at the purchase price of \$60,000 per unit, with each unit comprised of 100,000 shares and a warrant to purchase 50,000 shares of common stock at \$1.00 per share. As of March 31, 2009, the warrants to purchase 740,001 shares of common stock are still outstanding.

During 2007, as previously described, a shareholder that was issued 400,000 shares of the Company's common stock and a warrant to purchase 200,000 shares of common stock at \$0.50 per share rescinded his shares and warrant.

During February 2007, the Company issued 151,785 shares of common stock for investor relations services valued at \$106,250, fair value, which was recorded as a deferred charge and amortized over one year, the term of the services contract. During 2007, the Company recognized \$97,396 in investor relations expense. During 2008, the Company recognized \$8,854 in investor relations expense. This contract expired in February 2008.

During February 2007, the Company terminated its then CEO. The option to purchase 56,000 shares of common stock that was recorded as deferred charges of \$42,730 were not vested and were forfeited. The option to purchase

444,000 shares of common stock that were vested expired during 2007.

During March 2007, the Company issued 1,000,000 shares of common stock to a related party for management consulting services valued at \$580,000, fair value. During April 2007, the Company issued 500,000 warrants as an addendum to the original contract for management consulting services valued at \$348,000, fair value. This contract was recorded as a contra-equity deferred charges account and is amortized over one year, the term of the contract. Management consulting expense of \$773,333 was recognized during 2007. For the year ending December 31, 2008, \$154,667 was recognized as management consulting expense. This contract was renewed in March 2008.

During April 2007, the Company issued 100,000 shares of common stock for legal services to a related party valued at \$35,000, fair value, to settle \$29,708 of accounts payable and as payment for \$5,292 of legal services incurred in April 2007.

During October 2007, the Company issued 150,000 shares of common stock for investor relations services valued at \$102,000, fair value to a related party. During 2007 the Company recognized \$102,000 in investor relation expense.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During October 2007, the Company issued 150,000 shares of common stock for investor relation services valued at \$135,000, fair value. During 2007, the Company recognized \$135,000 in investor relations expense.

During November 2007, the Company issued 400,000 shares of common stock under the 2007 Stock Option Plan to the acting Chief Executive Officer for services rendered valued at \$288,000, fair value. The Company recognized \$288,000 in consulting expense during 2007.

During March 2007, the Company issued a warrant to purchase 100,000 shares of common stock for consulting services at an exercise price of \$0.25 per share. The warrant was valued at \$63,065 using the Black-Scholes Option Pricing Formula and expensed over the life of the contract associated with the consulting services, which is one year. The consulting expense recognized during 2008 and 2007 is \$10,885 and \$52,180. The warrant is still outstanding as of March 31, 2009.

During April 2007, the Company issued warrants to purchase 900,000 shares of common stock for consulting services at an exercise price of \$0.25 per share. The warrants were valued at \$604,416 using the Black-Scholes Option Pricing Formula and expensed over the life of the contracts associated with the consulting services, which is one year. The consulting expense recognized during 2008 and 2007 is \$170,451 and \$433,966. The warrants are still outstanding as of March 31, 2009.

During May 2007, the Company issued a warrant to purchase 150,000 shares of common stock for consulting services at an exercise price of \$0.25 per share. The warrant was valued at \$84,390 using the Black-Scholes Option Pricing Formula and expensed over the life of the contract associated with the consulting services, which is one year. The consulting expense recognized during 2008 and 2007 is \$31,444 and \$52,946. The warrant is still outstanding as of March 31, 2009.

During October 2007, the Company issued a warrant to purchase 100,000 shares of common stock at a purchase price of \$0.25 per share for accounting services rendered. The warrant was valued at \$61,449 using the Black-Scholes Option Pricing Formula. The Company recognized \$61,449 in accounting expense during 2007. The warrant is still outstanding as of March 31, 2009.

During October 2007, the Company issued a warrant to purchase 67,200 shares of common stock at a purchase price of \$0.25 per share for consulting services rendered. The warrant was valued at \$52,292 using the Black-Scholes Option Pricing Formula. During 2007, the Company recognized \$52,292 in consulting expense. In July 2008, the warrant was partially exercised to purchase 20,000 shares of common stock for proceeds of \$5,000. As of March 31, 2009, warrants to purchase 47,200 shares of common stock are still outstanding.

During December 2007, the Company issued a warrant to purchase 25,000 shares of common stock at a purchase price of \$0.50 per share for accounting services rendered. The warrant was valued at \$13,646 using the Black-Scholes Option Pricing Formula and expensed over the life of the contract, which is one year. The Company recognized \$12,487 and \$1,159 in consulting expense during 2008 and 2007. The warrant is still outstanding as of March 31, 2009.

LIGHTWAVE LOGIC, INC.

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NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During November 2007, under the 2007 Employee Stock Option Plan, the Company issued options to purchase 1,752,000 shares of common stock at a purchase price of \$0.72 per share. The options were valued at \$1,045,077 using the Black-Scholes Option Pricing Formula. During 2008, an option to purchase 750,000 shares of common stock, of which 125,000 shares were vested, forfeited. During 2008 and 2007, the Company recognized \$286,803 and \$41,653 in consulting expense. For the three months ending March 31, 2009, the Company recognized \$49,126 of expense. The remaining options are still outstanding as of March 31, 2009.

In January 2008, under the 2007 Employee Stock Option Plan, the Company issued an option to purchase 100,000 shares of common stock at a purchase price of \$0.72 per share. The option was valued at \$59,490, fair value, using the Black-Scholes Option Pricing Formula and is being recognized based on vesting terms over a three year period. The expense recognized during 2008 is \$30,750. For the three months ending March 31, 2009, the Company recognized \$2,377 of expense. The option is still outstanding as of March 31, 2009.

During 2008, the Company issued 690,001 shares of common stock and warrants to purchase 345,001 shares of common stock for proceeds of \$414,000 in accordance to a private placement memorandum issued on October 3, 2007. Pursuant to the terms of the offerings, up to 25 units were offered at the purchase price of \$60,000 per unit, with each unit comprised of 100,000 shares and a warrant to purchase 50,000 shares of common stock at \$1.00 per share. As of March 31, 2009, warrants to purchase 299,167 shares of common stock are still outstanding.

During March 2008, the Company issued a warrant to purchase 400,000 shares of common stock as an addendum to the original contract for management consulting services provided by a related party, valued at \$332,000, fair value using Black-Scholes Option Pricing Formula, vesting immediately. This contract was recorded as a contra-equity deferred charges account and is amortized over one year beginning February 28, 2008, the term of the contract. Management consulting expense of \$276,670 was recognized for year ending December 31, 2008. For the three month period ending March 31, 2009, \$55,330 was recognized as management consulting expense. In January 2009,

the warrant was fully exercised to purchase 400,000 shares of common stock for proceeds of \$400.

During March 2008, the company issued 100,000 shares of common stock for legal services to a related party valued at \$75,000, fair value. The Company recognized \$75,000 of legal expense for the year ending December 31, 2008.

During April 2008, the Company issued a warrant to purchase 600,000 shares of common stock at a purchase price of \$0.73 per share for consulting services rendered. The warrant was valued at \$976,193, fair value, using the Black-Scholes Option Pricing Formula, vesting immediately. For the year ended December 31, 2008, the Company recognized \$976,193 in consulting expense. The warrant is still outstanding as of December 31, 2008.

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NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

In July 2008, the Company issued options to purchase 200,000 shares of common stock at a purchase price of \$1.75 per share to members of the board of directors, under the 2007 Employee Stock Option Plan. Using the Black-Scholes Option Pricing Formula, the options were valued at \$296,247, fair value, vesting 50,000 immediately and the remaining in annual equal installments of 50,000 over the next three years. For the year ending December 31, 2008, the Company recognized \$114,519 of expense, which is being recognized based on vesting terms over a three year period. The Company recognized expense of \$12,039 for the three month period ending March 31, 2009. The options are still outstanding as of March 31, 2009.

In August 2008, under the 2007 Employee Stock Option Plan, the Company issued options to purchase 550,000 and 1,050,000 shares of common stock at a purchase price of \$1.42 and \$1.75 per share to members of the board of directors and the Chief Executive Officer, vesting 212,500 immediately and the remaining in annual equal installments of 112,500 over the next three years and vesting in quarterly equal installments of 87,500 commencing November 1, 2008, respectively. The options were valued at \$2,176,201, fair value, using the Black-Scholes Option Pricing Formula and are being recognized based on vesting terms over a three year period. For the year ending December 31, 2008, the Company recognized \$525,263 of expense. The Company recognized expense of \$138,180 for the three month period ending March 31, 2009. The options are still outstanding as of March 31, 2009.

In August 2008, the Company issued 200,000 shares of common stock under the 2007 Stock Option Plan to its new Chief Executive Officer as part of the employment agreement valued at \$360,000, fair value. The Company recognized \$360,000 in consulting expense for the year ending December 31, 2008.

In 2008, January through August warrant holders exercised warrants to purchase 270,000 shares at \$0.50 per share for proceeds of \$135,000.

On October 28, 2008, the Company's board of directors authorized the Company to raise up to \$600,000 of capital through an Adjusted Common Stock Offering to certain warrant holders. This offering provided eligible warrant holders with the opportunity to purchase four (4) shares of common stock for each dollar invested pursuant to their existing warrant agreement. As of December 31, 2008, warrants to purchase 641,080 shares of common stock were exercised with proceeds of \$160,270. For the three month period ending March 31, 2009, warrants to purchase 1,279,336 shares of common stock were exercised with proceeds of \$319,834. In January 2009, the term of the 2008 Adjusted Common Stock offering was extended until January 31, 2009.

In November 2008, the Company issued an option to purchase 250,000 shares of common stock under the 2007 Stock Option Plan at a purchase price of \$.65 per share to a new member of its board of directors. Using the Black-Scholes Option Pricing Formula, the options were valued at \$125,911, fair value, vesting 62,500 immediately and the remaining in annual equal installments of 62,500 over the next three years. For the year ending December 31, 2008, the Company recognized \$6,439 of expense which is being recognized based on vesting terms over a three year period. The Company recognized expense of \$37,630 for the three month period ending March 31, 2009. The options are still outstanding as of March 31, 2009.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

In January 2009, an employee was granted with an option to purchase up to 25,000 shares of common stock. Using the Black-Scholes Option Pricing Formula, the options were valued at valued at \$13,136, fair value. These options expire in 5 years and vest immediately. The Company recognized expense of \$13,136 for the three month period ending March 31, 2009. The options are still outstanding as of March 31, 2009.

During January 2009, the Company issued 100,000 shares of common stock to an officer, under the 2007 Stock Option Plan, for services rendered valued at \$58,000, fair value.

During January 2009, the Company issued 100,000 shares of common stock for legal services to a related party valued at \$25,000, valued in accordance with EITF 96-18 Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services, to settle accounts payable for \$10,000 and \$15,000 for legal services.

During January 2009, the officers, directors, and employees of the Company were each given the right to purchase from the Company's 2007 Employee Stock Plan up to 40,000 shares of common stock at a purchase price of \$.25 per share, 400,000 shares in the aggregate, all of which were valued at \$132,058, fair value using the Black-Scholes Option Pricing Formula. The rights to purchase vested immediately. A total of 180,550 shares were purchased pursuant to the rights to purchase with total proceeds of \$35,138 and a common stock receivable of \$10,000 which was paid in May, 2009. The rights to purchase the remaining 219,450 shares expired on January 31, 2009.

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At December 31, 2008 the Company had accrued officer salaries and payroll taxes of \$98,205. On February 19, 2009, two officers, who are also shareholders, agreed to waive their rights to unpaid wages and salary amounting to \$52,129. Accordingly in the first quarter 2009, the accrued expense was adjusted from \$98,205 to \$42,088 with the \$52,129 treated as contributed capital and \$3,988 reversed from payroll taxes.

In February 2009, an employee was granted with an option to purchase up to 25,000 shares of common stock. Using the Black-Scholes Option Pricing Formula, the options were valued at \$9,583, fair value. These options expire in 5 years and vest immediately. The Company recognized expense of \$9,583 for the three month period ending March 31, 2009. The options are still outstanding as of March 31, 2009.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 8 STOCK BASED COMPENSATION

The Company uses the Black-Scholes option pricing model to calculate the grant-date fair value of an award, with the following assumptions for 2009 and 2008: no dividend yield in both years, expected volatility between 127% and 129% in 2009 and between 113% and 186% in 2008, risk-free interest rate between 0.03% and 1.89% in 2009 and between 0.03% and 5.1% in 2008 and expected option life of one month to five years in 2009 and 2008.

As of March 31, 2009, there was \$2,115,624 of unrecognized compensation expense related to non-vested market-based share awards that is expected to be recognized through October 2013.

The following tables summarize all stock option and warrant activity of the Company since December 31, 2004:

	Non-Qualified Stock Options and Warrants Outstanding and Exercisable		
	Number of Shares	Exercise Price	Weighted Average Exercise Price
Outstanding, December 31, 2004	-	\$ -	\$ -
Granted	680,000	\$0.25 - \$2.10	\$ 0.99
Exercised	(300,000)	\$ 0.25	\$ 0.25
Outstanding, December 31, 2005	380,000	\$1.40 - \$2.10	\$ 0.68
Granted	1,425,000	\$0.25 - \$1.00	\$ 0.70
Cancelled	(260,000)	\$1.40 - \$2.10	\$ (0.48)

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Expired	(70,000)	\$1.40 - \$2.00	\$	(0.12)
Outstanding, December 31, 2006	1,475,000	\$0.25 - \$2.00	\$	0.83
Granted	5,768,971	\$0.25 - \$0.72	\$	0.48
Rescinded	(200,000)	\$ 0.50	\$	0.50
Forfeited	(125,019)	\$ 1.00	\$	1.00
Expired	(574,981)	\$ 1.00	\$	1.00
Outstanding, December 31, 2007	6,343,971	\$0.25 - \$2.00	\$	0.48
Granted	3,495,001	\$0.001 - \$1.75	\$	1.16
Expired	(115,000)	\$0.50 - \$2.00	\$	0.07
Forfeited	(750,000)	\$ 0.72	\$	0.72
Exercised	(807,770)	\$0.25 - \$0.50	\$	0.53
Outstanding, December 31, 2008	8,166,202	\$0.001 - \$1.75	\$	0.79
Granted	450,000	\$0.25 - \$0.45	\$	0.26
Expired	(362,450)	\$0.25 - \$0.50	\$	0.35
Forfeited	-			
Exercised	(1,133,384)	\$0.001 - \$0.25	\$	0.20
Outstanding, March 31, 2009	7,120,368	\$0.25 - \$1.75	\$	0.86
Exercisable, March 31, 2009	4,935,868	\$0.25 - \$1.75	\$	0.66

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 8 STOCK BASED COMPENSATION (CONTINUED)

Range of Exercise Prices	Non-Qualified Stock Options and Warrants Outstanding		
	Number Outstanding Currently Exercisable at March 31, 2009	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price of Options and Warrants Currently Exercisable
\$0.25 - \$1.75	4,935,868	2.13 Years	\$ 0.66

NOTE 9 CONTINGENCY**2005 Private Offering**

During 2005, the Company raised \$1,000,000 through the sale of 4,000,000 shares of common stock in a limited offering to persons believed to be accredited investors. The Company received a legal opinion from third party outside counsel as to the availability of an exemption from registration with the U.S. Securities and Exchange Commission (SEC) with respect to the limited offering. In December 2005, the Company was informed by the SEC that it is investigating the circumstances surrounding the \$1,000,000 offering including the subsequent public resale of certain shares originally sold in the offering, along with related matters. The Company has further been informed that the original issuance of the stock and subsequent resale may have been done, in the opinion of the SEC, in violation of the registration provisions of the Securities Act of 1933, as amended. These matters could lead to enforcement action by the SEC.

In or around January 2007, the SEC issued an investigative subpoena to the Company directing it to produce specified documents and information. Thereafter, an SEC subpoena seeking testimony by the Company's president was issued. The Company and its president have complied with all of the SEC's requests for documents and testimony. The SEC has not indicated whether or not it intends to take any action against the Company or any of its officers, directors or employees. There has been no communications with the SEC regarding this matter since December 2007.

Ronald R. Genova Lawsuit

During July 2007, Ronald R. Genova (plaintiff) filed a lawsuit in Philadelphia County, Court of Common Pleas against Defendants Lightwave Logic, Inc., (formerly Third-Order Nanotechnologies, Inc.), PSI-TEC Holdings, Inc. (which subsequently merged into Lightwave Logic, Inc.) and Universal Capital Management, Inc.

The lawsuit was settled in May 2008 against all defendants by the Company making a payment of \$47,500 to the plaintiff, reflected in other expenses on the statement of operations for the three month period ending March 31, 2008.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2009 AND 2008

NOTE 10 RELATED PARTY

Under the management agreement dated August 1, 2005, the related party was issued 200,000 shares of common stock with a fair value of \$584,000 which was amortized over the term of the agreement (one year), which expired in 2006. In February 2007, the Company entered into a contract with the related party and issued 1,000,000 shares of common stock with a fair value of \$580,000. In addition, the Company issued a warrant to purchase 500,000 shares of its common stock with a fair value of \$348,000. This contract was renewed in March 2008 and the Company issued a warrant to purchase 400,000 shares of its common stock in exchange for management services for one year, valued at \$332,000, fair value. For the three month period ending March 31, 2009, the Company recognized \$55,330 in management expense. The unamortized expense as of December 31, 2008 is reflected as deferred charges in the equity section of the balance sheet. The Company decided not to renew its management contract. The contract was terminated on February 28, 2009.

At March 31, 2009 the Company has accrued officer salaries of \$42,088.

Item 2.

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

The following management's discussion and analysis of financial condition and results of operations provides information that management believes is relevant to an assessment and understanding of our plans and financial condition. The following selected financial information is derived from our historical financial statements and should be read in conjunction with such financial statements and notes thereto set forth elsewhere herein and the "Forward-Looking Statements" explanation included herein.

Overview

Lightwave Logic, Inc., formerly, Third-Order Nanotechnologies, Inc., formerly, PSI-TEC Holdings, Inc., formerly Eastern Idaho Internet Service, Inc. was organized under the laws of the State of Nevada in 1997, where we engaged in the business of marketing Internet services until June 30, 1998 when our operations were discontinued. We were then inactive until we acquired PSI-TEC Corporation as our wholly owned subsidiary on July 14, 2004, at which time our name was changed to PSI-TEC Holdings, Inc. On October 20, 2006, we completed a parent-sub subsidiary merger with PSI-TEC Corporation whereby we were the surviving corporation of the merger, and our name was changed to Third-Order Nanotechnologies, Inc. On March 10, 2008, we changed our name to Lightwave Logic, Inc. to better suit our strategic business plan and to facilitate stockholder recognition of our Company and its business.

We are a developmental stage company that has developed and continues to develop high-activity, high-stability electro-optic polymers (plastics) that we believe could have a broad range of applications in the electro-optic device market. We engineer our proprietary electro-optic plastics at the molecular level for superior performance, stability, cost-efficiency and ease of processability. We expect our electro-optic plastics to broadly replace more expensive, lower-performance materials that are currently used in fiber-optic ground, wireless and satellite communication networks.

In order to transmit digital information at extremely high-speeds (wide bandwidth) over the Internet, it is necessary to convert the electrical signals produced by a computer into optical signals for transmission over long-distance fiber-optic cable. The actual conversion of electricity to an optical signal may be performed by a molecularly-engineered material known as an electro-optic plastic.

We are currently developing electro-optic plastics that promise performance many times faster than any technology currently available and that have unprecedented thermal stability. High-performance electro-optic materials produced by our Company have demonstrated stability as high as 350 degrees Celsius. Stability above 300 degrees Celsius is necessary for vertical integration into many semi-conductor production lines. Recent results, independently confirmed by the University of Arizona, have demonstrated that the molecular performance of some of our Company's molecular designs perform 650% better than competitive electro-optic compounds.

Our revenue model relies substantially on the assumption that we will be able to successfully develop electro-optic products for applications within the industries described below. When appropriate, we intend to create specific materials for each of these applications and use our proprietary knowledge base to continue to enhance its discoveries.

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Satellite Reconnaissance

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Navigational Systems

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Radar Applications

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Telecommunications

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Backplane Optical Interconnects

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Entertainment

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Medical Applications

To be successful, we must, among other things:

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Develop and maintain collaborative relationships with strategic partners;

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Continue to expand our research and development efforts for our products;

·
Develop and continue to improve on our manufacturing processes and maintain stringent quality controls;

·
Produce commercial quantities of our products at commercially acceptable prices;

·
Rapidly respond to technological advancements;

·
Attract, retain and motivate qualified personnel; and

·
Obtain and retain effective intellectual property protection for our products and technology.

We believe that Moore's Law (a principle which states the number of transistors on a silicon chip doubles approximately every eighteen months) will create markets for our high-performance electro-optic material products.

Plan of Operation

Since our inception, we have been engaged primarily in the research and development of our polymer materials technologies and potential products. We are devoting significant resources to engineer next-generation electro-optic plastics for future applications to be utilized by electro-optic device manufacturers, such as telecommunications component and systems manufacturers, networking and switching suppliers, semiconductor companies, aerospace companies and government agencies. We expect to continue to develop products that we intend to introduce to these rapidly changing markets and to seek to identify new markets. We expect to continue to make significant operating and capital expenditures for research and development activities.

As we move from a development stage company to a product vendor, we expect that our financial condition and results of operations will undergo substantial change. In particular, we expect to record both revenue and expense from product sales, to incur increased costs for sales and marketing and to increase general and administrative expense. Accordingly, the financial condition and results of operations reflected in our historical financial statements are not expected to be indicative of our future financial condition and results of operations.

On August 8, 2006, we contracted with Triple Play Communications Corporation, a design and market consulting company, to deliver a comprehensive market opportunity assessment report for high speed 40G (commercial) & 100G+ (military/aerospace) modulators and system applications.

In August, 2006 we entered into a co-location agreement with InPlane Photonics, a New Jersey-based micro-optics company that allowed our scientists to establish a pre-production line in order to test and integrate our organic materials into waveguide devices and system prototypes as a first step toward product commercialization. This agreement was terminated at the end of January 2007 so that we could focus on pursuing a strategic relationship with Photon-X LLC, a Pennsylvania-based firm with extensive experience in polymer waveguide processing. We entered into a non-binding memorandum of understanding with Photon-X, LLC in December 2006 to work towards creating a fee for services agreement with Photon-X, LLC to design, develop, produce and market electro-optic components based upon our polymer technology, which we ultimately finalized in March 2007. This agreement with Photon-X, LLC enables our Company access to a full suite of fabrication facilities capable of producing commercial quantities of precision micro-optic devices such as high-speed (40GHz) telecom modulators, optical filters, and optical interconnects important to military and civilian global information movement and management markets.

On September 25, 2006 we obtained independent laboratory results that confirmed the thermal stability of our Perkinamine electro-optic materials. Thermal stability as high as 350 degrees Celsius was confirmed, significantly exceeding many other commercially available high performance electro-optic materials, such as CLD-1 which exhibits thermal degradation in the range of 250 degrees Celsius to 275 degrees Celsius. This high temperature stability of our materials eliminates a major obstacle to vertical integration of electro-optic polymers into standard microelectronic manufacturing processes (e.g. wave/vapor-phase soldering) where thermal stability of at least 300 degrees Celsius is required. In independent laboratory tests, ten-percent material degradation, a common evaluation of overall thermal stability, did not occur until our Perkinamine material base was exposed to temperatures as high as 350 degrees Celsius, as determined by Thermo-Gravimetric Analysis (TGA). The test results supported our Company's progress to introduce our materials into commercial applications such as optical interconnections, high-speed telecom and datacom modulators, and military/aerospace components.

In July 2007, our Company developed an innovative process to integrate our unique architecture into our anticipated commercial devices, whereby dendritic spacer systems are attached to its core chromophore. In the event we are successful in developing a commercially viable product, we believe these dendrimers will reduce the cost of manufacturing materials and reduce the cost and complexity of tailoring the material to specific customer requirements.

In January 2008, we retained TangibleFuture, Inc., a San Francisco based technology analysis and business development consulting company, to generate an independent assessment of our business opportunities in the fiber-optic telecommunications and optical computing sectors and develop strategies to penetrate those potential markets.

In March 2008, we commenced production of our first prototype photonic chip, which we delivered to Photon-X, LLC to fabricate a prototype polymer optical modulator and measure its technical properties. As a result of delays caused by engineering setbacks related to our material production, the production of our first prototype photonic chip was temporarily halted, along with the completion of our proof of concept tests that were being administered by Dr. Robert Norwood at the University of Arizona Photonics Department. In order to address this issue, Dr. David Eaton's role and responsibilities with the Company were significantly expanded, and we added two veteran synthetic chemists to our science and technology team. We have since overcome a majority of these engineering setbacks and we are currently in the process of extensive testing for material performance, including, among other tests, the (r33) Teng-Man testing protocol, in order to re-confirm our previous test results. Once again, we intend to deliver independent validated r33 test results necessary for secondary proof of concept testing, as we have in the past. We may incur additional delays in this process due to slower than expected material production within our laboratories and/or delays caused by the testing procedures. Should these tests produce a functional 40 Gb/s or greater modulator we expect to go forward with product development and marketing in the telecommunication market with partners in the telecommunication field. We cannot anticipate the details of the customer adoption cycle until we have produced a functional prototype to create a credible technology offering. Further, our management is in the process of developing a business plan that it believes will be attractive enough to investors to raise the necessary capital to continue to maintain our operations. However, we cannot assure you that we will be able to secure the necessary financing and/or equity investment or achieve an adequate sales level to do so. Successful completion of our prototype could lead to adequate financing to fulfill our development activities and achieve a level of revenue adequate to support our Company's cost structure for the following three years.

We ultimately intend to use our next-generation electro-optic plastics for future applications vital to the following industries. We expect to create specific materials for each of these applications as appropriate:

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Satellite Reconnaissance

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Navigational Systems

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Radar Applications

.

Telecommunications

.

Backplane Optical Interconnects

.

Entertainment

.

Medical Applications

In an effort to maximize our future revenue stream from our electro-optic polymer products, we are currently evaluating each of or some combination of the following approaches:

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Licensing our technology for individual specific applications;

.

Entering into collaborative or joint venture agreements with one or a number of partners; or

.

Selling our products directly to commercial customers.

Additionally, we must create an infrastructure, including operational and financial systems, and related internal controls, and recruit qualified personnel. Failure to do so could adversely affect our ability to support our operations.

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. During 2004 we raised approximately \$529,000 from the issuance of convertible promissory notes, of which \$30,000 was converted into common stock of the company during 2004 and the remaining \$499,000 converted in 2005. Also, during 2005, we raised an aggregate of \$1,000,000 from the private sale of our common stock. During 2006, we raised approximately \$425,000 from the private sale of our common stock, of which \$200,000 was rescinded during 2007. During 2007, we raised approximately \$2,301,524 from the private sale of our common stock. During 2008, we raised approximately \$414,000 from the private sale of our common stock and \$375,270 upon the exercise of existing warrant holder s warrants.

We have also issued shares of our common stock and warrants to purchase shares of our common stock in exchange for services rendered to our company, including professional services.

Award

On September 26, 2006, we were awarded the 2006 Electro-Optic Materials Technology Innovation of the Year Award by Frost & Sullivan. Frost & Sullivan's Technology Innovation of the Year Award is bestowed upon candidates whose original research has resulted in innovations that have, or are expected to bring, significant contributions to multiple industries in terms of adoption, change, and competitive posture. This award recognizes the quality and depth of our Company's research and development program as well as the vision and risk-taking that enabled us to undertake such an endeavor.

Results of Operations

Comparison of Three Months Ended March 31, 2009 to Three Months Ended March 31, 2008

Revenues

We had no revenues during the three months ended March 31, 2009 and 2008 since we are a development stage company that has yet to commence revenue creating operations.

Operating Expenses

Our operating expenses were \$756,984 and \$966,102 for the three months ended March 31, 2009 and 2008, respectively, for a decrease of \$209,118. This decrease in operating expenses was due primarily to a decrease in management, legal and market research fees.

Included in our operating expenses for the three months ended March 31, 2009 was \$449,717 for research and development expenses compared to \$375,889 for the three months ended March 31, 2008, for an increase of \$73,828. Research and development expenses currently consist primarily of compensation for employees engaged in internal research and product development activities; laboratory operations, outsourced development and processing work; fees; costs; and related operating expenses. The increase is primarily due to research and development employee compensation expense.

We expect to continue to incur substantial research and development expense to develop commercial products that utilize our electro-optic plastics. These expenses could increase as a result of continued development and commercialization of our electro-optic materials technology; subcontracting work to potential development partners; expanding and equipping in-house laboratories; hiring additional technical and support personnel; pursuing other potential business opportunities; and incurring related operating expenses.

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

General and administrative expenses decreased \$282,946 to \$307,267 for the three months ended March 31, 2009 compared to \$590,213 for the three months ended March 31, 2008. The decrease is due primarily to our decreases in management fees, legal fees, market research fees, which were offset by an increase in executive compensation, insurance, travel and other costs.

Management fees decreased \$127,004 to \$55,330 from \$182,334 for the three months ended March 31, 2009 since the Company decided not to renew its management contract on February 28, 2009. Legal fees decreased \$95,568 to \$17,851 for the three months ended March 31, 2009 compared to \$113,419 for the three months ended March 31, 2008.

Market research fees were \$0 and \$75,319 for the three months ended March 31, 2009 and 2008. During the first quarter of 2008, the Company entered into a contract with a San Francisco based technology analysis and business development consulting company, to generate an independent assessment of our business opportunities in the fiber-optic telecommunications and optical computing sectors and develop strategies to penetrate those potential markets. The market research firm is finalizing the section of the final report relating to optical computing sectors.

Wages and salaries increased \$55,941 from \$114,356 for the three months ended March 31, 2008 to \$170,297 for the three months ended March 31, 2009 due to the amortization of employee options

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 was (\$414) for the three months ended March 31, 2009, consisting of \$2 of interest income on cash deposits offset by (\$416) of interest expense compared to other (expense) of (\$43,718) for the three months ended March 31, 2008, consisting of the settlement of a lawsuit in the amount of (\$47,500), \$4,624 of interest income on cash deposits and short term investments offset by (\$842) of interest expense.

Net Loss

Net loss was \$757,398 and \$1,009,820 for the three months ended March 31, 2009 and 2008, respectively, for a decrease of \$252,422, primarily resulting from reduction in general and administrative expenses including management, legal and market research fees as described above.

Critical Accounting Policies

The Company's accounting policies are more fully described in the Notes to Financial Statements. As disclosed in Note 1 of Notes to Financial Statements, the preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions about future events that affect the amounts reported in the financial statements and accompanying notes. Future events and their effects cannot be determined with absolute certainty. Therefore, the determination of estimates requires the exercise of judgment. Actual results inevitably will differ from those estimates, and such differences may be material to the financial statements. The Company believes that, of its significant accounting policies, the following may involve a higher degree of judgment, estimation, or complexity than other accounting policies.

Merger

On July 14, 2004, the Company acquired PSI-TEC Corporation. Under the terms of the merger agreement, the stockholders of PSI-TEC Corporation received 15,600,000 shares of common stock in exchange for its 2,206,280

shares. Following the merger, the Company changed its name to PSI-TEC Holdings, Inc. Under accounting principles generally accepted in the United States, the share exchange is considered to be a capital transaction in substance rather than a business combination. That is, the share exchange is equivalent to the issuance of stock by PSI-TEC Holdings, Inc. for the net monetary assets of PSI-TEC Corporation, accompanied by a recapitalization, and is accounted for as a change of capital structure. Accordingly, the accounting for the share exchange will be identical to that resulting from a reverse acquisition, except no goodwill will be recorded. Under reverse takeover accounting, the post-reverse acquisition comparative historical financial statements of the legal acquirer, PSI-TEC Holdings, Inc., are those of the legal acquiree, PSI-TEC Corporation, which is considered to be the

accounting acquirer. On October 20, 2006, PSI-TEC Holdings, Inc. and PSI-TEC Corporation merged and changed its name to Third-Order Nanotechnologies, Inc.

Stock Based Compensation

In December 2004, the Financial Accounting Standards Board ("FASB") issued SFAS 123 (revised 2004), Share-Based Payment ("SFAS 123R"). SFAS 123(R) supersedes APB Opinion No. 25, Accounting for Stock Issued to Employees, and amends SFAS No. 95, Statement of Cash Flows. Generally, the approach in SFAS 123(R) is similar to the approach described in SFAS 123. However, SFAS 123(R) requires share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values at the date of grant. Pro forma disclosure is no longer an alternative.

On January 1, 2006, the Company adopted SFAS 123(R) using the modified prospective method as permitted under SFAS 123(R). Under this transition method, compensation cost recognized in the first quarter of 2006 includes compensation cost for all share-based payments granted prior to but not yet vested as of December 30, 2005, based on the grant-date fair value estimated in accordance with the provisions of SFAS 123. In accordance with the modified prospective method of adoption, the Company's results of operations and financial position for prior periods have not been restated.

The Company uses the Black-Scholes option pricing model to calculate the grant-date fair value of an award.

Liquidity and Capital Resources

During the three months ended March 31, 2009, net cash used in operating activities was \$259,452 and net cash used in investing activities was \$1,185, 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 three months ended March 31, 2009 was \$367,872. At March 31, 2009, our cash and cash equivalents totaled \$195,460, our assets totaled \$488,435, our liabilities totaled \$76,835, and we had stockholders' equity of \$411,600.

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 plastic 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 \$700,000 to \$1,000,000 of expenditures through the remainder of 2009. 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 plastic technology during the latter portion of 2009.

Our business does not presently generate the cash needed to finance our current and anticipated operations. We believe we have raised sufficient capital to finance our operations through May 2009, however, we will need to obtain additional future financing after that time to finance our operations until such time that we can conduct profitable revenue-generating activities. Such future sources of financing may include cash from exercise of warrants, equity offerings, exercise of stock options and proceeds from debt instruments; but we cannot assure you that such equity or borrowings will be available or, if available, will be at rates or prices acceptable to us. If adequate funds are not available to satisfy either short-term or 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.

We expect that our cash used in operations will increase during 2009 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 three months ended March 31, 2009

Net cash used in operating activities was \$259,452 for the three months ended March 31, 2009, consisting of payments for management, legal, professional and consulting expenses, rent and other expenditures necessary to develop our business infrastructure, offset by \$55,330 in deferred charges, \$262,071 in options issued for services, \$73,000 in common stock issued for services, \$132,058 in purchase right agreement amortization, \$1,524 in prepaid expenses and (\$29,063) in accounts payable and accrued expenses.

Net cash used by investing activities was \$1,185 for the three months ended March 31, 2009, consisting of cost for intangibles.

Net cash provided by financing activities was \$367,872 for the three months ended March 31, 2009 and consisted of \$320,234 from the exercise of warrants, \$35,138 from the exercise of purchase right agreements and \$12,500 of proceeds from a subscription receivable.

Inflation and Seasonality

We do not believe that our operations are significantly impacted by inflation. Our business is not seasonal in nature.

Item 3.

Quantitative and Qualitative Disclosures about Market Risk.

Not applicable.

Item 4.

Controls and Procedures.

Disclosure Controls and Procedures. As of March 31, 2009, an evaluation was performed under the supervision and with the participation of the Company's principal executive officer and financial officer of the effectiveness of the design and operation of the Company's disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. The evaluation revealed to the Company's principal executive officer and financial officer that the design and operation of the Company's disclosure controls and procedures were effective as of the end of the period covered by this report.

Changes in Internal Control Over Financial Reporting. There has been no change in our internal control over financial reporting during our last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1.

Legal Proceedings.

Not applicable.

Item 1A.

Risk Factors.

Not applicable.

Item 2.

Unregistered Sales of Equity Securities and Use of Proceeds.

During October 2008, our board of directors authorized the Company to raise up to \$600,000 of capital through an incentive to current warrant holders that provided eligible warrant holders with the opportunity to purchase four (4) shares of common stock for each dollar invested pursuant to their existing warrant agreement. During the period covered by this report, warrants to purchase 1,279,336 shares of common stock were exercised with proceeds of \$319,834.

During January 2009, pursuant to our 2007 Employee Stock Plan, we granted an employee an option to purchase up to 25,000 shares of common stock at a strike price of \$0.25 per share. These options expire in 5 years and vest immediately

During January 2009, pursuant to our 2007 Employee Stock Plan, we granted 100,000 shares of common stock to an officer for services rendered.

During January 2009, pursuant to our 2007 Employee Stock Plan, we granted each of our officers, directors, and employees the right to purchase up to 40,000 shares of common stock at a purchase price of \$.25 per share, 400,000 shares in the aggregate. The rights to purchase vested immediately and expired on January 31, 2009. A total of 180,550 shares were purchased pursuant to this offering.

During January 2009, we issued 100,000 shares of common stock to one accredited investor for professional services. The shares were valued at \$.25 per share, \$25,000 in the aggregate.

During February 2009, pursuant to our 2007 Employee Stock Plan, we granted an employee an option to purchase up to 25,000 shares of common stock at a strike price of \$.45 per share. These options expire in 5 years and vest immediately.

No underwriters were utilized and no commissions or fees were paid with respect to any of the above transactions. These persons were the only offerees in connection with these transactions. We relied on Sections 4(2) and (4)(6) of the Securities Act since these transactions did not involve any public offering.

Item 3.

Defaults Upon Senior Securities.

Not applicable.

Item 4.

Submission of Matters to a Vote of Security Holders.

Not applicable.

Item 5.

Other Information.

In February of 2009 we received a first office action on one of our patent applications entitled Heterocyclic Chromophore Architectures. This action was reported earlier to shareholders and it required us to respond to the U.S. Patent Office (**USPTO**) by May 6, 2009, which we did on May 5, 2009. We believe our response will place this application in condition for allowance as to some of the pending claims. We intend to pursue additional subject matter of the original application in one or more continuing applications based upon the original application. We will continue to provide updates as we receive official communication(s) from the USPTO.

On April 28, 2009, we received a first office action on another of our patent applications. This application, Tricyclic Spacers for Nonlinear Optical (NLO) Devices, describes a range of structures that can be used as auxiliary substituents on our chromophore backbones, which we believe can confer various chemical and physical properties to our nonlinear chromophores, such as solubility and space-filling packing shapes that enhance polar orientation in poled NLO devices. We consider these spacer architectures to be yet another important part of our intellectual property portfolio, and we are pleased to begin substantive examination in this application. The office action requires the election of a spacer for initial search and examination

purposes by the USPTO. Our response is due to the USPTO before May 28, 2009, which we expect to provide on or before that time.

These two office actions move our Company forward in our continued procurement and protection of our valuable intellectual property portfolio.

Item 6.

Exhibits

The following exhibits are included herein:

Exhibit No.

Description of Exhibit

10.1

2007 Employee Stock Plan*

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.

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.

32.1

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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.

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.

*

Incorporated by reference to the Company's Definitive Schedule 14C Information Statement filed on February 19, 2008.

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/ James S. Marcelli

James S. Marcelli,

Chief Executive Officer

Date: May 14, 2009

By: /s/ James S. Marcelli

James S. Marcelli,

Chief Executive Officer

Date: May 14, 2009

By: /s/ Andrew J. Ashton

Andrew J. Ashton,

Treasurer

Date: May 14, 2009

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