Lightwave Logic, Inc.
Form 10-Q
May 16, 2011

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

ý **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarterly period ended March 31, 2011

OR

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from _____________to _____________

Commission File Number 0-52567

Lightwave Logic, Inc.

(Exact name of registrant as specified in its charter)

Nevada	**82-049-7368**
(State or other jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
121 Continental Drive **Suite 110** **Newark, DE**	**19713**
(Address of principal executive offices)	(Zip Code)

Registrant s telephone number, including area code: **(302) 356-2717**

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

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

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

Large accelerated filer ¨ Accelerated filer ¨ Non-accelerated filer ¨ Smaller Reporting Company ý

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

The number of shares of the registrant's Common Stock outstanding as of May 16, 2011 was 44,126,872.

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PART I – FINANCIAL INFORMATION

PART I FINANCIAL INFORMATION

Item 1

Financial Information

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

FINANCIAL STATEMENTS

MARCH 31, 2011

(UNAUDITED)

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LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

BALANCE SHEETS

	March 31, 2011 (Unaudited)	December 31, 2010 (Audited)
ASSETS		
CURRENT ASSETS		
	$	$
Cash and cash equivalents	548,627	953,867
Prepaid expenses and other current assets	83,101	74,189
	631,728	1,028,056
PROPERTY AND EQUIPMENT - NET	94,849	97,568
OTHER ASSETS		
Intangible assets - net	359,308	346,009
	$	$
TOTAL ASSETS	1,085,885	1,471,633
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
	$	$
Accounts payable	68,517	56,459
Accounts payable - related party	19,245	9,760
Accrued expenses	59,407	49,793
TOTAL LIABILITIES	147,169	116,012
STOCKHOLDERS' EQUITY		
Preferred stock, $0.001 par value, 1,000,000 authorized		
No shares issued or outstanding	-	-
Common stock $0.001 par value, 100,000,000 authorized		
43,976,042 and 43,966,042 issued and outstanding at		
March 31, 2011 and December 31, 2010	43,976	43,966
Additional paid-in-capital	22,213,441	21,704,361
Accumulated deficit	(15,827)	(15,827)
Deficit accumulated during development stage	(21,302,874)	(20,376,879)

TOTAL STOCKHOLDERS' EQUITY	938,716	1,355,621
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 1,085,885	$ 1,471,633

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENTS OF OPERATIONS FOR THE THREE MONTHS ENDING

MARCH 31, 2011 AND 2010 AND FOR THE PERIOD

JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO MARCH 31, 2011

(UNAUDITED)

	Cumulative Since Inception	For the Three Months Ending March 31, 2011	For the Three Months Ending March 31, 2010
	$	$	$
NET SALES	3,200	-	-
COST AND EXPENSE			
Research and development	9,448,748	466,864	366,432
General and administrative	11,810,610	459,246	644,274
	21,259,358	926,110	1,010,706
LOSS FROM OPERATIONS	(21,256,158)	(926,110)	(1,010,706)
OTHER INCOME (EXPENSE)			
Interest income	30,302	179	120
Dividend income	1,551	-	-
Realized gain on investment	3,911	-	-
Realized gain on disposal of assets	637	-	-
Litigation settlement	(47,500)	-	-
Interest expense	(35,617)	(64)	(66)
	$	$	$
NET LOSS	(21,302,874)	(925,995)	(1,010,652)
		$	$
Basic and Diluted Loss per Share		(0.02)	(0.03)

Basic and Diluted Weighted Average Number of Shares	43,966,153	41,166,542

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, 2011

(UNAUDITED)

	Number of Shares	Common Stock	Paid-in Capital	Subscription Receivable	Deferred Charges	Unrealized Loss on Securities	Accumulated Deficit	Deficit Accumulated During Development Stage	Total
ENDING BALANCE AT DECEMBER 31, 2003	100	$ 1	$ -	$ -	$ -	$ -	$ (15,827)	$ -	$ (15,826)
Retroactive recapitalization upon reverse acquisition	706,973	706	(706)	-	-	-	-	-	-
BALANCE AT JANUARY 1, 2004	707,073	707	(706)	-	-	-	(15,827)	-	(15,826)
Common stock issued to founders	13,292,927	13,293	(13,293)	-	-	-	-	-	-
Common stock issued for future services in July 2004 at $0.16/share	1,600,000	1,600	254,400	-	-	-	-	-	256,000
	2,000,000	2,000	(2,000)	-	-	-	-	-	-

Common stock issued at merger									
Common stock issued for future services in August 2004 at $0.12/share	637,500	638	74,362	-	-	-	-	-	75,000
Conversion of note payable in December 2004 at $0.16/share	187,500	187	29,813	-	-	-	-	-	30,000
Net loss for the year ended December 31, 2004	-	-	-	-	-	-	-	(722,146)	(722,146)
BALANCE AT DECEMBER 31, 2004	18,425,000	18,425	342,576	-	-	-	(15,827)	(722,146)	(376,972)
Common stock issued in private placement in April 2005 at $0.25/share	4,000,000	4,000	996,000	-	-	-	-	-	1,000,000
Conversion of notes payable in May 2005 at $0.16/share	3,118,750	3,119	495,881	-	-	-	-	-	499,000
Subscription receivable	-	-	-	(6,500)	-	-	-	-	(6,500)
Common stock issued for future services in August 2005, valued at $2.79/share	210,000	210	585,290	-	-	-	-	-	585,500
Common stock issued for future services in August 2005, valued at $2.92/share	200,000	200	583,800	-	-	-	-	-	584,000
Warrants issued for services in May 2005, vested during 2005, valued at	-	-	37,000	-	-	-	-	-	37,000

$1.13/share									
Warrants issued for services in September 2005, vested during 2005, valued at $1.45/share	-	-	24,200	-	-	-	-	-	24,200
Warrants issued for services in October 2005, vested during 2005, valued at $0.53/share	-	-	15,900	-	-	-	-	-	15,900
Warrants issued for future services in December 2005, vested during 2005, valued at $1.45/share	-	-	435,060	-	-	-	-	-	435,060
Deferred charges for common stock issued for future services in August 2005, valued at $2.92/share	-	-	-	-	(584,000)	-	-	-	(584,000)
Amortization of deferred charges	-	-	-	-	265,455	-	-	-	265,455
Exercise of warrants in December 2005 at $0.25/share	300,000	300	74,700	-	-	-	-	-	75,000
Net loss for the year ended December 31, 2005	-	-	-	-	-	-	-	(1,721,765)	(1,721,765)
BALANCE AT DECEMBER 31, 2005	26,253,750	26,254	3,590,407	(6,500)	(318,545)	-	(15,827)	(2,443,911)	831,878
Common stock issued in private	850,000	850	424,150	-	-	-	-	-	425,000

placement during 2006 at $0.50/share									
Common stock issued for future services in February 2006, valued at $0.90/share	300,000	300	269,700	-	-	-	-	-	270,000
Common stock issued for future services in May 2006, valued at $1.55/share	400,000	400	619,600	-	-	-	-	-	620,000
Common stock issued for future services in June 2006, valued at $1.45/share	25,000	25	36,225	-	-	-	-	-	36,250
Common stock issued for future services in November 2006, valued at $0.49/share	60,000	60	29,340	-	-	-	-	-	29,400
Warrants issued for services in September 2005, vested during 2006, valued at $1.45/share	-	-	66,500						
Warrants issued for future services in June 2006, vested during 2006, valued at $1.55/share	-	-	465,996						
Options issued for services in February 2006, vested during 2006, valued at $1.01/share	-	-	428,888						
Contributed capital related to accrued interest	-	-	35,624	-	-	-	-	-	35,624
	-	-	-	6,500	-	-	-	-	6,500

Subscription receivable									
Amortization of deferred charges	-	-	-	-	318,545	-	-	-	318,545
Unrealized gain (loss) on securities	-	-	-	-	-	(26,000)	-	-	(26,000)
Net loss for the year ending December 31, 2006	-	-	-	-	-		-	(2,933,809)	(2,933,809)
BALANCE AT DECEMBER 31, 2006	27,888,750	$ 27,889	$ 5,966,430	$ -	$ -	$ (26,000)	$ (15,827)	$ (5,377,720)	$ 574,772

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, 2011 (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, 2006	27,888,750 $	27,889 $	5,966,430 $	- $	- $	(26,000) $	(15,827) $	(5,377,720) $	574,772
Common stock issued in private placement during 2007 at $0.50/share	2,482,000	2,482	1,238,518	-	-	-	-		1,241,000
Common stock issued in private placement during 2007 at $0.60/share	1,767,540	1,768	1,058,756	-	-	-	-	-	1,060,524
Common stock subscription rescinded during 2007 at $0.50/share	(400,000)	(400)	(199,600)	-	-	-	-	-	(200,000)
Common stock issued for	151,785	152	106,098	-	-	-	-	-	106,250

future services in February 2007, valued at $0.70/share									
Common stock issued for future services in March 2007, valued at $0.58/share	1,000,000	1,000	579,000	-	-	-	-	-	580,000
Common stock issued for services and settlement for accounts payable in April 2007, valued at $0.35/share	100,000	100							
Common stock issued for services in October 2007, valued at $0.68/share	150,000	150	101,850	-	-	-	-	-	102,000
Common stock issued for services in October 2007, valued at $0.90/share	150,000	150	134,850	-	-	-	-	-	135,000
Common stock issued for services in November 2007, valued at $0.72/share	400,000	400	287,600	-	-	-	-	-	288,000
Warrants issued for services in September 2005, vested during 2007, valued at $1.45/share	-	-	36,370	-	-	-	-	-	36,370
Warrants issued for services in March 2007, vested during 2007, valued at	-	-	52,180	-	-	-	-	-	52,180

$0.63/share									
Warrants issued for services in April 2007, vested during 2007, valued at $0.69/share	-	-	293,476	-	-	-	-	-	293,476
Warrants issued for services in April 2007, vested during 2007, valued at $0.63/share	-	-	140,490	-	-	-	-	-	140,490
Warrants issued for services in May 2007, vested during 2007, valued at $0.56/share	-	-	52,946	-	-	-	-	-	52,946
Warrants issued for services in October 2007, vested during 2007, valued at $0.61/share	-	-	61,449	-	-	-	-	-	61,449
Warrants issued for services in October 2007, vested during 2007, valued at $0.78/share	-	-	52,292	-	-	-	-	-	52,292
Warrants issued for services in December 2007, vested during 2007, valued at $0.55/share	-	-	1,159	-	-	-	-	-	1,159
Options issued for services in February 2006, vested during 2007, valued at $1.01/share	-	-	17,589	-	-	-	-	-	17,589
	-	-	43,757	-	-	-	-	-	43,757

Options issued for services in February 2006, vested during 2007, valued at $1.09/share									
Options issued for services in November 2007, vested during 2007, valued at $0.60/share	-	-	41,653	-	-	-	-	-	41,653
Warrants issued for future services in April 2007, vested during 2007, valued at $0.70/share	-	-	348,000	-	-	-	-	-	348,000
Deferred charges for common stock issued for future services in March 2007, valued at $0.58/share	-	-	-	-	(928,000)	-	-	-	(928,000)
Amortization of deferred charges	-	-	-	-	773,333	-	-	-	773,333
Unrealized gain (loss) on securities	-	-	-	-	-	(32,610)	-	-	(32,610)
Net loss for the year ending December 31, 2007	-	-	-	-	-	-	-	(4,223,449)	(4,223,449)
BALANCE AT DECEMBER 31, 2007	33,690,075	33,690	10,449,763	-	(154,667)	$ (58,610)	(15,827)	(9,601,169)	653,180
Common stock issued in private placement during 2008 at $0.60/share	690,001	690	413,310	-	-	-	-	-	414,000
Common stock issued for	100,000	100	74,900	-	-	-	-	-	75,000

services in March 2008, valued at $0.75/share									
Common stock issued for services in August 2008, valued at $1.80/share	200,000	200	359,800	-	-	-	-	-	360,000
Exercise of warrants at $0.25/share	320,000	320	79,680	-	-	-	-	-	80,000
Exercise of warrants at $0.25/share, pursuant to November 2008 adjusted stock offering	641,080	641	159,629						160,270
Exercise of warrants at $0.50/share	270,000	270	134,730	-	-	-	-	-	135,000
Warrants issued for services in September 2005, vested during 2008, valued at $1.45/share	-	-	27,014	-	-	-	-	-	27,014
Warrants issued for services in March 2007, vested during 2008, valued at $0.63/share	-	-	10,885	-	-	-	-	-	10,885
Warrants issued for services in April 2007, vested during 2008, valued at $0.69/share	-	-	121,713	-	-	-	-	-	121,713
Warrants issued for services in April 2007, vested during 2008, valued at	-	-	48,738	-	-	-	-	-	48,738

$0.63/share									
Warrants issued for services in May 2007, vested during 2008, valued at $0.56/share	-	-	31,444	-	-	-	-	-	31,444
Warrants issued for services in December 2007, vested during 2008, valued at $0.55/share	-	-	12,487	-	-	-	-	-	12,487
Options issued for services in November 2007, vested during 2008, valued at $0.60/share	-	-	286,803	-	-	-	-	-	286,803
Options issued for services in January 2008, vested during 2008, valued at $0.60/share	-	-	30,750	-	-	-	-	-	30,750
Options issued for services in July 2008, vested during 2008, valued at $1.48/share	-	-	114,519	-	-	-	-	-	114,519
Options issued for services in August 2008, vested during 2008, valued at $1.36/share	-	-	525,263	-	-	-	-	-	525,263
Options issued for services in November 2008, vested during 2008, valued at $0.50/share	-	-	6,439	-	-	-	-	-	6,439
Warrants issued for future services	-	-	332,000	-	(332,000)	-	-	-	-

in March 2008, vested through September 2008, valued at $0.83/share									
Warrants issued for services in May 2008, vested through September 2008, valued at $1.63/share	-	-	976,193	-	-	-	-	-	976,193
Amortization of deferred charges	-	-	-	-	431,337	-	-	-	431,337
Receivable for the issuance of common stock	-	-	-	(12,500)	-	-	-	-	(12,500)
Realized loss reclassification	-	-	-	-	-	58,610	-	-	58,610
Net loss for the year ending December 31, 2008	-	-	-	-	-	-	-	(4,340,607)	(4,340,607)
BALANCE AT DECEMBER 31, 2008	35,911,156	$ 35,911	$ 14,196,060	$ (12,500)	$ (55,330)	$ -	$ (15,827)	$ (13,941,776)	$ 206,538

See accompanying notes to these financial statements.

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LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENT OF STOCKHOLDERS EQUITY

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

MARCH 31, 2011 (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 & settlement for accounts payable	100,000	100	24,900	-	-	-	-	25,000

January 2009 valued at $0.25/share								
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
Exercise of warrants at $1.00/share	355,000	355	354,645					355,000
Options issued for services in November 2007, vested during 2009, valued at $0.60/share	-	-	199,234	-	-	-	-	199,234
Options issued for services in January 2008, vested during 2009, valued at $0.60/share	-	-	13,583	-	-	-	-	13,583
Options issued for services in July 2008, vested during 2009, valued at $1.48/share	-	-	67,838	-	-	-	-	67,838
Options issued for services in August 2008, vested during 2009, valued at $1.36/share	-	-	623,246	-	-	-	-	623,246
Options issued for services in November 2008, vested during 2009, valued at $0.50/share	-	-	61,346	-	-	-	-	61,346

Options issued for services in January 2009, vested during 2009, valued at $0.53/share	-	-	13,136	-	-	-	-	13,136
Options issued for services in February 2009, vested during 2009, valued at $0.38/share	-	-	9,583	-	-	-	-	9,583
Options issued for services in June 2009, vested during 2009, valued at $0.85/share	-	-	21,085	-	-	-	-	21,085
Warrants issued for services in June 2009, vested during 2009, valued at $0.85/share	-	-	177,881	-	-	-	-	177,881
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
Common stock issued for services in June 2009, valued at $0.34/share	116,000	116	39,884	-	-	-	-	40,000
Common stock issued for services & settlement for accounts payable June 2009 valued at $0.34/share	145,000	145	49,855					50,000
Common stock issued in private placement during June 2009 at $0.34/share	2,479,500	2,480	852,520	-	-	-	-	855,000
Common stock issued for	100,000	100	74,900	-	-	-	-	75,000

services in July 2009, valued at $0.75/share								
Net loss for the year ending December 31, 2009	-	-	-	-	-	-	(2,721,871)	(2,721,871)
BALANCE AT December 31, 2009	41,166,542	41,167	17,385,295	-	-	(15,827)	(16,663,647)	746,988
Options issued for services in November 2007, vested during 2010, valued at $0.60/share	-	-	174,866	-	-	-	-	174,866
Options issued for services in January 2008, vested during 2010, valued at $0.60/share	-	-	14,873	-	-	-	-	14,873
Options issued for services in July 2008, vested during 2010, valued at $1.48/share	-	-	74,061	-	-	-	-	74,061
Options issued for services in August 2008, vested during 2010, valued at $1.36/share	-	-	643,812	-	-	-	-	643,812
Options issued for services in November 2008, vested during 2010, valued at $0.50/share	-	-	31,478	-	-	-	-	31,478
Warrants issued for services in June 2009, vested during 2010, valued at $0.85/share	-	-	213,459	-	-	-	-	213,459
Warrants issued for services in January 2010,			580,167					580,167

vested during 2010, valued at $1.83/share								
Warrants issued for services in March 2010, vested during 2010, valued at $1.86/share	-	-	214,063	-	-	-	-	214,063
Options issued for services in August 2010, vested during 2010, valued at $1.31/share			27,434					27,434
Options issued for services in December 2010, vested during 2010, valued at $1.14/share			286,002					286,002
Exercise of warrants at $0.25/share	947,200	947	235,853					236,800
Exercise of options at $0.25/share	15,000	15	3,735					3,750
Exercise of warrants at $0.345/share	10,000	10	3,440					3,450
Exercise of warrants at $0.50/share	25,000	25	12,475					12,500
Exercise of warrants at $1.00/share	282,500	283	282,218					282,500
Common stock issued in private placement during 2010 at $1.00/share	1,500,000	1,500	1,498,500					1,500,000
Common stock issued for services in August 2010, valued at $1.25/share	4,800	4	5,996					6,000
Common stock issued for services in November 2010,	5,000	5	4,645					4,650

valued at $0.93/share								
Common stock issued for services in December 2010, valued at $01.20/share	10,000	10	11,990					12,000
Net loss for the year ending December 31, 2010	-	-	-	-	-	-	(3,713,232)	(3,713,232)
BALANCE AT DECEMBER 31, 2010	43,966,042	$ 43,966	$ 21,704,361	$ -	$ -	$ (15,827)	$ (20,376,879)	$ 1,355,621

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, 2011 (CONTINUED)

(UNAUDITED)

	Number of Shares	Common Stock	Paid-in Capital	Accumulated Deficit	Deficit Accumulated During Development Stage	Total
		$	$	$	$	$
BALANCE AT DECEMBER 31, 2010	43,966,042	43,966	21,704,361	(15,827)	(20,376,879)	1,355,621
Common stock issued for services in March 2011, valued at $1.45/share	10,000	10	14,490			14,500
Options issued for services in January 2008, vested during 2011, valued at $0.60/share	-	-	285			285
Options issued for services in July 2008, vested during 2011, valued at $1.48/share	-	-	18,262			18,262
Options issued for services in August 2008, vested during 2011, valued at $1.36/share	-	-	158,747			158,747
Options issued for services in November 2008, vested during 2011, valued at $0.50/share	-	-	7,762			7,762
Warrants issued for services in January 2010, vested during 2011, valued at $1.83/share			73,233			73,233
Warrants issued for services in March 2010, vested during 2011, valued at $1.86/share	-	-	64,983			64,983
Options issued for services in August 2010, vested during 2011, valued at $1.31/share			16,138			16,138

Options issued for services in December 2010, vested during 2011, valued at $1.14/share			91,140			91,140
Warrants issued for services in January 2011, vested during 2011, valued at $1.05/share			36,585			36,585
Warrants issued for services in April 2011, vested during 2011, valued at $0.98/share			27,455			27,455
Net loss for the three months ending March 31, 2011	-	-	-	-	(925,995)	(925,995)
		$	$	$	$	$
BALANCE AT MARCH 31, 2011 (UNAUDITED)	43,976,042	43,976	22,213,441	(15,827)	(21,302,874)	938,716

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, 2011 AND 2010 AND

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

MARCH 31, 2011

(UNAUDITED)

	Cumulative Since Inception	For the Three Months Ending March 31, 2011	For the Three Months Ending March 31, 2010
CASH FLOWS FROM OPERATING ACTIVITIES	$	$	$
Net loss	(21,302,874)	(925,995)	(1,010,652)
Adjustment to reconcile net loss to net cash used in operating activities			
Amortization of deferred charges	4,392,455	-	-
Amortization of prepaid expenses	75,000	-	18,750
Warrants issued for services	3,450,262	202,256	415,117
Stock options issued for services	4,383,072	292,334	237,564
Common stock issued for services	1,130,442	14,500	-
Purchase right agreement amortization	132,058	-	-
Depreciation and amortization of patents	115,747	7,714	7,316
Realized gain on investments	(3,911)	-	-
Realized gain on disposal of assets	(637)	-	-
(Increase) decrease in assets			
Receivables	(30,461)	-	-
Prepaid expenses and other current assets	(83,101)	(8,912)	(24,581)
Increase (decrease) in liabilities			
Accounts payable	201,433	12,058	8,490
Accounts payable - related party	19,245	9,485	(4,580)
Accrued expenses	46,021	9,614	2,627
Net cash used in operating activities	(7,475,249)	(386,946)	(349,949)

CASH FLOWS FROM INVESTING ACTIVITIES

Cost of intangibles	(359,553)	(13,544)	(15,241)
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, furniture and leasehold improvements	(173,101)	(4,750)	(15,333)
Net cash used in investing activities	(428,743)	(18,294)	(30,574)
CASH FLOWS FROM FINANCING ACTIVITIES			
Issuance of common stock, private placement	6,495,524	-	-
Common stock rescinded, private placement	(200,000)	-	-
Issuance of common stock, exercise of warrants	1,577,004	-	-
Issuance of common stock, exercise of purchase right agreement	45,138	-	-
Repayment of notes payable	(14,970)	-	-
Proceeds from subscription receivable	19,000	-	-
Advances to stockholders	(4,933)	-	-
Proceeds from convertible notes	529,000	-	-
Advances from officers	1,498	-	-
Net cash provided by financing activities	8,447,261	-	-
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	543,269	(405,240)	(380,523)
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	5,358	953,867	459,989
CASH AND CASH EQUIVALENTS - END OF PERIOD	$ 548,627	$ 548,627	$ 79,466

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, 2011 AND 2010 AND

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

MARCH 31, 2011

(UNAUDITED)

	Cumulative Since Inception	For the Three Months Ending March 31, 2011	For the Three Months Ending March 31, 2010
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION			
CASH PAID DURING THE PERIOD FOR:			
Interest	$ 23,008	$ 64	$ 66
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	$ -	$ -
Common stock issued as settlement for accounts payable	$ 74,708	$ -	$ -

Realized loss reclassification	$ -	$ -	$ -
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	$ -	$ -
Contribution of officer accrued payroll	$ 52,129	$ -	$ -
Common stock issued for prepaid expense	$ 75,000	$ -	$ -

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

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 polices described in the Summary of Accounting Policies included in the 2010 Annual Report. Certain financial information and footnote disclosures normally included 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, 2010, as filed with the Securities and Exchange Commission. The interim operating results for the three months ending March 31, 2011 may not be indicative of operating results expected for the full year.

Loss Per Share

The Company follows Financial Accounting Standards Board Accounting Standards Codification (FASB ASC) 260, Earnings per Share , resulting in the presentation of basic and diluted earnings per share. Because the Company reported a net loss in 2011 and 2010, common stock equivalents, including stock options and warrants were anti-dilutive; therefore, the amounts reported for basic and dilutive loss per share were the same.

Comprehensive Income

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

Recently Issued Accounting Pronouncements Not Yet Adopted

As of March 31, 2011, there are no recently issued accounting standards not yet adopted which would have a material effect on the Company s financial statements.

Recently Adopted Accounting Pronouncements

As of March 31, 2011 and for the period then ended, there were no recently adopted accounting pronouncements that had a material effect on the Company s financial statements.

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.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

NOTE 2 GOING CONCERN (CONTINUED)

The Company is in the development stage at March 31, 2011. In May 2011, the Company has signed an agreement with an institutional investor to sell up to $20 million of common stock. Under the agreement subject to certain conditions and at the Company's sole discretion, the institutional investor has committed to invest up to $20 million in the Company's common stock over a 30-month period. The Company is required to file a registration statement with the U.S. Securities and Exchange Commission (SEC) covering the sale of the shares that may be issued to the institutional investor. Once the registration statement is effective, the institutional investor is obligated to make purchases as the Company directs in accordance with the agreement, which may be terminated by the Company at any time, without cost or penalty. The Company expects to have sufficient funds to maintain its operations for an extended period of time. With the additional capital, the Company expects to achieve a level of revenues attractive enough to fulfill its development activities and achieve a level of revenue adequate to support the Company s business model for the foreseeable future. However, there can be no assurances that the SEC will approve the registration statement or that the Company will achieve an adequate sales level. The Company continues to develop and test its next generation Electro-Optic and third-order material platform to support and cultivate potential customers and strategic partners. Currently, the Company s Electro-Optic materials are in evaluation with potential customers. The Company s first revenue has been in engineering revenues. Management believes the Company s next revenue will be in Application and non-recurring engineering charges, prototype devices and material charges for specialty non-linear applications.

NOTE 3 EQUIPMENT

Equipment consists of the following:

	March 31, 2011	December 31, 2010
	$	$
Office equipment	12,816	12,816

Lab equipment	155,883	151,134
Furniture	3,494	3,494
Leasehold Improvements	5,368	5,368
	177,561	172,812
Less: Accumulated depreciation	82,712	75,244
	$ 94,849	$ 97,568

Depreciation expense for the three months ending March 31, 2011 and 2010 was $7,469 and $7,316.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

NOTE 4 INTANGIBLE ASSETS

This represents legal fees and patent fees associated with the registration of patents. The Company has recorded amortization expenses on the spacer patent application accepted by the United States Patent and Trademark Office in February 2011 which is amortized over its legal life of 20 years. No amortization expense has been recorded on the remaining patents 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.

Patents consists of the following:

	March 31, 2011	December 31, 2010
	$	$
Patents	359,553	346,009
Less: Accumulated amortization	245	-
	$	$
	359,308	346,009

Amortization expense for the three months ending March 31, 2011 and 2010 was $245 and $0.

NOTE 5 INCOME TAXES

There is no income tax benefit for the losses for the three months ended March 31, 2011 and 2010 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, 2011, the Company had no unrecognized tax benefits, or any tax related interest of penalties. There were no changes in the Company s unrecognized tax benefits during the period ended March 31, 2011. The Company did not recognize any interest or penalties during 2011 related to unrecognized tax benefits. With few exceptions, the U.S. and state income tax returns filed for the tax years ending on December 31, 2007 and thereafter are subject to examination by the relevant taxing authorities.

NOTE 6 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, 2011 AND 2010

NOTE 6 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 FASB ASC 718 Stock Compensation, 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, 2011 AND 2010

NOTE 6 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 FASB ASC 718 Stock Compensation, 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 FASB ASC 718 Stock Compensation, 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.

NOTE 6 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, 2011 AND 2010

NOTE 6 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. For the six month ending June 30, 2009, the remaining 600,000 outstanding warrants expired.

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. During 2009 and 2008, 416,000 and 82,770 warrants were exercised, respectively. For the year ending December 31, 2009, the remaining 385,000 outstanding warrants expired.

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 recognized during 2008 and 2007 is $154,667 and $773,333. This contract was renewed in March, 2008. In December 2010, the warrant was partially exercised to purchase 100,000 shares of common stock for proceeds of $25,000. As of March 31, 2011, warrants to purchase 400,000 shares of common stock are still outstanding.

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.

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

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

NOTE 6 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

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. In April 2010, the warrant was exercised to purchase 100,000 shares of common stock for proceeds of $25,000.

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. In July 2008, the warrant was partially exercised to purchase 20,000 shares of common stock for proceeds of $5,000. In April 2010, the warrant was partially exercised to purchase 380,000 shares of common stock for proceeds of $95,000. The remaining warrant to purchase 500,000 shares of common stock is still outstanding as of March 31, 2011.

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. In April 2010, the warrant was exercised to purchase 150,000 shares of common stock for proceeds of $37,500.

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, 2011.

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 October 2010, the warrant was exercised to purchase 67,200 shares of common stock for proceeds of $16,800.

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. In June 2010, the warrant was exercised to purchase 25,000 shares of common stock for proceeds of $12,500.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

NOTE 6 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. The consulting expense recognized during 2010, 2009, 2008 and 2007 is $174,866, $199,233, $286,803 and $41,653. For the three month ending March 31, 2011 and 2010, the Company recognized $0 and $49,126 of expense. The options are still outstanding as of March 31, 2011.

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 2010, 2009 and 2008 is $14,873, $13,582 and $30,750. For the three month ending March 31, 2011 and 2010, the Company recognized $285 and $3,667 of expense. The options are still outstanding as of March 31, 2011.

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. During 2009 and 2008, the warrant was partially exercised to purchase 25,834 and 20,000 shares of common stock for proceeds of $25,834 and $20,000. In April 2010, the warrant was partially exercised to purchase 282,500 shares of common stock for proceeds of $282,500. During the six month ending June 30, 2010, the remaining warrants to purchase 16,667 shares of common stock expired.

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. For the year ending December 31, 2009 and 2008, the Company recognized $55,330 and $276,670 of management consulting expense. For the three month ending March 31, 2010 and 2009, the Company recognized $0 and $55,330 of 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 March 31, 2011.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

NOTE 6 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. The expense is being recognized based on vesting terms over a three year period. The expense recognized during 2010, 2009 and 2008 is $74,061, $67,840 and $114,519. For the three month ending March 31, 2011 and 2010, the Company recognized $18,262 and $18,262 of expense. The options are still outstanding as of March 31, 2011.

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. The expense recognized during 2010, 2009 and 2008 is $643,812, $623,246 and $525,263. For the three month ending March 31, 2011 and 2010, the Company recognized $158,748 and $158,748 of expense. The options are still outstanding as of March 31, 2011.

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. The expense is being recognized based on vesting terms over a three year period. The expense recognized during 2010, 2009 and 2008 is $31,478, $61,346 and $6,439. For the three month ending March 31, 2011 and 2010, the Company recognized $7,762 and $7,762 of expense. The options are still outstanding as of March 31, 2011.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

NOTE 6 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 at a purchase price of $.25 per share. 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 expense recognized during 2010 and 2009 is $0 and $13,136. For the three month ending March 31, 2011 and 2010, the Company recognized $0 and $0 of expense. In May 2010, the option was partially exercised to purchase 15,000 shares of common stock for proceeds of $3,750. As of March 31, 2011, options to purchase 10,000 shares of common stock are still outstanding.

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, 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.

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 at a purchase price of $.45 per share. Using the Black-Scholes Option Pricing Formula, the options were valued at valued at $9,583, fair value. These options expire in 5 years and vest immediately. The expense recognized during 2010 and 2009 is $0 and $9,583. For the three month ending March 31, 2011 and 2010, the Company recognized $0 and $0 of expense. The options are still outstanding as of March 31, 2011.

During June 2009, in accordance to private placement memorandum, the Company issued 2,479,500 shares of common stock for proceeds of $855,000 dated June 10, 2009. Pursuant to the terms of the offering, up to 18 units were offered at the offering price of $50,000 per unit, with each unit comprised of 145,000 shares to purchase at $0.34 per share.

During June 2009, the Company issued a warrant to purchase 464,000 shares of common stock at a purchase price of $0.34 per share for accounting services rendered. The warrant was valued at $391,342 using the Black-Scholes Option Pricing Formula, vesting 46,400 immediately and the remaining on equal monthly installments of 23,200 over the next eighteen months. The expense is being recognized based on service terms of the agreement over a twenty two month period. The consulting expense recognized during 2010 and 2009 is $213,459 and $177,883. For the three month ending March 31, 2011 and 2010, the Company recognized $0 and $53,365 of expense. In April 2010, the warrant was partially exercised to purchase 10,000 shares of common stock for proceeds of $3,450. As of March 31, 2011, warrants to purchase 454,000 shares of common stock are still outstanding.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

NOTE 6 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

In June 2009, an employee was granted with an option to purchase up to 25,000 shares of common stock at a purchase price of $.34 per share. Using the Black-Scholes Option Pricing Formula, the options were valued at valued at $21,085, fair value. These options expire in 5 years and vest immediately. The expense recognized during 2010 and 2009 is $0 and $21,085. For the three month ending March 31, 2011 and 2010, the Company recognized $0 and $0 of expense. The option is still outstanding as of March 31, 2011.

During June 2009, the Company issued 145,000 shares of common stock for legal services to a related party valued at $50,000, to settle accounts payable for $35,000 and $15,000 for legal services.

During June 2009, the Company issued 116,000 shares of common stock for accounting services valued at $40,000, fair value. The Company recognized $40,000 of accounting expense for the year ending December 31, 2009.

During July 2009, the Company issued 100,000 shares of common stock for investor relation services valued at $75,000, fair value vesting 25,000 shares each quarter commencing July 1, 2009. The investor relation expense recognized during 2010 and 2009 is $37,500 and $37,500. For the three month ending March 31, 2011 and 2010, the Company recognized $0 and $18,750 of investor relation expense.

In January 2010, the Company issued a warrant to purchase 650,000 shares of common stock at a purchase price of $1.51 per share to a new member of its board of directors serving as the Company s full-time non-executive chair of the board of directors. Using the Black-Scholes Option Pricing Formula, the warrants were valued at $1,188,000, fair value, vesting 162,500 immediately and the remaining in annual equal installments of 162,500 over the next three years. The consulting expense recognized during 2010 and 2009 is $580,167 and $0. For the three month ending March 31, 2011 and 2010, the Company recognized $73,233 and $356,400 of expense. The warrant is still outstanding as of March 31, 2011.

In March 2010, 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. Using the Black-Scholes Option Pricing Formula, the warrants were valued at $279,045, fair value, vesting immediately. The consulting expense recognized during 2010 and 2009 is $214,063 and $0. For the three month ending March 31, 2011 and 2010, the Company recognized $64,983 and $5,352 of expense. In June and July 2010, the warrant was fully exercised to purchase 150,000 shares of common stock for proceeds of $37,500.

In June 2010, an employee was granted with an option to purchase up to 100,000 shares of common stock at a purchase price of $1.50 per share. Using the Black-Scholes Option Pricing Formula, the options were valued at valued at $131,075, fair value. These options expire in 5 years and vest in equal installments of 12,500 over the next two years commencing August 1, 2010. The consulting expense recognized during 2010 and 2009 is $27,434 and $0. For the three month ending March 31, 2011 and 2010, the Company recognized $16,138 and $0 of expense. The options are still outstanding as of March 31, 2011.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

NOTE 6   STOCKHOLDERS   EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During 2010, the Company issued 1,500,000 shares of common stock and warrants to purchase 375,000 shares of common stock for proceeds of $1,500,000 in accordance to a private placement memorandum as amended on September 14, 2010. Pursuant to the terms of the offerings, up to 30 units were offered at the purchase price of $50,000 per unit, with each unit comprised of 50,000 shares and a warrant to purchase 12,500 shares of common stock at $1.25 per share. The warrants to purchase 375,000 shares of common stock at $1.25 per share are still outstanding as of March 31, 2011.

Effective July 8, 2010, the number of shares of the Company   s common stock available for issuance under the 2007 Employee Stock plan was increased from 3,500,000 to 6,500,000 shares.

During August 2010, the Company issued 4,800 shares of common stock for investor relations services valued at $6,000, fair value. The Company recognized $6,000 of investor relations expense for the year ending December 31, 2010.

In November 2010, the board of directors approved a grant to employees of options to purchase up to 250,000 shares of common stock at a purchase price of $1.00 per share. These options were granted on December 13, 2010. Using the Black-Scholes Option Pricing Formula, the options were valued at $283,787, fair value. These options expire in 5 years with 125,000 vesting on December 13, 2010 and 125,000 vesting on June 13, 2011. The consulting recognized during 2010 is $156,707. For the three month ending March 31, 2011, the Company recognized $70,167 of expense. The options are still outstanding as of March 31, 2011.

In November 2010, the board of directors approved a grant to employees of options to purchase up to 35,000 shares of common stock at a purchase price of $1.00 per share. These options were granted on December 13, 2010. Using the

Black-Scholes Option Pricing Formula, the options were valued at $39,730, fair value. These options expire in 5 years and vest on December 13, 2010. The expense recognized during 2010 is $39,730. For the three month ending March 31, 2011, the Company recognized $0 of expense. The options are still outstanding as of March 31, 2011.

In November 2010, the board of directors approved a grant to three outside directors of options to purchase up to 300,000 shares of common stock at a purchase price of $1.00 per share. These options were granted on December 13, 2010. Using the Black-Scholes Option Pricing Formula, the options were valued at $340,545, fair value. These options expire in 5 years and vest 75,000 on December 13, 2010 and the remaining in equal annual installments of 75,000 over the next three years commencing November 4, 2011. The consulting expense recognized during 2010 is $89,565. For the three month ending March 31, 2011, the Company recognized $20,973 of expense. The options are still outstanding as of March 31, 2011.

In November 2010, 5,000 shares of common stock were issued for investor relation services valued at $4,650, fair value. The Company recognized $4,650 of investor relations expense for the year ending December 31, 2010.

During December 2010, the Company issued 10,000 shares of common stock for investor relations services valued at $12,000, fair value. The Company recognized $12,000 of investor relations expense for the year ending December 31, 2010.

LIGHTWAVE LOGIC, INC.

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NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

NOTE 6 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

In January 2011, the Company issued a warrant to a related party to purchase 10,000 shares of common stock for legal services at an exercise price of $1.25 per share. Using the Black-Scholes Option Pricing Formula, the warrants were valued at $10,453, fair value. These warrants expire in 3 years and vest immediately. For the three month ending March 31, 2011, the Company recognized $10,453 of expense. The warrant is still outstanding as of March 31, 2011.

In January 2011, the Company issued a warrant to purchase 25,000 shares of common stock for research and development at an exercise price of $1.25 per share. Using the Black-Scholes Option Pricing Formula, the warrants were valued at $26,132, fair value. These warrants expire in 3 years and vest immediately. For the three month ending March 31, 2011, the Company recognized $26,132 of expense. The warrant is still outstanding as of March 31, 2011.

During March 2011, the Company issued 10,000 shares of common stock for investor relations services valued at $14,500, fair value. For the three month ending March 31, 2011, the Company recognized $14,500 of investor relations expense.

During April 2011, the Company issued warrants to purchase 150,000 shares of common stock at a purchase price of $1.18 per share for accounting services rendered commencing January 1, 2011. The warrant was valued at $146,425 using the Black-Scholes Option Pricing Formula, vesting 37,500 immediately and the remaining on equal monthly installments of 9,375 over the next twelve months expiring in 5 years. The expense is being recognized based on service terms of the agreement over a sixteen month period. For the three month ending March 31, 2011, the Company recognized $27,455 of expense. As of March 31, 2011, warrants to purchase 150,000 shares of common stock are still outstanding.

NOTE 7 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 2011 and 2010: no dividend yield in both years, expected volatility, based on the Company s historical volatility, between 119% and 125% in 2011 and between 130% and 134% in 2010, risk-free interest rate between 0.96% and 2.15% in 2011 and between 1.69% and 2.57% in 2010 and expected option life of three to five years in 2011 and 2010.

As of March 31, 2011, there was $1,293,577 of unrecognized compensation expense related to non-vested market-based share awards that is expected to be recognized through November 2013.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

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)
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	939,000	$ 0.25-$0.45	$ 0.30
Expired	(1,204,451)	0.25-$1.00	0.61
Forfeited	-		
		$	$
Exercised	(1,488,384)	0.001-$1.00	0.20
		$	$
Outstanding, December 31, 2009	6,412,367	0.25-$1.75	0.83
		$	$
Granted	1,860,000	0.25-$1.51	1.20
Expired	(16,667)	$	$

		1.00	1.00
Forfeited	-	-	-
Exercised	(1,279,700)	$ 0.25-$1.00	$ 0.42
Outstanding, December 31, 2010	6,976,000	$ 0.25-$1.75	$ 1.00
Granted	185,000	$ 1.18-$1.25	$ 1.19
Expired	-	-	
Forfeited	-	-	-
Exercised	-	-	-
Outstanding, March 31, 2011	7,161,000	$ 0.25-$1.75	$ 1.00
Exercisable, March 31, 2011	5,873,500	$ 0.25-$1.75	$ 0.93

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

MARCH 31, 2011 AND 2010

NOTE 7 STOCK BASED COMPENSATION (CONTINUED)

	Non-Qualified Stock Options and Warrants Outstanding		
Range of Exercise Prices	Number Outstanding Currently Exercisable at March 31, 2011	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price of Options and Warrants Currently Exercisable
$0.25 - $1.75	5,873,500	2.42 Years	$ 0.93

NOTE 8 RELATED PARTY

At March 31, 2011 the Company has accrued salaries to one officer and two beneficial owners of $45,588.

NOTE 9 SUBSEQUENT EVENTS

In April 2011, the United States Patent and Trademark Office issued patent number 7919619 for the Chromophore 11,666,320 patent application.

In May 2011, the Company has signed an agreement with an institutional investor to sell up to $20 million of common stock. Under the agreement subject to certain conditions and at the Company's sole discretion, the institutional investor has committed to invest up to $20 million in the Company's common stock over a 30-month period. The Company is required to file a registration statement with the U.S. Securities and Exchange Commission covering the sale of the shares that may be issued to the institutional investor. Once the registration statement is effective, the institutional investor is obligated to make purchases as the Company directs in accordance with the agreement, which may be terminated by the Company at any time, without cost or penalty. Sales of shares will be made in specified amounts and at prices that are based upon the market prices of the Company's common stock immediately preceding the sales to the institutional investor. The Company has issued 150,830 shares of common stock to the institutional investor as an initial commitment fee and 301,659 shares of common stock are reserved for additional commitment fees to the institutional investor in accordance with the terms of the agreement.

In May 2011, the board of directors approved a grant to a new outside director of an option to purchase up to 200,000 shares of common stock at a purchase price of $1.12 per share. Using the Black-Scholes Option Pricing Formula, the option was valued at $193,686, fair value. The option expires in 5 years and vests 50,000 immediately and the remaining in annual equal installments of 50,000 over the next three years.

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-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. Unless the context otherwise requires, all references to the **Company**, **we**, **our** or **us** and other similar terms means Lightw Logic, Inc., a Nevada corporation.

We are a development stage research and development company. We have developed and are continuing to develop Application Specific Electro-Optic Polymers (ASEOP) and Non-Linear All-Optical Polymers (NLAOP) which have high electro-optic and optical activity. Both types of materials are thermally and photo-chemically stable, which we believe could have utility across a broad range of applications in devices. We engineer our proprietary electro-optic polymers at the molecular level for superior performance, stability, cost-efficiency and ease of processability. We expect our NLAOP polymers to broadly replace more expensive, lower-performance materials that are currently used in, telecommunication, data communications, computing, photovoltaic cells, 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 polymer.

We are currently developing electro-optic polymers 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 250 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 non-linear all optical polymers have demonstrated resonantly enhanced Third-order properties about 2,630 times larger than fused silica which means that they are very photo-optically active in the absence of an RF layer. In this way they differ from our electro-optical polymers and are considered more advanced next-generation materials.

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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Optical Interconnects

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Optical Computing

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Entertainment

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Medical Applications

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Solar Panels (Photovoltaic cells)

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;

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

.

Produce commercial quantities of our products at commercially acceptable prices;

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Rapidly respond to technological advancements;

.

Attract, retain and motivate qualified personnel; and

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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 polymers 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 ™ materials 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 continual process of extensive testing for material performance, including, among other tests, the (r33) Teng-Man testing protocol. In June 2009 we released test results conducted by Dr. C.C. Teng that re-confirmed our previous test results, and we intend to deliver completed independent validated material performance test results, including the (r33) Teng-Man testing protocol, as they become ripe for release.

In August 2009, Photon-X, LLC commenced a compatible study, process sequences, and fabricated wafers/chips containing arrays of phase modulators. The first one hundred plus modulators were completed at the end of October 2009, and were successfully characterized for insertion loss, Vpi, modulation dynamic range and initial frequency response in March 2010. The multi-step manufacturing process we utilized to fabricate our modulators involved exposing our proprietary Perkinamine ™ materials to extreme conditions that are typically found in standard commercial manufacturing settings. Our step-by-step analysis throughout the fabrication process demonstrated to us that our Perkinamine ™ materials can successfully withstand each step of the fabrication process without damage. We anticipated completing the development and building of functional prototype 40 Gb/s and 100 Gb/s modulators during the second quarter of 2010. However, we have incurred delays with our modulator project due to our focus on current application driven projects and evaluations that we believe will more quickly generate revenue for our Company. The completion of these two modulator designs will most likely occur during the second half of 2011 upon completion of an anticipated updated optical device design. However, we may incur delays in this process due to slower than expected material production within our laboratories and/or delays caused by the production of the modulator and testing procedures.

In August 2009, we retained Perdix, Inc. to help us identify and build prototype products for high growth potential target markets in fiber optic telecommunications systems. During October 2009, we initiated the development and production of our prototype amplitude modulator, which can ultimately be assembled into 1- and 2- dimensional arrays that are useful for optical computing applications, such as encryption and pattern recognition. We expected our initial prototype amplitude modulator to be completed by the end of the second quarter 2010. Our Company continues to work with strategic partners in this development effort and we anticipate prototypes in second half of 2011. However, we may incur delays in this process due to slower than expected material production within our laboratories and/or delays caused by the production of the modulator and testing procedures.

In November 2009 we introduced our new prototype phase modulator to the Gilder/Forbes Telecosm Conference in Tarrytown, New York and discussed how Lightwave s material could be spun onto silicon chips prior to stacking and used for input, output, and interconnect due to the stability of Lightwave s electro-optic polymer and Lightwave s recent demonstration that its proprietary Perkinamine ™ materials can survive all of the rigors of standard commercial manufacturing processes. Other applications discussed with the conference attendees included low cost modulators for fiber optic communications, multi-channel modulators for ultra dense wavelength division multiplex systems, and optical computing.

In December 2009 we filed our sixth patent application. The provisional application covers stable free radical chromophores for use in Non-Linear optical applications. The new polymeric electro-optic material has enormous potential in spatial light modulation and all optical signal processing (light switching light).

In January 2010 we entered into an agreement with the University of Alabama at Tuscaloosa to conduct cooperative development, analytical testing, optimization, and scale-up of our proprietary materials platform, which should help shorten the time to market for our new Polymeric Electro-Optic materials.

In March 2010 we successfully concluded the electrical and optical performance testing stage of our prototype phase modulator and began Application Engineering of our technology in customer design environments and working directly with interested large system suppliers to attempt to engineer specific individual product materials and device designs for sale to or by these suppliers.

In October of 2010 we completed the concept stage of a novel design for an advanced optical computing application and moved forward into the design stage with with Celestech, Inc. of Chantilley, Virginia. This project will incorporate one of our Company s advanced electro-optical polymer materials.

In October of 2010 we announced the results of testing performed by Lehigh University which demonstrated the Third-order non-linear properties of our proprietary molecules in the Perkinamine NR ™ chromophore class. Leghigh University determined that the material was 100 times stronger than the highest off-resonance small molecule currently known. They also determined that it was 2,600 times more powerful than fused silica and demonstrated extremely fast (less than 1 picosecond) photo-induced non-linear response that would be capable of modulation at raters of 1 THz (terahertz).

In February and April 2011, respectively, the United States Patent Office granted our Company two patents: US Patent No. 7,894,695 covering our Tricyclic Spacer System for Non-Linear Optical Devices and US Patent No. 7,919,619 for Heterocyclical Chromophore Architectures directed to our Perkinamine ™ chromophores. These composition of matter patents taken together protect the core of our electro-optical materials portfolio.

In March 2011 we entered into a research and development agreement with the City University of New York s Laboratory for Nano Micro Photonics (LaNMP) to develop Third-order non-linear devices. The combination of LaNMP s device capabilities together with our materials expertise should accelerate the development of all-optical devices.

In March 2011 the City University of New York s Laboratory for Nano Micro Photonics (LaNMP) fabricated our first-ever all optical waveguide using one of our Perkinamine NR ™ chromophores. It is anticipated that LaNMP will use this device architecture to develop various all-optical devices including an all-optical transistor.

In March 2011 we announced a two year research and development collaboration with the University of Alabama to explore the advanced energy capture properties of our Perkinamine ™ class of chromophores. Our material absorbs light across a wide range of wavelengths from near infra-red into the near ultraviolet. The University intends to explore how to efficiently capture a wide range of solar radiation with our material.

We ultimately intend to use our next-generation electro-optic polymers 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

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Telecommunications

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Optical Interconnects

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Optical Computing

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Entertainment

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Medical Applications

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Solar Panels (Photovoltaic cells)

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;

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

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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 from the exercise of outstanding warrants. Through June 30, 2009, we raised approximately $855,000 from the sale of our private stock. 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. During October 2009 we obtained proceeds of $455,000 from the exercise of outstanding warrants. During 2010, we raised $1,500,000 from the private sale of our common stock and $539,000 from the exercise of outstanding options and warrants. We also issued shares of our common stock and warrants to purchase shares of our common stock in exchange for services rendered to our company. During the first quarter of 2011, we issued shares of our common stock and warrants to purchase shares of our common stock in exchange for services rendered to our company.

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, 2011 to three months ended March 31, 2010

Revenues

The Company is a development stage company. We had no revenues during the three months ended March 31, 2011 and 2010. The Company s first development revenue project commenced during 2010 resulting in net revenues of $3,200 for the year ended December 31, 2010. The Company expects revenues to increase once the customer s approval and design cycle has been completed.

Operating Expenses

Our operating expenses were $926,110 and $1,010,706 for the three months ended March 31, 2011 and 2010, respectively, for a decrease of $84,596. The decrease is due primarily to decrease in non cash amortization of warrants based on vesting terms as part of the employment agreement entered into in January 2010 with the Company s new Chairman offset by increases in primarily research and development costs including non cash research and development amortization of options, research and development wages and salaries, laboratory materials and supplies.

Included in our operating expenses for the three months ended March 31, 2011 was $466,864 for research and development expenses compared to $366,432 for the three months ended March 31, 2010, for an increase of $100,432. This is primarily due to an increase in non cash amortization of options of $62,345 from $174,166 for the three months ended March 31, 2010 to $236,511 for the three months ended March 31, 2011, an increase in wages and salaries of $11,894 from $106,430 for the three months ended March 31, 2010 to $118,324 for the three months ended March 31, 2011 and an increase in laboratory materials and supplies of $10,772, from $5,109 for the three months ended March 31, 2010 to $15,881 for the three months ended March 31, 2011. These additional research and development activities for the three months ended March 31, 2011 support the expansion of research, development and application engineering activities.

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

We expect to continue to incur substantial research and development expense to develop and commercialize our electro-optic material platform. These expenses will increase as a result of accelerated development effort to support commercialization of our electro-optic materials technology; subcontracting work to build prototypes; expanding and equipping in-house laboratories; hiring additional technical and support personnel; pursuing other potential business opportunities; customer testing and evaluation; 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, sales and marketing, investor relations, accounting and finance, legal, consulting and other operating expenses.

General and administrative expenses decreased $185,028 to $459,246 for the three months ended March 31, 2011 compared to $644,274 for the three months ended March 31, 2010. The decrease is due primarily to decrease in non cash amortization of warrants based on vesting terms as part of the employment agreement entered into in January 2010 with the Company s new Chairman offset by increases in other costs.

Legal fees increased $8,871 to $24,997 for the three months ended March 31, 2011 compared to $16,126 for the three months ended March 31, 2010.

Investor relations expenses decreased by $2,309 from $42,248 for the three months ended March 31, 2010 to $39,939 for the three months ended March 31, 2011 as the Company continues its efforts to expand its exposure to a broader base of investors.

Total expenses for accounting and administrative services decreased by $16,910 for the three months ended March 31, 2011 compared to the three months ended March 31, 2010. Non cash amortization of warrants for accounting and administrative services decreased by $25,910 from $53,365 for the three months ended March 31, 2010 to $27,455 for the three months ended March 31, 2011. Accounting fees increased $9,000 from $10,500 for the three months ended March 31, 2010 to $19,500 for the three months ended March 31, 2011.

Non cash stock compensation decreased by $230,889 from $478,515 for the three months ended March 31, 2010 to $247,626 for the three months ended March 31, 2011. The stock compensation for the three months ended March 31, 2011 included the aforementioned non cash amortization of warrants for accounting and administrative expenses. This total decrease in stock compensation is primarily due to the non cash amortization of warrants as part of the employment agreement entered into with the Company s new Chairman during 2010. The decrease is due to amortization of the warrants to expense based upon the vesting terms of the warrant agreement.

Auditing fees increased $16,000 from $10,000 for the three months ended March 31, 2010 to $26,000 for the three months ended March 31, 2011 due to the timing of the recognition of the 2009 audit fee.

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.

Net Loss

Net loss was $925,995 and $1,010,652 for the three months ended March 31, 2011 and 2010, respectively, for a decrease of $84,657, primarily resulting from decrease in non cash amortization of warrants based on vesting terms as part of the employment agreement entered into in January 2010 with the Company s new Chairman offset by increases in primarily research and development costs including non cash research and development amortization of options, research and development wages and salaries, laboratory materials and supplies.

Significant Accounting Policies

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

We believe our significant accounting policies affect our more significant estimates and judgments used in the preparation of our financial statements. Our Annual Report on Form 10-K for the year ended December 31, 2010 contains a discussion of these significant accounting policies. There have been no significant changes in our significant accounting policies since December 31, 2010. See our Note 1 in our unaudited financial statements for the three months ended March 31, 2011, as set forth herein.

Liquidity and Capital Resources

During the three months ended March 31, 2011, net cash used in operating activities was $386,946 and net cash used in investing activities was $18,294, 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, 2011 was $0. At March 31, 2011, our cash and cash equivalents totaled $548,627, our assets totaled $1,085,885, our liabilities totaled $147,169, and we had stockholders equity of $938,716.

Sources and Uses of Cash

Our future expenditures and capital requirements will depend on numerous factors, including: the progress of our research and development efforts; the rate at which we can, directly or through arrangements with original equipment manufacturers, introduce and sell products incorporating our polymer materials technology; the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; market acceptance of our products and competing technological developments; and our ability to establish cooperative development, joint venture and licensing arrangements. We expect that we will incur in excess of $1,500,000 of expenditures over the next 12 months. 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 non-linear optical polymer technology during the latter portion of 2011.

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 August 2011, 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 equity offerings, exercise of stock options, warrants 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.

In May 2011 we signed a stock purchase agreement with Lincoln Park Capital Fund, LLC ("LPC") whereby subject to certain conditions and at our sole discretion, LPC has committed to purchase up to $20 million of our common stock over a 30-month period. We are first required to file a registration statement with the U.S. Securities and Exchange Commission covering the sale of the shares that may be issued to LPC. Once the registration statement is effective, LPC is obligated to make purchases as the Company directs in accordance with the purchase agreement, which may be terminated by the Company at any time, without cost or penalty. Sales of shares will be made in specified amounts and at prices that are based upon the market prices of our Company's common stock immediately preceding the sales to LPC. We expect this financing to provide our Company with sufficient funds to maintain its operations for an extended period of time. With the additional capital, we expect to achieve a level of revenues attractive enough to fulfill our development activities and adequate enough to support our business model for the foreseeable future. We cannot assure you that we will meet the conditions of the stock purchase agreement with LPC in order to obligate LPC to purchase our shares of common stock or that our registration statement will be declared effective. In the event we fail to do so, and other 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 2011 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 facilities and 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, 2011

Net cash used in operating activities was $386,946 for the three months ended March 31, 2011, consisting of payments for research and development, legal, professional and consulting expenses, rent and other expenditures necessary to develop our business infrastructure, offset by $202,256 in warrants issued for services, $292,334 in options issued for services, $14,500 in common stock issued for services, $7,714 in depreciation expense and amortization of patents, ($8,912) in prepaid expenses and other current assets and $31,157 in accounts payable and accrued expenses.

Net cash used by investing activities was $18,294 for the three months ended March 31, 2011, consisting of the purchase of intangibles (patents) for $13,544 and $4,750 in asset additions for the lab facility.

Net cash provided by financing activities was $0 for the three months ended March 31, 2011.

Inflation and Seasonality

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

Item 4

Controls and Procedures

Evaluation of Disclosure Controls and Procedures. The Company s management, with the participation of the Company s Principal Executive Officer and Principal Financial Officer, evaluated the effectiveness of the Company s disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of March 31, 2011. Based on this evaluation, the Company s Principal Executive Officer and Principal Financial Officer concluded that, as of March 31, 2011 the Company s disclosure controls and procedures were effective, in that they provide reasonable assurance that information required to be disclosed by the Company in the reports that it files or submits under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission s rules and forms, and is accumulated and communicated to the Company s management, including the Company s Principal Executive Officer and Principal Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting. There were no changes in our internal control over financial reporting during the quarter ended March 31, 2011 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II   OTHER INFORMATION

Item 2

Unregistered Sales of Equity Securities and Use of Proceeds

During the period covered by this report, we sold the following unregistered securities:

Securities issued for services

Date	Security/Value
January 2011	Warrant - 10,000 shares of common stock at $1.25 per share. The warrants were valued at $10,453 using the Black-Scholes Option Pricing Formula.
January 2011	Warrant - 25,000 shares of common stock at $1.25 per share. The warrants were valued at $26, 132 using the Black-Scholes Option Pricing Formula.
March 2011	Common stock 10,000 shares of common stock. The common stock was valued at $14,500.

No underwriters were utilized and no commissions or fees were paid with respect to any of the above transactions.

Item 6

Exhibits

The following exhibits are included herein:

Exhibit No.	Description of Exhibit
10.1	Purchase Agreement, dated as of May 3, 2011, by and between the Company and Lincoln Park Capital Fund, LLC (incorporated by reference to our Form 8-K filed on May 6, 2011).
10.2	Registration Rights Agreement, dated as of May 3, 2011, by and between the Company and Lincoln Park Capital Fund, LLC (incorporated by reference to our Form 8-K filed on May 6, 2011).
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	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.

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 16, 2011

By: /s/ James S. Marcelli
James S. Marcelli,

Chief Executive Officer

Date: May 16, 2011

By: /s/ Andrew J. Ashton
Andrew J. Ashton,

Treasurer

Date: May 16, 2011