Filed pursuant to Rule 424(b)(3)
File No. 333-180631

Prospectus Supplement No. 1
(To Prospectus dated June 7, 2012)

NOVELOS THERAPEUTICS, INC.

5,420,800 Units Consisting of
5,420,800 Shares of Common Stock and
Class A Warrants to Purchase 2,710,400 Shares of Common Stock
Class B Warrants to Purchase 5,420,800 Shares of Common Stock

---

This prospectus supplement supplements the Prospectus dated June 7, 2012, relating to the sale of 5,420,800 units, consisting of 5,420,800 shares of our common stock, Class A Warrants to purchase up to 2,710,400 shares of our common stock and Class B Warrants to purchase up to 5,420,800 shares of our common stock. This prospectus supplement should be read in conjunction with the Prospectus.

Quarterly Report on Form 10-Q

On August 9, 2012, we filed with the Securities and Exchange Commission our Quarterly Report on Form 10-Q for the quarter ended June 30, 2012. The text of the Form 10-Q is attached hereto.

Investing in our common stock involves a high degree of risk.
See Risk Factors beginning on page 6 of the Prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus supplement. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is August 9, 2012

U.S. SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

[mark one]

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

For the quarterly period ended: June 30, 2012

☐ 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 333-119366

NOVELOS THERAPEUTICS, INC.
(*Exact name of registrant as specified in its charter*)

DELAWARE	**04-3321804**
(*State or other jurisdiction of incorporation or organization*)	(*IRS Employer Identification No.*)

One Gateway Center, Suite 504, Newton, Massachusetts 02458
(*Address of principal executive offices*)

(617) 244-1616
(*Registrant's telephone number, including area code*)

(*Former name, former address and former fiscal year, if changed since last report)*

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

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

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☒

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

Number of shares outstanding of the issuer's common stock as of the latest practicable date: 43,236,000 shares of common stock, $0.00001 par value per share, as of August 7, 2012.

NOVELOS THERAPEUTICS, INC.

FORM 10-Q INDEX

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

NOVELOS THERAPEUTICS, INC.
(a Development Stage Company)
CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)

	June 30, 2012	December 31, 2011
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 7,146,400	$ 5,505,960
Restricted cash	55,000	55,000
Prepaid expenses and other current assets	138,990	254,967
Total current assets	7,340,390	5,815,927
FIXED ASSETS, NET	2,807,628	3,044,565
GOODWILL	1,675,462	1,675,462
OTHER ASSETS	27,222	27,222
TOTAL ASSETS	$ 11,850,702	$ 10,563,176
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable and accrued liabilities	$ 607,872	$ 478,041
Derivative liability	25,530	23,305
Capital lease obligations, current portion	2,315	2,235
Total current liabilities	635,717	503,581
LONG-TERM LIABILITIES:		
Notes payable, net of current portion	450,000	450,000
Deferred rent	130,355	124,381
Capital lease obligations, net of current portion	2,913	4,091
Total long-term liabilities	583,268	578,472
TOTAL LIABILITIES	1,218,985	1,082,053
COMMITMENTS AND CONTINGENCIES (Note 8)		
STOCKHOLDERS' EQUITY:		
Preferred stock, $0.00001 par value; 7,000 shares authorized; none issued and outstanding as of June 30, 2012 and December 31, 2011	—	—
Common stock, $0.00001 par value; 150,000,000 shares authorized; 43,186,000 and 36,907,824 shares issued and outstanding at June 30, 2012 and December 31, 2011, respectively	431	369
Additional paid-in capital	46,699,426	40,961,180
Deficit accumulated during the development stage	(36,068,140)	(31,480,426)
Total stockholders' equity	10,631,717	9,481,123
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 11,850,702	$ 10,563,176

The accompanying notes are an integral part of these financial statements.

NOVELOS THERAPEUTICS, INC.
(a Development Stage Company)
CONSOLIDATED STATEMENTS OF OPERATIONS
(UNAUDITED)

	Three Months Ended June 30,		Six Months Ended June 30,		Cumulative Development-Stage Period from November 7, 2002 (date of inception) through June 30,
	2012	2011	2012	2011	2012
COSTS AND EXPENSES:					
Research and development	$ 1,314,623	$ 961,953	$ 2,642,937	$ 1,433,356	$ 23,447,976
General and administrative	896,881	796,714	1,894,552	928,440	11,557,163
Merger costs	—	495,773	—	746,207	799,133
Total costs and expenses	2,211,504	2,254,440	4,537,489	3,108,003	35,804,272
LOSS FROM OPERATIONS	(2,211,504)	(2,254,440)	(4,537,489)	(3,108,003)	(35,804,272)
OTHER INCOME (EXPENSE):					
Grant income	—	—	—	44,479	244,479
Loss on derivative warrants	(17,234)	(70,393)	(46,080)	(70,393)	(58,238)
Interest expense, net	(2,073)	(270,378)	(4,145)	(426,546)	(451,270)
Other income	—	—	—	—	1,161
Total other expense, net	(19,307)	(340,771)	(50,225)	(452,460)	(263,868)
NET LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS	$ (2,230,811)	$ (2,595,211)	$ (4,587,714)	$ (3,560,463)	$ (36,068,140)
BASIC AND DILUTED NET LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS PER COMMON SHARE	$ (0.06)	$ (0.10)	$ (0.12)	$ (0.18)	$ (2.90)
SHARES USED IN COMPUTING BASIC AND DILUTED NET LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS PER COMMON SHARE	38,598,586	25,743,781	37,754,402	19,317,642	12,453,597

The accompanying notes are an integral part of these financial statements.

NOVELOS THERAPEUTICS, INC.
(a Development Stage Company)
CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	Six Months Ended June 30,		Cumulative Development-Stage Period from November 7, 2002 through
	2012	2011	June 30, 2012
Net loss	$ (4,587,714)	$ (3,560,463)	$ (36,068,140)
Adjustments to reconcile net loss to cash used in operating activities:			
Depreciation and amortization	266,077	290,739	2,682,115
Stock-based compensation	823,475	257,586	3,678,348
Intrinsic value of beneficial conversion feature associated with convertible debt	—	257,973	471,765
Issuance of stock for technology and services	—	—	89,520
Impairment of intangible assets	—	—	19,671
Loss on disposal of fixed assets	—	—	36,477
Loss on derivative warrants	46,080	70,393	58,238
Changes in:			
Prepaid expenses and other current assets	115,977	25,969	(122,820)
Accounts payable and accrued liabilities	129,831	(407,216)	227,743
Accrued interest	—	158,672	463,722
Deferred rent	5,974	3,132	130,355
Cash used in operating activities	(3,200,300)	(2,903,215)	(28,333,006)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Cash acquired in a business combination	—	905,649	905,649
Purchases of fixed assets	(29,140)	(23,069)	(5,515,732)
Proceeds from sale of fixed assets	—	—	7,000
Purchases of short-term certificates of deposit	—	—	(5,500,730)
Proceeds from short-term certificates of deposit	—	—	5,500,730
Change in restricted cash	—	500,000	(55,000)
Payment for intangible assets	—	—	(19,671)
Cash provided by (used in) investing activities	(29,140)	1,382,580	(4,677,754)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from issuance of convertible notes	—	—	2,720,985
Proceeds from long-term obligations	—	—	1,677,945
Payments on long-term obligations	—	(675,743)	(1,227,944)
Payments on capital lease obligations	(1,098)	(1,024)	(5,746)
Proceeds from issuance of common stock, net of issuance costs	4,870,978	4,866,406	36,745,232
Proceeds from exercise of warrant	—	—	250,000
Repurchase of common stock	—	—	(31,667)
Cash in lieu of fractional shares in a business combination	—	(145)	(145)
Change in deferred issuance costs	—	(29,200)	28,500
Cash provided by financing activities	4,869,880	4,160,294	40,157,160
INCREASE IN CASH AND EQUIVALENTS	1,640,440	2,639,659	7,146,400
CASH AND EQUIVALENTS AT BEGINNING OF PERIOD	5,505,960	673,739	—
CASH AND EQUIVALENTS AT END OF PERIOD	$ 7,146,400	$ 3,313,398	$ 7,146,400
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION			
Interest paid	$ —	$ 13,700	$ 208,689
Fair value of derivative warrants reclassified to equity upon cashless exercise	$ 43,855	$ 48,339	$ 92,186
Issuance of common stock in connection with the conversion of notes payable and $463,722 in accrued interest	$ —	$ 3,184,707	$ 3,184,707
Fair value of assets acquired in exchange for securities in a business combination	$ —	$ 78,408	$ 78,408
Fair value of liabilities assumed in exchange for securities in a business combination	$ —	$ (439,616)	$ (439,616)
Goodwill resulting from business combination	$ —	$ 1,675,462	$ 1,675,462

The accompanying notes are an integral part of these financial statements.

NOVELOS THERAPEUTICS, INC.
(a Development Stage Company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

1. NATURE OF BUSINESS, ORGANIZATION AND GOING CONCERN

Novelos Therapeutics, Inc. ("Novelos" or the "Company") is a pharmaceutical company developing novel compounds for the treatment and diagnosis of cancer. On April 8, 2011, Novelos completed a business combination with Cellectar, Inc. ("Cellectar"), a privately held Wisconsin corporation that designed and developed products to detect, treat and monitor a wide variety of human cancers, and Cell Acquisition Corp. (the "Merger Subsidiary"), a Wisconsin corporation and a wholly owned subsidiary of Novelos. Pursuant to the transaction Cellectar was merged into the Merger Subsidiary (the "Acquisition", see Note 3). References in these financial statements and notes to "Cellectar" relate to the activities and financial information of Cellectar prior to the Acquisition, references to "Novelos" relate to the activities and financial information of Novelos prior to the Acquisition and references to "the Company" or "we" or "us" or "our" relate to the activities and obligations of the combined Company following the Acquisition.

Immediately prior to the Acquisition, Novelos completed a 1-for-153 reverse split of its common stock. Novelos then issued to the shareholders of Cellectar at that date 17,001,596 shares of its common stock as consideration for the Acquisition, representing a ratio of 0.8435 shares of Novelos common stock in exchange for one share of Cellectar common stock (the "Exchange Ratio") as set forth in the Agreement and Plan of Merger (the "Merger Agreement") dated April 8, 2011. The shares issued to Cellectar shareholders in the Acquisition constituted approximately 85% of Novelos' outstanding common stock after giving effect to the Acquisition.

Accounting principles generally accepted in the United States require that a company whose security holders retain the majority voting interest in the combined business be treated as the acquirer for financial reporting purposes. Accordingly, the Acquisition was accounted for as a reverse acquisition whereby Cellectar, Inc. was treated as the acquirer for accounting and financial reporting purposes. On April 8, 2011, Cellectar was merged into the Merger Subsidiary a wholly owned subsidiary of Novelos; as such, the financial statements presented herein as of and for the three and six months ended June 30, 2012 include the consolidated results of the combined company from January 1, 2012 through June 30, 2012. The financial statements as of and for the three and six months ended June 30, 2011 include the historical results of Cellectar from January 1, 2011 through April 8, 2011, except for the capital structure which has been retroactively adjusted to reflect the legal capital structure of Novelos by applying the Exchange Ratio, and include the consolidated results of the combined company from April 9, 2011 through June 30, 2011. All per-share amounts and outstanding shares prior to the Acquisition, including all common stock equivalents, and stock options, have been retroactively restated in these financial statements and notes for all periods presented to reflect the capital structure of Novelos by applying the Exchange Ratio.

As a result of the Acquisition, the Company has implemented a revised business plan focused on the development of the Cellectar compounds. Development of Novelos' other compounds (NOV-002 and NOV-205) has been suspended. The Company conducts its operations from its headquarters in Madison, Wisconsin and the Company's executive offices are in Newton, Massachusetts.

The Company is subject to a number of risks similar to those of other small pharmaceutical companies. Principal among these risks are dependence on key individuals, competition from substitute products and larger companies, the successful development and marketing of its products in a highly regulated environment and the need to obtain additional financing necessary to fund future operations.

The accompanying financial statements have been prepared on a basis that assumes that the Company will continue as a going concern and that contemplates the continuity of operations, realization of assets and the satisfaction of liabilities and commitments in the normal course of business. The Company has incurred losses since inception in devoting substantially all of its efforts toward research and development and has an accumulated deficit of $36,068,140 at June 30, 2012. During the six months ended June 30, 2012, the Company generated a net loss of $4,587,714 and the Company expects that it will continue to generate operating losses for the foreseeable future. The Company believes that its cash on hand is adequate to fund operations into the second quarter of 2013. The Company's ability to execute its operating plan beyond that time depends on its ability to obtain additional funding via the sale of equity and/or debt securities, a strategic transaction or otherwise. The Company plans to continue to actively pursue financing alternatives, but there can be no assurance that it will obtain the necessary funding. The accompanying financial statements do not include any adjustments that might result from the outcome of this uncertainty.

The accompanying balance sheet as of December 31, 2011 has been derived from audited financial statements. The accompanying unaudited consolidated balance sheet as of June 30, 2012, the consolidated statements of operations for the three and six months ended June 30, 2012 and 2011 and the cumulative period November 7, 2002 (date of inception) through June 30, 2012, and the consolidated statements of cash flows for the three and six months ended June 30, 2012 and 2011 and the cumulative period November 7, 2002 (date of inception) through June 30, 2012 and the related interim information contained within the notes to the consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission ("SEC") for interim financial information. Accordingly, they do not include all of the information and the notes required by U.S. generally accepted accounting principles for complete financial statements. In the opinion of management, the unaudited interim consolidated financial statements reflect all adjustments, consisting of normal and recurring adjustments, necessary for the fair presentation of the Company's consolidated financial position at June 30, 2012 and consolidated results of its operations and its cash flows for the three and six months ended June 30, 2012 and 2011 and the period from November 7, 2002 (inception) to June 30, 2012. The results for the three and six months ended June 30, 2012 are not necessarily indicative of future results.

These unaudited consolidated financial statements should be read in conjunction with the audited financial statements and related notes thereto included in the Company's Form 10-K, which was filed with the SEC on March 9, 2012.

Goodwill — Intangible assets at June 30, 2012 consist of goodwill recorded in connection with the Acquisition. Goodwill is not amortized, but is required to be evaluated for impairment annually or whenever events or changes in circumstances suggest that the carrying value of an asset may not be recoverable. The Company evaluates goodwill for impairment annually in the fourth fiscal quarter and additionally on an interim basis if an event occurs or there is a change in circumstances, such as a decline in the Company's stock price or a material adverse change in the business climate, which would more likely than not reduce the fair value of the reporting unit below its carrying amount.

Stock-Based Compensation — The Company uses the Black-Scholes option-pricing model to calculate the grant-date fair value of stock option awards. The resulting compensation expense, net of expected forfeitures, for awards that are not performance-based is recognized on a straight-line basis over the service period of the award, which is generally three years for stock options. For stock options with performance-based vesting provisions, recognition of compensation expense, net of expected forfeitures, commences if and when the achievement of the performance criteria is deemed probable. The compensation expense, net of expected forfeitures, for performance-based stock options is recognized over the relevant performance period. Non-employee stock-based compensation is accounted for in accordance with the guidance of Topic 505, *Equity* of the Financial Accounting Standards Board Accounting Standards Codification ("FASB ASC"). As such, the Company recognizes expense based on the estimated fair value of options granted to non-employees over their vesting period, which is generally the period during which services are rendered and deemed completed by such non-employees.

Fair Value of Financial Instruments — The guidance under FASB ASC Topic 825, *Financial Instruments*, requires disclosure of the fair value of certain financial instruments. Financial instruments in the accompanying financial statements consist of cash equivalents, accounts payable and long-term obligations. The carrying amount of cash equivalents and accounts payable approximate their fair value due to their short-term nature. The carrying value of long-term obligations, including the current portion, approximates fair value because the fixed interest rate approximates current market interest rates available on similar instruments.

Derivative Instruments — The Company generally does not use derivative instruments to hedge exposures to cash flow or market risks. However, certain warrants to purchase common stock that do not meet the requirements for classification as equity, in accordance with the Derivatives and Hedging Topic of the FASB ASC, are classified as liabilities. In such instances, net-cash settlement is assumed for financial reporting purposes, even when the terms of the underlying contracts do not provide for a net-cash settlement. These warrants are considered derivative instruments because the agreements contain "down-round" provisions whereby the number of shares for which the warrants are exercisable and/or the exercise price of the warrants are subject to change in the event of certain issuances of stock at prices below the then-effective exercise price of the warrants. The number of shares issuable under such warrants was 27,310 at June 30, 2012. The primary underlying risk exposure pertaining to the warrants is the change in fair value of the underlying common stock. Such financial instruments are initially recorded at fair value with subsequent changes in fair value recorded as a component of gain or loss on derivatives on the consolidated statements of operations in each reporting period. If these instruments subsequently meet the requirements for equity classification, the Company reclassifies the fair value to equity. At June 30, 2012 and December 31, 2011, these warrants represented the only outstanding derivative instruments issued or held by the Company.

New Accounting Pronouncements — In May 2011, the FASB issued ASU No. 2011-04, *Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. Generally Accepted Accounting Principles ("GAAP") and International Financial Reporting Standards ("IFRSs").* This standard updates accounting guidance to clarify the measurement of fair value to align the guidance and improve the comparability surrounding fair value measurement within GAAP and IFRSs. The standard also updates requirements for measuring fair value and expands the required disclosures. The standard does not require additional fair value measurements and was not intended to establish valuation standards or affect valuation practices outside of financial reporting. The adoption of this standard on January 1, 2012 did not have a material impact on the Company's financial statements or required disclosures.

In September 2011, the FASB issued ASU No. 2011-08, *Intangibles – Goodwill and Other (Topic 350): Testing Goodwill for Impairment.* This standard simplifies how an entity tests goodwill for impairment and allows an entity to first assess qualitative factors in determining whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the two-step goodwill impairment test. This standard is effective for entities as of the beginning of a fiscal year that begins after December 15, 2011, interim and annual periods thereafter. Early adoption is permitted. The Company adopted the provisions of this standard on January 1, 2012. The adoption of this standard did not have a material impact on the Company's financial statements or required disclosures.

2. FAIR VALUE

In accordance with Fair Value Measurements and Disclosures Topic of the FASB ASC 820, the Company groups its financial assets and financial liabilities generally measured at fair value in three levels, based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value.

- Level 1: Input prices quoted in an active market for identical financial assets or liabilities.
- Level 2: Inputs other than prices quoted in Level 1, such as prices quoted for similar financial assets and liabilities in active markets, prices for identical assets and liabilities in markets that are not active or other inputs that are observable or can be corroborated by observable market data.
- Level 3: Input prices quoted that are significant to the fair value of the financial assets or liabilities which are not observable or supported by an active market.

Assets and liabilities measured at fair value on a recurring basis are summarized below:

	June 30, 2012			
	Level 1	**Level 2**	**Level 3**	**Fair Value**
Liabilities:				
Warrants	$ -	$ 25,530	$ -	$ 25,530

	December 31, 2011			
	Level 1	Level 2	Level 3	Fair Value
Liabilities:				
Warrants	$ -	$ 23,305	$ -	$ 23,305

The Company uses the Black-Scholes option pricing model and assumptions that consider, among other variables, the fair value of the underlying stock, risk-free interest rate, volatility, expected life and dividend rates in estimating fair value for the warrants considered to be derivative instruments. Assumptions used are generally consistent with those disclosed for stock-based compensation (see Note 5).

3. ACQUISITION

Merger Agreement

On April 8, 2011, Novelos acquired Cellectar through a merger with and into the Merger Subsidiary, pursuant to the Merger Agreement entered into on that date. As a result of the Acquisition, the Merger Subsidiary, which was renamed Cellectar, Inc., owns all assets of and operates the business previously owned and operated by Cellectar.

In the Acquisition, the former stockholders of Cellectar received an aggregate number of shares of Novelos common stock constituting approximately 85% of the outstanding shares of Novelos common stock, after giving effect to the Acquisition but before giving effect to the concurrent private placement of Novelos securities described below. Prior to the Acquisition, Novelos amended and restated its certificate of incorporation and in connection therewith, among other things, effected a 1-for-153 reverse split of its common stock resulting in 2,959,871 shares of Novelos common stock outstanding. Novelos then issued 17,001,596 shares of Novelos common stock to the stockholders of Cellectar upon the effective date of the Acquisition. Warrants and options to purchase Novelos common stock that were outstanding prior to the Acquisition remained outstanding following the Acquisition. These consisted of warrants to purchase a total of 315,164 shares of Novelos common stock with prices ranging from $16.07 to $191.25 and options to purchase a total of 49,159 shares of Novelos common stock with prices ranging from $1.53 to $1,072.53.

XMS Capital Partners, the financial advisor to Cellectar in connection with the Acquisition, received a cash fee of $200,000 upon the completion of the Acquisition in consideration of their services. Rodman & Renshaw, LLC (“Rodman”), financial advisor to Novelos in connection with the Acquisition, received a cash fee of $250,000 upon the completion of the Acquisition in consideration of their services. These amounts were recorded as merger costs and expensed as incurred on the date of the Acquisition. In addition to the investment banking fees, the Company also incurred an additional $250,434 of merger-related legal and other costs during the three months ended March 31, 2011 which were included as a component of expense in the respective period.

The Acquisition was completed principally to leverage synergies between Novelos’ strategic focus and experience in developing and funding the development of cancer drugs and Cellectar’s portfolio of cancer-targeted compounds.

Purchase Accounting

The Acquisition was accounted for using the purchase method of accounting as a reverse acquisition. In a reverse acquisition, the post-acquisition net assets of the surviving combined company includes the historical cost basis of the net assets of the accounting acquirer (Cellectar) plus the fair value of the net assets of the accounting acquiree (Novelos). Further, under the purchase method, the purchase price is allocated to the assets acquired, liabilities assumed and identifiable intangible assets based on their estimated fair values with the remaining excess purchase price over net assets acquired allocated to goodwill.

The fair value of the consideration transferred in the Acquisition was $2,219,903 and was calculated as the number of shares of common stock that Cellectar would have had to issue (adjusted for the Exchange Ratio) in order for Novelos shareholders to hold a 15% equity interest in the combined Company post-acquisition (but prior to the concurrent private placement), multiplied by the estimated fair value of the Company's common stock on the acquisition date. The estimated fair value of the Company's common stock was based on the offering price of the common stock sold in the private placement which was both completed concurrently with and conditioned upon the closing of the Acquisition. This price was determined to be the best indication of fair value on that date since the price was based on an arm's length negotiation with a group consisting of both new and existing investors that had been advised of the pending Acquisition and assumed similar liquidity risk as those investors holding the majority of shares being valued as purchase consideration.

The following table summarizes the Company's determination of fair values of the assets acquired and the liabilities as of the date of acquisition.

Consideration - issuance of securities	$ 2,219,903
Prepaid expenses and other assets	$ 71,892
Fixed assets	6,515
Accrued liabilities	(380,130)
Derivative liability	(59,485)
Goodwill	1,675,462
Total purchase price – net of cash acquired of $905,649	$ 1,314,254

The Company determined that the acquired Novelos legacy technology had no value as of the date of the acquisition.

Goodwill

Of the total purchase price of $2,219,903, $1,675,462 was allocated to goodwill. Goodwill represents the excess of the purchase price of an acquired business over the fair value of the underlying net tangible and intangible assets. The goodwill includes the value of the Novelos work force (management team). None of the goodwill associated with the Acquisition is deductible for income tax purposes.

The Company is required to perform an annual impairment test related to goodwill, which is performed in the fourth quarter of each year, or sooner if changes in circumstances suggest that the carrying value of an asset may not be recoverable. There were no changes in circumstances that would suggest that the goodwill is not recoverable. There were no changes in goodwill during the six months ended June 30, 2012.

4. STOCKHOLDERS' EQUITY

April 2011 Private Placement

Concurrently with and conditioned upon the execution of the Merger Agreement, the Company entered into a Securities Purchase Agreement with certain accredited investors under which the Company sold an aggregate of 6,846,537 units, each unit consisting of one share of its common stock and a warrant to purchase one share of its common stock, at a price of $0.75 per unit, for gross proceeds of approximately $5,135,000 (the "April Private Placement"). The warrants have an exercise price of $0.75 and expire on March 31, 2016. The warrant exercise price and/or the common stock issuable pursuant to such warrant are subject to adjustment only for stock dividends, stock splits or similar capital reorganizations so that the rights of the warrant holders after such event will be equivalent to the rights of warrant holders prior to such event. The relative fair value of the warrants issued to the investors was $2,124,286 at issuance and has been included as a component of stockholders' equity.

The Securities Purchase Agreement includes certain registration requirements which were subsequently extended by the consent of purchasers holding a majority of shares of the Company's common stock issued in the April Private Placement, which holders constituted the requisite holders, as defined. The Company was required to file with the SEC a registration statement covering the resale of the shares of common stock and the shares of common stock underlying the warrants issued pursuant to the Securities Purchase Agreement that are not otherwise saleable under an available exemption from registration requirements. The Company was also required to use commercially reasonable efforts to have the registration statement declared effective by July 28, 2012 and is required to keep the registration statement continuously effective under the Securities Act of 1933, as amended (the "Securities Act"), until the earlier of the date when all the registrable securities covered by the registration statement have been sold or such time as all the registrable securities covered by the registration statement can be sold under Rule 144 without any volume limitations. The Company filed a registration statement with the SEC on July 17, 2012 covering the resale of 4,000,000 shares of common stock pursuant to the registration requirements and this registration statement was declared effective on July 26, 2012.

The Company will be allowed to suspend the use of the registration statement for not more than 30 consecutive days on not more than two occasions in any 12-month period (the "Allowed Delay"). If the Company suspends the use of the registration for longer than the Allowed Delay, it may be required to pay to the purchasers liquidated damages equal to 1.5% per month (pro-rated on a daily basis for any period of less than a full month) of the aggregate purchase price of the units purchased until the use of the registration statement is no longer suspended, not to exceed 5% of the aggregate purchase price. The Company has also granted piggy-back registration rights with respect to any shares of common stock that it is required to exclude from the registration statement as a condition of its effectiveness, and has also agreed to file further registration statements with respect to any such shares six months after the effective date of the initial registration statement. As of June 30, 2012, and through the date of this filing, the Company has not concluded that it is probable that damages will become due; therefore, no accrual for damages has been recorded.

The Company paid to Rodman, the placement agent for the financing, a cash fee equal to $200,000 and issued warrants to purchase 192,931 shares of its common stock (having an exercise price of $0.75 and which expire March 31, 2016) in consideration for their advisory services with respect to the financing pursuant to the placement agency agreement between Rodman and the Company. The cash fee was recorded as a reduction of gross proceeds received. The estimated fair value of the warrants issued to the placement agent was $112,096 and was recorded as a component of stockholders' equity.

December 2011 Underwritten Offering

On December 6, 2011, the Company completed an underwritten public offering of 10,081,667 shares of its common stock and warrants to purchase up to an aggregate of 10,081,667 shares of its common stock at an exercise price of $0.60 per share, expiring on December 6, 2016, for gross proceeds of $6,049,000 and net proceeds of $5,298,140 after deducting transaction costs (the "Underwritten Offering"). The warrant exercise price and the common stock issuable pursuant to such warrant are subject to adjustment only for stock dividends, stock splits and similar capital reorganizations so that the rights of the warrant holders after such event will be equivalent to the rights of the warrant holders prior to such event. The relative fair value of the warrants issued to the investors was $2,350,320 at issuance and has been included as a component of stockholders' equity. In connection with the Underwritten Offering, the Company paid to Rodman, the underwriter, a cash fee of $302,000, which was recorded as a reduction of the gross proceeds received.

June 2012 Public Offering

On June 13, 2012, pursuant to securities purchase agreements entered into with investors on June 7, 2012, the Company completed a registered public offering of an aggregate of 5,420,800 shares of its common stock, warrants to purchase up to an aggregate of 5,420,800 at an exercise price of $1.00 per share, exercisable for 90 days from issuance, and warrants to purchase up to an aggregate of 2,710,400 shares of its common stock at an exercise price of $1.25 per share, exercisable for five years from issuance, for total gross proceeds of $5,420,800 and net proceeds of $4,870,978 after deducting transaction costs (the "June Offering"). The warrant exercise price and the common stock issuable pursuant to such warrants are subject to adjustment only for stock dividends, stock splits and similar capital reorganizations, in which event the rights of the warrant holders would be adjusted as necessary so that they would be equivalent to the rights of the warrant holders prior to such event. The relative fair value of the warrants issued to the investors was $1,994,631 at issuance and has been included as a component of stockholders' equity. In connection with the June Offering, the Company paid to Rodman, the placement agent, a cash fee of $379,456 and issued warrants to Rodman to purchase 271,040 shares of its common stock at an exercise price of $1.25 per share and an expiration date of June 13, 2017. The cash fee was recorded as a reduction of the gross proceeds received. The estimated fair value of the Rodman warrants issued to the placement agent was $255,703 and was recorded as a component of stockholders' equity.

Common Stock Warrants

The Company uses the Black-Scholes option pricing model to value warrants and applies assumptions that consider, among other variables, the fair value of the underlying stock, risk-free interest rate, volatility, expected life and dividend rates in estimating fair value for the warrants.

The following table summarizes information with regard to outstanding warrants to purchase common stock as of June 30, 2012.

Offering	Number of Shares Issuable Upon Exercise of Outstanding Warrants		Exercise Price	Expiration Date
June 2012 Public Offering	2,981,440	$	1.25	June 13, 2017
June 2012 Public Offering	5,420,800	$	1.00	September 11, 2012
December 2011 Underwritten Offering	9,248,334	$	0.60	December 6, 2016
April 2011 Private Placement	6,465,352	$	0.75	March 31, 2016
Legacy warrants (1)	27,310	$	0.60	July 27, 2015
Legacy warrants	105,040	$	16.065	July 27, 2015
Legacy warrants	91,524	$	99.45-100.98	December 31, 2015
Total	24,339,800			

(1) The exercise prices of these warrants are subject to adjustment for "down-rounds" and have been accounted for as derivative instruments as described in Note 2.

On March 28, 2012, the Company issued 10,285 shares of common stock in connection with the cashless exercise of warrants to purchase 27,310 shares of common stock. The warrants had an expiration date of July 27, 2015 and an exercise price of $0.60 per share. The Company reclassified $19,754 from the derivative liability to additional paid-in capital upon the exercise of the warrants.

On March 28, 2012, the Company issued 44,155 shares of common stock in connection with the cashless exercise of warrants to purchase 200,000 shares of common stock. The warrants had an expiration date of March 31, 2016 and an exercise price of $0.75 per share.

On April 26, 2012, the Company issued 582,981 shares of common stock in connection with the cashless exercise of warrants to purchase 833,333 shares of common stock. The warrants had an expiration date of December 6, 2016 and an exercise price of $0.60 per share.

On April 30, 2012, the Company issued 25,000 shares of common stock upon the cashless exercise of warrants to purchase 40,783 shares of common stock. The warrants had an expiration date of March 31, 2016 and an exercise price of $0.75 per share.

On May 3, 2012, the Company issued 181,745 shares of common stock upon the cashless exercise of warrants to purchase 333,333 shares of common stock. The warrants had an expiration date of March 31, 2016 and an exercise price of $0.75 per share.

On May 18, 2012, the Company issued 13,210 shares of common stock upon the cashless exercise of warrants to purchase 23,109 shares of common stock. The warrants had an expiration date of July 27, 2015 and an exercise price of $0.60 per share. The Company reclassified $24,101 from the derivative liability to additional paid-in capital upon the exercise of the warrants.

On May 7, 2012, warrants to purchase 8,561 shares of common stock at $191.25 per share expired unexercised.

5. STOCK-BASED COMPENSATION

Accounting for Stock-Based Compensation

The Company uses the Black-Scholes option-pricing model to calculate the grant-date fair value of stock option awards. The resulting compensation expense, net of expected forfeitures, for non-performance based awards is recognized on a straight-line basis over the service period of the award, which is generally three years for stock options. For stock options with performance-based vesting provisions, recognition of compensation expense, net of expected forfeitures, commences if and when the achievement of the performance criteria is deemed probable. The compensation expense, net of expected forfeitures, for performance-based stock options is recognized over the relevant performance period. Evaluation of the probability of meeting performance targets is evaluated at the end of each reporting period. Non-employee stock-based compensation is accounted for in accordance with the guidance of FASB ASC Topic 505, *Equity.* As such, the Company recognizes expense based on the estimated fair value of options granted to non-employees over their vesting period, which is generally the period during which services are rendered and deemed completed by such non-employees.

The following table summarizes amounts charged to expense for stock-based compensation related to employee and director stock option grants and stock-based compensation recorded in connection with stock options granted to non-employee consultants:

	Three Months Ended June 30,		Six Months Ended June 30,		Cumulative Development Stage Period from November 7, 2002 through June 30,
	2012	2011	2012	2011	2012
Employee and director stock option grants:					
Research and development	$ 78,145	$ 31,465	$ 156,189	$ 54,991	$ 644,747
General and administrative	249,278	101,519	498,246	136,455	2,646,433
	327,423	132,984	654,435	191,446	3,291,180
Non-employee consultant stock option grants:					
Research and development	34,355	17,287	81,369	17,287	117,526
General and administrative	44,344	48,853	87,671	48,853	269,642
	78,699	66,140	169,040	66,140	387,168
Total stock-based compensation	$ 406,122	$ 199,124	$ 823,475	$ 257,586	$ 3,678,348

During 2011, the Company granted options to purchase 670,200 shares of common stock that vest based upon the achievement of performance-based milestones. As of June 30, 2012, 335,100 of these performance-based awards remain outstanding. No compensation expense has been recognized related to the performance-based awards as the Company does not believe that it is probable that the performance targets will be met.

The following table summarizes weighted-average values and assumptions used for options granted to employees, directors and consultants in the periods indicated:

	Three and Six Months Ended June 30, 2011
Volatility	110%
Risk-free interest rate	1.84% – 3.17%
Expected life (years)	5.5 – 6.25
Dividend	0%
Weighted-average exercise price	$ 1.45
Weighted-average grant-date fair value	$ 1.22

No stock option awards were granted in the three or six months ended June 30, 2012.

Stock Option Activity

A summary of stock option activity under stock option plans is as follows:

	Number of Shares Issuable Upon Exercise of Outstanding Options	Weighted Average Exercise Price	Weighted Average Remaining Contracted Term in Years	Aggregate Intrinsic Value
Outstanding at December 31, 2011	4,827,638	$ 1.82		
Granted	—			
Canceled	—			
Outstanding at March 31, 2012	4,827,638	$ 1.82		
Granted	—			
Canceled	—			
Outstanding at June 30, 2012	4,827,638	$ 1.82		
Vested, June 30, 2012	1,555,462	$ 3.37	8.91	$ 212,560
Unvested, June 30, 2012	3,272,176	$ 1.09	9.10	$ 877,714
Exercisable at June 30, 2012	1,555,462	$ 3.37	8.91	$ 212,560

The aggregate intrinsic value of options outstanding is calculated based on the positive difference between the estimated per-share fair value of common stock at the end of the respective period and the exercise price of the underlying options. There have been no option exercises to date. Shares of common stock issued upon the exercise of options are from authorized but unissued shares.

As of June 30, 2012, there was $2,339,338 of total unrecognized compensation cost related to unvested stock-based compensation arrangements. Of this total amount, the Company expects to recognize $674,332, $1,049,586, $509,152 and $106,268 during 2012, 2013, 2014 and 2015, respectively. The Company expects 2,937,076 in unvested options, excluding performance-based awards, to vest in the future. The weighted-average grant-date fair value of vested and unvested options outstanding at June 30, 2012 was $1.08 and $0.88, respectively.

6. INCOME TAXES

The Company accounts for income taxes in accordance with the liability method of accounting. Under this guidance, deferred tax assets or liabilities are computed based on the difference between the financial statement and income tax basis of assets and liabilities, and net operating loss carryforwards, using the enacted tax rates. Deferred income tax expense or benefit is based on changes in the asset or liability from period to period. The Company did not record a provision or benefit for federal, state or foreign income taxes for the three or six months ended June 30, 2012 or 2011 because the Company has experienced losses on a tax basis since inception. Because of the limited operating history, continuing losses and uncertainty associated with the utilization of the NOLs in the future, management has provided a full allowance against the value of its gross deferred tax asset.

The Company also accounts for the uncertainty in income taxes related to the recognition and measurement of a tax position taken or expected to be taken in an income tax return. The Company follows the applicable accounting guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition related to the uncertainty in income tax positions. No uncertain tax positions have been identified.

7. NET LOSS PER SHARE

Basic net loss per share is computed by dividing net loss by the weighted average number of shares of common stock outstanding during the period. Diluted net loss per share is computed by dividing net loss, as adjusted, by the sum of the weighted average number of shares of common stock and the dilutive potential common stock equivalents then outstanding. Potential common stock equivalents consist of stock options and convertible debt. Since there is a net loss attributable to common stockholders for the three and six months ended June 30, 2012 and 2011, the inclusion of common stock equivalents in the computation for those periods would be antidilutive. Accordingly, basic and diluted net loss per share is the same for all periods presented.

The following potentially dilutive securities have been excluded from the computation of diluted net loss per share since their inclusion would be antidilutive:

	Three Months Ended June 30,		Six Months Ended June 30,		Cumulative Development-Stage Period from November 7, 2002 (inception) through June 30,
	2012	2011	2012	2011	2012
Warrants	24,339,800	7,327,322	24,339,800	7,327,322	24,339,800
Stock options	4,827,638	3,632,638	4,827,638	3,632,638	4,827,638

8. CONTINGENCIES

Litigation

Following the Acquisition, the Company is party to certain legal matters that existed with Novelos prior to the Acquisition. The following summarizes the status of those matters.

Class Action

A putative federal securities class action complaint was filed on March 5, 2010 in the United States District Court for the District of Massachusetts by an alleged shareholder of Novelos, on behalf of himself and all others who purchased or otherwise acquired Novelos common stock in the period between December 14, 2009 and February 24, 2010, against Novelos and its President and Chief Executive Officer, Harry S. Palmin. On October 1, 2010, the court appointed lead plaintiffs (Boris Urman and Ramona McDonald) and appointed lead plaintiffs' counsel. On October 22, 2010, an amended complaint was filed. The amended complaint claims, among other things, that Novelos violated Section 10(b) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 promulgated thereunder in connection with alleged misleading disclosures related to the progress of the Phase 3 clinical trial of NOV-002 for non-small cell lung cancer. On December 6, 2010, the defendants filed a motion to dismiss the complaint with prejudice. On January 20, 2011, the plaintiffs filed their opposition to our motion and on March 3, 2011, the defendants filed their response to the opposition. On June 23, 2011, the motion to dismiss was granted and the case was dismissed without prejudice. Because the dismissal was without prejudice, the plaintiffs could reinstitute the proceeding by filing an amended complaint. On August 5, 2011, the plaintiffs filed a second amended complaint realleging that the defendants violated Section 10(b) of the Exchange Act and Rule 10b-5 in connection with alleged misleading disclosures related to the Phase 3 clinical trial for NOV-002 in non-small cell lung cancer. On September 9, 2011, the defendants filed a motion to dismiss the second amended complaint. The plaintiffs' opposition to the motion was filed on October 14, 2011 and the defendants filed a reply brief on November 4, 2011. The Company and Mr. Palmin believe the allegations are without merit and intend to continue to vigorously defend against them. On June 11, 2012, the second amended complaint was dismissed with prejudice. The plaintiffs did not file a notice of appeal prior to the expiration of the deadline for such filing on July 13, 2012.

BAM Dispute

On June 28, 2010, Novelos received a letter from counsel to ZAO BAM and ZAO BAM Research Laboratories (Russian companies, collectively referred to as "BAM") alleging that it modified the chemical composition of NOV-002 without prior notice to or approval from BAM, constituting a material breach of a technology and assignment agreement Novelos had entered into with BAM on June 20, 2000 (the "June 2000 Agreement"). The letter references the amendment, submitted to the FDA on August 30, 2005, to Novelos' investigational new drug application dated August 1999 as the basis for BAM's claims and demands the transfer of all intellectual property rights concerning NOV-002 to BAM. Mark Balazovsky, a director of Novelos from June 1996 until November 2006 and a shareholder of Novelos through at least June 25, 2010, is, to our knowledge, still the general director and principal shareholder of ZAO BAM. On September 24, 2010, Novelos filed a complaint in Suffolk Superior Court seeking a declaratory judgment by the court that the June 2000 Agreement has been replaced by a subsequent agreement between the parties dated April 1, 2005 (the "April 2005 Agreement"), that Novelos' obligations to BAM are governed solely by the April 2005 Agreement and that the obligations of the June 2000 agreement have been performed and fully satisfied. On November 29, 2010, BAM answered the complaint, denying the material allegations, and stating its affirmative defenses and certain counterclaims. On January 14, 2011, Novelos responded to the counterclaims, denying BAM's material allegations and stating its affirmative defenses. On June 9, 2011, BAM filed an amended counterclaim alleging additional claims related to Novelos' acquisition of Cellectar. In that amended counterclaim, BAM alleges that the acquisition evidences Novelos' abandonment of the technology assigned to it by BAM constituting a breach of the June 2000 Agreement or, if that agreement is determined to no longer be in effect, a breach of the April 2005 Agreement and/or a breach of the implied duty of good faith and fair dealing with respect to the April 2005 Agreement. On June 15, 2011 the Company filed its response to their amended counterclaim. On August 5, 2011, the Company filed a motion for judgment on the pleadings as to its declaratory judgment count and all counts of BAM's amended counterclaim. The motion was opposed by BAM and a hearing on the motion was held on September 27, 2011. On October 17, 2011, the court ruled on the Company's behalf for each of its declaratory judgment claims and dismissed all counts of BAM's counterclaim. Judgment in favor of the Company was entered on October 20, 2011. On November 14, 2011, BAM filed a notice of appeal.

We do not anticipate that these litigation contingencies will have a material impact on the Company's future financial position, results of operations or cash flows.

9. RELATED PARTY TRANSACTIONS

Jamey Weichert, the Company's Chief Scientific Officer and principal founder of Cellectar, and a director and shareholder of the Company, is a faculty member at the University of Wisconsin-Madison ("UW"). During the three and six months ended June 30, 2012, the Company made contributions to UW totaling $62,500 and $144,000 for use towards unrestricted research activities and paid UW $51,290 and $144,044 for costs associated with clinical trial and other research agreements. The Company made contributions to the UW of $62,500 during the three and six months ended June 30, 2011.

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

Forward-Looking Statements

This quarterly report on Form 10-Q includes forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, which we refer to as the Exchange Act. For this purpose, any statements contained herein regarding our strategy, future operations, financial position, future revenues, projected costs, prospects, plans and objectives of management, other than statements of historical facts, are forward-looking statements. The words "anticipates," "believes," "estimates," "expects," "intends," "may," "plans," "projects," "will," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We cannot guarantee that we actually will achieve the plans, intentions or expectations disclosed in our forward-looking statements. There are a number of important factors that could cause actual results or events to differ materially from those disclosed in the forward-looking statements we make. These important factors include our significant accounting estimates, such as those for amounts due to clinical research organizations, and clinical investigators and the risk factors set forth below under the caption "Risk Factors". Although we may elect to update forward-looking statements in the future, we specifically disclaim any obligation to do so, even if our estimates change, and readers should not rely on those forward-looking statements as representing our views as of any date subsequent to the date of this quarterly report.

Acquisition

On April 8, 2011, we completed the Acquisition. Immediately prior to the Acquisition, we completed a 1-for-153 reverse split of our common stock. We then issued 17,001,596 shares of our common stock to the former shareholders of Cellectar as consideration for the Acquisition, constituting approximately 85% of our outstanding common stock after giving effect to the Acquisition. Upon the closing of the Acquisition, we completed the private placement of 6,846,537 shares of our common stock and warrants to purchase an additional 6,846,537 shares of our common stock. The Acquisition was accounted for as a reverse acquisition whereby Cellectar, Inc. was treated as the acquirer for accounting and financial reporting purposes. As such, references to the results of operations prior to April 8, 2011 represent the historical results of Cellectar. References to the results of operations subsequent to April 8, 2011 include the consolidated results of the combined company.

As a result of the Acquisition, we have implemented a revised business plan focused on the development of the Cellectar compounds. We conduct our operations from Cellectar's headquarters in Madison, WI and our executive offices are in Newton, MA. Further development of our other compounds (NOV-002 and NOV-205) has been suspended.

Overview

We are a pharmaceutical company developing novel drugs for the treatment and diagnosis of cancer. We believe our three cancer-targeted compounds are selectively taken up and retained in cancer cells, including cancer stem cells, versus normal cells. Thus, our therapeutic compounds appear to directly kill cancer cells while minimizing harm to normal cells. This offers the potential for a paradigm shift in cancer therapy by providing efficacy versus all three major drivers of mortality in cancer: primary tumors, metastases and stem cell-based relapse. I-124-CLR1404 (LIGHT) is a small-molecule cancer-targeted positron emission tomography (PET) imaging agent. We believe LIGHT has first-in-class potential and Phase 1-2 clinical trials are ongoing. I-131-CLR1404 (HOT) is a small-molecule, broad-spectrum, cancer-targeted molecular radiotherapeutic that delivers cytotoxic (cell killing) radiation directly and selectively to cancer cells and cancer stem cells. We believe HOT also has first-in-class potential. HOT Phase 1b dose-escalation trial is ongoing and, subject to our obtaining additional funding, we expect HOT to enter Phase 2 trials in the third quarter of 2013, as a monotherapy for solid tumors with significant unmet medical need. CLR1404 (COLD), a pre-clinical cancer-targeted non-radioactive chemotherapy, works primarily through Akt (a serine/threonine protein kinase) inhibition. Together, we believe our compounds are able to "find, treat and follow" cancer anywhere in the body in a novel, effective and highly selective way.

LIGHT is a small-molecule imaging agent that we believe has first-in-class potential for selective detection of tumors and metastases in a broad range of cancers. LIGHT is comprised of a small, non-pharmacological quantity of CLR1404 (COLD, acting as a cancer-targeted delivery and retention vehicle) labeled with the short-lived radioisotope, iodine-124, a new PET imaging isotope. PET imaging used in conjunction with CT scanning has now become the imaging method of choice in oncology. In studies to date, LIGHT selectively illuminated malignant tumors in 52 of 54 animal models of cancer, demonstrating evidence of broad-spectrum, cancer-selective uptake and retention. Investigator-sponsored Phase 1-2 trials of LIGHT as a PET imaging agent are ongoing at the University of Wisconsin. The trials include lung cancer, brain cancer and, starting in the third quarter of 2012, other solid tumors. These human trials, if successful, would likely provide proof-of-concept for LIGHT itself as a PET imaging agent with the potential to supplant the current "gold standard" agent, 18-fluoro-deoxyglucose (FDG), due to what we believe to be LIGHT's superior cancer-specificity and more favorable logistics of clinical use. Also, tumor uptake data would likely accelerate clinical development of HOT by predicting efficacy and enabling calculation of efficacious doses of HOT for Phase 2 trials.

HOT (iodine-131 radiolabeled CLR1404) is a small-molecule, broad-spectrum, cancer-targeted molecular radiotherapeutic that we believe has first-in-class potential. HOT is comprised of a small, non-pharmacological quantity of CLR1404 (COLD) acting as a cancer-targeted delivery and retention vehicle and incorporating a cytotoxic dose of radiotherapy (in the form of iodine-131, a radioisotope that is already in common use to treat thyroid and other cancer types). It is this "intracellular radiation" mechanism of cancer cell killing, coupled with selective delivery to a wide range of malignant tumor types that we believe imbues HOT with broad-spectrum anti-cancer activity. Selective uptake and retention has also been demonstrated in cancer stem cells compared with normal stem cells, offering the prospect of longer-lasting cancer remission. In 2009 we filed an IND with the FDA to study HOT in humans. In early 2010 we successfully completed a Phase 1a dosimetry trial demonstrating initial safety, tumor imaging and pharmacokinetic consistency and establishing a starting dose for a Phase 1b dose-escalation trial. Radiation dosimetry measures how much radiation is absorbed by tumors and body organs in order to optimize delivery of radiation therapy. The ongoing Phase 1b dose-escalation trial is aimed at determining the Maximum Tolerated Dose of HOT. We expect to initiate HOT Phase 2 efficacy trials as a monotherapy for solid tumors with significant unmet medical need as soon as a minimal efficacious dose is established, in the event that we obtain the additional funding necessary for that purpose. We may determine such an effective dose upon seeing a tumor response in the Phase 1b trial or calculating it from ongoing PET imaging trials in cancer patients with LIGHT (since PET imaging is quantitative, enabling determination of tumor radiation exposure at a given dose level). Preclinical *in vitro* (in cell culture) and *in vivo* (in animals) experiments have demonstrated selective killing of cancer cells along with a benign safety profile. HOT's anti-tumor/survival-prolonging activities have been demonstrated in more than a dozen xenograft models (human tumor cells implanted into animals) including breast, prostate, lung, glioma (brain), pancreatic, ovarian, uterine, renal and colorectal cancers and melanoma. In all but two models, a single administration of a well-tolerated dose of HOT was sufficient to demonstrate efficacy. In view of HOT's selective uptake and retention in a wide range of solid tumors and in cancer stem cells, its single-agent efficacy in xenograft models and its non-specific mechanism of cancer-killing (radiation), we expect first to develop HOT as a monotherapy, initially for solid tumors.

COLD is a cancer-targeted chemotherapy that, in pre-clinical experiments, has been observed to inhibit the phosphatidylinosotol 3-kinase (PI3K)/Akt survival pathway, which is overexpressed in many types of cancer. As a result, in such pre-clinical experiments COLD has been observed to selectively inhibit Akt activity, induce apoptosis (programmed cell death) through caspase activation and inhibit cell proliferation in cancer cells versus normal cells. COLD also exhibits significant *in vivo* efficacy in mouse xenograft tumor models, including non-small cell lung cancer and triple-negative breast cancers, producing long-lasting tumor growth suppression and significantly increased survival. We believe COLD has the potential to be best-in-class versus other Akt inhibitors in development due to (a) cancer cell/cancer stem cell targeting, resulting in cancer-selective inhibition of Akt and cell proliferation or (b) suitability for intravenous administration that we believe offers the prospect of greater systemic exposure and hence Akt inhibition in cancer cells, which we believe would result in superior efficacy.

Prior to the Acquisition, for more than 10 years Novelos had been developing oxidized glutathione-based compounds for the treatment of cancer, including NOV-002, an injectable small-molecule compound based on a proprietary formulation of oxidized glutathione that Novelos had been developing for use in combination with standard of care chemotherapies for the treatment of solid tumors. From 2005 through 2010 Novelos raised approximately $67 million in capital for the development of our compounds. From November 2006 through January 2010, Novelos conducted a Phase 3 trial of NOV-002 plus first-line chemotherapy in advanced non-small cell lung cancer which, when completed in February 2010, did not meet its primary and secondary efficacy endpoints. Following the completion of the Phase 3 trial during 2010, Novelos continued clinical development of NOV-002 in breast cancer and NOV-205 in hepatitis C, although further development of those compounds has been suspended. Novelos also explored strategic alternatives, which resulted in the completion of the Acquisition in April 2011.

Results of Operations

Executive summary. In March 2010, Cellectar completed a Phase 1a dosimetry trial of HOT in humans (the Phase 1a Trial), demonstrating initial safety and establishing dosing parameters for a Phase 1b dose-escalation trial. Following the completion of the Phase 1a Trial and as a result of limited funding, Cellectar suspended research and manufacturing activities, terminated certain non-key personnel and implemented salary reductions in an effort to contain costs while Cellectar concentrated on its fundraising efforts. The increases in research and development costs for the three and six months ended June 30, 2012 compared to the three and six months ended June 30, 2011are primarily attributable to the recommencement of research activities following the Acquisition. Following the Acquisition, we have resumed development activities including the commencement of clinical trials in HOT and LIGHT.

Research and development expense. Research and development expense consists of costs incurred in identifying, developing and testing and manufacturing product candidates, which primarily include salaries and related expenses for personnel, costs of our research and manufacturing facility, cost of manufacturing materials, fees paid to professional service providers for independent monitoring and analysis of our clinical trials, and costs to secure intellectual property. The Company analyzes its research and development expenses based on four categories as follows: clinical projects, preclinical projects, chemistry and manufacturing costs, and general fixed and overhead costs that are not allocated to the functional project costs, including personnel costs, manufacturing facility costs, related overhead costs and patent costs.

General and administrative expense. General and administrative expense consists primarily of salaries and other related costs for personnel in executive, finance and administrative functions. Other costs include insurance, costs for public and investor relations, directors' fees and professional fees for legal and accounting services.

Three Months Ended June 30, 2012 and 2011

Research and Development. Research and development expense for the three months ended June 30, 2012 was approximately $1,315,000 (comprised of $167,000 in clinical project costs, $92,000 of preclinical project costs, $170,000 of manufacturing and related costs and $886,000 in general unallocated research and development costs) compared to approximately $962,000 (comprised of $1,000 in clinical projects, $66,000 in preclinical projects, $47,000 in chemistry and manufacturing costs, and $848,000 in general unallocated research and development costs) for the three months ended June 30, 2011. The $353,000, or 37%, increase in research and development expense resulted from increases in all categories. The $166,000 increase in clinical projects and the $123,000 increase in chemistry, manufacturing and related costs in the three months ended June 30, 2012 versus 2011 were related to costs associated with the Phase 1-2 trials for LIGHT and the Phase 1b trial for HOT. The $26,000 increase in preclinical costs for the three months ended June 30, 2012 versus 2011 was related to consulting costs to support preclinical research efforts. The $38,000 increase in general unallocated research and development costs for the three months ended June 30, 2012 versus 2011 was primarily related to an approximately $64,000 increase in stock-based compensation resulting from stock options granted in December 2011 and an approximately $27,000 increase in patent costs offset by decreases in facilities and equipment maintenance costs and depreciation.

General and Administrative. General and administrative expense for the three months ended June 30, 2012 was approximately $897,000 compared to approximately $797,000 in the three months ended June 30, 2011. The approximately $100,000, or 13%, increase is related to an approximately $143,000 increase in stock-based compensation resulting from the recognition of compensation expense over the vesting periods of stock options granted in May and December 2011, an approximately $65,000 increase in salary and a $20,000 increase in accounting fees. These increases were partially offset by a decrease in legal fees.

Merger Costs. We did not incur any merger-related costs in the three months ended June 30, 2012. Merger costs during the three months ended June 30, 2011 consisted of $450,000 in investment banking fees, $36,000 in legal fees and $10,000 in insurance costs.

Loss on Derivative Warrants. We recorded a loss on derivative warrants of approximately $17,000 and approximately $70,000 in the three months ended June 30, 2012 and 2011, respectively. These amounts represent the change in fair value, during the respective period, of outstanding warrants which contain "down-round" anti-dilution provisions whereby the number of shares for which the warrants are exercisable and/or the exercise price of the warrants is subject to change in the event of certain issuances of stock at prices below the then-effective exercise prices of the warrants.

Interest expense, net. Interest expense, net for the three months ended June 30, 2012 and 2011 consists of the following:

	Three Months Ended June 30,	
	2012	2011
Interest expense, convertible notes	$ —	$ (13,000)
Beneficial conversion feature, convertible notes	—	(258,000)
Interest expense, bank note	(2,000)	(1,000)
Interest income	—	1,000
	$ (2,000)	$ (271,000)

Since the Convertible Notes were converted based on revised conversion terms that resulted in the issuance of an additional 343,963 shares of common stock than would have been issued if the Convertible Notes had been converted in accordance with their original terms, the value of these additional shares of approximately $258,000 was recorded as a component of interest expense in the quarter ended June 30, 2011. The decrease in interest expense on the convertible notes and bank note was a result of the settlement of those obligations in connection with the Acquisition.

Six Months Ended June 30, 2012 and 2011

Research and Development. Research and development expense for the six months ended June 30, 2012 was approximately $2,643,000 (comprised of $421,000 in clinical project costs, $162,000 of preclinical project costs, $232,000 of manufacturing and related costs and $1,828,000 in general unallocated research and development costs) compared to approximately $1,433,000 (comprised of $1,000 in clinical project costs, $68,000 of preclinical project costs, $50,000 of chemistry, manufacturing and related costs and $1,314,000 in general unallocated research and development costs) for the same period in 2011. The approximately $1,210,000, or 84%, increase in research and development expense occurred in several categories. The $420,000 increase in clinical projects in the six months ended June 30, 2012 versus the comparable period in 2011 is related to costs associated with the Phase 1-2 trials for LIGHT and the Phase 1b trial for HOT. The $94,000 increase in preclinical projects for the six months ended June 30, 2012 versus the same period in 2011 was related to contributions to the UW towards unrestricted research activities and increased consulting to support preclinical research activities. Manufacturing costs increased $182,000 primarily as a result of increased chemistry and manufacturing activities to support the clinical trials. General unallocated research and development costs increased approximately $514,000 primarily as a result of an approximately $217,000 increase in salary resulting from the addition of employees following the Acquisition and the removal of salary reductions that were in place in the first quarter of 2011 in order to conserve cash; an approximately $84,000 increase in stock-based compensation associated with the recognition of compensation expense over the vesting periods of stock option granted in May and December 2011; an approximately $84,000 increase in patent expenses; an approximately $13,000 increase in travel as well as increases in consulting and maintenance costs.

General and Administrative. General and administrative expense for the six months ended June 30, 2012 was approximately $1,895,000 compared to approximately $928,000 in the same period of 2011. The $967,000, or 104%, increase in general and administrative costs were primarily related to the following items: stock-based compensation increased approximately $313,000 resulting from the recognition of compensation expense over the vesting periods of stock option granted in May and December 2011; salary increased approximately $308,000 resulting from the addition of employees following the Acquisition and the removal of salary reductions that were in place in the first quarter of 2011 in order to conserve cash; the cost of subcontracted services increased by approximately $167,000 as a result of increased accounting fees, investor relations activities and costs associated with public company reporting. Insurance costs increased approximately $39,000, director's fees increased approximately $31,000, rent increased approximately $20,000 associated with the addition of the Massachusetts location and travel costs increased approximately $17,000 due principally to an increase in travel between our Massachusetts and Wisconsin offices.

Merger Costs. We did not incur any merger-related costs in the six months ended June 30, 2012. Merger costs during the six months ended June 30, 2011 consisted of $450,000 in investment banking fees, $286,000 in legal fees and $10,000 in insurance costs.

Grant income. Qualifying therapeutic discovery projects, among others, include those designed to treat or prevent diseases or conditions by conducting pre-clinical or clinical activities for the purpose of securing FDA approval of a product. We received payments of approximately $44,000 in the first six months of 2011 under a cash grant from the U.S. Internal Revenue Service as a qualifying therapeutic discovery project credit pursuant to Patient Protection and Affordable Care Act. The payments have been recorded as a component of other income. There were no such payments in 2012.

Loss on Derivative Warrants. We recorded losses on derivative warrants of approximately $46,000 and $70,000 in the six months ended June 30, 2012 and 2011, respectively. These amounts represent the change in fair value, during the respective period, of outstanding warrants which contain "down-round" anti-dilution provisions whereby the number of shares for which the warrants are exercisable and/or the exercise price of the warrants is subject to change in the event of certain issuances of stock at prices below the then-effective exercise prices of the warrants.

Interest expense, net. Interest expense, net for the six months ended June 30, 2012 and 2011 consists approximately of the following:

	Six Months Ended June 30,	
	2012	2011
Interest expense, convertible notes	$ —	$ (159,000)
Beneficial conversion feature, convertible notes	—	(258,000)
Interest expense, bank note	—	(6,000)
Interest expense, other	(4,000)	(7,000)
Interest income	—	3,000
	$ (4,000)	$ (427,000)

Since the Convertible Notes were converted based on revised conversion terms that resulted in the issuance of an additional 343,963 shares of common stock than would have been issued if the Convertible Notes had been converted in accordance with their original terms, the value of these additional shares of approximately $258,000 was recorded as a component of interest expense in the quarter ended June 30, 2011. The increase in interest expense on the convertible notes was a result of the increased effective interest rate in effect during the first three months of 2011 until the conversion that occurred on April 8, 2011. The decrease in interest expense on the convertible notes and bank note was a result of the settlement of those obligations in connection with the Acquisition.

Liquidity and Capital Resources

We have financed our operations since inception primarily through the sale of equity securities and securities convertible into equity securities. To date, Cellectar and Novelos have raised capital aggregating approximately $115 million. Novelos has raised capital aggregating approximately $88 million, including proceeds from the April 2011 private placement, the December 2011 underwritten offering and the June 2012 public offering. Since its inception and prior to the Acquisition, Cellectar had raised capital aggregating approximately $27 million. As of June 30, 2012, we had approximately $7,146,000 in cash and cash equivalents.

During the six months ended June 30, 2012, approximately $3,200,000 in cash was used in operations. During this period we reported a net loss of approximately $4,588,000. However, this loss included the following non-cash items: a $46,000 loss on derivative warrants, $823,000 in stock-based compensation, and $266,000 in depreciation and amortization expense. Changes in working capital provided cash of approximately $252,000.

During the six months ended June 30, 2012, we purchased approximately $29,000 of equipment.

In June 2012 we completed a public offering of our common stock and warrants for net proceeds of approximately $4,871,000.

The accompanying consolidated financial statements have been prepared on a basis that assumes that we will continue as a going concern and that contemplates the continuity of operations, realization of assets and the satisfaction of liabilities and commitments in the normal course of business. We have incurred losses since inception in devoting substantially all of our efforts toward research and development and had an accumulated deficit of $36,068,140 at June 30, 2012. During the six months ended June 30, 2012, we generated a net loss of $4,587,714 and we expect that we will continue to generate operating losses for the foreseeable future. At June 30, 2012, our cash balance was approximately $7,146,000. We believe our cash on hand is adequate to fund operations into the second quarter of 2013. Our ability to execute our operating plan beyond that time depends on our ability to obtain additional funding via the sale of equity and/or debt securities, a strategic transaction or otherwise. We plan to actively pursue these financing alternatives; however there can be no assurance that we will obtain the necessary funding in the amounts we seek to obtain. We have in the past successfully completed multiple rounds of financing but, due to market conditions and other factors, including our development stage, the proceeds we have been able to secure have been less than the amounts we initially sought to obtain. Other than the uncertainties regarding our ability to obtain additional funding, there are currently no known trends, demands, commitments, events or uncertainties that are likely to materially affect our liquidity.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2012. Disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, are controls and procedures that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that such information is accumulated and communicated to our management, including our principal executive and financial officers, to allow timely decisions regarding required disclosures.

Based on the evaluation of our disclosure controls and procedures as of June 30, 2012 our Chief Executive Officer and our Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were operating effectively.

Change in Internal Control over Financial Reporting

The Company's management, in connection with its evaluation of internal controls (with the participation of the Company's principal executive officer and principal financial officer), did not identify any change in internal control over the financial reporting process that occurred during the Company's second quarter of 2012 that would have materially affected, or would have been reasonably likely to materially affect, the Company's internal control over financial reporting.

Limitations on Effectiveness of Controls

In designing and evaluating our disclosure controls and procedures, our management recognizes that any system of controls, however well designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of the system are met. In addition, the design of any control system is based in part on certain assumptions about the likelihood of future events. Because of these and other inherent limitations of control systems, there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions, regardless of how remote.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

A putative federal securities class action complaint was filed on March 5, 2010 in the United States District Court for the District of Massachusetts by an alleged shareholder of Novelos, on behalf of himself and all others who purchased or otherwise acquired Novelos common stock in the period between December 14, 2009 and February 24, 2010, against Novelos and its President and Chief Executive Officer, Harry S. Palmin. On October 1, 2010, the court appointed lead plaintiffs (Boris Urman and Ramona McDonald) and appointed lead plaintiffs' counsel. On October 22, 2010, an amended complaint was filed. The amended complaint claims, among other things, that Novelos violated Section 10(b) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 promulgated thereunder in connection with alleged misleading disclosures related to the progress of the Phase 3 clinical trial of NOV-002 for non-small cell lung cancer. On December 6, 2010, the defendants filed a motion to dismiss the complaint with prejudice. On January 20, 2011, the plaintiffs filed their opposition to our motion and on March 3, 2011, the defendants filed their response to the opposition. On June 23, 2011, the motion to dismiss was granted and the case was dismissed without prejudice. Because the dismissal was without prejudice, the plaintiffs could reinstitute the proceeding by filing an amended complaint. On August 5, 2011, the plaintiffs filed a second amended complaint realleging that the defendants violated Section 10(b) of the Exchange Act and Rule 10b-5 in connection with alleged misleading disclosures related to the Phase 3 clinical trial for NOV-002 in non-small cell lung cancer. On September 9, 2011, the defendants filed a motion to dismiss the second amended complaint. The plaintiffs' opposition to the motion was filed on October 14, 2011 and the defendants filed a reply brief on November 4, 2011. The Company and Mr. Palmin believe the allegations are without merit and intend to continue to vigorously defend against them. On June 11, 2012, the second amended complaint was dismissed with prejudice. The plaintiffs did not file a notice of appeal prior to the expiration of the deadline for such filing on July 13, 2012.

On June 28, 2010, Novelos received a letter from counsel to ZAO BAM and ZAO BAM Research Laboratories (Russian companies, collectively referred to as "BAM") alleging that it modified the chemical composition of NOV-002 without prior notice to or approval from BAM, constituting a material breach of a technology and assignment agreement Novelos had entered into with BAM on June 20, 2000 (the "June 2000 Agreement"). The letter references the amendment, submitted to the FDA on August 30, 2005, to Novelos' investigational new drug application dated August 1999 as the basis for BAM's claims and demands the transfer of all intellectual property rights concerning NOV-002 to BAM. Mark Balazovsky, a director of Novelos from June 1996 until November 2006 and a shareholder of Novelos through at least June 25, 2010, is, to our knowledge, still the general director and principal shareholder of ZAO BAM. On September 24, 2010, Novelos filed a complaint in Suffolk Superior Court seeking a declaratory judgment by the court that the June 2000 Agreement has been replaced by a subsequent agreement between the parties dated April 1, 2005 (the "April 2005 Agreement"), that Novelos' obligations to BAM are governed solely by the April 2005 Agreement and that the obligations of the June 2000 agreement have been performed and fully satisfied. On November 29, 2010, BAM answered the complaint, denying the material allegations, and stating its affirmative defenses and certain counterclaims. On January 14, 2011, Novelos responded to the counterclaims, denying BAM's material allegations and stating its affirmative defenses. On June 9, 2011, BAM filed an amended counterclaim alleging additional claims related to Novelos' acquisition of Cellectar. In that amended counterclaim, BAM alleges that the acquisition evidences Novelos' abandonment of the technology assigned to it by BAM constituting a breach of the June 2000 Agreement or, if that agreement is determined to no longer be in effect, a breach of the April 2005 Agreement and/or a breach of the implied duty of good faith and fair dealing with respect to the April 2005 Agreement. On June 15, 2011 the Company filed its response to their amended counterclaim. On August 5, 2011, the Company filed a motion for judgment on the pleadings as to its declaratory judgment count and all counts of BAM's amended counterclaim. The motion was opposed by BAM and a hearing on the motion was held on September 27, 2011. On October 17, 2011, the court ruled on the Company's behalf for each of its declaratory judgment claims and dismissed all counts of BAM's counterclaim. Judgment in favor of the Company was entered on October 20, 2011. On November 14, 2011, BAM filed a notice of appeal.

Item 1A. Risk Factors

We will require additional capital in order to continue our operations, and may have difficulty raising additional capital.

We expect that we will continue to generate significant operating losses for the foreseeable future. At June 30, 2012, our consolidated cash balance was approximately $7,146,000. We believe our cash on hand is adequate to fund operations into the second quarter of 2013. We will require additional funds to conduct research and development, establish and conduct pre-clinical and clinical trials, establish commercial-scale manufacturing arrangements and provide for the marketing and distribution of our products. Our ability to execute our operating plan depends on our ability to obtain additional funding via the sale of equity and/or debt securities, a strategic transaction or otherwise. We plan to actively pursue financing alternatives. However, there can be no assurance that we will obtain the necessary funding in the amounts we seek or that it will be available on a timely basis or upon terms acceptable to us. If we obtain capital by issuing debt or preferred stock, the holders of such securities would likely obtain rights that are superior to those of holders of our common stock.

Our capital requirements and our ability to meet them depend on many factors, including:

- the number of potential products and technologies in development;
- continued progress and cost of our research and development programs;
- progress with pre-clinical studies and clinical trials;
- the time and costs involved in obtaining regulatory clearance;
- costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims;
- costs of developing sales, marketing and distribution channels and our ability to sell our products;
- costs involved in establishing manufacturing capabilities for clinical trial and commercial quantities of our products;
- competing technological and market developments;
- market acceptance of our products;
- costs for recruiting and retaining management, employees and consultants;
- costs for educating physicians regarding the application and use of our products;
- whether or not we obtain listing on a national exchange and, if not, our prospects for obtaining such listing;
- uncertainty and economic instability resulting from terrorist acts and other acts of violence or war; and
- the condition of capital markets and the economy generally, both in the U.S. and globally.

We may consume available resources more rapidly than currently anticipated, which would result in the need for additional funding sooner than expected. We may seek to raise any necessary additional funds through the issuance of warrants, equity or debt financings or executing collaborative arrangements with corporate partners or other sources, which may be dilutive to existing stockholders or have a material effect on our current or future business prospects. In addition, in the event that additional funds are obtained through arrangements with collaborative partners or other sources, we may have to relinquish economic and/or proprietary rights to some of our technologies or products under development that we would otherwise seek to develop or commercialize by ourselves. If we cannot secure adequate financing when needed, we may be required to delay, scale back or eliminate one or more of our research and development programs or to enter into license or other arrangements with third parties to commercialize products or technologies that we would otherwise seek to develop ourselves or commercialize ourselves. In such event, our business, prospects, financial condition, and results of operations may be adversely affected.

We are a development stage company with a history of losses and can provide no assurance of our future operating results.

We are a development stage company and have incurred net losses and negative cash flows since inception. We currently have no product revenues and may not succeed in developing or commercializing any products that generate product or licensing revenues. We do not expect to have any products on the market for several years. Our primary activity to date has been research and development. In addition, development of our product candidates requires a process of pre-clinical and clinical testing, during which our product candidates could fail. We may not be able to enter into agreements with one or more companies experienced in the manufacturing and marketing of therapeutic drugs and, to the extent that we are unable to do so, we will not be able to market our product candidates. Whether we achieve profitability will depend on our success in developing, manufacturing, and marketing our product candidates. We have experienced net losses and negative cash flows from operating activities since inception and we expect such losses and negative cash flows to continue in the foreseeable future. For the period from Cellectar's inception in November 2002 until the business combination with Novelos on April 8, 2011, and thereafter through June 30, 2012, Cellectar (and, from and after the business combination, the Company) incurred aggregated net losses of $36,068,140. Net loss for the six months ended June 30, 2012 was $4,587,714. We may never achieve profitability.

We could suffer monetary damages or incur substantial costs in the event of future legal proceedings.

Because of the nature of our business and our status as a public company, we have been in the past and may be in the future subject to commercial disputes and various other lawsuits arising in the ordinary course of our business, including infringement and other licensing and intellectual property claims, employment matters or investor matters. Any future lawsuits may seek damages, including claims for punitive or other special damages, sometimes in substantial amounts. An adverse ruling or rulings in one or more such lawsuits could, individually or in the aggregate, substantially harm our business. In addition, even if we are successful in defending any such claims, as we have been in the past, such defense could result in substantial costs and divert the attention of management.

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

On May 18, 2012, we issued 13,210 shares of common stock upon the cashless exercise of warrants to purchase 23,109 shares of common stock. The warrants had an expiration date of July 27, 2015 and an exercise price of $0.60 per share.

On May 3, 2012, we issued 181,745 shares of common stock upon the cashless exercise of warrants to purchase 333,333 shares of common stock. The warrants had an expiration date of March 31, 2016 and an exercise price of $0.75 per share.

On April 30, 2012, we issued 25,000 shares of common stock upon the cashless exercise of warrants to purchase 40,783 shares of common stock. The warrants had an expiration date of March 31, 2016 and an exercise price of $0.75 per share.

On April 26, 2012, we issued 582,981 shares of common stock upon the cashless exercise of warrants to purchase 833,333 shares of common stock. The warrants had an expiration date of December 6, 2016 and an exercise price of $0.60 per share.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosure

None

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit No.	Description	Filed with this Form 10-K	Incorporation by Reference		
			Form	Filing Date	Exhibit No.
2.1	Agreement and Plan of Merger by and among Novelos Therapeutics, Inc., Cell Acquisition Corp. and Cellectar, Inc. dated April 8, 2011		8-K	April 11, 2011	2.1
3.1	Second Amended and Restated Certificate of Incorporation		8-K	April 11, 2011	3.1
3.2	Amended and Restated By-laws		8-K	June 1, 2011	3.1
4.1	Form of common stock certificate		S-1/A	November 9, 2011	4.1
10.31	Placement Agent Agreement dated April 9, 2012 between the Company and Rodman and Renshaw LLC		S-1	April 9, 2012	10.31
10.32	Form of Securities Purchase Agreement dated June 7, 2012		8-K	June 11, 2012	10.1
10.33	Amendment Agreement dated May 11, 2012 between the Company and Rodman and Renshaw LLC		S-1/A	May 14, 2012	10.33
10.34	Form of Common Stock Purchase Warrant dated June 13, 2012		8-K	June 11, 2012	4.1
31.1	Certification of chief executive officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
31.2	Certification of chief financial officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
32.1	Certification of chief executive officer and chief financial officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X			
101	Interactive Data Files	X			