Filed pursuant to Rule 424(b)(3)
File No. 333-161922

Prospectus Supplement No. 4
(To Prospectus dated May 3, 2010)

NOVELOS THERAPEUTICS, INC.

15,601,703 shares of common stock

This prospectus supplement supplements the Prospectus dated May 3, 2010, relating to the resale of 15,601,703 shares of our common stock. This prospectus supplement should be read in conjunction with the Prospectus.

Quarterly Report on Form 10-Q

On August 13, 2010, we filed with the Securities and Exchange Commission our Quarterly Report on Form 10-Q for the quarter ended June 30, 2010. 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 7 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 13, 2010

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, 2010

☐ 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: 111,931,182 shares of common stock, $0.00001 par value per share, as of August 11, 2010.

NOVELOS THERAPEUTICS, INC.

FORM 10-Q INDEX

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

NOVELOS THERAPEUTICS, INC.
BALANCE SHEETS

	June 30, 2010 (unaudited)	December 31, 2009
ASSETS		
CURRENT ASSETS:		
Cash and equivalents	$ 3,394,933	$ 8,769,529
Prepaid expenses and other current assets	79,721	102,923
Total current assets	3,474,654	8,872,452
FIXED ASSETS, NET	13,775	44,097
DEPOSITS	15,350	15,350
TOTAL ASSETS	$ 3,503,779	$ 8,931,899
LIABILITIES, REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIENCY		
CURRENT LIABILITIES:		
Accounts payable and accrued liabilities	$ 1,352,009	$ 3,299,217
Accrued compensation	55,568	245,711
Accrued liquidated damages (see Note 4)	504,000	—
Accrued dividends	3,506,370	2,902,963
Derivative liability (see Note 2)	39	10,486,594
Deferred revenue – current	33,333	33,333
Total current liabilities	5,451,319	16,967,818
DEFERRED REVENUE – NONCURRENT	383,333	400,000
COMMITMENTS AND CONTINGENCIES		
REDEEMABLE PREFERRED STOCK:		
Series E convertible preferred stock, $0.00001 par value; 735 shares designated; 408.264045 and 548.26078125 shares issued and outstanding at June 30, 2010 and December 31, 2009, respectively (liquidation preference $22,964,853 at June 30, 2010)	13,770,026	18,459,619
STOCKHOLDERS' DEFICIENCY:		
Preferred Stock, $0.00001 par value; 7,000 shares authorized: Series C cumulative convertible preferred stock; 272 shares designated; 204 shares issued and outstanding at June 30, 2010 and December 31, 2009 (liquidation preference $3,402,720 at June 30, 2010)	—	—
Common stock, $0.00001 par value; 225,000,000 shares authorized; 90,502,606 and 69,658,002 shares issued and outstanding at June 30, 2010 and December 31, 2009, respectively	905	697
Additional paid-in capital	56,051,285	49,175,853
Accumulated deficit	(72,153,089)	(76,072,088)
Total stockholders' deficiency	(16,100,899)	(26,895,538)
TOTAL LIABILITIES, REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIENCY	$ 3,503,779	$ 8,931,899

See notes to financial statements.

NOVELOS THERAPEUTICS, INC.
STATEMENTS OF OPERATIONS
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2010	**2009**	**2010**	**2009**
REVENUE	$ 8,333	$ 32,313	$ 16,667	$ 63,281
COSTS AND EXPENSES:				
Research and development	197,018	1,588,458	2,107,907	3,372,290
General and administrative	743,155	506,747	1,387,919	982,943
Total costs and expenses	940,173	2,095,205	3,495,826	4,355,233
LOSS FROM OPERATIONS	(931,840)	(2,062,892)	(3,479,159)	(4,291,952)
OTHER INCOME (EXPENSE):				
Interest income	—	—	—	1,013
Gain (loss) on derivatives	4,717	(2,795,710)	7,902,158	(2,383,590)
Liquidated damages (see Note 4)	(504,000)	—	(504,000)	—
Miscellaneous	—	2,250	—	4,732
Total other income (expense)	(499,283)	(2,793,460)	7,398,158	(2,377,845)
NET INCOME (LOSS)	(1,431,123)	(4,856,352)	3,918,999	(6,669,797)
PREFERRED STOCK DIVIDENDS	(581,697)	(884,723)	(1,238,332)	(1,652,906)
PREFERRED STOCK DEEMED DIVIDENDS	—	—	—	(714,031)
NET INCOME (LOSS) ATTRIBUTABLE TO COMMON STOCKHOLDERS	$ (2,012,820)	$ (5,741,075)	$ 2,680,667	$ (9,036,734)
BASIC NET INCOME (LOSS) ATTRIBUTABLE TO COMMON STOCKHOLDERS PER COMMON SHARE	$ (0.02)	$ (0.13)	$ 0.03	$ (0.21)
SHARES USED IN COMPUTING BASIC NET INCOME (LOSS) ATTRIBUTABLE TO COMMON STOCKHOLDERS PER COMMON SHARE	90,483,375	44,142,669	85,230,704	44,059,624
DILUTED NET INCOME (LOSS) ATTRIBUTABLE TO COMMON STOCKHOLDERS PER COMMON SHARE	$ (0.02)	$ (0.13)	$ 0.01	$ (0.21)
SHARES USED IN COMPUTING DILUTED NET INCOME (LOSS) ATTRIBUTABLE TO COMMON STOCKHOLDERS PER COMMON SHARE	90,483,375	44,142,669	129,649,853	44,059,624

See notes to financial statements.

NOVELOS THERAPEUTICS, INC.
STATEMENTS OF CASH FLOWS
(Unaudited)

	Six months ended June 30,	
	2010	**2009**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income (loss)	$ 3,918,999	$ (6,669,797)
Adjustments to reconcile net income (loss) to cash used in operating activities:		
Depreciation and amortization	30,322	15,515
Stock-based compensation	46,490	360,089
(Gain) loss on derivative warrants	(7,902,158)	2,383,590
Changes in:		
Prepaid expenses and other current assets	23,202	44,117
Accounts payable and accrued liabilities	(1,947,208)	(1,957,437)
Accrued compensation	(190,143)	(115,270)
Accrued liquidated damages	504,000	—
Deferred revenue	(16,667)	(16,666)
Cash used in operating activities	(5,533,163)	(5,955,859)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of fixed assets	—	(18,000)
Cash used in financing activities	—	(18,000)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of Series E convertible preferred stock and warrants, net	—	9,204,531
Proceeds from exercise of stock options	158,567	—
Cash provided by financing activities	158,567	9,204,531
INCREASE (DECREASE) IN CASH AND EQUIVALENTS	(5,374,596)	3,230,672
CASH AND EQUIVALENTS AT BEGINNING OF PERIOD	8,769,529	1,262,452
CASH AND EQUIVALENTS AT END OF PERIOD	$ 3,394,933	$ 4,493,124
SUPPLEMENTAL DISCLOSURES OF NON-CASH FINANCING ACTIVITIES		
Dividends accumulated on shares of Series E preferred stock exchanged or converted into shares of common stock	$ 634,925	$ 1,597,144
Fair value of derivative warrants upon adoption of new accounting principle	$ —	$ 998,945
Fair value of derivative warrants reclassified to additional paid-in capital upon cashless exercise	$ 2,584,397	$ —
Carrying value of redeemable preferred stock converted into common stock	$ 4,689,593	$ —
Exchange of Series D for Series E preferred stock	$ —	$ 13,904,100
Relative fair value of warrants issued to stockholders	$ —	$ 2,907,208

See notes to financial statements.

Novelos Therapeutics, Inc.
Notes to Financial Statements

1. NATURE OF BUSINESS, BASIS OF PRESENTATION

Novelos Therapeutics, Inc. ("Novelos" or the "Company") is a biopharmaceutical company developing oxidized glutathione-based compounds for the treatment of cancer and hepatitis. Novelos is also seeking to expand its product pipeline by licensing or acquiring clinical stage compounds or technologies for oncology indications. Novelos owns exclusive worldwide intellectual property rights (excluding Russia and other states of the former Soviet Union (the "Russian Territory"), but including Estonia, Latvia and Lithuania) related to certain clinical compounds and other pre-clinical compounds based on oxidized glutathione.

The Company is subject to a number of risks similar to those of other small biopharmaceutical 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.

On February 24, 2010, the Company announced that its Phase 3 clinical trial for NOV-002 in non-small cell lung cancer ("NSCLC") (the "Phase 3 Trial") did not meet its primary endpoint of a statistically significant increase in median overall survival. Following evaluation of the detailed trial data, on March 18, 2010, the Company announced that the secondary endpoints had also not been met in the Phase 3 Trial and that it had discontinued development of NOV-002 for NSCLC in combination with first-line paclitaxel and carboplatin chemotherapy, although development for other indications is continuing.

The Company has generated insignificant revenues and has incurred operating losses since inception in devoting substantially all of its efforts toward research and development. The process of developing new products will continue to require significant research and development, non-clinical testing, clinical trials and regulatory approval. The Company expects that these activities, together with general and administrative costs, will result in continuing operating losses for the foreseeable future. The Company completed a financing in July 2010 for net proceeds of $1,250,000 (see Note 10) and believes that it has adequate cash to fund these ongoing activities into the second quarter of 2011. The Company's ability to execute its operating plan beyond early in the second quarter of 2011 is dependent on its ability to obtain additional funding, during 2010, via the sale of equity and/or debt securities, a strategic transaction or otherwise. The negative outcome of the Phase 3 Trial, as well as continuing difficult conditions in the capital markets globally, may adversely affect the ability of the Company to obtain funding in a timely manner. If the Company is unable to obtain sufficient additional funding, it will be required, beginning in late-2010, to scale back its administrative and clinical development activities and may be required to cease its operations entirely. The Company plans to continue to actively pursue financing alternatives, but there can be no assurance that it will obtain the funding necessary to continue its operations. In the interim, the Company is continuously evaluating measures to reduce costs to conserve its limited cash resources.

The accompanying unaudited financial statements of the Company have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP") for interim financial information and with the instructions to Form 10-Q. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for the fair presentation of these financial statements have been included. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Interim results are not necessarily indicative of results to be expected for other quarterly periods or for the entire year ending December 31, 2010. These unaudited financial statements should be read in conjunction with the audited financial statements and related notes thereto included in the Company's latest annual report for the year ended December 31, 2009 on Form 10-K, which was filed with the Securities and Exchange Commission ("SEC") on March 30, 2010. The report from the Company's independent registered public accounting firm dated March 23, 2010 and included with its annual report on Form 10-K indicated that factors exist that raised substantial doubt about the Company's ability to continue as a going concern.

Comprehensive Income (Loss) – The Company had no components of comprehensive income (loss) other than the net income (loss) in all periods presented.

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 Financial Accounting Standards Board Accounting Standards Codification ("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 such warrants was 5,710,027 at June 30, 2010. 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, or relative fair value, when issued with other instruments, with subsequent changes in fair value recorded as a component of gain or loss on derivatives 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, 2010, these warrants represented the only outstanding derivative instruments issued or held by the Company. As a result of the significant decline in the Company's stock price following the announcement of the results of the Phase 3 Trial, the Company recorded a gain of approximately $7,902,000 during the six months ended June 30, 2010 in connection with the revaluation of the derivative liability balance at June 30, 2010.

2. FAIR VALUES OF ASSETS AND LIABILITIES

In accordance with Fair Value Measurements and Disclosures Topic of the FASB ASC, 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, 2010			
	Level 1	Level 2	Level 3	Fair Value
Liabilities:				
Warrants	$ -	$ 39	$ -	$ 39

	December 31, 2009			
	Level 1	Level 2	Level 3	Fair Value
Liabilities:				
Warrants	$ -	$ 10,486,594	$ -	$ 10,486,594

The fair value of warrants has been estimated using the Black-Scholes option pricing model based on the closing price of the common stock at the valuation date, estimated volatility of 90%, terms ranging from one to eight months at June 30, 2010 and three to fourteen months at December 31, 2009 and risk-free interest rates ranging from 0.17% to 0.27% at June 30, 2010 and 0.04% to 0.47% at December 31, 2009.

3. COLLABORATION AGREEMENTS

2007 Collaboration Agreement with Lee's Pharmaceutical (HK) Ltd.

In December 2007 the Company entered into a Collaboration Agreement with Lee's Pharmaceutical (HK) Ltd. ("Lee's Pharm"). Pursuant to this agreement, Lee's Pharm obtained an exclusive license to develop, manufacture and commercialize NOV-002 and NOV-205 in China, Hong Kong, Taiwan and Macau (the "Chinese Territory"). Under the terms of the agreement the Company received a license fee of $500,000 in March 2008 and is entitled to receive up to $1,700,000 in future milestone payments upon the completion of development and marketing milestones by Lee's Pharm. This initial $500,000 payment received is being amortized over the estimated term of this agreement, 15 years. Accordingly, $8,000 and $17,000 of license revenue was recognized in each of the three- and six-month periods, respectively, ended June 30, 2010 and 2009.

The Lee's Pharm agreement provides that the Company receive royalty payments of 20-25% of net sales of NOV-002 in the Chinese Territory and receive royalty payments of 12-15% of net sales of NOV-205 in the Chinese Territory. Lee's Pharm is obligated to reimburse the Company for the manufacturing cost of pharmaceutical products provided to Lee's Pharm in connection with the agreement. Lee's Pharm has committed to spend a minimum amount on development in the first four years of the agreement. The agreement expires upon the expiration of the last patent covering any of the licensed products, or twelve years from the date of the first commercial sale in China, whichever occurs later.

2009 Collaboration Agreement with Mundipharma

On February 11, 2009, Novelos entered into a collaboration agreement (the "Collaboration Agreement") with Mundipharma International Corporation Limited ("Mundipharma") to develop, manufacture and commercialize, on an exclusive basis, Licensed Products (as defined in the Collaboration Agreement), which includes the Company's lead compound, NOV-002, in Europe (other than the Russian Territory), Asia (other than the Chinese Territory) and Australia (collectively referred to as the "Mundipharma Territory"). Mundipharma is an independent associated company of Purdue Pharma, L.P. ("Purdue"). The Collaboration Agreement provides for Mundipharma to pay the Company royalties and fixed milestone payments based on sales and commercial launches in the licensed territories.

For countries in which patents are held, the Collaboration Agreement expires on a country-by-country basis within the Mundipharma Territory on the earlier of (1) expiration of the last applicable Novelos patent within the country or (2) the determination that any patents within the country are invalid, obvious or otherwise unenforceable. For countries in which no patents are held, the Collaboration Agreement expires the earlier of 15 years from its effective date or upon generic product competition in the country resulting in a 20% drop in Mundipharma's market share. Novelos may terminate the Collaboration Agreement upon breach or default by Mundipharma. Mundipharma may terminate the Collaboration Agreement upon breach or default, filing of voluntary or involuntary bankruptcy by Novelos, the termination of certain agreements with companies associated with the originators of the licensed technology, or 30-day notice for no reason. If any regulatory approval within the Mundipharma Territory is suspended as a result of issues related to the safety of the Licensed Products, then Mundipharma's obligations under the Collaboration Agreement will be suspended until the regulatory approval is reinstated. If that reinstatement does not occur within 12 months of the suspension, then Mundipharma may terminate the Collaboration Agreement.

Concurrently with the execution of the Collaboration Agreement, Novelos completed a private placement of Series E preferred stock and common stock purchase warrants to Purdue.

The Company expects that the negative results of its Phase 3 Trial will adversely affect development and commercialization of NOV-002 under the collaboration agreements with Lee's Pharm and Mundipharma.

4. STOCKHOLDERS' DEFICIENCY

Registration Rights Agreements

Simultaneous with the execution of the Series E preferred stock purchase agreement in 2009, the Company entered into a registration rights agreement (the "Series E Registration Agreement") with Purdue and the investors in the Company's Series D preferred stock (the "Series D Investors"). The Series E Registration Agreement replaced a prior agreement dated April 11, 2008 between Novelos and the Series D Investors. The Series E Registration Agreement required Novelos to file with the Securities and Exchange Commission ("SEC") no later than 5 business days following the six-month anniversary of the execution of the Series E purchase agreement (the "Filing Deadline"), a registration statement covering the resale of (i) a number of shares of common stock equal to 100% of the shares issuable upon conversion of the Series E preferred stock (excluding 12,000,000 shares of common stock issuable upon conversion of the Series E preferred stock issued in exchange for shares of outstanding Series D preferred stock during 2008 that are included on a prior registration statement) and (ii) an aggregate of 21,096,150 shares of common stock issuable upon exercise of warrants issued in connection with Series B, Series D and Series E preferred stock. Novelos was required to use its best efforts to have the registration statement declared effective and to keep the registration statement continuously effective under the Securities Act until the earlier of the date when all the registrable securities covered by the registration statement have been sold or the second anniversary of the closing of the Series E purchase agreement. Purdue and the Series D Investors consented to extend the Filing Deadline to September 15, 2009. The registration statement was filed on that date. The Series E Registration Agreement was amended on January 21, 2010 principally to consent to a reduction in the number of shares offered. The registration statement covering the resale of a total of 19,000,000 shares of the Company's common stock was declared effective on February 12, 2010 and a post-effective amendment was declared effective on May 3, 2010. The use of the registration statement may be suspended for not more than 15 consecutive days or for a total of not more than 30 days in any 12-month period. The Company will use its reasonable best efforts to register the shares excluded from the registration statement as may be permitted by the SEC until such time as all of these shares either have been registered or may be sold without restriction in reliance on Rule 144 under the Securities Act.

As part of a common stock private placement in August 2009, the Company entered into a registration rights agreement with Purdue (the "Purdue Registration Agreement"). The Purdue Registration Agreement requires the Company to have filed with the SEC no later than May 17, 2010, a registration statement covering the resale of all the shares of common stock issued pursuant to the August 2009 purchase agreement and all shares of common stock issuable upon exercise of the warrants issued pursuant to the August 2009 purchase agreement. The Company is required to use its best efforts to have the registration statement declared effective and to keep the registration statement continuously effective under the Securities Act until the earlier of the date when all the registrable securities covered by the registration statement have been sold or the second anniversary of the final closing. The Company will be allowed to suspend the use of the registration for not more than 15 consecutive days or for a total of not more than 30 days in any 12-month period. The Company failed to timely file the registration statement and as of June 30, 2010, and through the date of this filing, the registration statement has not been filed. The registration rights agreement provides for 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 common stock until the delinquent registration statement is filed. The Company estimates that the earliest date at which time the registration statement may be filed is in early September 2010 and has accrued $504,000 in the three months ended June 30, 2010 which represents management's best estimate of the probable total liquidated damages. This amount has been included as a component of other income (expense).

Conversions of Preferred Stock – During the six months ended June 30, 2010, 140 shares of the Company's Series E preferred stock, having an aggregate stated value of $7,000,000, and accumulated dividends thereon, were converted at a conversion price of $0.65 per share of common stock into 11,745,779 shares of common stock. The associated carrying value of the converted shares totaling approximately $4,690,000 was reclassified to permanent equity from temporary equity.

Common Stock Warrants — The following table summarizes information with regard to outstanding warrants issued in connection with equity and debt financings as of June 30, 2010:

Offering	Outstanding (as adjusted)		Exercise Price (as adjusted)	Expiration Date
2005 Issuance of Common Stock – placement agents	243,476	$	0.65	August 9, 2010
Series A Preferred Stock	909,090	$	0.65	September 30, 2010
2006 Issuance of Common Stock	4,557,461	$	1.72	March 7, 2011
Series B Preferred Stock – placement agents	825,000	$	1.25	May 2, 2012
Series C Exchange	1,250,000	$	1.25	May 2, 2012
Series E Preferred Stock	9,230,769	$	0.65	December 31, 2015
August 2009 Private Placement	4,772,730	$	0.66	December 31, 2015
Total	21,788,526			

See Note 10 for a description of warrants issued in connection with a financing completed in July 2010 and adjustments that were made to certain of the above warrants as a result of that financing.

During the six months ended June 30, 2010, 8,182,158 shares of the Company's common stock were issued upon the cashless exercise of warrants to purchase 13,732,580 shares of the Company's common stock. The Company reclassified $2,584,000 from derivative liability to additional paid-in capital upon the exercise of warrants. The following is a summary of the exercises:

Original private placement	Shares of Common Stock Issued	Warrants Exercised	Exercise Price
2005 Bridge Financing	314,982	400,000	$ 0.625
2005 Issuance of Common Stock – placement agents	226,544	317,350	$ 0.65
2006 Issuance of Common Stock	366,492	991,516	$ 1.72
Series B Preferred Stock – purchasers	4,545,447	7,500,000	$ 0.65
Series B Preferred Stock – placement agents	35,106	75,000	$ 1.25
Series D Preferred Stock	2,645,685	4,365,381	$ 0.65
Series C Exchange	47,902	83,333	$ 1.25
Total	8,182,158	13,732,580	

5. STOCK-BASED COMPENSATION

The following table summarizes amounts charged (credited) 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,	
	2010	2009	2010	2009
Employee and director stock option grants:				
Research and development	$ 57,478	$ 35,286	$ 114,591	$ 71,546
General and administrative	91,914	75,304	174,842	157,319
	149,392	110,590	289,433	228,865
Non-employee consultant stock option grants:				
Research and development	(4,816)	75,504	(215,641)	78,833
General and administrative	(607)	47,408	(27,302)	52,391
	(5,423)	122,912	(242,943)	131,224
Total stock-based compensation	$ 143,969	$ 233,502	$ 46,490	$ 360,089

There were no stock option grants during the three or six months ended June 30, 2010 or 2009.

A summary of stock option activity is as follows:

	Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contracted Term in Years	Aggregate Intrinsic Value
Outstanding at January 1, 2010	9,219,825	$ 0.63	7.5	$ 17,650,255
Options exercised	(916,667)	$ 0.17		
Options cancelled	(150,000)	$ 2.20		
Outstanding at June 30, 2010	8,153,158	$ 0.65	7.4	$ 124,211
Exercisable at June 30, 2010	5,169,805	$ 0.68	6.6	$ 124,211

The aggregate intrinsic value of options outstanding is calculated based on the positive difference between the closing market price of the Company's common stock at the end of the respective period and the exercise price of the underlying options. During the three and six months ended June 30, 2010, the total intrinsic value of options exercised was $28,000 and $663,000, respectively, and the total amount of cash received from exercise of these options was $1,200 and $158,600, respectively.
As of June 30, 2010, there was approximately $951,000 of total unrecognized compensation cost related to unvested stock-based compensation arrangements. Of this total amount, 31%, 48% and 21% is expected to be recognized during 2010, 2011 and 2012, respectively. The Company expects 2,983,353 in unvested options to vest in the future. The weighted-average grant-date fair value of both vested and unvested options outstanding at June 30, 2010 was $0.42 and $0.41.

6. NET INCOME (LOSS) PER SHARE

Basic net income (loss) per share is computed by dividing net income (loss) attributable to common stockholders by the weighted average number of shares of common stock outstanding during the period. Diluted net income per share is computed by dividing net income attributable to common stockholders 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, warrants and convertible preferred stock and accumulated dividends. Since the Company has a net loss for the three and six months ended June 30, 2009 and the three months ended June 30, 2010, the inclusion of common stock equivalents in the computation for those periods would be antidilutive. Accordingly, basic and diluted net loss per share are the same for those periods.

The following table sets forth the shares and net income used in the diluted earnings per share computation for the six months ended June 30, 2010:

Numerator:	
Net income available to common stockholders used in basic earnings per share calculation	$ 2,680,667
Derivative gain recorded on dilutive warrants	(2,340,516)
Dividends on convertible preferred stock	1,238,332
Net income available to common stockholders used in diluted earnings per share calculation	$ 1,578,483
Denominator:	
Weighted average shares of common stock used in the computation of basic earnings per share	85,230,704
Dilutive effect of stock options	2,295,036
Dilutive effect of warrants to purchase common stock	3,348,455
Dilutive effect of convertible preferred stock	38,775,658
Shares used in computation of diluted earnings per share	129,649,853

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2010	2009	2010	2009
Stock options	8,153,158	7,279,825	3,451,057	7,279,825
Warrants	21,788,526	38,424,340	6,632,461	38,424,340
Conversion of preferred stock	40,565,494	56,593,880	—	56,593,880

7. INCOME TAXES

The Company accounts for income taxes in accordance with the Income Taxes Topic of the FASB ASC. 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 and six months ended June 30, 2010 because the Company has experienced losses since inception. The net income reported for the six months ended June 30, 2010 is a result of the gain recorded on the revaluation of derivative warrant liability during that period, which is a nontaxable item. The Company has not recorded deferred tax assets as their realization is uncertain.

8. LITIGATION

A purported 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 the Company, on behalf of himself and all others who purchased or otherwise acquired the Company's common stock in the period between December 14, 2009 and February 24, 2010, against the Company and its President and Chief Executive Officer, Harry S. Palmin. On April 7, 2010, Novelos and Mr. Palmin filed a motion for an order to establish that their response to the complaint will not be due until some time after the court appoints a lead plaintiff and affords the lead plaintiff an opportunity to file a consolidated and amended complaint. On May 4, 2010, motions were filed on behalf of three different individuals or groups, each seeking to be appointed lead plaintiff, although two of the three motions were withdrawn on May 18, 2010. The court has not yet appointed a lead plaintiff. The complaint claims that the Company violated Section 10(b) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 promulgated thereunder in connection with alleged disclosures related to the Phase 3 clinical trial of NOV-002 for non-small cell lung cancer. The Company believes the allegations are without merit and intends to defend vigorously against the allegations. Legal costs related to the complaint will be expensed as incurred.

On June 28, 2010, the Company received a letter from counsel to ZAO BAM and ZAO BAM Research Laboratories (collectively, "BAM") alleging that the Company 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 the Company had entered into with BAM on June 20, 2000. The letter references the Company's amendment, submitted to the FDA on August 30, 2005, to its 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 the Company's knowledge, still the general director and principal shareholder of ZAO BAM. The Company believes the allegations are without merit and intends to defend vigorously against any proceedings that BAM may initiate as to these allegations.

9. COMMITMENTS

Retention Agreements

On May 14, 2010, the Company entered into retention agreements with each of its four vice-president executive officers other than its Chief Executive Officer, Harry S. Palmin. The agreements provide for the lump-sum payment of six months' base salary and benefits to each such officer following a termination without cause or a resignation with good reason occurring on or before November 14, 2011. The agreements further provide that if the executives remain employed with the Company as of October 1, 2010, they will receive a payment of two months' base salary as a retention bonus on that date. The amount paid as a retention bonus will be deducted from the severance amounts that may become payable upon a subsequent involuntary termination. The agreements expire November 14, 2011. The total amounts that may become payable to the Company's Named Executive Officers pursuant to the retention agreements are approximately $132,000 to Christopher Pazoles and $129,000 to Elias Nyberg. Concurrently with the execution of the retention agreements, the employment agreement between the Company and Christopher Pazoles dated July 15, 2005 was terminated.

On May 14, 2010, the Company also entered into retention agreements with each of its three non-executive employees. The agreements provide for the lump-sum payment of six months' base salary and benefits to each employee following a termination without cause or a resignation with good reason occurring on or before November 14, 2011. The agreements expire November 14, 2011.

10. SUBSEQUENT EVENTS

Sale of Common Stock and Warrants

On July 27, 2010, pursuant to securities purchase agreements entered into with institutional investors on July 21, 2010, the Company completed the sale, in an offering registered under the Securities Act of 1933, as amended, of an aggregate of 21,428,576 shares of its common stock and five-year warrants to purchase up to an aggregate of 16,071,434 shares of its common stock at an exercise price of $0.07 per share, for gross proceeds of $1,500,000. The warrant exercise price is subject to adjustment in certain circumstances. After deducting transaction costs, the Company estimates that the net proceeds will be approximately $1,250,000.

Since the securities in this financing were issued at a price less than $0.66 per share, the Company obtained the consent of its preferred stockholders pursuant to a consent and waiver dated July 6, 2010, as amended on July 21, 2010. In connection with obtaining this consent, the Company issued five-year warrants (the "Incentive Warrants") to its preferred stockholders for the purchase of up to an aggregate of 16,071,434 shares of common stock at an exercise price of $0.105 per share. No adjustments to the conversion price of the preferred stock or warrants held by preferred stockholders were made in connection with the financing. The consent requires that the Company seek the approval of its stockholders, not later than January 1, 2011, of an amendment to its certificate of incorporation in order to authorize a number of additional shares of common stock sufficient to cover the full exercise of the Incentive Warrants. In the event the Company is unable to secure this approval by January 1, 2011, the consent provides that liquidated damages are immediately payable to each preferred stockholder in an amount equal to 12% of the liquidation preference applicable to the shares of preferred stock they then hold, and additional liquidated damages of 2% of such liquidation preference for each month after such date until the requisite amendment is filed.

The financing resulted in adjustments to certain warrants pursuant to their terms. Warrants issued in 2005 that were exercisable for 243,476 shares at an exercise price of $0.65 per share as of immediately prior to the transaction became exercisable for 2,260,845 shares at an exercise price of $0.07 per share, and warrants issued in 2006 that were exercisable for 4,557,461 shares at an exercise price of $1.72 per share as of immediately prior to the transaction became exercisable for 5,136,191 shares at an exercise price of $1.53 per share. The 2005 warrants expired unexercised on August 9, 2010, and the 2006 warrants will expire in March 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 unbilled contract service fees and amounts due to clinical research organizations, clinical investigators and contract manufacturers, the risk factors set forth below under the caption "Risk Factors" and the risk factors set forth in Item 1A of our annual report for the year ended December 31, 2009 on Form 10-K, which was filed with the Securities and Exchange Commission ("SEC") on March 30, 2010. 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.

Overview

We are a biopharmaceutical company developing oxidized glutathione-based compounds for the treatment of cancer and hepatitis. We are also seeking to expand our product pipeline by licensing or acquiring clinical stage compounds or technologies for oncology indications.

NOV-002, our lead compound, is a small-molecule compound based on a proprietary formulation of oxidized glutathione that has been administered to approximately 1,000 cancer patients in clinical trials and is in Phase 2 development for solid tumors in combination with chemotherapy. According to Cancer Market Trends (2008-2012, URCH Publishing), Datamonitor (July 3, 2006) and PharmaLive (October 9, 2009), the global market for cancer pharmaceuticals reached an estimated $66 billion in 2007, nearly doubling from $35 billion in 2005, and is expected to grow to $80 billion by 2012.

From November 2006 through January 2010, we conducted a Phase 3 trial of NOV-002 plus first-line chemotherapy in advanced non-small cell lung cancer ("NSCLC"). The Phase 3 trial enrolled 903 patients, 452 of whom received NOV-002. On February 24, 2010, we announced that the primary endpoint of improvement in overall survival compared to first-line chemotherapy alone was not met in this pivotal Phase 3 trial of NOV-002 plus first-line chemotherapy in advanced NSCLC. Following evaluation of the detailed trial data, we announced on March 18, 2010 that the secondary endpoints also were not met in the trial and that adding NOV-002 to paclitaxel and carboplatin chemotherapy was not statistically or meaningfully different in terms of efficacy-related endpoints or recovery from chemotherapy toxicity versus chemotherapy alone. However, NOV-002 was safe and did not add to the overall toxicity of chemotherapy. Based on the results from the Phase 3 trial, we have determined to discontinue development of NOV-002 for NSCLC in combination with first-line paclitaxel and carboplatin chemotherapy.

NOV-002 is being developed to treat breast cancer in combination with chemotherapy. In June 2007 we commenced enrollment in a U.S. Phase 2 neoadjuvant breast cancer trial, which is ongoing at The University of Miami to evaluate the ability of NOV-002 to enhance the effectiveness of chemotherapy in HER-2 negative patients. On July 12, 2010, we announced the 12^{th} pathologic complete response (pCR), which is the minimum number of pCRs required in order for NOV-002 to be declared active, in the first 31 patients (39%) who completed chemotherapy and underwent surgery in the Phase 2 breast cancer trial. The historical control pCR rate is in the range of 10-20%. We submitted the trial results for presentation to the AACR Breast Cancer Symposium taking place in San Antonio, TX, in December 2010.

NOV-002 is also being developed to treat chemotherapy-resistant ovarian cancer. In a U.S. Phase 2 chemotherapy-resistant ovarian cancer trial at Massachusetts General Hospital and Dana-Farber Cancer Institute from July 2006 through May 2008, NOV-002, in combination with carboplatin, slowed progression of the disease in 60% of evaluable patients (nine out of 15 women). The median progression-free survival was 15.4 weeks, almost double the historical control of eight weeks. Furthermore, patients experienced decreased hematologic toxicities. These results were presented at the American Society of Clinical Oncology in May 2008.

NOV-205, our second glutathione-based compound, acts as a hepatoprotective agent with immunomodulating and anti-inflammatory properties. NOV-205 has been administered to approximately 200 hepatitis patients in clinical trials and is in Phase 2 development for chronic hepatitis C non-responders. An Investigational New Drug Application ("IND") for NOV-205 as a monotherapy for chronic hepatitis C was accepted by the FDA in 2006. A U.S. Phase 1b clinical trial with NOV-205 in patients who previously failed treatment with pegylated interferon plus ribavirin was completed in December 2007. Based on favorable safety results of that trial, in March 2010 we initiated a multi-center U.S. Phase 2 trial evaluating NOV-205 as monotherapy in up to 40 chronic hepatitis C genotype 1 patients who previously failed treatment with pegylated interferon plus ribavirin. Safety was established in the first group of 10 patients receiving 30mg of NOV-205 daily for 49 days, triggering enrollment of another group of 10 patients who will receive 60mg NOV-205 daily for 49 days. We expect to have further results from this trial by the end of 2010.

As evidenced by our Phase 3 trial in NSCLC, although promising Phase 2 results may advance the clinical development of compounds, such results are not necessarily determinative that the efficacy and safety of the compounds will be successfully demonstrated in a Phase 3 clinical trial.

Both compounds have completed clinical trials in humans and have been approved for use in Russia, where they were originally developed. We own all intellectual property rights worldwide (excluding Russia and other states of the former Soviet Union (the "Russian Territory"), but including Estonia, Latvia and Lithuana) related to compounds based on oxidized glutathione, including NOV-002 and NOV-205. Our patent portfolio includes six U.S. issued patents, two European issued patents and one Japanese issued patent.

We entered into a collaboration agreement with Mundipharma International Corporation Limited ("Mundipharma") to develop, manufacture and commercialize NOV-002 in Europe, excluding the Russian Territory, most of Asia (other than China, Hong Kong, Taiwan and Macau, the "Chinese Territory") and Australia. We have a collaboration agreement with Lee's Pharmaceutical (HK) Ltd. ("Lee's Pharm") to develop, manufacture and commercialize NOV-002 and NOV-205 in the Chinese Territory. We expect that the negative results of our Phase 3 trial in advanced NSCLC will adversely affect development and commercialization of NOV-002 under the collaboration agreements.

Results of Operations

Revenue. Revenue consists of amortization of license fees received in connection with partner agreements and income received from a grant from the U.S. Department of Health and Human Services.

Research and development expense. Research and development expense consists of costs incurred in identifying, developing and testing product candidates, which primarily consist of salaries and related expenses for personnel, fees paid to professional service providers for independent monitoring and analysis of our clinical trials, costs of contract research and manufacturing and costs to secure intellectual property. We are currently developing two proprietary compounds, NOV-002 and NOV-205. To date, most of our research and development costs have been associated with our NOV-002 compound.

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 facility costs, insurance, costs for public and investor relations, directors' fees and professional fees for legal and accounting services.

Quarters Ended June 30, 2010 and 2009

Revenue. During the three months ended June 30, 2010 and 2009, we recognized $8,000 in license fees in each of the three-month periods in connection with our collaboration agreement with Lee's Pharm. During the three months ended June 30, 2009, we also recognized $24,000 in grant revenue related to a grant received from the U.S. Department of Health and Human Services. The related costs are included as a component of research and development expense in that period.

Research and Development. Research and development expense for the three months ended June 30, 2010 was $197,000, compared to $1,588,000 for the same period in 2009. The $1,391,000, or 88%, decrease in research and development expense was due to a combination of factors. In February 2010, we completed our Phase 3 trial in NSCLC. Following the completion of that trial, contract research costs related to the trial decreased $1,381,000 in the three months ended June 30, 2010 as compared to the three months ended June 30, 2009. This reduction in Phase 3 clinical research costs includes the effect of a $518,000 reduction in the accrual of estimated amounts due to a large vendor, following a negotiated payment settlement during the three months ended June 30, 2010. Preclinical research and drug manufacturing costs decreased by $97,000. Stock-based compensation decreased $58,000 as a result of the decline in our stock price following the Phase 3 trial results. Salaries and overhead costs decreased by $33,000 as a result of efforts to contain costs. These decreases were partially offset by a $178,000 increase in clinical development costs for NOV-205 as a result of the commencement, in March 2010, of a Phase 2 trial evaluating NOV-205 in chronic hepatitis patients.

General and Administrative. General and administrative expense for the three months ended June 30, 2010 was $743,000 compared to $507,000 in the same period in 2009. The $236,000, or 47%, increase is due to a number of factors. First, professional fees increased by $194,000 principally due to increased corporate legal costs relating to securities activities and legal defense costs. Overhead costs increased by $73,000 principally resulting from an increase in liability insurance premium costs. These increases were offset in part by a $31,000 decrease in stock-based compensation as a result of the decline in our stock price following the Phase 3 trial results.

Gain (Loss) on Derivative Warrants. Effective January 1, 2009, we adopted the guidance of Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 815-40, *Derivatives and Hedging* and, as a result, we recorded a gain on derivative warrants of $5,000 during the three months ended June 30, 2010 and recorded a loss on derivative warrants of $2,796,000 in the same period of the previous year. This amount represents the change in fair value, during the respective periods, of outstanding warrants which contain "down-round" anti-dilution provisions whereby the number of shares for which the options 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.

Liquidated Damages. During the three months ended June 30, 2010, we accrued $504,000 in estimated liquidated damages as a result of our failure to file, on a timely basis, a registration statement covering the resale of shares of common stock sold pursuant to the August 2009 purchase agreement with Purdue Pharma, L.P. (the "August 2009 Purchase Agreement") and all shares of common stock issuable upon exercise of the warrants issued pursuant to the August 2009 Purchase Agreement. The accrual of $504,000 represents our best estimate of damages, pursuant to the terms of the applicable registration rights, from May 17, 2010 through the anticipated date of filing of the registration statement.

Preferred Stock Dividends. During the three months ended June 30, 2010 and 2009, we accrued $582,000 and $885,000, respectively, in dividends accumulating on our Series C and E preferred stock. No dividends were paid during those periods.

Six Months Ended June 30, 2010 and 2009

Revenue. During the six months ended June 30, 2010 and 2009, we recognized $17,000 in license fees in each of the six-month periods in connection with our collaboration agreement with Lee's Pharm. During the six months ended June 30, 2009, we also recognized $46,000 in grant revenue related to a grant received from the U.S. Department of Health and Human Services. The related costs are included as a component of research and development expense in that period.

Research and Development. Research and development expense for the six months ended June 30, 2010 was $2,108,000, compared to $3,372,000 for the same period in 2009. The $1,264,000, or 37%, decrease in research and development expense was due to a combination of factors. In February 2010, we completed our Phase 3 trial in NSCLC. Following the completion of that trial, contract research costs related to the trial decreased $2,061,000 in the six months ended June 30, 2010 as compared to the six months ended June 30, 2009. This reduction in Phase 3 clinical research costs includes the effect of a $518,000 reduction in the accrual of estimated amounts owed to a large vendor, following a negotiated payment settlement during the six months ended June 30, 2010. Stock-based compensation also decreased $251,000 as a result of the decline in our stock price following the Phase 3 trial results. Salaries and overhead costs decreased by $55,000 as a result of efforts to contain costs. These decreases were partially offset by a $822,000 increase in consulting costs related to preclinical and manufacturing work. In anticipation of the results of our Phase 3 clinical trial of NOV-002 in advanced NSCLC, announced in February 2010, we increased certain preclinical research and manufacturing activities in preparation of a possible filing of a new drug application later in 2010. There was also a $281,000 increase in clinical development costs for NOV-205 as a result of the commencement, in March 2010, of a Phase 2 trial evaluating NOV-205 in chronic hepatitis patients.

General and Administrative. General and administrative expense for the six months ended June 30, 2010 was $1,388,000 compared to $983,000 in the same period in 2009. The $405,000, or 41%, increase is due to a number of factors. First, professional fees increased by $329,000 principally due to increased corporate legal costs relating to the resale and registration of our securities and legal defense costs. Overhead costs increased by $138,000 principally resulting from an increase in liability insurance premium costs. These increases were offset in part by a $62,000 decrease in stock-based compensation as a result of the decline in our stock price following the Phase 3 trial results.

Gain (Loss) on Derivative Warrants. Effective January 1, 2009, we adopted the guidance of Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC), Topic 815-40, *Derivatives and Hedging* and, as a result, we recorded a gain on derivative warrants of $7,902,000 during the six months ended June 30, 2010 and recorded a loss on derivative warrants of $2,384,000 in the same period of the previous year. This amount represents the change in fair value, during the respective periods, of outstanding warrants which contain "down-round" anti-dilution provisions whereby the number of shares for which the options 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. The large decrease in value of the liability during the six months ended June 30, 2010 is a result of the significant drop in our stock price following the announcement of negative Phase 3 Trial results on February 24, 2010. This gain is not taxable; accordingly, no tax provision has been recorded.

Liquidated Damages. During the six months ended June 30, 2010, we accrued $504,000 in estimated liquidated damages as a result of our failure to file, on a timely basis, a registration statement covering the resale of shares of common stock, and the shares of common stock underlying warrants, sold pursuant to the August 2009 purchase agreement with Purdue Pharma, L.P. The accrual of $504,000 represents our best estimate of damages, pursuant to the terms of the applicable registration rights agreement, through the anticipated date of filing of the registration statement.

Preferred Stock Dividends. During the six months ended June 30, 2010 and 2009, we accrued $1,238,000 and $1,653,000, respectively, in dividends accumulating on our Series C, D and E preferred stock. No dividends were paid during those periods. On February 11, 2009, all shares of Series D preferred stock and accrued dividends thereon totaling $1,597,000 (including $202,000 that accrued during 2009 prior to the exchange) were exchanged for approximately 445.5 shares of Series E preferred stock. During the six months ended June 30, 2009, we also recorded deemed dividends on preferred stock totaling $714,000. This amount was recorded in connection with the financing that occurred in February 2009 and represents the value attributed to the modification of certain warrants less the net adjustment required to record the newly issued shares of Series E preferred stock at fair value.

Liquidity and Capital Resources

We have financed our operations since inception via the sale of securities and the issuance of debt (which was subsequently paid off or converted into equity). As of June 30, 2010, we had approximately $3,395,000 in cash and cash equivalents.

During the six months ended June 30, 2010, approximately $5,533,000 in cash was used in operations. During this period we reported $3,919,000 in net income. However, this included the following non-cash items: a $7,902,000 gain on derivative warrants, $46,000 in stock-based compensation and $30,000 in depreciation and amortization expense. After adjustment for these non-cash items, we used $2,137,000 in cash for the payment of accounts payable and accrued liabilities and accrued $504,000 in estimated liquidated damages for registration rights penalties. Other changes in working capital provided cash of $6,000.

During the six months ended June 30, 2010, we received $159,000 upon the exercise of stock options.

On February 24, 2010, we announced that our Phase 3 clinical trial for NOV-002 in NSCLC (the "Phase 3 Trial") did not meet its primary endpoint of a statistically significant increase in median overall survival. On March 18, 2010, we announced that the secondary endpoints had also not been met in the Phase 3 Trial and that we had discontinued development of NOV-002 for NSCLC in combination with first-line paclitaxel and carboplatin chemotherapy.

We are continuing development of NOV-002 in cancer indications other than NSCLC, continuing development of NOV-205 in hepatitis and are seeking to expand our product pipeline by acquiring or licensing clinical stage compounds or technologies for oncology indications. We expect that these activities, together with general and administrative costs, will result in continuing operating losses for the foreseeable future. We completed a financing in July 2010 for net proceeds of $1,250,000 (see Note 10 to the financial statements) and believe that we have adequate cash to fund these ongoing activities into early in the second quarter of 2011.

In the recently passed Patient Protection and Affordable Care Act, H.R. 3590, a new incentive for biotechnology companies like ours was provided: the Qualifying Therapeutic Discovery Project Credit, or Therapeutic Credit. The Therapeutic Credit allows small businesses to apply for a grant in an amount equal to 50% of their investment in qualifying therapeutic discovery projects for 2009 and 2010. 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 have applied for certification of approximately $8.0 million of expenditures during 2009 and 2010 under this program. If our application is approved in full, we could receive a cash grant of approximately $4.0 million during 2011. We believe there will be many applicants for this grant, and given the level of competition expected we cannot forecast what proceeds, if any, will be awarded to us. We expect notification from the Internal Revenue Service of acceptance or denial by the end of October 2010.

Our ability to execute our operating plan beyond early in the second quarter of 2011 is dependent on our ability to obtain additional funding, during 2010, via the sale of equity and/or debt securities, a strategic transaction, or otherwise. The negative outcome of the Phase 3 Trial, as

well as continuing difficult conditions in the capital markets globally, may adversely affect our ability to obtain funding in a timely manner. If we are unable to obtain sufficient additional funding before the end of 2010, we will be required, beginning in late-2010, to scale back our administrative and clinical development activities and may be required to cease our operations entirely. We plan to continue to actively pursue financing alternatives, but there can be no assurance that we will obtain the necessary capital. In the interim, we are continuously evaluating measures to reduce our costs to conserve our limited cash resources.

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, 2010. 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, 2010, 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 2010 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 purported class action complaint was filed on March 5, 2010 in the United States District Court for the District of Massachusetts by an alleged shareholder on behalf of himself and all others who purchased or otherwise acquired our common stock in the period between December 14, 2009 and February 24, 2010, against Novelos and our President and Chief Executive Officer, Harry S. Palmin. On April 7, 2010, Novelos and Mr. Palmin filed a motion for an order to establish that their response to the complaint will not be due until some time after the court appoints a lead plaintiff and affords the lead plaintiff an opportunity to file a consolidated and amended complaint. On May 4, 2010, motions were filed on behalf of three different individuals or groups, each seeking to be appointed lead plaintiff, although two of the three motions were withdrawn on May 18, 2010. The court has not yet appointed a lead plaintiff. The complaint claims that we violated Section 10(b) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 promulgated thereunder in connection with alleged disclosures related to the Phase 3 clinical trial for NOV-002 in non-small cell lung cancer ("NSCLC") (the "Phase 3 Trial"). We believe the allegations are without merit and intend to defend vigorously against the allegations.

On June 28, 2010, we received a letter from counsel to ZAO BAM and ZAO BAM Research Laboratories (collectively, "BAM") alleging that we 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 we had entered into with BAM on June 20, 2000. The letter references our amendment, submitted to the FDA on August 30, 2005, to our 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. We believe the allegations are without merit and intend to defend vigorously against any proceedings that BAM may initiate as to these allegations

Item 1A. Risk Factors

We will require additional capital to continue operations beyond early in the second quarter of 2011.

On February 24, 2010, we announced that our Phase 3 Trial did not meet its primary endpoint of a statistically significant increase in median overall survival. On March 18, 2010, we announced that the secondary endpoints had not been met in the Phase 3 Trial and that we had discontinued development of NOV-002 for NSCLC in combination with first-line paclitaxel and carboplatin chemotherapy. We are continuing development of NOV-002 in cancer indications other than NSCLC, continuing development of NOV-205 in hepatitis and are seeking to expand our product pipeline by acquiring or licensing clinical stage compounds or technologies for oncology indications. We expect that these activities, together with general and administrative costs, will result in continuing operating losses for the foreseeable future. We completed a financing in July 2010 for net proceeds of $1,250,000 (see Note 10 to the financial statements) and believe that we have adequate cash to fund these ongoing activities into the second quarter of 2011. Our ability to execute our operating plan beyond early in the second quarter of 2011 is dependent on our ability to obtain additional funding, during 2010, via the sale of equity and/or debt securities, a strategic transaction or otherwise. The negative outcome of the Phase 3 Trial, as well as continuing difficult conditions in the capital markets globally, may adversely affect our ability to obtain funding in a timely manner. If we are unable to obtain sufficient additional funding before the end of 2010, we will be required, beginning in late-2010, to scale back our administrative and clinical development activities and may be required to cease our operations entirely. We plan to actively pursue financing alternatives during 2010, but there can be no assurance that we will obtain the necessary capital. In the interim, we are continuously evaluating measures to reduce our costs to conserve our limited cash resources.

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

None.

Item 3. Defaults Upon Senior Securities

During the three months ended June 30, 2010, no dividends were paid or converted into common stock, dividends of $459,297 accrued with respect to our Series E Convertible Preferred Stock and dividends of $122,400 accrued with respect to our Series C Convertible Preferred Stock. As of June 30, 2010, there is a total of $2,551,650 in accumulated unpaid dividends with respect to our Series E Convertible Preferred Stock and a total of $954,720 in accumulated unpaid dividends with respect to our Series C Convertible Preferred Stock.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit No.	Description	Filed with this Form 10-Q	Incorporated by Reference		
			Form	Filing Date	Exhibit No.
2.1	Agreement and plan of merger among Common Horizons, Inc., Nove Acquisition, Inc. and Novelos Therapeutics, Inc. dated May 26, 2005		8-K	June 2, 2005	99.2
2.2	Agreement and plan of merger between Common Horizons and Novelos Therapeutics, Inc. dated June 7, 2005		10-QSB	August 15, 2005	2.2
3.1	Amended and Restated Certificate of Incorporation filed as Exhibit A to the Certificate of Merger merging Nove Acquisition, Inc. with and into Novelos Therapeutics, Inc. dated May 26, 2005		10-QSB	August 10, 2007	3.1
3.2	Certificate of Merger merging Common Horizons, Inc. with and into Novelos Therapeutics, Inc. dated June 13, 2005		10-QSB	August 10, 2007	3.2
3.3	Certificate of Correction dated March 3, 2006		10-QSB	August 10, 2007	3.3
3.4	Certificate of Amendment to Amended and Restated Certificate of Incorporation dated July 16, 2007		10-QSB	August 10, 2007	3.4
3.5	Certificate of Designations of Series C cumulative convertible preferred stock		10-QSB	August 10, 2007	3.6
3.6	Certificate of Designations of Series E convertible preferred stock		8-K	February 18, 2009	4.1
3.7	Certificate of Amendment to Amended and Restated Certificate of Incorporation dated November 3, 2009		10-Q	November 16, 2009	3.7
3.8	Amended and Restated By-Laws		8-K	August 26, 2009	3.1
10.1	Form of Executive Retention Agreement dated May 14, 2010		10-Q	May 17, 2010	10.3
10.2	Letter dated May 14, 2010 terminating Employment Agreement dated July 15, 2005 between the Company and Christopher J. Pazoles		10-Q	May 17, 2010	10.4

Exhibit No.	Description	Filed with this Form 10-Q	Incorporated by Reference		
			Form	Filing Date	Exhibit No.
31.1	Certification of the chief executive officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
31.2	Certification of the chief financial officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
32.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X			