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

FORM 10-QSB

[mark one]

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

For the quarterly period ended: March 31, 2007

☐ TRANSITION REPORT UNDER 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 small business issuer 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
(*Issuer's telephone number, including area code*)

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

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

Indicate by check mark whether the registrant is a 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: 39,235,272 shares of common stock, $.00001 par value per share, as of May 1, 2007.

Transitional Small Business Disclosure Format (check one): Yes ☐ No ☒

NOVELOS THERAPEUTICS, INC.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

NOVELOS THERAPEUTICS, INC.
BALANCE SHEETS

	March 31, 2007 (unaudited)	December 31, 2006 (audited)
ASSETS		
CURRENT ASSETS:		
Cash and equivalents	$ 7,772,195	$ 9,938,428
Restricted cash	1,607,711	1,655,251
Prepaid expenses and other current assets	193,255	294,995
Deferred financing costs	25,000	—
Total current assets	9,598,161	11,888,674
FIXED ASSETS, NET	23,659	23,810
DEPOSITS	10,875	10,875
TOTAL ASSETS	$ 9,632,695	$ 11,923,359
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable and accrued liabilities	$ 1,245,141	$ 1,088,041
Accrued compensation	62,024	225,384
Total current liabilities	1,307,165	1,313,425
COMMITMENTS AND CONTINGENCIES		
STOCKHOLDERS' EQUITY:		
Preferred Stock, $0.00001 par value; 7,000 shares authorized: Series A 8% cumulative convertible preferred stock; 3,264 shares issued and outstanding (liquidation preference $3,264,000)	—	—
Common stock, $0.00001 par value; 100,000,000 shares authorized; 39,235,272 shares issued and outstanding at March 31, 2007 and December 31, 2006	392	392
Additional paid-in capital	34,391,420	34,294,154
Accumulated deficit	(26,066,282)	(23,684,612)
Total stockholders' equity	8,325,530	10,609,934
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 9,632,695	$ 11,923,359

See notes to financial statements.

NOVELOS THERAPEUTICS, INC.
STATEMENTS OF OPERATIONS
(Unaudited)

	Three Months Ended March 31,	
	2007	**2006**
COSTS AND EXPENSES:		
Research and development	$ 1,909,407	$ 663,311
General and administrative	607,722	771,497
Total costs and expenses	2,517,129	1,434,808
OTHER INCOME:		
Interest income	133,959	80,722
Miscellaneous	1,500	—
Total other income	135,459	80,722
NET LOSS	(2,381,670)	(1,354,086)
PREFERRED STOCK DIVIDEND	(65,280)	(64,000)
NET LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS	$ (2,446,950)	$ (1,418,086)
BASIC AND DILUTED NET LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS PER COMMON SHARE	$ (0.06)	$ (0.05)
SHARES USED IN COMPUTING BASIC AND DILUTED NET LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS PER COMMON SHARE	39,235,272	30,927,952

See notes to financial statements.

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

	Three Months Ended March 31,	
	2007	**2006**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (2,381,670)	$ (1,354,086)
Adjustments to reconcile net loss to cash used in operating activities:		
Depreciation and amortization	3,878	2,178
Stock-based compensation	162,546	227,517
Increase (decrease) in:		
Prepaid expenses and other current assets	101,740	114,762
Accounts payable and accrued liabilities	157,100	258,443
Accrued compensation	(163,360)	—
Cash used in operating activities	(2,119,766)	(751,186)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(3,727)	(2,190)
Change in restricted cash	47,540	(1,201)
Deferred financing costs	(25,000)	24,612
Cash provided by investing activities	18,813	21,221
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of common stock, net	—	13,888,940
Dividends paid to preferred stockholders	(65,280)	(64,000)
Proceeds from exercise of stock option	—	750
Cash provided by (used in) financing activities	(65,280)	13,825,690
INCREASE (DECREASE) IN CASH AND EQUIVALENTS	(2,166,233)	13,095,725
CASH AND EQUIVALENTS AT BEGINNING OF YEAR	9,938,428	4,267,115
CASH AND EQUIVALENTS AT END OF PERIOD	$ 7,772,195	$ 17,362,840
SUPPLEMENTAL DISCLOSURE OF NON-CASH ACTIVITIES		
Common stock issued for services	$ —	$ 125,750

See notes to financial statements.

1. BASIS OF PRESENTATION

The accompanying unaudited financial statements of Novelos Therapeutics, Inc. ("Novelos" or 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-QSB and Item 310 of Regulation S-B. 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, 2007. 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, 2006 on Form 10-KSB, which was filed with the Securities and Exchange Commission ("SEC") on March 21, 2007.

Cash - Restricted cash consists of approximately $58,000 of cash placed in escrow as contractually required under an employment agreement with an officer and approximately $1,550,000 of cash pledged as security on a letter of credit agreement with a bank. See Note 8.

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

Reclassifications - Certain amounts in prior periods have been reclassified to conform to the current period presentation.

2. REVERSE MERGER AND REORGANIZATION

During May and June 2005, the Company completed a two-step reverse merger with Common Horizons, Inc. ("Common Horizons"), a Nevada-based developer of web portals, and its wholly owned subsidiary Nove Acquisition, Inc. Following the reverse merger Novelos became the surviving corporation. Following these transactions, Novelos shareholders owned approximately 83% of the combined company on a fully diluted basis after giving effect to the transactions. The business of Common Horizons, which was insignificant, was abandoned and the business of Novelos was adopted. The transaction was therefore treated as a reverse acquisition recapitalization with Novelos as the acquiring party and Common Horizons as the acquired party for accounting purposes.

3. STOCKHOLDERS' EQUITY

2005 PIPE - From May 27, 2005 through August 9, 2005, the Company completed a private offering of securities structured as a "PIPE" (Private Investment in Public Equity), exempt from registration under the Securities Act of 1933, in which it sold to accredited investors 4,000,000 shares of common stock and issued 2,000,000 common stock warrants (initially exercisable at $2.25 per share) for net cash proceeds of approximately $3,715,000 (net of cash issuance costs of approximately $735,000) and conversion of debt and accrued interest of $550,000. In connection with the private placement, the Company also issued 125,000 shares of common stock to placement agents with a value of approximately $156,000 and issued 340,000 common stock warrants to placement agents and finders at an initial exercise price of $2.00 per share. Pursuant to anti-dilution provisions, the number of warrants issued to investors, placement agents and finders was subsequently increased to 3,139,312 and the exercise price of the warrants was reduced to $1.65 per share as a result of the Series A Preferred financing described below. The 2006 PIPE transaction in March 2006 described below resulted in a further adjustment to the warrants, increasing the number of warrants to 3,836,967 and reducing the exercise price of the warrants to $1.35 per share.

Series A Preferred -- On September 30, 2005 and October 3, 2005, the Company sold, in a private placement, a total of 3,200 shares of its Series A 8% Cumulative Convertible Preferred Stock (Series A Preferred) and 969,696 common stock warrants for net proceeds of $2,864,000, net of issuance costs of $336,000. The preferred shares were originally convertible at a price of $1.65 per common share into 1,939,393 shares of common stock and the warrants were exercisable at $2.00 per share. See Note 9 regarding an exchange of all the outstanding shares of Series A Preferred Stock for shares of a new Series C convertible preferred stock.

The Series A Preferred stockholders do not have voting rights. The holders of a majority of the Series A Preferred stock nominated Michael J. Doyle to the Company's board of directors. The preferred stock has an annual dividend rate of 8%, payable quarterly in cash or additional shares of preferred stock. This dividend rate increases to 20% annually on the second anniversary of issuance or upon the occurrence of certain events of default. The Series A Preferred stockholders have a preference in liquidation equal to the face value of the outstanding shares plus any accrued but any unpaid dividends. If there are insufficient assets to permit payment in full, the Company's assets will be distributed to the Series A Preferred stockholders on a pro rata basis.

The Series A Preferred stock and warrants have anti-dilution provisions that provide for adjustments to the conversion or exercise price, as applicable, upon the occurrence of certain events. Pursuant to these anti-dilution provisions, both the conversion price of the preferred stock and the exercise price of the warrants were subsequently adjusted to $1.35 per share on March 7, 2006 in connection with the 2006 PIPE transaction described below and the preferred stock then outstanding became convertible into 2,417,774 shares of common stock.

2006 PIPE - On March 7, 2006, the Company completed a private offering of securities structured as a PIPE, exempt from registration under the Securities Act of 1933, in which it sold to accredited investors 11,154,073 shares of common stock at $1.35 per share and warrants to purchase 8,365,542 shares of its common stock exercisable at $2.50 per share for net cash proceeds of approximately $13,847,000 (net of issuance costs of approximately $1,211,000, including placement agent fees of approximately $1,054,000). In connection with the private placement, the Company issued 669,244 common stock warrants (exercisable at $2.50 per share) to the placement agents.

Common Stock Warrants — The following table summarizes information with regard to outstanding warrants issued in connection with equity and debt financings as of March 31, 2007:

Offering	Outstanding (as adjusted)		Exercise Price (as adjusted)	Expiration Date
2005 Bridge Loans	720,000	$	0.625	April 1, 2010
2005 PIPE:				
Investors	3,333,275	$	1.35	August 9, 2008
Placement agents and finders	503,692	$	1.35	August 9, 2010
Series A Preferred:				
Investors - September 30, 2005 closing	909,090	$	1.35	September 30, 2010
Investors - October 3, 2005 closing	60,606	$	1.35	October 3, 2010
2006 PIPE:				
Investors	8,365,542	$	2.50	March 7, 2011
Placement agents	669,244	$	2.50	March 7, 2011
Total	14,561,449			

On April 1, 2005, in connection with the issuance of $450,000 bridge notes payable, the Company issued warrants to purchase 720,000 shares of Novelos stock at $0.625 per share that expire in 5 years.

No warrants have been exercised as of March 31, 2007.

The sale of Series B Convertible Preferred Stock, described in Note 9, resulted in adjustments to certain warrant exercise prices and amounts. See Note 9 for a summary of those adjustments.

Registration Rights - The shares of common stock sold in the 2005 PIPE and the 2006 PIPE and the shares of common stock issuable upon conversion of the preferred stock and exercise of outstanding warrants have been registered for resale with the Securities and Exchange Commission. Pursuant to the registration rights associated with the financings, if the Company fails to maintain the effectiveness of the registration statements for the periods specified in the agreements, the Company may become obligated to pay liquidated damages to the selling stockholders. The Company believes that an investor claim for liquidated damages relating to these registration rights is not probable and therefore has not accrued for such a contingency at March 31, 2007.

Reserved Shares — At March 31, 2007 the following shares were reserved for future issuance upon exercise of stock options or warrants or conversion of preferred stock:

2000 Stock Option Plan	73,873
2006 Stock Incentive Plan	5,000,000
Options issued outside of formalized plans	2,578,778
Warrants	14,561,449
Preferred stock (1)	4,231,104
Total shares reserved for future issuance	26,445,204

(1) The amount of reserved shares includes shares reserved in excess of the number currently exercisable or convertible in accordance with the related financing agreement.

4. STOCK-BASED COMPENSATION

The Company accounts for stock-based compensation in accordance with the provisions of Statement of Financial Accounting Standards (SFAS) 123R *Share-Based Payment* (SFAS 123R), using the modified-prospective-transition method. SFAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the financial statements based on their fair values. SFAS 123R did not change the accounting guidance for share-based payments granted to non-employees provided in SFAS No. 123, *Accounting for Stock-Based Compensation* (SFAS 123), as originally issued and Emerging Issues Task Force (EITF) No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*. EITF 96-18 requires that companies recognize compensation 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 by such non-employees. Under the modified-prospective-transition method, compensation cost recognized for all periods presented includes: (a) compensation cost for all stock-based payments granted, but not yet vested as of January 1, 2006, based on the grant-date fair value estimated in accordance with the original provisions of SFAS 123, and (b) compensation cost for all stock-based payments granted subsequent to January 1, 2006, based on the grant-date fair value estimated in accordance with the provisions of SFAS 123R.

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 and restricted stock awards granted to non-employee consultants:

	Three Months Ended March 31,	
	2007	**2006**
Employee and director stock option grants:		
Research and development	$ 63,066	$ 45,615
General and administrative	41,642	15,110
	104,708	60,725
Non-employee consultants stock option grants and restricted stock awards:		
Research and development	17,858	—
General and administrative	39,980	166,792
	57,838	166,792
Total stock-based compensation	$ 162,546	$ 227,517

Determining Fair Value

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

	Three Months Ended March 31, 2007
Volatility	80%
Weighted-average volatility	80%
Risk-free interest rate	4.66%
Expected life (years)	5
Dividend	0
Weighted-average exercise price	$ 0.89
Weighted-average grant-date fair value	$ 0.60

There were no option grants in the three months ended March 31, 2006.

Stock Option Activity

A summary of stock option activity under the 2000 Plan, the 2006 Plan and outside of any formalized plan is as follows:

	Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contracted Term in Years	Aggregate Intrinsic Value
Outstanding at January 1, 2007	3,492,651	$ 0.70		
Options granted	120,000	$ 0.89		
Outstanding at March 31, 2007	3,612,651	$ 0.71	8.2	$ 2,593,113
Exercisable at March 31, 2007	2,466,817	$ 0.52	7.7	$ 2,301,079

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.

As of March 31, 2007, there was approximately $654,000 of total unrecognized compensation cost related to unvested share-based compensation arrangements. Of this total amount, 53%, 30% and 17% are expected to be recognized during 2007, 2008 and 2009, respectively. The Company expects 1,145,834 in unvested options to vest in the future. The weighted-average grant-date fair value of vested and unvested options outstanding at March 31, 2007 was $0.29 and $0.68, respectively.

5. NET LOSS PER SHARE

Basic net loss per share is computed by dividing net loss attributable to common stockholders 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 attributable to common stockholders by 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. Since the Company has a net loss for all periods presented, the inclusion of stock options and warrants in the computation would be antidilutive. Accordingly, basic and diluted net loss per share are the same.

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 March 31,	
	2007	2006
Stock options	3,612,651	2,652,651
Warrants	14,561,449	14,561,449
Conversion of preferred stock	2,417,774	2,417,774

6. INCOME TAXES

The Company accounts for income taxes in accordance with SFAS No. 109, *Accounting for Income Taxes* (SFAS 109). Under SFAS 109, 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 for federal, state or foreign income taxes for the three months ended March 31, 2007 and 2006, respectively, because the Company has experienced losses since inception. The Company has not recorded a benefit for deferred tax assets as their realizability is uncertain.

7. NEW ACCOUNTING PRONOUNCEMENTS

In February 2007, the Financial Accounting Standards Board (FASB) issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities - Including an Amendment to FASB Statement No. 115* (SFAS 159). SFAS 159 permits entities to choose to measure many financial instruments and certain other items at fair value. SFAS 159 is effective for financial statements issued for fiscal years beginning after November 15, 2007. Earlier adoption is permitted as of the beginning of a fiscal year that begins on or before November 15, 2007, provided that the entity also elects to apply the provisions of SFAS 157. The Company is currently evaluating the effect of this standard on its future reported financial position and results of operations.

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements* (SFAS 157), to define fair value, establish a framework for measuring fair value in generally accepted accounting principles and expand disclosures about fair-value measurements. SFAS 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007 and interim periods within those fiscal years, with earlier application allowed. The Company is currently evaluating the effect of this standard on its future reported financial position and results of operations.

In February 2006, the FASB issued SFAS No. 155, *Accounting for Certain Hybrid Financial Instruments—an amendment of FASB Statements No. 133 and 140* (SFAS 155), to simplify and make more consistent the accounting for certain financial instruments. SFAS 155 amends SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*, to permit fair-value remeasurement for any hybrid financial instrument with an embedded derivative that otherwise would require bifurcation, provided that the whole instrument is accounted for on a fair-value basis. SFAS 155 amends SFAS No. 140, *Accounting for the Impairment or Disposal of Long-Lived Assets*, to allow a qualifying special-purpose entity to hold a derivative financial instrument that pertains to a beneficial interest other than another derivative financial instrument. SFAS 155 applies to all financial instruments acquired or issued after the beginning of an entity's first fiscal year that begins after September 15, 2006, with earlier application allowed. This standard had no effect on the Company’s financial position or results of operations in the three months ended March 31, 2007.

8. COMMITMENTS AND RELATED PARTY TRANSACTIONS

The Company is obligated to ZAO BAM under a royalty and technology transfer agreement. Mark Balazovsky, a director of the Company until November 2006, is the majority shareholder of ZAO BAM. Pursuant to the royalty and technology transfer agreement between the Company and ZAO BAM, the Company is required to make royalty payments of 1.2% of net sales of oxidized glutathione-based products. The Company is also required to pay ZAO BAM $2 million for each new oxidized glutathione-based drug within eighteen months following FDA approval of such drug.

The Company has also agreed to pay ZAO BAM 12% of all license revenues, as defined, in excess of the Company’s expenditures associated therewith, including but not limited to, preclinical and clinical studies, testing, FDA and other regulatory agency submission and approval costs, general and administrative costs, and patent expenses, provided that such payment be no less than 3% of all license revenues.

As a result of the assignment to Novelos of the exclusive worldwide intellectual property and marketing rights of oxidized glutathione (excluding Russia and the other states of the former Soviet Union), Novelos is obligated to the Oxford Group, Ltd. for future royalties. The Company’s Chairman of the Board of Directors is president of Oxford Group, Ltd. Pursuant to the agreement, as revised May 26, 2005, Novelos is required to pay Oxford Group, Ltd. a royalty in the amount of 0.8% of the Company’s net sales of oxidized glutathione-based products.

In July, 2006, the Company entered into a contract with a supplier of pharmaceutical products that will provide chemotherapy drugs to be used in connection with Phase 3 clinical trial activities outside of the United States. Pursuant to the contract, the Company was obligated to purchase a minimum of approximately $2,600,000 of chemotherapy drugs at specified intervals through March 2008. During 2006, the Company purchased approximately $1,300,000 under the contract and as of March 31, 2007, approximately $1,300,000 is remaining under that commitment. In connection with that agreement, the Company was required to enter into a standby letter of credit arrangement with a bank, expiring in August 2007. The balance on the standby letter of credit at March 31, 2007 equals the remaining purchase commitment of $1,300,000. In connection with the letter of credit, the Company has pledged cash of approximately $1,600,000 to the bank as collateral on the letter of credit. The pledged cash is included in restricted cash at March 31, 2007.

9. SUBSEQUENT EVENT

Securities Purchase Agreement

On May 2, 2007, pursuant to a securities purchase agreement with accredited investors dated April 12, 2007 (the "Purchase Agreement"), as amended May 2, 2007, the Company sold 300 shares of a newly created series of preferred stock, designated "Series B Convertible Preferred Stock", with a stated value of $50,000 per share (the "Series B Preferred Stock") and issued warrants to purchase 7,500,000 shares of common stock for an aggregate purchase price of $15,000,000.

Series B Preferred Stock

The shares of Series B Preferred Stock issued to investors are convertible into shares of common stock at $1.00 per share at any time after issuance at the option of the holder. If there is an effective registration statement covering the shares of common stock underlying the Series B Preferred Stock and the volume-weighted average price ("VWAP"), as defined in the Series B Certificate of Designations, of the Company's common stock exceeds $2.00 for 20 consecutive trading days, then the outstanding Series B Preferred Stock will automatically convert into common stock at the conversion price then in effect. The conversion price is subject to adjustment for stock dividends, stock splits or similar capital reorganizations. The Series B Preferred Stock has an annual dividend rate of 9%, payable semi-annually on September 30 and March 31. Such dividends may be paid in cash or in registered shares of the Company's common stock at the Company's option.

For as long as any shares of Series B Preferred Stock remain outstanding, the Company is prohibited from (i) paying dividends to common stockholders, (ii) amending the Company's certificate of incorporation (except to increase the number of shares of authorized common stock to 150,000,000), (iii) issuing any equity security or any security convertible into or exercisable for any equity security at a price of $1.00 or less or with rights senior to the Series B Preferred Stock (except for certain exempted issuances), (iv) increasing the number of shares of Series B Preferred Stock or issuing any additional shares of Series B Preferred Stock other than the 400 shares designated in the Series B Certificate of Designations, (v) selling or otherwise disposing of all or substantially all of the Company's assets or intellectual property or entering into a merger or consolidation with another company unless Novelos is the surviving corporation, the Series B Preferred Stock remains outstanding and there are no changes to the rights and preferences of the Series B Preferred Stock, (vi) redeeming or repurchasing any capital stock other than Series B Preferred Stock, (vii) incurring any new debt for borrowed money and (viii) changing the number of the Company's directors.

Common-Stock Purchase Warrants

The common-stock purchase warrants issued to investors are exercisable for an aggregate of 7,500,000 shares of the Company's common stock at an exercise price of $1.25 per share and expire in May 2012. If after the first anniversary of the date of issuance of the warrant there is no effective registration statement registering, or no current prospectus available for, the resale of the shares issuable upon the exercise of the warrants, the holder may conduct a cashless exercise whereby the holder may elect to pay the exercise price by having the Company withhold, upon exercise, shares having a fair market value equal to the applicable aggregate exercise price. The warrant exercise price and/or number of warrants is subject to adjustment 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. If there is an effective registration statement covering the shares underlying the warrants and the VWAP, as defined in the warrant, of the Company's common stock exceeds $2.25 for 20 consecutive trading days, then on the 31st day following the end of such period any remaining warrants for which a notice of exercise was not delivered shall no longer be exercisable and shall be converted into a right to receive $.01 per share.

Registration Rights Agreement

The Company and the investors have entered into a registration rights agreement which requires the Company to file with the SEC no later than 30 days following the closing of the transaction, a registration statement covering the resale of a number of shares of common stock equal to 100% of the shares issuable upon conversion of the preferred stock and exercise of the warrants as of the date of filing of the registration statement. The registration statement covering these shares must be declared effective by the SEC no later than 90 days following the closing (or in the event there is a review, no later than 120 days from the closing). The Company is required to use its best efforts 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. In the event the Company fails to file the registration statement or it is not declared effective within the timeframes specified by the Registration Rights Agreement, the Company is required to pay to the Investors 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 preferred stock and warrants until the Company files the delinquent registration statement or the registration statement is declared effective, as applicable. The Company is allowed to suspend the use of the registration statement for not more than 15 consecutive days or for a total of not more than 30 days in any 12-month period without incurring liability for the liquidated damages in certain circumstances.

Placement Agent Agreement

Upon the closing of the preferred stock and warrant financing the Company paid a cash placement agent fee to Rodman & Renshaw LLC ("Rodman") and Rodman's subagent totaling $1,050,000 and issued Rodman and the subagent warrants to purchase a total of 900,000 shares of common stock with the same terms as the warrants issued to the investors.

The Company has agreed to indemnify Rodman from claims arising in relation to the services it provided to the Company in connection with this agreement.

Agreement to Exchange and Consent

As a condition to closing the preferred stock and warrant financing, the holders of the existing Series A preferred stock have exchanged their 3,264 shares of Series A preferred stock for 272 shares of a new Series C convertible preferred stock, which are subordinated to the Series B preferred stock as set forth in the Series C Certificate of Designations. The Series C preferred stock is convertible at $1.00 per share into 3,264,000 shares of common stock. As part of the exchange, the Company issued to the holders of the Series A preferred stock warrants to purchase 1,333,333 shares of common stock expiring on May 2, 2012 at a price of $1.25 per share and paid them a cash allowance to defray expenses totaling $40,000 and an amount equal to unpaid dividends accumulated through the date of the exchange. Pursuant to the exchange agreement the holders of the new Series C preferred stock retained registration and related rights substantially identical to the rights that they had as holders of the Series A preferred stock.

The Series C Preferred Stock has an annual dividend rate of 8% until October 1, 2008 and thereafter has an annual dividend rate of 20%. The dividends are payable quarterly commencing on June 30, 2007. Such dividends shall only be paid after all outstanding dividends on the Series B Preferred Stock (with respect to the current fiscal year and all prior fiscal years) shall have been paid to the holders of the Series B Preferred Stock. The conversion price is subject to adjustment for stock dividends, stock splits or similar capital reorganizations.

The following events, if not cured in the applicable time period, are events of default under the Series C Certificate of Designations and cause the dividend rate to increase to 20%: (i) failure to timely pay any dividend payment or the failure to timely pay any other sum of money due to the Holder, (ii) any breach of any material covenant, term or condition of the Subscription Agreement or the Series C Certificate of Designations, (iii) any material representation or warranty of the Company made in the Subscription Agreement, or in any agreement, statement or certificate given in writing pursuant thereto shall prove to have been false or misleading at the time when made, (iv) an assignment of a substantial part of the Company's property or business for the benefit of creditors, (v) the entry of any money judgment, confession of judgment, writ or similar process against the Company or its property or other assets for more than $100,000 that is not vacated, satisfied, bonded or stayed within 45 days, (vi) the institution of bankruptcy, insolvency, reorganization or liquidation proceedings or other proceedings for relief under any bankruptcy law or any law for the relief of debtors against the Company which is not dismissed within 45 days, (vii) an order entered by a court of competent jurisdiction, or by the SEC, or by the National Association of Securities Dealers, preventing purchase and sale transactions in the Company's Common Stock for a period of five or more consecutive trading days, (viii) failure to deliver to the Holder Common Stock or a replacement Preferred Stock certificate within ten (10) business days of the required delivery date, (ix) the occurrence and continuation of a Non-Registration Event as described in Section 11.4 of the Subscription Agreement for a period of forty-five (45) days, (x) delisting of the Common Stock from the OTC Bulletin Board ("OTCBB") or such other principal market or exchange on which the Common Stock is listed for trading, if the Common Stock is not quoted or listed on such market or exchange, or quoted on the automated quotation system of a national securities association or listed on a national securities exchange, within ten (10) trading days after such delisting, (xi) failure to reserve the amount of Common Stock required to be reserved pursuant to Section 4(h) of the Certificate of Designations, (xii) a default by the Company of a material term, covenant, warranty or undertaking of any other agreement to which the Company and Holder are parties, or the occurrence of a material event of default under any such other agreement, in each case, which is not cured after any required notice and/or cure period, and (xiii) the occurrence of a Change in Control (as defined in the Series C Certificate of Designations).

Board and Observer Rights

Pursuant to the Purchase Agreement, from and after the closing of the sale of the Series B Preferred Stock, Xmark Opportunity Fund, Ltd. and its affiliates (the "Xmark Entities"), will have the right to designate one member to the Company's Board of Directors. This right shall last until such time as the Xmark Entities no longer hold at least one-third of the Series B Preferred Stock issued to them at closing. In addition, the Xmark Entities and Caduceus Capital Master Fund Limited and its affiliates (together with the Xmark Entities, the "Lead Investors") will have the right to designate one observer to attend all meetings of the Company's Board of Directors, committees thereof and access to all information made available to members of the Board. This right shall last until such time as the Lead Investors no longer hold at least one-third of the Series B Preferred Stock issued to them. Pursuant to the Agreement to Exchange and Consent described above, the holders of the new Series C preferred stock gave up the right to nominate one person to the Company's Board of Directors, which right they previously held as holders of Series A preferred stock.

Anti-Dilution Adjustments

Pursuant to anti-dilution provisions associated with existing warrant agreements, the sale of Series B Preferred Stock resulted in adjustments to the amount and/or exercise price of certain warrants. The following table summarizes the anti-dilution adjustments to warrants that were outstanding prior to the financing:

	Prior to Series B Financing		Following Series B Financing	
Offering	**Number Outstanding**	**Exercise Price**	**Number Outstanding**	**Exercise Price**
2005 Bridge Loans	720,000	$ 0.625	720,000	$ 0.625
2005 PIPE:				
Investors	3,333,275	$ 1.35	4,500,000	$ 1.00
Placement agents and finders	503,692	$ 1.35	680,000	$ 1.00
Series A Preferred (1) :				
Investors - September 30, 2005 closing	909,090	$ 1.35	909,090	$ 1.00
Investors - October 3, 2005 closing	60,606	$ 1.35	60,606	$ 1.00
2006 PIPE :				
Investors	8,365,542	$ 2.50	9,509,275	$ 2.20
Placement agents	669,244	$ 2.50	760,743	$ 2.20
Total	14,561,449		17,139,714	

(1) Following the Series B Financing, the shares of Series A Preferred Stock are now shares of Series C Preferred Stock.

Item 2. Management's Discussion and Analysis or Plan of Operation

Forward-Looking Statements

This quarterly report on Form 10-QSB 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 "critical accounting estimates" and the risk factors set forth below under the caption "Factors That May Affect Future Results." 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, established in 1996, commercializing oxidized glutathione-based compounds for the treatment of cancer and hepatitis.

NOV-002, our lead compound currently in Phase 3 development for non-small cell lung cancer (NSCLC), acts as a chemoprotectant and an immunomodulator. In May 2006, we finalized a Special Protocol Assessment (SPA) with the FDA for a single pivotal Phase 3 trial in advanced NSCLC in combination with first-line chemotherapy, and received Fast Track designation in August 2006. The primary endpoint of this trial is improvement in median overall survival. Patient enrollment commenced in November 2006 and is ongoing. NOV-002 is also in Phase 2 development for chemotherapy-resistant ovarian cancer and early-stage breast cancer and, in addition, is being developed for treatment of acute radiation injury.

NOV-205, our second compound, acts as a hepatoprotective agent with immunomodulating and anti-inflammatory properties. Our Investigational New Drug Application for NOV-205 as monotherapy for chronic hepatitis C has been accepted by the FDA, and a U.S. Phase 1b clinical trial in patients who previously failed treatment with pegylated interferon plus ribavirin is ongoing.

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) related to compounds based on oxidized glutathione, including NOV-002 and NOV-205. Our patent portfolio includes four U.S. issued patents (plus one notice of allowance), two European issued patents and one Japanese issued patent.

Plan of Operation

Our plan of operation for the next twelve months is to continue the clinical development of our two product candidates. We expect our principal expenditures during those 12 months to include the costs associated with clinical trials. We will continue to maintain a low number of permanent employees and utilize senior advisors, consultants, contract research and manufacturing organizations and third parties to perform certain aspects of product development, including clinical and non-clinical development, manufacturing and, in some cases, regulatory and quality assurance functions. As discussed in Note 9, on May 2, 2007 we completed a private placement of our Series B Preferred Stock and warrants with anticipated net proceeds of approximately $13,600,000 (net of estimated issuance costs). Based on our current and anticipated spending, we expect that we will be able to fund these activities with existing working capital into the middle of 2008.

Capital Structure and Financings

In 2005 following the settlement of certain of our indebtedness, we completed a two-step reverse merger with Common Horizons, Inc. ("Common Horizons"), a Nevada-based developer of web portals, and its wholly owned subsidiary Nove Acquisition, Inc. After the completion of the reverse merger Novelos became the surviving corporation, the business of Common Horizons, which was insignificant, was abandoned and the business of Novelos was adopted. The transaction was therefore treated as a reverse acquisition recapitalization with Novelos as the acquiring party and Common Horizons as the acquired party for accounting purposes.

During 2005 and 2006 we completed various private placements of securities. In May through August of 2005 we sold an aggregate of 4,000,000 shares of common stock and warrants to purchase 2,000,000 shares of common stock for net cash proceeds of $3,715,000 and the conversion of $550,000 of convertible debt and accrued interest. In September and October 2005, we sold in a private placement 3,200 shares of Series A preferred stock and warrants to purchase 969,696 shares of common stock for aggregate net proceeds of $2,864,000. The preferred stock was initially convertible into 1,939,393 shares of common stock, and is currently convertible into 2,370,370, shares of common stock due to certain adjustments to the conversion price. On March 7, 2006, we sold 11,154,073 shares of our common stock and warrants to purchase 8,365,542 shares of our common stock for net proceeds of $13,847,000. On May 2, 2007, we sold 300 shares of our Series B preferred stock and warrants to purchase 7,500,000 shares of our common stock for net proceeds of approximately $13,600,000 (net of estimated issuance costs) and the holders of the existing Series A preferred stock exchanged their 3,264 shares of Series A preferred stock for 272 shares of a new Series C convertible preferred stock.

Results of Operations

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.

Three Months Ended March 31, 2007 and 2006

Research and Development. Research and development expense for the three months ended March 31, 2007 was $1,909,000 compared to $663,000 for the three months ended March 31, 2006. The $1,246,000, or 188%, increase in research and development expense was due to increased funding of our clinical, contract manufacturing and non-clinical activities. The overall increase resulted principally from expanded activities relating to our pivotal Phase 3 clinical trial of NOV-002 for non-small cell lung cancer. The increase includes $813,000 in additional contract research and consulting services, $194,000 in clinical site expenses, an increase of $176,000 in drug manufacturing costs and an increase of $28,000 related to overhead costs such as travel and related expenses. Additionally, stock compensation expense increased $35,000 during the first quarter of 2007 as compared to the first quarter of 2006, principally resulting from additional option grants during 2006. During the next twelve months, we expect research and development spending to continue to increase as our clinical trials progress.

General and Administrative. General and administrative expense for the three months ended March 31, 2007 was $608,000 compared to $771,000 for the three months ended March 31, 2006. The $163,000, or 21%, decrease in general and administrative expense was primarily due to two factors. First, investor relations costs decreased $156,000 principally from a decrease in restricted stock awards to consultants. Second, consulting fees for accounting and business development services decreased by $63,000 as we increased our use of internal resources to perform those functions. These decreases were partly offset by a $25,000 increase in stock compensation associated with new option grants during 2006 to employees, directors and consultants and a $31,000 increase in travel and overhead costs.

Interest Income. Interest income for the three months ended March 31, 2007 was $134,000 compared to $81,000 for the three months ended March 31, 2006. The increase in interest income during 2007 related to higher average cash balances in 2007 as a result of the remaining net proceeds from the financings described in Note 3 being placed in interest-bearing accounts.

Liquidity and Capital Resources

We have financed our operations since inception through the sale of equity securities and the issuance of debt (which was subsequently paid off or converted into equity). As of March 31, 2007, we had $9,380,000 in cash and equivalents, including $1,608,000 of restricted cash that is reserved for research and development activities.

During the three months ended March 31, 2007, cash of approximately $2,120,000 was used in operations, primarily due to a net loss of $2,382,000 and net payment of accrued compensation of $163,000, offset by non-cash stock-based compensation expense of $162,000, depreciation and amortization of $4,000, a decrease in prepaid expenses of $102,000 and an increase in accounts payable and accrued expenses of $157,000. During the three months ended March 31, 2007, cash of approximately $19,000 was provided by investing activities resulting from the release of restrictions on $48,000 of cash that had been previously restricted, offset by payments of $25,000 for financing costs and to purchase $4,000 of fixed assets.

During the three months ended March 31, 2007, cash of approximately $65,000 was used in financing activities resulting from the payment of cash dividends on the Series A cumulative convertible preferred stock.

As discussed in Note 9, on May 2, 2007 we completed a private placement of our Series B Preferred Stock and warrants with anticipated net proceeds of approximately $13,600,000 (net of estimated issuance costs). Based on our current and anticipated spending, we believe that our available cash and equivalents, including the net proceeds from the Series B financing, will be sufficient to meet our working capital requirements, including operating losses and capital expenditure requirements, into the middle of 2008, assuming that our business plan is implemented successfully.

We believe, however, that we will need to raise additional capital in order to complete the pivotal Phase 3 clinical trial for NOV-002 and other research and development activities. Furthermore, we may license or acquire other compounds that will require capital for development. We may seek additional funding through collaborative arrangements and public or private financings. Additional funding may not be available to us on acceptable terms or at all. In addition, the terms of any financing may adversely affect the holdings or the rights of our stockholders. For example, if we raise additional funds by issuing equity securities, further dilution to our existing stockholders may result. If we are unable to obtain funding on a timely basis, we may be required to significantly curtail one or more of our research or development programs. We also could be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights to some of our technologies, product candidates, or products which we would otherwise pursue on our own.

Even if we are able to raise additional funds in a timely manner, our future capital requirements may vary from what we expect and will depend on many factors, including the following:

- the resources required to successfully complete our clinical trials;
- the time and costs involved in obtaining regulatory approvals;
- continued progress in our research and development programs, as well as the magnitude of these programs;
- the cost of manufacturing activities;
- the costs involved in preparing, filing, prosecuting, maintaining, and enforcing patent claims;
- the timing, receipt, and amount of milestone and other payments, if any, from collaborators; and
- fluctuations in foreign exchange rates.

Commitments

In July 2006, we entered into a contract with a supplier of pharmaceutical products that will provide chemotherapy drugs to be used in connection with Phase 3 clinical trial activities in certain locations outside of the United States. Payments under the contract will be made in Euros and will be funded with available working capital. The minimum commitment under the contract is approximately as follows as of March 31, 2007:

	Payments Due by Period				
	Total	**0-12 Months**	**1 - 3 Years**	**3 - 5 Years**	**After 5 Years**
Chemotherapy purchase commitment	$ 1,300,000	$ 1,200,000	$ 100,000	$ -	-

Factors Affecting Future Performance

We may have difficulty raising needed capital because of our limited operating history and our business risks.

We currently generate no revenue from our proposed products or otherwise. We do not know when this will change. We have expended and will continue to expend substantial funds in the research, development and clinical and pre-clinical testing of our drug compounds. We will require additional funds to conduct research and development, establish and conduct clinical and pre-clinical trials, establish commercial-scale manufacturing arrangements and provide for the marketing and distribution of our products. Additional funds may not be available on acceptable terms, if at all. If adequate funding is not available to us, we may have to delay, reduce the scope of or eliminate one or more of our research or development programs or product launches or marketing efforts, which may materially harm our business, financial condition and results of operations.

Our long-term capital requirements are expected to 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 drugs;
- costs involved in establishing manufacturing capabilities for clinical trial and commercial quantities of our drugs;
- competing technological and market developments;
- market acceptance of our products;
- costs for recruiting and retaining management, employees and consultants;
- costs for training physicians;
- our status as a bulletin-board listed company and the prospects for our stock to be listed on a national exchange; and
- uncertainty and economic instability resulting from terrorist acts and other acts of violence or war.

We may consume available resources more rapidly than currently anticipated, resulting in the need for additional funding. 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 otherwise 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 adequate funds are not available, we may be required to significantly reduce or refocus our development efforts with regard to our drug compounds. Currently, we believe that we have available cash sufficient to meet our working capital requirements into the middle of 2008, assuming our expense levels do not exceed our current plan. If we do not generate revenues or raise additional capital, we will not be able to sustain our operations at existing levels beyond that date or earlier if expense levels increase.

The failure to complete development of our therapeutic technology, obtain government approvals, including required U.S. Food and Drug Administration (FDA) approvals, or to comply with ongoing governmental regulations could prevent, delay or limit introduction or sale of proposed products and result in failure to achieve revenues or maintain our ongoing business.

Our research and development activities and the manufacture and marketing of our intended products are subject to extensive regulation for safety, efficacy and quality by numerous government authorities in the United States and abroad. Before receiving FDA clearance to market our proposed products, we will have to demonstrate that our products are safe and effective on the patient population and for the diseases that are to be treated. Clinical trials, manufacturing and marketing of drugs are subject to the rigorous testing and approval process of the FDA and equivalent foreign regulatory authorities. The Federal Food, Drug and Cosmetic Act and other federal, state and foreign statutes and regulations govern and influence the testing, manufacturing, labeling, advertising, distribution and promotion of drugs and medical devices. As a result, clinical trials and regulatory approval can take many years to accomplish and require the expenditure of substantial financial, managerial and other resources.

In order to be commercially viable, we must successfully research, develop, obtain regulatory approval for, manufacture, introduce, market and distribute our technologies. For each drug utilizing oxidized glutathione-based compounds, including NOV-002 and NOV-205, we must successfully meet a number of critical developmental milestones including:

- demonstrating benefit from delivery of each specific drug for specific medical indications;
- demonstrating through pre-clinical and clinical trials that each drug is safe and effective; and
- demonstrating that we have established a viable Good Manufacturing Process capable of potential scale-up.

The timeframe necessary to achieve these developmental milestones may be long and uncertain, and we may not successfully complete these milestones for any of our intended products in development.

In addition to the risks previously discussed, our technology is subject to additional developmental risks that include the following:

- uncertainties arising from the rapidly growing scientific aspects of drug therapies and potential treatments;
- uncertainties arising as a result of the broad array of alternative potential treatments related to cancer, hepatitis and other diseases; and
- anticipated expense and time believed to be associated with the development and regulatory approval of treatments for cancer, hepatitis and other diseases.

In order to conduct the clinical trials that are necessary to obtain approval by the FDA to market a product, it is necessary to receive clearance from the FDA to conduct such clinical trials. The FDA can halt clinical trials at any time for safety reasons or because we or our clinical investigators do not follow the FDA's requirements for conducting clinical trials. If we are unable to receive clearance to conduct clinical trials or the trials are halted by the FDA, we would not be able to achieve any revenue from such product, as it is illegal to sell any drug for human consumption in the U.S. without FDA approval.

Data obtained from clinical trials is susceptible to varying interpretations, which could delay, limit or prevent regulatory clearances.

Data already obtained, or in the future obtained, from pre-clinical studies and clinical trials does not necessarily predict the results that will be obtained from later pre-clinical studies and clinical trials. Moreover, pre-clinical and clinical data are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials, even after promising results in earlier trials. The failure to adequately demonstrate the safety and effectiveness of an intended product under development could delay or prevent regulatory clearance of the potential drug, resulting in delays to commercialization, and could materially harm our business. Our clinical trials may not demonstrate sufficient levels of safety and efficacy necessary to obtain the requisite regulatory approvals for our drugs, and our proposed drugs may not be approved for marketing.

We may encounter delays or rejections based on additional government regulation from future legislation or administrative action or changes in FDA policy during the period of development, clinical trials and FDA regulatory review. We may encounter similar delays in foreign countries. Sales of our products outside the U.S. would be subject to foreign regulatory approvals that vary from country to country. The time required to obtain approvals from foreign countries may be shorter or longer than that required for FDA approval, and requirements for foreign licensing may differ from FDA requirements. We may be unable to obtain requisite approvals from the FDA and foreign regulatory authorities, and even if obtained, such approvals may not be on a timely basis, or they may not cover the uses that we request.

Even if we do ultimately receive FDA approval for any of our products, it will be subject to extensive ongoing regulation. This includes regulations governing manufacturing, labeling, packaging, testing, dispensing, prescription and procurement quotas, record keeping, reporting, handling, shipment and disposal of any such drug. Failure to obtain and maintain required registrations or comply with any applicable regulations could further delay or preclude us from developing and commercializing our drugs and subject us to enforcement action.

Our drugs or technology may not gain FDA approval in clinical trials or be effective as a therapeutic agent, which could affect our future profitability and prospects.

In order to obtain regulatory approvals, we must demonstrate that each drug is safe and effective for use in humans and functions as a therapeutic against the effects of a disease or other physiological response. To date, studies conducted in Russia involving our NOV-002 and NOV-205 products have shown what we believe to be promising results. In fact, NOV-002 has been approved for use in Russia for general medicinal use as an immunostimulant in combination with chemotherapy and antimicrobial therapy, and specifically for indications such as tuberculosis and psoriasis. NOV-205 has been approved in Russia as a monotherapy agent for the treatment of hepatitis B and C. Russian regulatory approval is not equivalent to FDA approval. Pivotal Phase 3 studies with a large number of patients, typically required for FDA approval, were not conducted for NOV-002 and NOV-205 in Russia. Further, all of our Russian clinical studies were completed prior to 2000 and may not have been conducted in accordance with current guidelines either in Russia or the United States.

A U.S.-based Phase 1/2 clinical study involving 44 non-small cell lung cancer patients provided what we believe to be a favorable outcome. As a result, we have enrolled the first patient in the Phase 3 study of NOV-002 for non-small cell lung cancer in November 2006 and are continuing to enroll patients. We enrolled the first patient in the Phase 2 clinical study for NOV-002 for chemotherapy-resistant ovarian cancer in July 2006 and anticipate completing that study in 2007. We enrolled the first patient in the Phase 1b clinical study for NOV-205 for chronic hepatitis C in September 2006 and we anticipate completing that study in 2007. There can be no assurance that we can demonstrate that these products are safe or effective in advanced clinical trials. We are also not able to give assurances that the results of the tests already conducted can be repeated or that further testing will support our applications for regulatory approval. As a result, our drug and technology research program may be curtailed, redirected or eliminated at any time.

There is no guarantee that we will ever generate substantial revenue or become profitable even if one or more of our drugs are approved for commercialization.

We expect to incur increasing operating losses over the next several years as we incur increasing costs for research and development and clinical trials. Our ability to generate revenue and achieve profitability depends on our ability, alone or with others, to complete the development of our proposed products, obtain the required regulatory approvals and manufacture, market and sell our proposed products. Development is costly and requires significant investment. In addition, if we choose to license or obtain the assignment of rights to additional drugs, the license fees for such drugs may increase our costs.

To date, we have not generated any revenue from the commercial sale of our proposed products or any drugs and do not expect to receive such revenue in the near future. Our primary activity to date has been research and development. A substantial portion of the research results and observations on which we rely were performed by third parties at those parties' sole or shared cost and expense. We cannot be certain as to when or whether to anticipate commercializing and marketing our proposed products in development, and do not expect to generate sufficient revenues from proposed product sales to cover our expenses or achieve profitability in the near future.

We rely solely on research and manufacturing facilities at various universities, hospitals, contract research organizations and contract manufacturers for all of our research, development, and manufacturing, which could be materially delayed should we lose access to those facilities.

At the present time, we have no research, development or manufacturing facilities of our own. We are entirely dependent on contracting with third parties to use their facilities to conduct research, development and manufacturing. Our inability to have the facilities to conduct research, development and manufacturing may delay or impair our ability to gain FDA approval and commercialization of our drug delivery technology and products.

We currently maintain a good working relationship with such contractors. Should the situation change and we are required to relocate these activities on short notice, we do not currently have an alternate facility where we could relocate our research, development and/or manufacturing activities. The cost and time to establish or locate an alternate research, development and/or manufacturing facility to develop our technology would be substantial and would delay gaining FDA approval and commercializing our products.

We are dependent on our collaborative agreements for the development of our technologies and business development, which exposes us to the risk of reliance on the viability of third parties.

In conducting our research, development and manufacturing activities, we rely and expect to continue to rely on numerous collaborative agreements with universities, hospitals, governmental agencies, charitable foundations, manufacturers and others. The loss of or failure to perform under any of these arrangements, by any of these entities, may substantially disrupt or delay our research, development and manufacturing activities including our anticipated clinical trials.

We may rely on third-party contract research organizations, service providers and suppliers to support development and clinical testing of our products. Failure of any of these contractors to provide the required services in a timely manner or on reasonable commercial terms could materially delay the development and approval of our products, increase our expenses and materially harm our business, financial condition and results of operations.

We are exposed to product, clinical and preclinical liability risks that could create a substantial financial burden should we be sued.

Our business exposes us to potential product liability and other liability risks that are inherent in the testing, manufacturing and marketing of pharmaceutical products. We cannot assure that such potential claims will not be asserted against us. In addition, the use in our clinical trials of pharmaceutical products that we may develop and then subsequently sell or our potential collaborators may develop and then subsequently sell may cause us to bear a portion of or all product liability risks. A successful liability claim or series of claims brought against us could have a material adverse effect on our business, financial condition and results of operations.

Although we have not received any product liability claims to date, we have an insurance policy of $5,000,000 per occurrence and $5,000,000 in the aggregate to cover such claims should they arise. There can be no assurance that material claims will not arise in the future or that our insurance will be adequate to cover all situations. Moreover, there can be no assurance that such insurance, or additional insurance, if required, will be available in the future or, if available, will be available on commercially reasonable terms. Any product liability claim, if successful, could have a material adverse effect on our business, financial condition and results of operations. Furthermore, our current and potential partners with whom we have collaborative agreements or our future licensees may not be willing to indemnify us against these types of liabilities and may not themselves be sufficiently insured or have a net worth sufficient to satisfy any product liability claims. Claims or losses in excess of any product liability insurance coverage that may be obtained by us could have a material adverse effect on our business, financial condition and results of operations.

Acceptance of our products in the marketplace is uncertain and failure to achieve market acceptance will prevent or delay our ability to generate revenues.

Our future financial performance will depend, at least in part, on the introduction and customer acceptance of our proposed products. Even if approved for marketing by the necessary regulatory authorities, our products may not achieve market acceptance. The degree of market acceptance will depend on a number of factors including:

- the receipt of regulatory clearance of marketing claims for the uses that we are developing;
- the establishment and demonstration of the advantages, safety and efficacy of our technologies;
- pricing and reimbursement policies of government and third-party payers such as insurance companies, health maintenance organizations and other health plan administrators;
- our ability to attract corporate partners, including pharmaceutical companies, to assist in commercializing our intended products; and
- our ability to market our products.

Physicians, patients, payers or the medical community in general may be unwilling to accept, utilize or recommend any of our products. If we are unable to obtain regulatory approval or commercialize and market our proposed products when planned, we may not achieve any market acceptance or generate revenue.

We may face litigation from third parties who claim that our products infringe on their intellectual property rights, particularly because there is often substantial uncertainty about the validity and breadth of medical patents.

We may be exposed to future litigation by third parties based on claims that our technologies, products or activities infringe on the intellectual property rights of others or that we have misappropriated the trade secrets of others. This risk is exacerbated by the fact that the validity and breadth of claims covered in medical technology patents and the breadth and scope of trade-secret protection involve complex legal and factual questions for which important legal principles are unresolved. Any litigation or claims against us, whether or not valid, could result in substantial costs, could place a significant strain on our financial and managerial resources and could harm our reputation. Most of our license agreements would likely require that we pay the costs associated with defending this type of litigation. In addition, intellectual property litigation or claims could force us to do one or more of the following:

- cease selling, incorporating or using any of our technologies and/or products that incorporate the challenged intellectual property, which would adversely affect our future revenue;
- obtain a license from the holder of the infringed intellectual property right, which license may be costly or may not be available on reasonable terms, if at all; or
- redesign our products, which would be costly and time-consuming.

If we are unable to adequately protect or enforce our rights to intellectual property or secure rights to third-party patents, we may lose valuable rights, experience reduced market share, assuming any, or incur costly litigation to protect such rights.

Our ability to obtain licenses to patents, maintain trade secret protection and operate without infringing the proprietary rights of others will be important to our commercializing any products under development. Therefore, any disruption in access to the technology could substantially delay the development of our technology.

The patent positions of biotechnology and pharmaceutical companies, including us, that involve licensing agreements, are frequently uncertain and involve complex legal and factual questions. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued or in subsequent legal proceedings. Consequently, our patent applications and any issued and licensed patents may not provide protection against competitive technologies or may be held invalid if challenged or circumvented. Our competitors may also independently develop products similar to ours or design around or otherwise circumvent patents issued or licensed to us. In addition, the laws of some foreign countries may not protect our proprietary rights to the same extent as U.S. law.

We also rely upon trade secrets, technical know-how and continuing technological innovation to develop and maintain our competitive position. We generally require our employees, consultants, advisors and collaborators to execute appropriate confidentiality and assignment-of-inventions agreements. Our competitors may independently develop substantially equivalent proprietary information and techniques, reverse engineer our information and techniques, or otherwise gain access to our proprietary technology. We may be unable to meaningfully protect our rights in trade secrets, technical know-how and other non-patented technology.

Although our trade secrets and technical know-how are important, our continued access to the patents is a significant factor in the development and commercialization of our products. Aside from the general body of scientific knowledge from other drug delivery processes and technology, these patents, to the best of our knowledge and based on our current scientific data, are the only intellectual property necessary to develop our products, including NOV-002 and NOV-205. We do not believe that we are or will be violating any patents in developing our technology.

We may have to resort to litigation to protect our rights for certain intellectual property, or to determine their scope, validity or enforceability. Enforcing or defending our rights is expensive, could cause diversion of our resources and may not prove successful. Any failure to enforce or protect our rights could cause us to lose the ability to exclude others from using our technology to develop or sell competing products.

We have limited manufacturing experience and, if our products are approved, we may not be able to manufacture sufficient quantities at an acceptable cost, or may be subject to risk that contract manufacturers could experience shut-downs or delays.

We remain in the research and development and clinical and pre-clinical trial phase of product commercialization. Accordingly, if our products are approved for commercial sale, we will need to establish the capability to commercially manufacture our products in accordance with FDA and other regulatory requirements. We have limited experience in establishing, supervising and conducting commercial manufacturing. If we fail to adequately establish, supervise and conduct all aspects of the manufacturing processes, we may not be able to commercialize our products.

We presently plan to rely on third-party contractors to manufacture our products. This may expose us to the risk of not being able to directly oversee the production and quality of the manufacturing process. Furthermore, these contractors, whether foreign or domestic, may experience regulatory compliance difficulties, mechanical shutdowns, employee strikes or other unforeseeable acts that may delay production.

Due to our limited marketing, sales and distribution experience, we may be unsuccessful in our efforts to sell our products, enter into relationships with third parties or develop a direct sales organization.

We have not yet had to establish marketing, sales or distribution capabilities for our proposed products. Until such time as our products are further along in the regulatory process, we will not devote any meaningful time and resources to this effort. At the appropriate time, we intend to enter into agreements with third parties to sell our products or we may develop our own sales and marketing force. We may be unable to establish or maintain third-party relationships on a commercially reasonable basis, if at all. In addition, these third parties may have similar or more established relationships with our competitors.

If we do not enter into relationships with third parties for the sale and marketing of our products, we will need to develop our own sales and marketing capabilities. We have limited experience in developing, training or managing a sales force. If we choose to establish a direct sales force, we may incur substantial additional expenses in developing, training and managing such an organization. We may be unable to build a sales force on a cost-effective basis or at all. Any such direct marketing and sales efforts may prove to be unsuccessful. In addition, we will compete with many other companies that currently have extensive marketing and sales operations. Our marketing and sales efforts may be unable to compete against these other companies. We may be unable to establish a sufficient sales and marketing organization on a timely basis, if at all.

We may be unable to engage qualified distributors. Even if engaged, these distributors may:

- fail to satisfy financial or contractual obligations to us;

- fail to adequately market our products;
- cease operations with little or no notice; or
- offer, design, manufacture or promote competing products.

If we fail to develop sales, marketing and distribution channels, we would experience delays in product sales and incur increased costs, which would harm our financial results.

If we are unable to convince physicians as to the benefits of our intended products, we may incur delays or additional expense in our attempt to establish market acceptance.

Achieving broad use of our products may require physicians to be informed regarding these products and their intended benefits. The time and cost of such an educational process may be substantial. Inability to successfully carry out this physician education process may adversely affect market acceptance of our products. We may be unable to timely educate physicians regarding our intended products in sufficient numbers to achieve our marketing plans or to achieve product acceptance. Any delay in physician education may materially delay or reduce demand for our products. In addition, we may expend significant funds towards physician education before any acceptance or demand for our products is created, if at all.

Fluctuations in foreign exchange rates could increase costs to complete international clinical trial activities.

We have initiated a portion of our clinical trial activities in Europe. Significant depreciation in the value of the U.S. Dollar against principally the Euro could adversely affect our ability to complete the trials, particularly if we are unable to redirect funding or raise additional funds. Since the timing and amount of foreign-denominated payments are uncertain and dependent on a number of factors, it is difficult to cost-effectively hedge the potential exposure. Therefore, to date, we have not entered into any foreign currency hedges to mitigate the potential exposure.

The market for our products is rapidly changing and competitive, and new therapeutics, new drugs and new treatments that may be developed by others could impair our ability to maintain and grow our business and remain competitive.

The pharmaceutical and biotechnology industries are subject to rapid and substantial technological change. Developments by others may render our technologies and intended products noncompetitive or obsolete, or we may be unable to keep pace with technological developments or other market factors. Technological competition from pharmaceutical and biotechnology companies, universities, governmental entities and others diversifying into the field is intense and is expected to increase. Many of these entities have significantly greater research and development capabilities and budgets than we do, as well as substantially more marketing, manufacturing, financial and managerial resources. These entities represent significant competition for us. Acquisitions of, or investments in, competing pharmaceutical or biotechnology companies by large corporations could increase such competitors' financial, marketing, manufacturing and other resources.

We are an early-stage enterprise that operates with limited day-to-day business management, operating as a vehicle to hold certain technology for possible future exploration, and have been and will continue to be engaged in the development of new drugs and therapeutic technologies. As a result, our resources are limited and we may experience management, operational or technical challenges inherent in such activities and novel technologies. Competitors have developed or are in the process of developing technologies that are, or in the future may be, the basis for competition. Some of these technologies may have an entirely different approach or means of accomplishing similar therapeutic effects compared to our technology. Our competitors may develop drugs and drug delivery technologies that are more effective than our intended products and, therefore, present a serious competitive threat to us.

The potential widespread acceptance of therapies that are alternatives to ours may limit market acceptance of our products even if commercialized. Many of our targeted diseases and conditions can also be treated by other medication or drug delivery technologies. These treatments may be widely accepted in medical communities and have a longer history of use. The established use of these competitive drugs may limit the potential for our technologies and products to receive widespread acceptance if commercialized.

If users of our products are unable to obtain adequate reimbursement from third-party payers, or if new restrictive legislation is adopted, market acceptance of our products may be limited and we may not achieve anticipated revenues.

The continuing efforts of government and insurance companies, health maintenance organizations and other payers of healthcare costs to contain or reduce costs of health care may affect our future revenues and profitability, and the future revenues and profitability of our potential customers, suppliers and collaborative partners and the availability of capital. For example, in certain foreign markets, pricing or profitability of prescription pharmaceuticals is subject to government control. In the United States, given recent federal and state government initiatives directed at lowering the total cost of health care, the U.S. Congress and state legislatures will likely continue to focus on healthcare reform, the cost of prescription pharmaceuticals and on the reform of the Medicare and Medicaid systems. While we cannot predict whether any such legislative or regulatory proposals will be adopted, the announcement or adoption of such proposals could materially harm our business, financial condition and results of operations.

Our ability to commercialize our products will depend in part on the extent to which appropriate reimbursement levels for the cost of our products and related treatment are obtained by governmental authorities, private health insurers and other organizations, such as health maintenance organizations (HMO's). Third-party payers are increasingly challenging the prices charged for medical drugs and services. Also, the trend toward managed health care in the United States and the concurrent growth of organizations such as HMO's that could control or significantly influence the purchase of healthcare services and drugs, as well as legislative proposals to reform health care or reduce government insurance programs, may all result in lower prices for or rejection of our drugs. The cost containment measures that healthcare payers and providers are instituting and the effect of any healthcare reform could materially harm our ability to operate profitably.

We depend on key personnel who may terminate their employment with us at any time, and we would need to hire additional qualified personnel.

Our success will depend to a significant degree upon the continued services of key management and advisors to us. There can be no assurance that these individuals will continue to provide service to us. In addition, our success will depend on our ability to attract and retain other highly skilled personnel. We may be unable to recruit such personnel on a timely basis, if at all. Our management and other employees may voluntarily terminate their employment with us at any time. The loss of services of key personnel, or the inability to attract and retain additional qualified personnel, could result in delays in development or approval of our products, loss of sales and diversion of management resources.

Compliance with changing corporate governance and public disclosure regulations may result in additional expense.

Keeping abreast of, and in compliance with, changing laws, regulations and standards relating to corporate governance, public disclosure and internal controls, including the Sarbanes-Oxley Act of 2002, new SEC regulations and, in the event we seek and are approved for listing on a registered national securities exchange, the stock exchange rules will require an increased amount of management attention and external resources. We intend to continue to invest all reasonably necessary resources to comply with evolving standards, which may result in increased general and administrative expense and a diversion of management time and attention from revenue-generating activities to compliance activities. Beginning with our annual report for the fiscal year ending December 31, 2007 we will be required to include a report of our management on internal control over financial reporting. Further, in our annual report for the fiscal year ending December 31, 2008 we will be required to include an attestation report of our independent registered public accounting firm on internal control over financial reporting.

Our executive officers, directors and principal stockholders have substantial holdings, which could delay or prevent a change in corporate control favored by our other stockholders.

Our directors, officers and 5% stockholders beneficially own, in the aggregate, approximately 17% of our outstanding voting stock. The interests of our current officers and directors may differ from the interests of other stockholders. Further, our current officers and directors may have the ability to significantly affect the outcome of all corporate actions requiring stockholder approval, including the following actions:

- the election of directors;
- the amendment of charter documents;

- issuance of blank-check preferred or convertible stock, notes or instruments of indebtedness which may have conversion, liquidation and similar features, or effecting other financing arrangements; or

- the approval of certain mergers and other significant corporate transactions, including a sale of substantially all of our assets, or merger with a publicly-traded shell or other company.

Our common stock could be further diluted as the result of the issuance of additional shares of common stock, convertible securities, warrants or options.

In the past, we have issued common stock, convertible securities, such as our Series A cumulative convertible preferred stock, and warrants in order to raise money. We have also issued options and warrants as compensation for services and incentive compensation for our employees and directors. We have a substantial number of shares of common stock reserved for issuance upon the conversion and exercise of these securities. Our issuance of additional common stock, convertible securities, options and warrants could affect the rights of our stockholders, and could reduce the market price of our common stock.

The use of the prospectus included in the Post-Effective Amendment No. 1 to the Registration Statement on Form SB-2 (previously declared effective on April 3, 2006) and the prospectus included in the Registration Statement on Form SB-2 (previously declared effective on April 19, 2006) were suspended on October 24, 2006.

On October 24, 2006, we filed a Current Report on Form 8-K which described an error in the financial statements and related notes to financial statements for the quarter ended September 30, 2005 and the year ended December 31, 2005 relating to the accounting and disclosure of the beneficial conversion feature of the Company's Series A 8% Cumulative Convertible Preferred Stock. On November 1, 2006 we filed amendments to the Annual Report on Form 10-KSB for the year ended December 31, 2005 and the Quarterly Report on Form 10-QSB for the quarter ended September 30, 2005. Following the filing of the Form 8-K on October 24, 2006, we advised the selling stockholders named in two registration statements related to the resale of securities purchased in private placement transactions in 2005 and 2006 that the use of the respective prospectuses had been suspended. The registration statements were amended through the filing of a combined registration statement that was filed on November 17, 2006 and became effective on November 21, 2006. Pursuant to the registration rights associated with the private placement of securities that occurred from May through August of 2005, we exceeded the allowable grace period for suspension of use of an effective prospectus. As a result, we may become obligated to these selling stockholders in the event that any remaining holders submit a claim for liquidated damages. As of March 31, 2007, we have concluded that it is not probable that we will incur any liability associated with the suspension of the prospectus.

Item 3. 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 March 31, 2007. 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 March 31, 2007, 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 first fiscal quarter of 2007 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

None.

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

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Submission of Matters to a Vote of Security Holders

None.

Item 5. Other Information

On May 2, 2007, pursuant to a securities purchase agreement with accredited investors dated April 12, 2007, as amended May 2, 2007, the Company sold 300 shares of a newly created series of preferred stock, designated "Series B Convertible Preferred Stock", with a stated value of $50,000 per share and issued warrants to purchase 7,500,000 shares of common stock for an aggregate purchase price of $15,000,000. As a condition to closing this financing, the holders of the existing Series A preferred stock exchanged their 3,264 shares of Series A preferred stock for 272 shares of a new Series C convertible preferred stock, which are subordinated to the Series B preferred stock as set forth in the Series C Certificate of Designations. See Note 9 for a complete description of this financing and the exchange transaction.

Item 6. Exhibits

Exhibit No.	Description	Filed with this Form 10-QSB	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	Certificate of Incorporation		8-K	June 17, 2005	1
3.2	Certificate of Designations of Series B convertible preferred stock	X			
3.3	Certificate of Designations of Series C cumulative convertible preferred stock	X			
3.4	By-Laws		8-K	June 17, 2005	2
4.1	Form of Common Stock Purchase Warrant dated May 2, 2007 issued pursuant to the Securities Purchase Agreement dated April 12, 2007	X			
4.2	Form of Common Stock Purchase Warrant dated May 2, 2007 issued pursuant to the Agreement to Exchange and Consent dated May 2, 2007	X			
10.1	Securities Purchase Agreement dated April 12, 2007	X			
10.2	Letter Amendment dated May 2, 2007 to the	X			

	Securities Purchase Agreement	
10.3	Registration Rights Agreement dated May 2, 2007	X
10.4	Placement Agent Agreement with Rodman & Renshaw, LLC dated February 12, 2007	X
10.5	Agreement to Exchange and Consent dated May 1, 2007	X
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	Certificate pursuant to 18 U.S.C. Section 1350 of the chief executive officer	X
32.2	Certificate pursuant to 18 U.S.C. Section 1350 of the chief financial officer	X

SIGNATURES

In accordance with the requirements of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

NOVELOS THERAPEUTICS, INC.

Date: May 8, 2007

By: /s/ Harry S. Palmin

Harry S. Palmin
President, Chief Executive Officer

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CERTIFICATE OF DESIGNATIONS, PREFERENCES AND RIGHTS

OF

SERIES B CONVERTIBLE PREFERRED STOCK

OF

NOVELOS THERAPEUTICS, INC.

(Pursuant to Section 151 of the
Delaware General Corporation Law)

Novelos Therapeutics, Inc. (the "*Corporation*"), a corporation organized and existing under the laws of the State of Delaware, hereby certifies that, pursuant to authority conferred on its Board of Directors (the "*Board*") by the Certificate of Incorporation of the Corporation, the following resolution was adopted by the Board at a meeting of the Board duly held on May 2, 2007, which resolution remains in full force and effect on the date hereof:

RESOLVED, that there is hereby established a series of the Corporation's authorized Preferred Stock (the "*Preferred Stock*") having a par value of $0.00001 per share, which series shall be designated as "Series B Convertible Preferred Stock" (the "*Series B Preferred Stock*") and shall consist of Four Hundred (400) shares. The shares of Series B Preferred Stock shall have the voting powers, designations, preferences and other special rights, and qualifications, limitations and restrictions thereof set forth below:

1. *Certain Definitions*. As used herein, the following terms shall have the following meanings:

(a) "*Affiliate*" shall mean, with respect to any Person, any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For the purposes of this definition, "*control*," when used with respect to any Person, means the power to direct the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms "*affiliated*," "*controlling*" and "*controlled*" have meanings correlative to the foregoing.

(b) "*Business Day*" shall mean a day, other than a Saturday or Sunday, on which banks in New York City are open for the general transaction of business.

(c) "*Fair Market Value*" shall mean, with respect to any listed security, its Market Price, and with respect to any property or assets other than cash or listed securities, the fair value thereof determined in good faith by the Board and the Requisite Holders.

(d) "*Initial Issue Date*" shall mean the date that shares of Series B Preferred Stock are first issued by the Corporation.

(e) "*Lead Series B Preferred Investors*" shall mean each of Xmark Opportunity Fund, L.P., a Delaware limited partnership ("*Xmark LP*"), Xmark Opportunity Fund, Ltd., a Cayman Islands exempted company ("*Xmark Ltd*"), Xmark JV Investment Partners LLC, a Delaware limited liability company ("*Xmark LLC*"), Caduceus Master Fund Limited, a Bermuda corporation ("*Caduceus Master*"), Caduceus Capital II, L.P., a Delaware limited partnership ("*Caduceus Capital*"), UBS Eucalyptus Fund, L.L.C., a Delaware registered investment company ("*UBS Eucalyptus*"), PW Eucalyptus Fund, Ltd., a Cayman Islands investment company ("*PW Eucalyptus*") and HFR SHC Aggressive Master Trust, a Bermuda trust ("*HFR*").

(f) "*Market Price*", as of a particular date (the "*Valuation Date*"), shall mean the following with respect to any class of listed securities: (A) if such security is then listed on a national stock exchange, the Market Price shall be the closing sale price of one share of such security on such exchange on the last trading day prior to the Valuation Date, provided that if such security has not traded in the prior ten (10) trading sessions, the Market Price shall be the average closing price of such security in the most recent ten (10) trading sessions during which such security has traded; (B) if such security is then included in the OTC Bulletin Board, the Market Price shall be the closing sale price of one share of such security on the OTC Bulletin Board on the last trading day prior to the Valuation Date or, if no such closing sale price is available, the average of the high bid and the low ask price quoted on the OTC Bulletin Board as of the end of the last trading day prior to the Valuation Date, provided that if such stock has not traded in the prior ten (10) trading sessions, the Market Price shall be the average closing price of one share of such security in the most recent ten (10) trading sessions during which such security has traded; or (C) if such security is then included in the "pink sheets," the Market Price shall be the closing sale price of one share of such security on the "pink sheets" on the last trading day prior to the Valuation Date or, if no such closing sale price is available, the average of the high bid and the low ask price quoted on the "pink sheets" as of the end of the last trading day prior to the Valuation Date, provided that if such stock has not traded in the prior ten (10) trading sessions, the Market Price shall be the average closing price of one share of such security in the most recent ten (10) trading sessions during which such security has traded.

(g) "*OrbiMed Entities*" shall mean, collectively, Caduceus Master, Caduceus Capital, UBS Eucalyptus, PW Eucalyptus and HFR.

(h) "*Person*" shall mean any individual, partnership, company, limited liability company, joint venture, association, joint-stock company, trust, unincorporated organization, government or agency or political subdivision thereof, or other entity.

(i) "*Principal Market*" means the Trading Market on which the Common Stock is primarily listed on and quoted for trading, which, as of the Initial Issue Date means the OTC Bulletin Board ("*OTCBB*").

(j) "*Requisite Holders*" shall mean the holders of at least a majority of the then outstanding shares of Preferred Stock which majority must include (i) the Xmark Entities, provided such Xmark Entities have purchased an aggregate of $4,000,000 of Preferred Stock and hold at least one-third of the Preferred Stock issued to the Xmark Entities and (ii) the OrbiMed Entities, provided such OrbiMed Entities have purchased an aggregate of $5,000,000 of Preferred Stock and hold at least one-third of the Preferred Stock issued to the OrbiMed Entities (appropriately adjusted for any stock dividend, stock split, reverse stock split, reclassification, stock combination or other recapitalization occurring after the date hereof).

(k) "*SEC*" shall mean the U.S. Securities and Exchange Commission.

(l) "*Series B Stated Value*" shall mean, with respect to each share of Series B Preferred Stock, Fifty Thousand Dollars ($50,000), which Series B Stated Value shall be subject to appropriate adjustment from time to time in the event of any stock dividend, stock split, reverse stock split, reclassification, stock combination or other recapitalization affecting the Series B Preferred Stock.

(m) "*Trading Day*" means any day on which the Common Stock is purchased and sold on the Principal Market.

(n) "*VWAP*" on a Trading Day means the volume weighted average price of the Common Stock for such Trading Day on the Principal Market as reported by Bloomberg Financial Markets or, if Bloomberg Financial Markets is not then reporting such prices, by a comparable reporting service of national reputation selected by the Requisite Holders and reasonably satisfactory to the Corporation. If VWAP cannot be calculated for the Common Stock on such Trading Day on any of the foregoing bases, then the Corporation shall submit such calculation to an independent investment banking firm of national reputation reasonably acceptable to the Requisite Holders, and shall cause such investment banking firm to perform such determination and notify the Corporation and the Requisite Holders of the results of determination no later than two (2) Business Days from the time such calculation was submitted to it by the Corporation. All such determinations shall be appropriately adjusted for any stock dividend, stock split or other similar transaction during such period.

(o) "*Xmark Entities*" shall mean, collectively, Xmark LP, Xmark Ltd and Xmark LLC.

2. *Designation; Preference and Ranking*. The Series B Preferred Stock shall consist of Four Hundred (400) shares. The preferences of each share of Series B Preferred Stock with respect to dividend payments and distributions of the Corporation's assets upon voluntary or involuntary liquidation, dissolution or winding up of the Corporation shall be equal to the preferences of every other share of Series B Preferred Stock from time to time outstanding in every respect. Notwithstanding the terms and conditions of any series of Preferred Stock now or hereafter existing providing that the Series B Preferred Stock shall rank junior or senior thereto, the Series B Preferred Stock shall rank senior to all other outstanding series of Preferred Stock and senior to the Common Stock, par value $0.00001 per share (the "*Common Stock*"), of the Corporation as to the payment of dividends and the distribution of assets upon voluntary or involuntary liquidation, dissolution or winding up of the Corporation. No other equity or equity-linked securities shall be permitted to rank pari passu with the Series B Preferred Stock without express written approval of the Lead Series B Preferred Investors.

3. *Dividend Rights*. (a) Each holder of Series B Preferred Stock, in preference and priority to the holders of all other classes of stock, shall be entitled to receive, with respect to each share of Series B Preferred Stock then outstanding and held by such holder of Series B Preferred Stock, dividends, commencing from the date of issuance of such share of Series B Preferred Stock, at the rate of nine percent (9%) per annum of the Series B Stated Value (the "*Series B Preferred Dividends*"). The Series B Preferred Dividends shall be cumulative, whether or not earned or declared, and shall be paid semi-annually in arrears beginning on September 30, 2007 and then on the last day of March and September in each year. The Series B Preferred Dividends shall be paid to each holder of Series B Preferred Stock in cash, out of legally available funds or at the Corporation's election, but only if the Common Stock underlying such dividends are on the payment date subject to an effective Registration Statement (as defined in the Registration Rights Agreement), in Common Stock, based on the lesser of (x) the Conversion Price (as defined below) then in effect, and (y) the Fair Market Value of the Common Stock on the Business Day preceding the payment date. If shares of Series B Preferred Stock are transferred in between the scheduled Series B Preferred Stock dividend payment dates, each of the transferor and transferee of the Series B Preferred Stock are entitled to their respective pro rata portion of such Series B Preferred Dividends as of the date of transfer. Any election by the Corporation to pay dividends in cash or shares of Common Stock shall be made uniformly with respect to all outstanding shares of Series B Preferred Stock for a given dividend period.

(b) No dividends shall be paid on any Common Stock of the Corporation or any other capital stock of the Corporation during any fiscal year of the Corporation until all Series B Preferred Dividends (with respect to the current fiscal year and all prior fiscal years) shall have been paid, or declared and set apart for payment, when due to the holders of Series B Preferred Stock.

(c) In the event that the Corporation shall at any time pay a dividend on the Common Stock (other than a dividend payable solely in shares of Common Stock) or any other class or series of capital stock of the Corporation (except for Series C Preferred Stock), the Corporation shall, at the same time, pay to each holder of Series B Preferred Stock a dividend equal to the dividend that would have been payable to such holder if the shares of Series B Preferred Stock held by such holder had been converted into Common Stock on the date of determination of holders of Common Stock entitled to receive such dividends, subject to the limitations on conversion set forth in Sections 6(l) below.

4. *Liquidation Rights*. (a) In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, the holders of Series B Preferred Stock shall be entitled to receive, on a pro rata basis, prior and in preference to any distribution of any of the assets or surplus funds of the Corporation to the holders of the Common Stock, or any other class of capital stock of the Corporation, an amount equal to the Series B Stated Value for each share of Series B Preferred Stock then held by such holder, plus an amount equal to all declared but unpaid dividends, and all accrued but unpaid dividends set forth in Section 3(a) above, on each such share of Series B Preferred Stock (the "*Liquidation Preference Payment*"). If, upon the occurrence of any such liquidation, dissolution or winding up of the Corporation, the assets and funds to be distributed among the holders of Series B Preferred Stock shall be insufficient to permit the payment to such holders of the full Liquidation Preference Payment, then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of Series B Preferred Stock in proportion to the Liquidation Preference Payment each such holder is entitled to receive, and no assets of the Corporation shall be distributed to the holders of the Common Stock or any other class or series of capital stock of the Corporation in respect of such Common Stock or such other stock unless and until the Liquidation Preference Payment payable to all holders of the Series B Preferred Stock has been paid in full.

(b) After payment of the full Liquidation Preference Payment to the holders of the Series B Preferred Stock as set forth in Section 4(a) above and subject to any other distribution that may be required with respect to any future series of Preferred Stock that may from time to time come into existence, the remaining assets and funds of the Corporation, if any, available for distribution to stockholders shall be distributed (i) in connection with a Liquidation Event pursuant to Section 4(c)(1) below, ratably among the holders of the Series B Preferred Stock, any other class or series of capital stock that participates with the Common Stock in the distribution of assets upon such Liquidation Event and the Common Stock, with the holders of the Series B Preferred Stock deemed to hold that number of shares of Common Stock into which such shares of Series B Preferred Stock are then convertible and (ii) in connection with a Liquidation Event pursuant to Sections 4(c)(2)-(5) below, ratably among the holders of Common Stock.

(c) The Requisite Holders, by written notice to the Corporation at least two (2) Business Days prior to the effective date thereof, may elect to treat any of the following transactions as a dissolution or winding up of the Corporation (each a "*Liquidation Event*") for the purposes of this Section 4: (1) any dissolution, winding up or liquidation of the Corporation; (2) any sale, lease or other transfer of substantially all of the Corporation's assets, in one or a series of transactions; (3) any merger, consolidation or similar business combination transaction, in which the Corporation is not the survivor or, if the Corporation is the survivor, then only if the holders of a majority of the Common Stock outstanding immediately before such transaction cease to own a majority of the Common Stock immediately after the transaction; (4) in one or a series of events, any change in the majority of the members of the Corporation's Board of Directors (the "*Board*"), unless the replacement directors were nominated by the majority of the Board immediately preceding such change; and (5) if any person or entity (other than the Investors) shall acquire or become the "beneficial owner" (as that term is defined in Rule 13d-3 of the Exchange Act) of more than 50% of the Corporation's outstanding stock.

(d) Distributions Other than Cash. Whenever the distributions provided for in this Section 4 shall be payable in property other than cash, the value of such distribution shall be the Fair Market Value thereof. All distributions (including distributions other than cash) made hereunder shall be made pro rata to the holders of Series B Preferred Stock, based on the number of shares of Series B Preferred Stock held by each such holder.

(e) Right to Convert. Nothing in this Section 4 shall affect in any way the right of each holder of Series B Preferred Stock to convert such shares at any time and from time to time into Common Stock in accordance with Section 6 hereof prior to the Liquidation Event.

5. ***Voting Rights; Protective Provisions; Covenants***.

(a) Except as otherwise provided herein or as required by applicable law, the holders of Series B Preferred Stock shall be entitled to vote on all matters on which the holders of Common Stock shall be entitled to vote, in the same manner and with the same effect as the holders of Common Stock, voting together with the holders of Common Stock as a single class. For this purpose, the holders of Series B Preferred Stock shall be given notice of any meeting of stockholders as to which the holders of Common Stock are given notice in accordance with the by-laws of the Corporation. As to any matter on which the holders of Series B Preferred Stock shall be entitled to vote, each holder of Series B Preferred Stock shall have a number of votes per share of Series B Preferred Stock held of record by such holder on the record date for the meeting of stockholders, if such matter is subject to a vote at a meeting of stockholders, or on the effective date of any written consent, if such matter is subject to a written consent of the stockholders without a meeting of stockholders, equal to the number of shares of Common Stock into which such share of Series B Preferred Stock is then convertible on such record date or effective date, as the case may be, in accordance with Section 6 hereof (subject to the limitations on conversion set forth in Sections 6(l) below).

(b) So long as all or any portion of the Series B Preferred Stock remain outstanding, without the prior written consent of the holders of the Requisite Holders, the Corporation shall not, directly or indirectly, take any of the following actions or agree to take any of the following actions:

(1) amend, alter or repeal (whether by merger, consolidation or otherwise) any provision of the Corporation's certificate of incorporation (except for such amendments to increase the number of authorized common stock of the Corporation to 150,000,000 shares) or the bylaws;

(2) create or authorize the creation of or issue any equity security, or any security convertible into or exercisable for any equity security, unless the per share price of such securities exceeds $1.00 in cash and such securities rank junior to the Series B Preferred Stock; provided that the Company may issue shares of Common Stock or options to employees, consultants, officers or directors of the Company pursuant to any stock or option plan duly adopted by a majority of the non-employee members of the Board of Directors of the Company or a majority of the members of a committee of non-employee directors established for such purpose;

(3) increase the number of authorized shares of Series B Preferred Stock or authorize the issuance of or issue any shares of Series B Preferred Stock (other than in connection with the payment of Series B Preferred Dividends in accordance with Section 3 hereof);

(4) sell, lease, convey, license or otherwise grant any rights with respect to, all or substantially all of its assets (and in the case of licensing, any material intellectual property) or business of the Corporation and shall not effect any merger or consolidation with any other company unless as a result thereof and after giving effect thereto (a) the Corporation shall be the surviving corporation, (b) the Series B Preferred Stock shall continue to be outstanding, (c) there shall be no change in the preference, privileges or other rights and restrictions with respect to the Series B Preferred Stock and (d) there shall not be created or thereafter exist as a result of thereof any new class of shares having preference over the Series B Preferred Stock with respect to dividends, distribution of assets or rights upon liquidation;

(5) except for a declaration or payment of dividends on the Series B Preferred Stock and the Series C Preferred Stock (at such time as all accrued and unpaid dividends on shares of Series B Preferred Stock then due have been paid), the Corporation shall not declare or pay any dividends on any common stock, preferred stock or other capital stock of the Corporation;

(6) except for a redemption or repurchase of the Series B Preferred Stock or the Warrants issued to the holders of Series B Preferred Stock on the Initial Issue Date, the Corporation shall not redeem or repurchase any of its capital stock (or security exercisable, convertible or exchangeable for any of its capital stock), except relating to settlement with departing employees pursuant to written employment agreements in effect on the Initial Issue Date;

(7) incur any debt for borrowed money except with respect to borrowings pursuant to letter(s) of credit in effect as of the date hereof in an amount not to exceed $1,500,000 in the aggregate; provided that any such letter(s) of credit is/are fully cash collateralized; and

(8) change the number of directors which constitutes the Board of Directors.

6. ***Conversion*****.** The holders of shares of Series B Preferred Stock shall have the following conversion rights:

(a) Optional Conversion. Subject to the terms and conditions of this Section 6, the holder of any share or shares of Series B Preferred Stock shall have the right, at its option at any time, to convert any such shares of Series B Preferred Stock into such number of fully paid and nonassessable shares of Common Stock as is obtained by: (i) multiplying the number of shares of Series B Preferred Stock to be converted by the Series B Stated Value and adding to such product the amount of any accrued but unpaid dividends with respect to such shares of Series B Preferred Stock to be converted; and (ii) dividing the result obtained pursuant to clause (i) above by the Series B Conversion Price then in effect.

(b) Mandatory Conversion. Subject to the terms and conditions of this Section 6, if the Registration Statement covering the resale of the shares of Common Stock underlying all of the Series B Preferred Stock is declared effective by the SEC, and is then effective, and the daily VWAP of the Common Stock for twenty (20) consecutive trading days exceeds $2.00 per share, then the outstanding Series B Preferred Stock shall automatically convert, together with accrued dividends, into Common Stock at the Conversion Price then in effect.

(c) The "*Series B Conversion Price*" shall initially be $1.00, and shall be subject to adjustment from time to time in accordance with the provisions of this Section 6.

(d) Conversion Procedures:

(1) Optional. The rights of conversion set forth in this Section 6 shall be exercised by any holder of Series B Preferred Stock by giving written notice to the Corporation that such holder elects to convert a stated number of shares of Series B Preferred Stock into Common Stock (the "*Optional Conversion Notice*") and by surrender of a certificate or certificates for the shares of Series B Preferred Stock so to be converted (or, in lieu thereof, by delivery of an appropriate lost stock affidavit in the event such certificate or certificates have been lost or destroyed) to the Corporation at its principal office (or such other office or agency of the Corporation as the Corporation may designate by notice in writing to the holders of Series B Preferred Stock) at any time on the date set forth in such notice (which date shall not be earlier than the Corporation's receipt of such notice), together with a statement of the name or names (with address) in which the certificate or certificates for shares of Common Stock shall be issued.

(2) Mandatory. In the case of mandatory conversion, the Corporation shall within five (5) Business Days of the occurrence of the events described in Section 6(b) notify the Corporation's transfer agent of such events ("*Mandatory Conversion Notice*") which shall identify the Conversion Price then in effect and direct the Transfer Agent to send certificates representing shares of Common Stock issued upon conversion to the holders of Series B Preferred Stock upon surrender of the certificates for shares of Series B Preferred Stock; and the Corporation shall provide a copy of such Mandatory Conversion Notice to each holder of Series B Preferred Stock. The Mandatory Conversion Notice shall state the Conversion Price then in effect and the address for the Company's transfer agent to send the new Common Stock upon surrender of the Series B Preferred Stock certificates to the Company's transfer agent and the address of the Company's transfer agent for the holder to send its Series B Preferred Stock certificate(s). Immediately upon the occurrence of the events described in Section 6(b), all shares of Series B Preferred Stock shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate, except only the right of the holders thereof, upon surrender of their certificate or certificates therefor, to receive certificates representing the number of shares of Common Stock into which such Series B Preferred Stock has been converted.

(e) Promptly after receipt of the written notices referred to in Section 6(d) above and surrender of the certificate or certificates for the share or shares of Series B Preferred Stock to be converted (or, in lieu thereof, by delivery of an appropriate lost stock affidavit in the event such certificate or certificates have been lost or destroyed), but in no event more than three (3) Business Days thereafter, the Corporation shall issue and deliver, or cause to be issued and delivered, to the holder of Series B Preferred Stock, registered in such name or names as such holder may direct in writing, a certificate or certificates for the number of whole shares of Common Stock issuable upon the conversion of such share or shares of Series B Preferred Stock. To the extent permitted by law, such optional conversion shall be deemed to have been effected, and the Series B Conversion Price shall be determined, as of the close of business on the date on which such Optional Conversion Notice shall have been received by the Corporation and the certificate or certificates for such share or shares of Series B Preferred Stock shall have been surrendered as aforesaid (or, in lieu thereof, an appropriate lost stock affidavit has been delivered to the Corporation). Upon a mandatory conversion, such conversion shall be deemed to have been effected, and the Series B Conversion Price shall be determined, as of the close of business on the date on which the conditions in Section 6(b) have been satisfied. At such time of conversions, the rights of the holder of such share or shares of Series B Preferred Stock shall cease with respect to the shares of Series B Preferred Stock being converted, and the Person or Persons in whose name or names any certificate or certificates for shares of Common Stock shall be issuable upon such conversion shall be deemed to have become the holder or holders of record of the shares represented thereby.

(f) If the Company shall fail for any reason or for no reason to issue to a holder the applicable certificate or certificates within three (3) Business Days of receipt of documents necessary for the conversions set forth above (the "*Deadline Date*"), then, in addition to all other remedies available to such holder, if on or after the Business Day immediately following such three (3) Business Day period, such holder or holder's broker, acting on behalf of such holder, purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the holder of shares of Common Stock that such holder anticipated receiving from the Company upon a conversion of holder's Series B Preferred tock (a "*Buy-In*"), then the Company shall, within three (3) Business Days after such holder's request and in such holder's sole discretion, either (i) pay cash to the holder in an amount equal to such holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased (the "*Buy-In Price*"), at which point the Company's obligation to deliver such certificate (and to issue such shares of Common Stock) shall terminate, or (ii) promptly honor its obligation to deliver to such holder a certificate or certificates representing such shares of Common Stock and pay cash to the holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (a) such number of shares of Common Stock, times (b) the closing bid price on the Deadline Date.

(g) No fractional shares shall be issued upon any conversion of shares of Series B Preferred Stock into Common Stock. If any fractional share of Common Stock would, except for the provisions of the first sentence of this Section 6(g), be delivered upon such conversion, the Corporation, in lieu of delivering such fractional share, shall pay to the holder surrendering the shares of Series B Preferred Stock for conversion an amount in cash equal to the Market Price of such fractional share of Common Stock. In case the number of shares of Series B Preferred Stock represented by the certificate or certificates surrendered pursuant to Section 6(d) above exceeds the number of shares converted, the Corporation shall, upon such conversion, execute and deliver to the holder, at the expense of the Corporation, a new certificate or certificates for the number of shares of Series B Preferred Stock represented by the certificate or certificates surrendered which are not to be converted.

(h) If, at any time after the Initial Issue Date, the number of shares of Common Stock outstanding is increased by a stock dividend payable in shares of Common Stock or by a subdivision or split-up of shares of Common Stock, then, following the record date for the determination of holders of Common Stock entitled to receive such stock dividend, or to be affected by such subdivision or split-up, the Series B Conversion Price shall be appropriately decreased so that the number of shares of Common Stock issuable on conversion of Series B Preferred Stock shall be increased in proportion to such increase in outstanding shares.

(i) If, at any time after the Initial Issue Date, the number of shares of Common Stock outstanding is decreased by a combination of the outstanding shares of Common Stock into a smaller number of shares of Common Stock, then, following the record date to determine shares affected by such combination, the Series B Conversion Price shall be appropriately increased so that the number of shares of Common Stock issuable on conversion of each share of Series B Preferred Stock shall be decreased in proportion to such decrease in outstanding shares.

(j) If the Common Stock issuable upon the conversion of the Series B Preferred Stock shall be changed into the same or different number of shares of any class or classes of stock, whether by capital reorganization, reclassification or otherwise (other than a subdivision or combination or shares of stock dividend provided for elsewhere in this Section 6, or the sale of all or substantially all of the Corporation's properties and assets to any other Person), then and in each such event the holder of each share of Series B Preferred Stock shall have the right thereafter to convert such share into the kind and amount of shares of stock and other securities and property receivable upon such reorganization, reclassification or other change by holders of the number of shares of Common Stock into which such shares of Series B Preferred Stock might have been converted, as the case may be, immediately prior to such reorganization, reclassification or change, all subject to further adjustment as provided herein.

(k) If at any time or from time to time there shall be a merger or consolidation of the Corporation with or into another corporation, or the sale of all or substantially all of the Corporation's properties and assets to any other Person, then, as a part of such merger, or consolidation or sale, provision shall be made so that holders of Series B Preferred Stock, as the case may be, shall thereafter be entitled to receive upon conversion of the Series B Preferred Stock, the number of shares of stock or other securities or property of the Corporation, or of the successor corporation resulting from such merger, consolidation or sale, to which such holder would have been entitled if such holder had converted its shares of Series B Preferred Stock immediately prior to such merger, consolidation or sale, without regard to any conversion limitation specified in Section 6(j). In any such case, appropriate adjustment shall be made in the application of the provisions of this Section 6 with respect to the rights of the holders of the Series B Preferred Stock after the merger, consolidation or sale to the end that the provisions of this Section 6, including adjustment of the Series B Conversion Price then in effect for the Series B Preferred Stock and the number of shares issuable upon conversion of the Series B Preferred Stock) shall be applicable after that event in as nearly equivalent a manner as may be practicable.

(l) (I) Except as to a mandatory conversion contemplated by Section 6(b) above, notwithstanding anything herein to the contrary, in no event shall a holder of Series B Preferred Stock be entitled to convert any portion of the Series B Preferred Stock so held by such holder in excess of that portion upon conversion of which the sum of (1) the number of shares of Common Stock beneficially owned by such holder and its Affiliates (other than shares of Common Stock which may be deemed beneficially owned through ownership of the unconverted shares of Series B Preferred Stock or the unexercised or unconverted portion of any other security of the holder subject to a limitation on conversion analogous to the limitations contained herein) and (2) the number of shares of Common Stock issuable upon the conversion of that portion of the Series B Preferred Stock with respect to which the determination of this proviso is being made, would result in beneficial ownership by such holder and its Affiliates of any amount greater than 4.99% of the then outstanding shares of Common Stock (whether or not, at the time of such conversion, the Holder and its Affiliates beneficially own more than 4.99% of the then outstanding shares of Common Stock). The waiver by a holder of Series B Preferred Stock of any limitation contained in an option or convertible security now or hereafter held by such holder that is similar or analogous to the limitations set forth in this Section 6(l) shall not be deemed a waiver or otherwise effect the limitation set forth in this Section 6(l), unless such waiver expressly states it is a waiver of the provisions of this Section 6(l). For purposes of this Section 6(l), beneficial ownership shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and Regulations 13D-G thereunder, except as otherwise provided in clause (1) of such proviso. Any holder of Series B Preferred Stock may waive the limitations set forth herein by sixty-one (61) days written notice to the Corporation.

(II) Except as to a mandatory conversion contemplated by Section 6(b) above, notwithstanding anything herein to the contrary, in no event shall a holder of Series B Preferred Stock be entitled to convert any portion of the Series B Preferred Stock so held by such holder in excess of that portion upon conversion of which the sum of (1) the number of shares of Common Stock beneficially owned by such holder and its Affiliates (other than shares of Common Stock which may be deemed beneficially owned through ownership of the unconverted shares of Series B Preferred Stock or the unexercised or unconverted portion of any other security of the holder subject to a limitation on conversion analogous to the limitations contained herein) and (2) the number of shares of Common Stock issuable upon the conversion of that portion of the Series B Preferred Stock with respect to which the determination of this proviso is being made, would result in beneficial ownership by such holder and its Affiliates of any amount greater than 9.99% of the then outstanding shares of Common Stock (whether or not, at the time of such conversion, the Holder and its Affiliates beneficially own more than 9.99% of the then outstanding shares of Common Stock). The waiver by a holder of Series B Preferred Stock of any limitation contained in an option or convertible security now or hereafter held by such holder that is similar or analogous to the limitations set forth in this Section 6(l) shall not be deemed a waiver or otherwise effect the limitation set forth in this Section 6(l), unless such waiver expressly states it is a waiver of the provisions of this Section 6(l). For purposes of this Section 6(l), beneficial ownership shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and Regulations 13D-G thereunder, except as otherwise provided in clause (1) of such proviso. Any holder of Series B Preferred Stock may waive the limitations set forth herein by sixty-one (61) days written notice to the Corporation.

(m) Notices of Record Date. In case at any time:

(1) the Corporation shall declare any dividend upon its Common Stock or any other class or series of capital stock of the Corporation payable in cash or stock or make any other distribution to the holders of its Common Stock or any such other class or series of capital stock;

(2) the Corporation shall offer for subscription pro rata to the holders of its Common Stock or any other class or series of capital stock of the Corporation any additional shares of stock of any class or other rights; or

(3) there shall be any capital reorganization or reclassification of the capital stock of the Corporation, any Acquisition or a liquidation, dissolution or winding up of the Corporation;

then, in any one or more of said cases, the Corporation shall give, by delivery in person or by certified or registered mail, return receipt requested, addressed to each holder of any shares of Series B Preferred Stock at the address of such holder as shown on the books of the Corporation, (a) at least 20 Business Days' prior written notice of the date on which the books of the Corporation shall close or a record shall be taken for such dividend, distribution or subscription rights or for determining rights to vote in respect of any event set forth in clause (3) of this Section 6(m) and (b) in the case of any event set forth in clause (3) of this Section 6(m), at least 20 Business Days' prior written notice of the date when the same shall take place. Such notice in accordance with the foregoing clause (a) shall also specify, in the case of any such dividend, distribution or subscription rights, the date on which the holders of Common Stock or such other class or series of capital stock shall be entitled thereto and such notice in accordance with the foregoing clause (b) shall also specify the date on which the holders of Common Stock and such other series or class of capital stock shall be entitled to exchange their Common Stock and other stock for securities or other property deliverable upon consummation of the applicable event set forth in clause (3) of this Section 6(m).

(n) Upon any adjustment of the Series B Conversion Price, then and in each such case the Corporation shall give prompt written notice thereof, by delivery in person or by certified or registered mail, return receipt requested, addressed to each holder of shares of Series B Preferred Stock at the address of such holder as shown on the books of the Corporation, which notice shall state the Series B Conversion Price resulting from such adjustment and setting forth in reasonable detail the method upon which such calculation is based.

(o) The Corporation will at all times reserve and keep available out of its authorized Common Stock, solely for the purpose of issuance upon conversion of the Series B Preferred Stock as herein provided, 125% (which percentage shall be decreased to 100% in the event the Company's shareholders do no approve an amendment to the Company's certificate of incorporation to increase the number of authorized shares of Common Stock to 150,000,000) of such number of shares of Common Stock as shall then be issuable upon the conversion of all outstanding shares of Series B Preferred Stock without regard to the limitation set forth in Section 6(l). The Corporation covenants that all shares of Common Stock which shall be so issued shall be duly and validly issued and fully paid and nonassessable, and free from all taxes, liens and charges with respect to the issue thereof, and, without limiting the generality of the foregoing, the Corporation covenants that it will from time to time take all such action as may be requisite to assure that the par value per share of the Common Stock is at all times equal to or less than the Series B Conversion Price in effect at the time. The Corporation will take all such action as may be necessary to assure that all such shares of Common Stock may be so issued without violation of any applicable law or regulation, or of any requirement of any national securities exchange upon which the Common Stock may be listed. The Corporation will not take any action which results in any adjustment of the Series B Conversion Price if the total number of shares of Common Stock issued and issuable after such action upon conversion of the Series B Preferred Stock would exceed the total number of shares of Common Stock then authorized by the Corporation's Amended and Restated Certificate of Incorporation.

(p) The issuance of certificates for shares of Common Stock upon conversion of Series B Preferred Stock shall be made without charge to the holders thereof for any issuance tax in respect thereof, provided that the Corporation shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than that of the holder of the Series B Preferred Stock which is being converted.

(q) The Corporation will at no time close its transfer books against the transfer of any Series B Preferred Stock or of any shares of Common Stock issued or issuable upon the conversion of any shares of Series B Preferred Stock in any manner which interferes with the timely conversion of such Series B Preferred Stock, except as may otherwise be required to comply with applicable securities laws.

7. ***Amendment***. This Certificate of Designations may only be amended with the prior written consent of the Requisite Holders and, in the event that any such amendment materially adversely affects a holder of Series B Preferred Stock in a manner disproportionate to the other holders of Series B Preferred Stock, without the prior written consent of such holder. The Corporation may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Corporation shall have obtained the written consent to such action or omission to act, of the Requisite Holders and, in the event that any such action or omission to act materially adversely affects a holder of Series B Preferred Stock in a manner disproportionate to the other holders of Series B Preferred Stock, without the prior written consent of such holder.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Designations to be duly executed as of the 2nd day of May, 2007.

NOVELOS THERAPEUTICS, INC.

/s/ Harry S. Palmin

Name: Harry S. Palmin
Title: President and CEO

CERTIFICATE TO SET FORTH DESIGNATIONS, VOTING POWERS, PREFERENCES, LIMITATIONS, RESTRICTIONS, AND RELATIVE RIGHTS OF SERIES C 8% CUMULATIVE CONVERTIBLE PREFERRED STOCK, $.00001 PAR VALUE PER SHARE

It is hereby certified that:

I. The name of the corporation is Novelos Therapeutics, Inc. (the "Corporation"), a Delaware corporation.

II. Set forth hereinafter is a statement of the voting powers, preferences, limitations, restrictions, and relative rights of shares of Series C 8% Cumulative Convertible Preferred Stock hereinafter designated as contained in a resolution of the Board of Directors of the Corporation pursuant to a provision of the Certificate of Incorporation of the Corporation permitting the issuance of said Series C 8% Cumulative Convertible Preferred Stock by resolution of the Board of Directors:

Series C 8% Cumulative Convertible Preferred Stock, $.00001 par value.

III. So long as any of the 400 shares of Series B Convertible Preferred Stock designated in the Series B certificate of designations (the "Series B Preferred Stock") are outstanding, the Series B Preferred Stock shall rank senior to any and all other preferred stock or equity securities of the Corporation, including, without limitation, the Series C Preferred Stock. Notwithstanding anything herein to the contrary, without the prior written consent of the Requisite Holders (as such term is defined in the certificate of designations for the Series B Preferred Stock (the "Series B Designations")) of the Series B Preferred Stock, or except as expressly permitted in the Series B Designations, no payments shall be made to the holders of the Series C Preferred Stock in respect of such Series C Preferred Stock so long as any shares of Series B Preferred Stock are outstanding.

1. Designation: Number of Shares. The designation of said series of Preferred Stock shall be Series C 8% Cumulative Convertible Preferred Stock (the "Series C Preferred Stock"). The number of shares of Series C Preferred Stock shall be 272. Each share of Series C Preferred Stock shall have a stated value equal to $12,000 (as adjusted for any stock dividends, combinations or splits with respect to such shares) (the "Stated Value"), and $.00001 par value. The Corporation may issue fractions of a share of Series C Preferred Stock.

2. Dividends.

(a) After all outstanding dividends on the Series B Preferred Stock (with respect to the current fiscal year and all prior fiscal years) shall have been paid to the holders of the Series B Preferred Stock, the holders of outstanding shares of Series C Preferred Stock shall be entitled to receive dividends in cash out of any funds of the Corporation before any dividend or other distribution will be paid or declared and set apart for payment on any shares of any Common Stock, or other class of stock presently authorized or to be authorized other than the Series B Preferred Stock (the Common Stock, and such other stock (other than the Series B Preferred Stock) being hereinafter collectively the "Junior Stock") at the rate of 8% per annum on the Stated Value, until October 1, 2008 and thereafter at the rate of 20% per annum on the Stated Value, payable commencing with the period ending June 30, 2007 and quarterly thereafter. To the extent not prohibited by law or this Section 2(a), dividends must be paid to the Holders not later than five (5) business days after the end of each period for which dividends are payable.

(b) The dividends on the Series C Preferred Stock at the rates provided above shall be cumulative whether or not declared so that, if at any time full cumulative dividends at the rate aforesaid on all shares of the Series C Preferred Stock then outstanding from the date from and after which dividends thereon are cumulative to the end of the quarterly dividend period next preceding such time shall not have been paid or declared and set apart for payment, or if the full dividend on all such outstanding Series C Preferred Stock for the then current dividend period shall not have been paid or declared and set apart for payment, the amount of the deficiency shall be paid or declared and set apart for payment before any sum shall be set apart for or applied by the Corporation or a subsidiary of the Corporation to the purchase, redemption or other acquisition of the Series C Preferred Stock or any shares of any other class of stock ranking on a parity with the Series C Preferred Stock ("Parity Stock") and before any dividend or other distribution shall be paid or declared and set apart for payment on any Junior Stock and before any sum shall be set aside for or applied to the purchase, redemption or other acquisition of Junior Stock.

(c) Dividends on all shares of the Series C Preferred Stock shall begin to accrue and be cumulative from and after the date of issuance thereof. A dividend period shall be deemed to commence on the day following a dividend payment date herein specified and to end on the next succeeding dividend payment date herein specified.

3. Liquidation and Mandatory Redemption Rights.

(a) Upon the dissolution, liquidation or winding-up of the Corporation, whether voluntary or involuntary, and after payment of all amounts that holders of Series B Preferred Stock shall be entitled to receive upon such dissolution, liquidation or winding-up of the Corporation, the Holders of the Series C Preferred Stock shall be entitled to receive before any payment or distribution shall be made on the Junior Stock, out of the assets of the Corporation available for distribution to stockholders, the Stated Value per share of Series C Preferred Stock and all accrued and unpaid dividends to and including the date of payment thereof. Unless otherwise provided in Section 4(b) of the Series B Designations, upon the payment in full of all amounts due to the Holders of the Series B Preferred Stock and the Holders of the Series C Preferred Stock, the Holders of the Common Stock of the Corporation and any other class of Junior Stock shall be entitled to receive all remaining assets of the Corporation legally available for distribution. If the assets of the Corporation available for distribution to the Holders of the Series C Preferred Stock shall be insufficient to permit payment in full of the amounts payable as aforesaid to the Holders of Series C Preferred Stock upon such liquidation, dissolution or winding-up, whether voluntary or involuntary, the holders of Series C Preferred Stock shall share ratably in any distribution of such remaining assets in proportion to the total Series C Liquidation Amount that each of such holders would have received had there been sufficient assets and all such remaining assets of the Corporation shall be distributed to the exclusion of the Holders of shares of Junior Stock.

(b) The merger or consolidation of the Corporation with or into any other corporation or corporations or the sale or transfer by the Corporation of all or substantially all of its assets shall be deemed to be a liquidation, dissolution or winding-up of the Corporation for the purposes of this paragraph 3.

4. Conversion into Common Stock. Holders of shares of Series C Preferred Stock shall have the following conversion rights and obligations:

(a) Subject to the further provisions of this paragraph 4 each Holder of shares of Series C Preferred Stock shall have the right at any time commencing after the issuance to the Holder of Series C Preferred Stock, to convert any such shares or fractions thereof, accrued and unpaid dividends on such shares, and any other sum owed by the Corporation arising from the Series C Preferred Stock or pursuant to a subscription agreement dated September 30, 2005 or October 3, 2005 entered into by the Corporation and the Holder or Holder's predecessor in connection with the issuance of Series A 8% Cumulative Convertible Preferred Stock, $.00001 par value per share ("Subscription Agreement") (collectively "Obligation Amount") into fully paid and non-assessable shares of Common Stock of the Corporation (as defined in paragraph 4(i) below) determined in accordance with the Conversion Price provided in paragraph 4(b) below (the "Conversion Price"). All issued or accrued but unpaid dividends may be converted at the election of the Holder simultaneously with the conversion of principal amount of Stated Value of Series C Preferred Stock being converted even in circumstances where the Holder would not be entitled to such dividends in cash by operation of Section 2(a) hereof.

(b) The number of shares of Common Stock issuable upon conversion of the Obligation Amount shall equal (i) the sum of (A) the Stated Value per share being converted, (B) at the Holder's election, accrued and unpaid dividends on such share, and (C) at the Holder's election, provided that the Conversion Price is not less than the conversion price of the Series B Preferred Stock, any other sum owed by the Corporation to the Holder arising from any source including but not limited to the Series C Preferred Stock or Subscription Agreement divided by (ii) the Conversion Price. The Conversion Price as of the date of this Certificate of Designations shall be $1.00, subject to further adjustment as described herein below.

(c) Holder will give notice of its decision to exercise its right to convert the Series C Preferred Stock or part thereof by telecopying an executed and completed Notice of Conversion (a form of which is annexed as Exhibit A to the Certificate of Designation) to the Corporation via confirmed telecopier transmission or otherwise pursuant to Section 13(a) of the Subscription Agreement. The Holder will not be required to surrender the Series C Preferred Stock certificate until the Series C Preferred Stock has been fully converted. Each date on which a Notice of Conversion is telecopied to the Corporation in accordance with the provisions hereof shall be deemed a Conversion Date. The Corporation will itself or cause the Corporation's transfer agent to transmit the Corporation's Common Stock certificates representing the Common Stock issuable upon conversion of the Series C Preferred Stock to the Holder via express courier for receipt by such Holder within three (3) business days after receipt by the Corporation of the Notice of Conversion (the "Delivery Date"). In the event the Common Stock is electronically transferable, then delivery of the Common Stock must be made by electronic transfer provided request for such electronic transfer has been made by the Holder. A Series C Preferred Stock certificate representing the balance of the Series C Preferred Stock not so converted will be provided by the Corporation to the Holder if requested by Holder, provided the Holder has delivered the original Series C Preferred Stock certificate to the Corporation. To the extent that a Holder elects not to surrender Series C Preferred Stock for reissuance upon partial payment or conversion, the Holder hereby indemnifies the Corporation against any and all loss or damage attributable to a third-party claim in an amount in excess of the actual amount of the Stated Value of the Series C Preferred Stock then owned by the Holder.

In the case of the exercise of the conversion rights set forth in paragraph 4(a) the conversion privilege shall be deemed to have been exercised and the shares of Common Stock issuable upon such conversion shall be deemed to have been issued upon the date of receipt by the Corporation of the Notice of Conversion. The person or entity entitled to receive Common Stock issuable upon such conversion shall, on the date such conversion privilege is deemed to have been exercised and thereafter, be treated for all purposes as the recordholder of such Common Stock and shall on the same date cease to be treated for any purpose as the record Holder of such shares of Series C Preferred Stock so converted.

Upon the conversion of any shares of Series C Preferred Stock no adjustment or payment shall be made with respect to such converted shares on account of any dividend on the Common Stock, except that the Holder of such converted shares shall be entitled to be paid any dividends declared on shares of Common Stock after conversion thereof.

The Corporation, in connection with any conversion of Series C Preferred Stock, and payment of dividends on Series C Preferred Stock may issue a fraction of a share of its Series C Preferred Stock, or may pay such amount in cash at the stated value of the fractional portion.

The Corporation and Holder may not convert that amount of the Obligation Amount on a Conversion Date in amounts that would result in the Holder having a beneficial ownership of Common Stock which would be in excess of the sum of (i) the number of shares of Common Stock beneficially owned by the Holder and its affiliates on such Conversion Date, and (ii) the number of shares of Common Stock issuable upon the conversion of the Obligation Amount with respect to which the determination of this proviso is being made on such Conversion Date, which would result in beneficial ownership by the Holder and its affiliates of more than 4.99% of the outstanding shares of Common Stock of the Corporation. For the purposes of the proviso to the immediately preceding sentence, beneficial ownership shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and Regulation 13d-3 thereunder. Subject to the foregoing, the Holder shall not be limited to successive exercises which would result in the aggregate issuance of more than 4.99%. The Holder may revoke the conversion limitation described in this Paragraph, in whole or in part, upon 61 days prior notice to the Corporation. The Holder may allocate which of the equity of the Corporation deemed beneficially owned by the Holder shall be included in the 4.99% amount described above and which shall be allocated to the excess above 4.99%.

(d) The Conversion Price determined pursuant to Paragraph 4(b) shall be subject to adjustment from time to time as follows:

(i) In case the Corporation shall at any time (A) declare any dividend or distribution on its Common Stock or other securities of the Corporation other than the Series C Preferred Stock or Series B Preferred Stock, (B) split or subdivide the outstanding Common Stock, (C) combine the outstanding Common Stock into a smaller number of shares, or (D) issue by reclassification of its Common Stock any shares or other securities of the Corporation, then in each such event the Conversion Price shall be adjusted proportionately so that the Holders of Series C Preferred Stock shall be entitled to receive the kind and number of shares or other securities of the Corporation which such Holders would have owned or have been entitled to receive after the happening of any of the events described above had such shares of Series C Preferred Stock been converted immediately prior to the happening of such event (or any record date with respect thereto). Such adjustment shall be made whenever any of the events listed above shall occur. An adjustment made to the Conversion Price pursuant to this paragraph 4(d)(i) shall become effective immediately after the effective date of the event.

(ii) Other than in connection with an Exempted Issuance, if at any time when the Series C Preferred Stock is outstanding, the Company shall offer, issue or agree to issue any Common Stock or securities convertible into or exercisable for shares of Common Stock (or modify any of the foregoing which may be outstanding) to any person or any entity at a price per share or conversion or exercise price per share which will be less than the Conversion Price in respect of the shares issuable upon conversion of the Series C Preferred Stock (the "Preferred Shares"), without the consent of each Holder of Series C Preferred Stock, then the Company shall issue, for each such occasion, additional shares of Common Stock to each Holder of Series C Preferred Stock so that the average per share purchase price of the shares of Common Stock issued to the Holder of Series C Preferred Stock (of only the Preferred Shares still owned by the Holder of the Series C Preferred Stock which Preferred Shares may not be publicly sold by the Holder of Series C Preferred Stock at the time of the dilutive event) is equal to such other lower price per share and the Conversion Price shall automatically be adjusted to such other lower price.

An "Exempted Issuance" shall mean (i) full or partial consideration in connection with a strategic merger, acquisition, consolidation or purchase of substantially all of the securities or assets of corporation or other entity which holders of such securities or debt are not at any time granted registration rights, (ii) the Corporation's issuance of securities in connection with strategic license agreements and other partnering arrangements so long as such issuances are not for the purpose of raising capital which holders of such securities or debt are not at any time granted registration rights, (iii) the Corporation's issuance of Common Stock or the issuances or grants of options to employees, consultants, officers and directors to purchase Common Stock pursuant to stock option plans and employee stock purchase plans duly adopted by a majority of the non-employee members of the Board of Directors of the Corporation or a majority of the members of a committee of non-employee directors established for such purpose hereto, (iv) the Corporation's issuance of the Series B Preferred Stock, shares of Common Stock upon conversion of the Series B Preferred Stock, or any other securities in exchange therefor, (v) as a result of the exercise of warrants issued to the Holders of Series C Preferred Stock on September 30, 2005 or October 3, 2005 or conversion of Series C Preferred Stock, (vi) the payment of dividends on the Series C Preferred Stock and liquidated damages, and (vii) as has been described in the reports or other written information filed with the Securities and Exchange Commission not later September 27, 2005.

(e) (i) In case of any merger of the Corporation with or into any other corporation (other than a merger in which the Corporation is the surviving or continuing corporation and which does not result in any reclassification, conversion, or change of the outstanding shares of Common Stock) then unless the right to convert shares of Series C Preferred Stock shall have terminated as part of such merger, lawful provision shall be made so that Holders of Series C Preferred Stock shall thereafter have the right to convert each share of Series C Preferred Stock into the kind and amount of shares of stock and/or other securities or property receivable upon such merger by a Holder of the number of shares of Common Stock into which such shares of Series C Preferred Stock might have been converted immediately prior to such consolidation or merger. Such provision shall also provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in sub-paragraph (d) of this paragraph 4. The foregoing provisions of this paragraph 4(e) shall similarly apply to successive mergers.

(ii) In case of any sale or conveyance to another person or entity of the property of the Corporation as an entirety, or substantially as an entirety, in connection with which shares or other securities or cash or other property shall be issuable, distributable, payable, or deliverable for outstanding shares of Common Stock, then, unless the right to convert such shares shall have terminated, lawful provision shall be made so that the Holders of Series C Preferred Stock shall thereafter have the right to convert each share of the Series C Preferred Stock into the kind and amount of shares of stock or other securities or property that shall be issuable, distributable, payable, or deliverable upon such sale or conveyance with respect to each share of Common Stock immediately prior to such conveyance.

(f) Whenever the number of shares to be issued upon conversion of the Series C Preferred Stock is required to be adjusted as provided in this paragraph 4, the Corporation shall forthwith compute the adjusted number of shares to be so issued and prepare a certificate setting forth such adjusted conversion amount and the facts upon which such adjustment is based, and such certificate shall forthwith be filed with the Transfer Agent for the Series C Preferred Stock and the Common Stock; and the Corporation shall mail to each Holder of record of Series C Preferred Stock notice of such adjusted conversion price.

(g) In case at any time the Corporation shall propose:

(i) to pay any dividend or distribution payable in shares upon its Common Stock or make any distribution (other than cash dividends) to the Holders of its Common Stock; or

(ii) to offer for subscription to the Holders of its Common Stock any additional shares of any class or any other rights; or

(iii) any capital reorganization or reclassification of its shares or the merger of the Corporation with another corporation (other than a merger in which the Corporation is the surviving or continuing corporation and which does not result in any reclassification, conversion, or change of the outstanding shares of Common Stock); or

(iv) the voluntary dissolution, liquidation or winding-up of the Corporation;

then, and in any one or more of said cases, the Corporation shall cause at least fifteen (15) days prior notice of the date on which (A) the books of the Corporation shall close or a record be taken for such stock dividend, distribution, or subscription rights, or (B) such capital reorganization, reclassification, merger, dissolution, liquidation or winding-up shall take place, as the case may be, to be mailed to the Transfer Agent for the Series C Preferred Stock and for the Common Stock and to the Holders of record of the Series C Preferred Stock.

(h) So long as any shares of Series C Preferred Stock or any Obligation Amount shall remain outstanding and the Holders thereof shall have the right to convert the same in accordance with provisions of this paragraph 4 the Corporation shall at the time of issuance of Series C Preferred Stock reserve from the authorized and unissued shares of its Common Stock 100% of the number of shares of Common Stock that would be necessary to allow the conversion of the entire Obligation Amount.

(i) The term “Common Stock” as used in this Certificate of Designation shall mean the $.00001 par value Common Stock of the Corporation as such stock is constituted at the date of issuance thereof or as it may from time to time be changed, or shares of stock of any class or other securities and/or property into which the shares of Series C Preferred Stock shall at any time become convertible pursuant to the provisions of this paragraph 4.

(j) The Corporation shall pay the amount of any and all issue taxes (but not income taxes) which may be imposed in respect of any issue or delivery of stock upon the conversion of any shares of Series C Preferred Stock, but all transfer taxes and income taxes that may be payable in respect of any change of ownership of Series C Preferred Stock or any rights represented thereby or of stock receivable upon conversion thereof shall be paid by the person or persons surrendering such stock for conversion.

(k) In addition to any other rights available to the Holder, if the Corporation fails to deliver to the Holder such certificate or certificates pursuant to Section 4(c) by the Delivery Date and if within seven (7) business days after the Delivery Date the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by such Holder of the Common Stock which the Holder anticipated receiving upon such conversion (a "Buy-In"), then the Corporation shall pay in cash to the Holder (in addition to any remedies available to or elected by the Holder) within five (5) business days after written notice from the Holder, the amount by which (A) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (B) the aggregate Stated Value of the shares of Series C Preferred Stock for which such conversion was not timely honored, together with interest thereon at a rate of 15% per annum, accruing until such amount and any accrued interest thereon is paid in full (which amount shall be paid as liquidated damages and not as a penalty). For example, if the Holder purchases shares of Common Stock having a total purchase price of $11,000 to cover a Buy-In with respect to an attempted conversion of $10,000 of Stated Value of Series C Preferred Stock, the Corporation shall be required to pay the Holder $1,000, plus interest. The Holder shall provide the Corporation written notice indicating the amounts payable to the Holder in respect of the Buy-In.

(m) The Corporation understands that a delay in the delivery of Common Stock upon conversion of Preferred Stock in the form required pursuant to this Certificate and the Subscription Agreement after the Delivery Date could result in economic loss to the Holder. As compensation to the Holder for such loss, the Corporation agrees to pay (as liquidated damages and not as a penalty) to the Holder for such late issuance of Common Stock upon Conversion of the Series C Preferred Stock in the amount of $100 per business day after the Delivery Date for each $10,000 of Obligation Amount being converted of the corresponding Common stock which is not timely delivered. The Corporation shall pay any payments incurred under this section in immediately available funds upon demand. Furthermore, in addition to any other remedies which may be available to the Holder, in the event that the Corporation fails for any reason to effect delivery of the Common Stock by the Delivery Date, the Holder will be entitled to revoke all or part of the relevant Notice of Conversion or rescind all by delivery of a notice to such effect to the Corporation whereupon the Corporation and the Holder shall each be restored to their respective positions immediately prior to the delivery of such notice, except that the liquidated damages described above shall be payable through the date notice of revocation is given to the Corporation.

(n) In the event a Holder shall elect to convert any part of the Obligation Amount, the Corporation may not refuse conversion based on any claim that Holder or any one associated or affiliated with Holder has been engaged in any violation of law, or for any other reason, unless, an injunction from a court, on notice, restraining and or enjoining conversion of all or part of such Obligation Amount shall have been sought and obtained by the Corporation and the Corporation has posted a surety bond for the benefit of such Holder in the amount of 120% of the amount of the Obligation Amount which are sought to be subject to the injunction, which bond shall remain in effect until the completion of arbitration/litigation of the dispute and the proceeds of which shall be payable to such Holder to the extent Holder obtains judgment.

(o) Commencing after the Actual Effective Date (as defined in the Subscription Agreement), provided an Event of Default has not occurred, and provided further that no Series B Preferred Stock is outstanding, whether or not such Event of Default has been cured, the Corporation will have the option of prepaying the Obligation Amount ("Optional Redemption"), in whole or in part, by paying to the Holder a sum of money equal to one hundred twenty percent (120%) of the Obligation Amount to be redeemed (the "Redemption Amount"). The Corporation's election to exercise its right to prepay must be by notice in writing ("Notice of Redemption") and made proportionately to all Holders of Series C Preferred Stock. The Notice of Redemption shall specify the date for such Optional Redemption (the "Redemption Payment Date"), which date shall be not less than thirty (30) business days after service of the Notice of Redemption (the "Redemption Period"). A Notice of Redemption shall not be effective with respect to any portion of the Obligation Amount for which the Holder has a pending election to convert pursuant to Section 4 hereof, or for conversions initiated or made by the Holder during the Redemption Period. On the Redemption Payment Date, the Redemption Amount less any portion of the Redemption Amount against which the Holder has exercised its rights pursuant to Section 4, shall be paid in good funds to the Holder. In the event the Corporation fails to pay the Redemption Amount on the Redemption Payment Date as set forth herein, then (i) such Notice of Redemption will be null and void, (ii) the Corporation will have no further right to deliver a Notice of Redemption, and (iii) the Corporation's failure may be deemed by the Holder to be a non-curable Event of Default.

5. Voting Rights. The Holder of shares of Series C Preferred Stock shall not have voting rights.

6. Restrictions and Limitations.

(a) Amendments to Charter. The Corporation shall not without first obtaining the approval (by vote or written consent, as provided by law) of the holders of at least a majority of the then outstanding shares of Series C Preferred Stock (voting together as a single class):

(i) change the relative seniority rights of the holders of Series C Preferred Stock as to the payment of dividends in relation to the holders of any other capital stock of the Corporation, or create any other class or series of capital stock entitled to seniority as to the payment of dividends in relation to the holders of Series C Preferred Stock other than the Series B Preferred Stock; provided that no such amendment shall increase the number of shares designated as Series B Preferred Stock or the stated value thereof without approval of the outstanding shares of Series C Preferred Stock;

(ii) reduce the amount payable to the holders of Series C Preferred Stock upon the voluntary or involuntary liquidation, dissolution or winding up of the Corporation, or change the relative seniority of the liquidation preferences of the holders of Series C Preferred Stock to the rights upon liquidation of the holders of other capital stock of the Corporation, or change the dividend rights of the holders of Series C Preferred Stock;

(iii) cancel or modify the conversion rights of the holders of Series C Preferred Stock provided for in Section 4 herein; or

(iv) cancel or modify the rights of the holders of the Series C Preferred Stock provided for in this Section 6.

(b) Amendments to this Certificate of Designations. So long as any shares of Series B Preferred Stock remain outstanding, the Corporation shall not amend this Certificate of Designations without first obtaining the approval (by vote or written consent, as provided by law) of the Requisite Holders of the Series B Preferred Stock.

7. Event of Default.

The occurrence of any of the following events of default ("Event of Default") shall, after the applicable period to cure the Event of Default, cause the dividend rate of 8% described in paragraph 2 hereof to become 20% (provided that any payment of dividends shall be in accordance with Section 2(a)) from and after the occurrence of such event:

(i) The Corporation fails to timely pay any dividend payment or the failure to timely pay any other sum of money due to the Holder from the Corporation and such failure continues for a period of seven (7) days after written notice to the Corporation from the Holder .

(ii) The Corporation breaches any material covenant, term or condition of the Subscription Agreement or in this Certificate of Designation, and if capable of being cured such breach continues for a period of seven (7) days after written notice to the Corporation from the Holder.

(iii) Any material representation or warranty of the Corporation made in the Subscription Agreement, or in any agreement, statement or certificate given in writing pursuant thereto shall prove to have been false or misleading at the time when made.

(iv) The Corporation or any of its subsidiaries shall make an assignment of a substantial part of its property or business for the benefit of creditors, or apply for or consent to the appointment of a receiver or trustee for it or for a substantial part of its property or business, or such a receiver or trustee shall otherwise be appointed.

(v) Any money judgment, confession of judgment, writ or similar process shall be entered against the Corporation, a subsidiary of the Corporation, or their property or other assets for more than $100,000, and is not vacated, satisfied, bonded or stayed within 45 days.

(vi) Bankruptcy, insolvency, reorganization or liquidation proceedings or other proceedings for relief under any bankruptcy law or any law for the relief of debtors shall be instituted by the Corporation or if instituted against the Corporation or any of its subsidiaries, is not dismissed within 45 days.

(vii) An order entered by a court of competent jurisdiction, or by the Securities and Exchange Commission, or by the National Association of Securities Dealers, preventing purchase and sale transactions in the Corporation’s Common Stock for a period of five or more consecutive trading days.

(viii) The Corporation's failure to deliver to the Holder Common Stock or a replacement Preferred Stock certificate within ten (10) business days of the required delivery date, if so required.

(ix) The occurrence and continuation of a Non-Registration Event as described in Section 11.4 of the Subscription Agreement for a period of forty-five (45) days.

(x) Delisting of the Common Stock from the OTC Bulletin Board ("OTCBB") or such other principal market or exchange on which the Common Stock is listed for trading, if the Common Stock is not quoted or listed on such market or exchange, or quoted on the automated quotation system of a national securities association or listed on a national securities exchange, within ten (10) trading days after such delisting.

(xi) The Corporation fails to reserve the amount of Common Stock required to be reserved pursuant to Section 4(h) hereof.

(xii) A default by the Corporation of a material term, covenant, warranty or undertaking of any other agreement to which the Corporation and Holder are parties, or the occurrence of a material event of default under any such other agreement, in each case, which is not cured after any required notice and/or cure period.

(xiii) Upon the occurrence of a Change in Control. A "Change in Control" shall mean (i) the Corporation becoming a Subsidiary of another entity, (ii) a majority of the board of directors of the Corporation as of the Issue Date of Series C Preferred Stock or successors appointed by the board of directors having a majority consisting of such persons or their successors no longer serving as directors of the Corporation except due to natural causes, (iii) if any person or entity other than officers or directors or persons or entities beneficially owning more than ten percent (10%) or more of the voting power of outstanding capital stock of the Corporation as of the Issue date of Series C Preferred Stock, acquires fifty percent (50%) or more of the voting power of outstanding capital stock of the Corporation, (iv) the sale, lease or transfer of substantially all the assets of the Corporation or Subsidiaries.

8. Status of Converted or Redeemed Stock. In case any shares of Series C Preferred Stock shall be redeemed or otherwise repurchased or reacquired, the shares so redeemed, converted, or reacquired shall resume the status of authorized but unissued shares of Preferred Stock and shall no longer be designated as Series C Preferred Stock.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Designations to be duly executed by its undersigned officer thereunto duly authorized, this 2nd day of May, 2007.

NOVELOS THERAPEUTICS, INC.

By: /s/ Harry S. Palmin

Harry S. Palmin, President

EXHIBIT A

NOTICE OF CONVERSION

(To Be Executed By the Registered Holder in Order to Convert the Series C Convertible Preferred Stock of Novelos Therapeutics, Inc.)

The undersigned hereby irrevocably elects to convert $_____ of the Stated Value of the above Series C Convertible Preferred Stock into shares of Common Stock of Novelos Therapeutics, Inc. (the "Corporation") according to the conditions hereof, as of the date written below.

Date of Conversion: _____

Applicable Conversion Price Per Share: _____

Number of Common Shares Issuable Upon This Conversion: _____

Select one:

☐ A Series C Convertible Preferred Stock certificate is being delivered herewith. The unconverted portion of such certificate should be reissued and delivered to the undersigned.

☐ A Series C Convertible Preferred Stock certificate is not being delivered to Novelos Therapeutics, Inc.

Signature: _____

Print Name: _____

Address: _____

_____

Deliveries Pursuant to this Notice of Conversion Should Be Made to:

NEITHER THESE SECURITIES NOR THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION (THE "COMMISSION") OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT") AND APPLICABLE STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO (I) AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR (II) AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES A C T AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS OR BLUE SKY LAWS.

Warrant No. ____ Original Issue Date: May 2, 2007

NOVELOS THERAPEUTICS, INC.

WARRANT TO PURCHASE [_____] SHARES OF COMMON STOCK, PAR VALUE $0.00001 PER SHARE

FOR VALUE RECEIVED, **[_____]** ("**Warrantholder**"), is entitled to purchase, subject to the provisions of this Warrant, from NOVELOS THERAPEUTICS, INC. a Delaware corporation ("**Corporation**"), at any time not later than 5:00 P.M., Eastern time, on [_____], 2012 (the "**Expiration Date**"), at an exercise price per share equal to $1.25 (the exercise price in effect being herein called the "**Warrant Price**"), **[_____]** shares ("**Warrant Shares**") of the Corporation's Common Stock, par value $0.00001 per share ("**Common Stock**"). The number of Warrant Shares purchasable upon exercise of this Warrant and the Warrant Price shall be subject to adjustment from time to time as described herein. This Warrant has been issued pursuant to a certain Securities Purchase Agreement, dated as of April 12, 2007, by and among the Corporation and the Investors signatory thereto (as amended on May 2, 2007, the "**Purchase Agreement**"). All capitalized terms used but not defined herein shall have the meanings ascribed thereto in the Purchase Agreement.

Section 1. Registration. The Corporation shall maintain books for the transfer and registration of the Warrant. Upon the initial issuance of this Warrant, the Corporation shall issue and register the Warrant in the name of the Warrantholder.

Section 2. Transfers. As provided herein, this Warrant may be transferred only pursuant to a registration statement filed under the Securities Act, or an exemption from such registration. Subject to such restrictions, the Corporation shall transfer this Warrant from time to time upon the books to be maintained by the Corporation for that purpose, upon surrender thereof for transfer properly endorsed or accompanied by appropriate instructions for transfer and such other documents as may be reasonably required by the Corporation, including, if required by the Corporation, an opinion of its counsel to the effect that such transfer is exempt from the registration requirements of the Securities Act, to establish that such transfer is being made in accordance with the terms hereof, and a new Warrant shall be issued to the transferee and the surrendered Warrant shall be canceled by the Corporation.

Section 3. Exercise of Warrant.

(a) Subject to the provisions hereof, the Warrantholder may exercise this Warrant in whole or in part at any time prior to its expiration upon surrender of the Warrant, together with delivery of the duly executed Warrant exercise form attached hereto as Appendix A (the "**Exercise Agreement**") and payment by cash, certified check or wire transfer of funds for the aggregate Warrant Price for that number of Warrant Shares then being purchased, to the Corporation during normal business hours on any Business Day at the Corporation's principal executive offices (or such other office or agency of the Corporation as it may designate by notice to the holder hereof). The Warrant Shares so purchased shall be deemed to be issued to the holder hereof or such holder's designee, as the record owner of such shares, as of the close of business on the date on which this Warrant shall have been surrendered (or evidence of loss, theft or destruction thereof and security or indemnity satisfactory to the Corporation), the Warrant Price shall have been paid and the completed Exercise Agreement shall have been delivered. Certificates for the Warrant Shares so purchased, representing the aggregate number of shares specified in the Exercise Agreement, shall be delivered to the holder hereof within a reasonable time, not exceeding three (3) Business Day, after this Warrant shall have been so exercised. When the Corporation is required to deliver certificates upon exercise, if certificates are not delivered to the Warrantholder within such three (3) Business Days, the Corporation shall be liable to the Warrantholder for liquidated damages equal to 1.5% of the aggregate Warrant Price for each 30-day period (or portion thereof) beyond such three (3) Business Day-period that the certificates have not been so delivered. The certificates so delivered shall be in such denominations as may be requested by the holder hereof and shall be registered in the name of such holder or such other name as shall be designated by such holder. If this Warrant shall have been exercised only in part, then, unless this Warrant has expired, the Corporation shall, at its expense, at the time of delivery of such certificates, deliver to the holder a new Warrant representing the number of shares with respect to which this Warrant shall not then have been exercised.

(b) (I) Notwithstanding anything herein to the contrary, in no event shall a Warrantholder be entitled to exercise any portion of this Warrant so held by such Warrantholder in excess of that portion upon exercise of which the sum of (1) the number of shares of Common Stock beneficially owned by such Warrantholder and its Affiliates (other than shares of Common Stock which may be deemed beneficially owned through ownership of the unexercised shares of Common Stock underlying the Warrant or the unexercised or unconverted portion of any other security of the holder subject to a limitation on conversion analogous to the limitations contained herein) and (2) the number of shares of Common Stock issuable upon the exercise of that portion of the Warrant with respect to which the determination of this proviso is being made, would result in beneficial ownership by such Warrantholder and its Affiliates of any amount greater than 4.99% of the then outstanding shares of Common Stock (whether or not, at the time of such conversion, the Warrantholder and its Affiliates beneficially own more than 4.99% of the then outstanding shares of Common Stock). The waiver by a Warrantholder of any limitation contained in a warrant or convertible security now or hereafter held by such holder that is similar or analogous to the limitations set forth in this Section 3(b)(I) shall not be deemed a waiver or otherwise effect the limitation set forth in this Section 3(b)(I), unless such waiver expressly states it is a waiver of the provisions of this Section 3(b)(I). For purposes of this Section 3(b)(I), beneficial ownership shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and Regulations 13D-G thereunder, except as otherwise provided in clause (1) of such proviso. Any Warrantholder may waive the limitations set forth herein by sixty-one (61) days written notice to the Corporation. The foregoing shall not affect the Company's right to redeem the Warrant pursuant to Section 19.

(II) Notwithstanding anything herein to the contrary, in no event shall a Warrantholder be entitled to exercise any portion of this Warrant so held by such Warrantholder in excess of that portion upon exercise of which the sum of (1) the number of shares of Common Stock beneficially owned by such Warrantholder and its Affiliates (other than shares of Common Stock which may be deemed beneficially owned through ownership of the unexercised shares of Common Stock or the unexercised or unconverted portion of any other security of the holder subject to a limitation on exercise analogous to the limitations contained herein) and (2) the number of shares of Common Stock issuable upon the exercise of that portion of the Warrant with respect to which the determination of this proviso is being made, would result in beneficial ownership by such Warrantholder and its Affiliates of any amount greater than 9.99% of the then outstanding shares of Common Stock (whether or not, at the time of such conversion, the Warrantholder and its Affiliates beneficially own more than 9.99% of the then outstanding shares of Common Stock). The waiver by a Warrantholder of any limitation contained in a warrant or convertible security now or hereafter held by such holder that is similar or analogous to the limitations set forth in this Section 3(b)(II) shall not be deemed a waiver or otherwise effect the limitation set forth in this Section 3(b)(II), unless such waiver expressly states it is a waiver of the provisions of this Section 3(b)(II). For purposes of this Section 3(b)(II), beneficial ownership shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and Regulations 13D-G thereunder, except as otherwise provided in clause (1) of such proviso. Any Warrantholder may waive the limitations set forth herein by sixty-one (61) days written notice to the Corporation. The foregoing shall not affect the Company's right to redeem the Warrant pursuant to Section 19.

Section 4. Compliance with the Securities Act of 1933. The Corporation may cause the legend set forth on the first page of this Warrant to be set forth on each Warrant or similar legend on any security issued or issuable upon exercise of this Warrant, unless counsel for the Corporation is of the opinion as to any such security that such legend is unnecessary.

Section 5. Payment of Taxes. The Corporation will pay any documentary stamp taxes attributable to the initial issuance of Warrant Shares issuable upon the exercise of the Warrant; provided, however, that the Corporation shall not be required to pay any tax or taxes which may be payable in respect of any transfer involved in the issuance or delivery of any certificates for Warrant Shares in a name other than that of the registered holder of this Warrant in respect of which such shares are issued, and in such case, the Corporation shall not be required to issue or deliver any certificate for Warrant Shares or any Warrant until the person requesting the same has paid to the Corporation the amount of such tax or has established to the Corporation's reasonable satisfaction that such tax has been paid. The holder shall be responsible for income taxes due under federal, state or other law, if any such tax is due.

Section 6. Mutilated or Missing Warrants. In case this Warrant shall be mutilated, lost, stolen, or destroyed, the Corporation shall issue in exchange and substitution of and upon cancellation of the mutilated Warrant, or in lieu of and substitution for the Warrant lost, stolen or destroyed, a new Warrant of like tenor and for the purchase of a like number of Warrant Shares, but only upon receipt of evidence reasonably satisfactory to the Corporation of such loss, theft or destruction of the Warrant, and with respect to a lost, stolen or destroyed Warrant, reasonable indemnity or bond with respect thereto, if requested by the Corporation.

Section 7. Reservation of Common Stock. The Corporation hereby represents and warrants that there have been reserved, and the Corporation shall at all applicable times keep reserved until issued (if necessary) as contemplated by this Section 7, out of the authorized and unissued shares of Common Stock, 125% (which percentage shall be decreased to 100% in the event the Company's shareholders do no approve an amendment to the Company's certificate of incorporation to increase the number of authorized shares of Common Stock to 150,000,000) of the number of shares issuable upon exercise of the rights of purchase represented by this Warrant. The Corporation agrees that all Warrant Shares issued upon due exercise of the Warrant shall be, at the time of delivery of the certificates for such Warrant Shares, duly authorized, validly issued, fully paid and non-assessable shares of Common Stock of the Corporation.

Section 8. Adjustments. Subject and pursuant to the provisions of this Section 8, the Warrant Price and number of Warrant Shares subject to this Warrant shall be subject to adjustment from time to time as set forth hereinafter.

(a) If the Corporation shall, at any time or from time to time while this Warrant is outstanding, pay a dividend or make a distribution on its Common Stock in shares of Common Stock, subdivide its outstanding shares of Common Stock into a greater number of shares or combine its outstanding shares of Common Stock into a smaller number of shares or issue by reclassification of its outstanding shares of Common Stock any shares of its capital stock (including any such reclassification in connection with a consolidation or merger in which the Corporation is the continuing corporation), then the number of Warrant Shares purchasable upon exercise of the Warrant and the Warrant Price in effect immediately prior to the date upon which such change shall become effective, shall be adjusted by the Corporation so that the Warrantholder thereafter exercising the Warrant shall be entitled to receive the number of shares of Common Stock or other capital stock which the Warrantholder would have received if the Warrant had been fully exercised immediately prior to such event upon payment of a Warrant Price that has been adjusted to reflect a fair allocation of the economics of such event to the Warrantholder. Such adjustments shall be made successively whenever any event listed above shall occur.

(b) If any capital reorganization, reclassification of the capital stock of the Corporation, consolidation or merger of the Corporation with another corporation in which the Corporation is not the survivor, or sale, transfer or other disposition of all or substantially all of the Corporation's assets to another corporation shall be effected, then, the Corporation shall use its best efforts to ensure that lawful and adequate provision shall be made whereby each Warrantholder shall thereafter have the right to purchase and receive upon the basis and upon the terms and conditions herein specified and in lieu of the Warrant Shares immediately theretofore issuable upon exercise of the Warrant, such shares of stock, securities or assets as would have been issuable or payable with respect to or in exchange for a number of Warrant Shares equal to the number of Warrant Shares immediately theretofore issuable upon exercise of the Warrant, had such reorganization, reclassification, consolidation, merger, sale, transfer or other disposition not taken place, and in any such case appropriate provision shall be made with respect to the rights and interests of each Warrantholder to the end that the provisions hereof (including, without limitation, provision for adjustment of the Warrant Price) shall thereafter be applicable, as nearly equivalent as may be practicable in relation to any shares of stock, securities or assets thereafter deliverable upon the exercise thereof. The Corporation shall not effect any such consolidation, merger, sale, transfer or other disposition unless prior to or simultaneously with the consummation thereof the successor corporation (if other than the Corporation) resulting from such consolidation or merger, or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or entity shall assume the obligation to deliver to the holder of the Warrant, at the last address of such holder appearing on the books of the Corporation, such shares of stock, securities or assets as, in accordance with the foregoing provisions, such holder may be entitled to purchase, and the other obligations under this Warrant. The provisions of this Section 8(b) shall similarly apply to successive reorganizations, reclassifications, consolidations, mergers, sales, transfers or other dispositions.

(c) In case the Corporation shall fix a payment date for the making of a distribution to all holders of Common Stock (including any such distribution made in connection with a consolidation or merger in which the Corporation is the continuing corporation) of evidences of indebtedness or assets (other than cash dividends or cash distributions payable out of consolidated earnings or earned surplus or dividends or distributions referred to in Section 8(a)), or subscription rights or warrants, the Company shall provide notice to the Warrantholder at least 10 days in advance of the fixing of such payment date and the Warrantholder may elect to exercise this Warrant in whole or in part prior to such payment date in accordance with Section 3 hereof.

(d) For the term of this Warrant, in addition to the provisions contained above, the Warrant Price shall be subject to adjustment as provided below. An adjustment to the Warrant Price shall become effective immediately after the payment date in the case of each dividend or distribution and immediately after the effective date of each other event which requires an adjustment.

(e) In the event that, as a result of an adjustment made pursuant to this Section 8, the holder of this Warrant shall become entitled to receive any shares of capital stock of the Corporation other than shares of Common Stock, the number of such other shares so receivable upon exercise of this Warrant shall be subject thereafter to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to the Warrant Shares contained in this Warrant.

Section 9. Fractional Interest. The Corporation shall not be required to issue fractions of Warrant Shares upon the exercise of this Warrant. If any fractional share of Common Stock would, except for the provisions of the first sentence of this Section 9, be deliverable upon such exercise, the Corporation, in lieu of delivering such fractional share, shall pay to the exercising holder of this Warrant an amount in cash equal to the Market Price of such fractional share of Common Stock on the date of exercise.

Section 10. [Reserved].

Section 11. Benefits. Nothing in this Warrant shall be construed to give any person, firm or corporation (other than the Corporation and the Warrantholder) any legal or equitable right, remedy or claim, it being agreed that this Warrant shall be for the sole and exclusive benefit of the Corporation and the Warrantholder.

Section 12. Notices to Warrantholder. Upon the happening of any event requiring an adjustment of the Warrant Price, the Corporation shall promptly give written notice thereof to the Warrantholder at the address appearing in the records of the Corporation, stating the adjusted Warrant Price and the adjusted number of Warrant Shares resulting from such event and setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based. Failure to give such notice to the Warrantholder or any defect therein shall not affect the legality or validity of the subject adjustment.

Section 13. Identity of Transfer Agent. The Transfer Agent for the Common Stock is American Stock Transfer & Trust Company. Upon the appointment of any subsequent transfer agent for the Common Stock or other shares of the Corporation's capital stock issuable upon the exercise of the rights of purchase represented by the Warrant, the Corporation will mail to the Warrantholder a statement setting forth the name and address of such transfer agent.

Section 14. Notices. Unless otherwise provided, any notice required or permitted under this Warrant shall be given in writing and shall be deemed effectively given as hereinafter described (i) if given by personal delivery, then such notice shall be deemed given upon such delivery, (ii) if given by telex or facsimile, then such notice shall be deemed given upon receipt of confirmation of complete transmittal, (iii) if given by mail, then such notice shall be deemed given upon the earlier of (A) receipt of such notice by the recipient or (B) three days after such notice is deposited in first class mail, postage prepaid, and (iv) if given by an internationally recognized overnight air courier, then such notice shall be deemed given one day after delivery to such carrier. All notices shall be addressed as follows: if to the Warrantholder, at its address as set forth in the Corporation's books and records and, if to the Corporation, at the address as follows, or at such other address as the Warrantholder or the Corporation may designate by ten days' advance written notice to the other:

If to the Corporation:

Novelos Therapeutics, Inc.
One Gateway Center, Suite 504
Newton, MA 02458
Attention: Chief Executive Officer
Fax: (617) 964-6331

With a copy to:

Foley Hoag LLP
Seaport World Trade Center West
155 Seaport Boulevard
Boston, MA 02210
Attn: Paul Bork
Fax: (617) 832-7000

Section 15. Registration Rights. The initial holder of this Warrant is entitled to the benefit of certain registration rights with respect to the shares of Common Stock issuable upon the exercise of this Warrant as provided in the Registration Rights Agreement dated May 2, 2007, by and between the Warrantholders and the Corporation, and any subsequent holder hereof shall be entitled to such rights to the extent provided in the Registration Rights Agreement.

Section 16. Successors. All the covenants and provisions hereof by or for the benefit of the Warrantholder shall bind and inure to the benefit of its respective successors and assigns hereunder.

Section 17. Governing Law. This Warrant shall be governed by, and construed in accordance with, the internal laws of the State of New York, without reference to the choice of law provisions thereof. The Corporation and, by accepting this Warrant, the Warrantholder, each irrevocably submits to the exclusive jurisdiction of the courts of the State of New York located in New York County and the United States District Court for the Southern District of New York for the purpose of any suit, action, proceeding or judgment relating to or arising out of this Warrant and the transactions contemplated hereby. Service of process in connection with any such suit, action or proceeding may be served on each party hereto anywhere in the world by the same methods as are specified for the giving of notices under this Warrant. The Corporation and, by accepting this Warrant, the Warrantholder, each irrevocably consents to the jurisdiction of any such court in any such suit, action or proceeding and to the laying of venue in such court. The Corporation and, by accepting this Warrant, the Warrantholder, each irrevocably waives any objection to the laying of venue of any such suit, action or proceeding brought in such courts and irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. **THE CORPORATION AND THE WARRANTHOLDER HEREBY IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING RELATING TO OR ARISING OUT OF THIS WARRANT AND THE TRANSACTIONS CONTEMPLATED HEREBY.**

Section 18. No Rights as Shareholder. Prior to the exercise of this Warrant, the Warrantholder shall not have or exercise any rights as a shareholder of the Corporation by virtue of its ownership of this Warrant.

Section 19. Cashless Exercise. If, at any time after the one year anniversary of the Original Issue Date, there is no effective registration statement covering the Warrant Shares filed under the Securities Act as a result of a breach of the Corporation's obligations under the Registration Right Agreement, the Warrantholder may elect to receive, without the payment by the Warrantholder of the aggregate Warrant Price in respect of the shares of Common Stock to be acquired upon exercise hereof, shares of Common Stock equal to the value of this Warrant or any portion hereof being exercised pursuant to this Section 19 by the surrender of this Warrant (or such portion of this Warrant being so exercised) together with the Net Issue Election Notice annexed hereto as Appendix B duly executed, at the office of the Corporation. Thereupon, and in no event later than three (3) Business Days after the Corporation's receipt of the Net Issue Election Notice, the Corporation shall issue to the Warrantholder certificate(s) for such number of fully paid, validly issued and nonassessable shares of Common Stock as is computed using the formula immediately below. The certificates so delivered shall be in such denominations as may be requested by the holder hereof and shall be registered in the name of such holder or such other name as shall be designated by such holder. If this Warrant shall have been exercised only in part, then, unless this Warrant has expired, the Corporation shall, at its expense, at the time of delivery of such certificates, deliver to the holder a new Warrant representing the number of shares with respect to which this Warrant shall not then have been exercised.

$$X = \frac{Y\ (A - B)}{A}$$

where

X = the number of shares of Common Stock to be issued to the Warrantholder upon exercise of this Warrant pursuant to this Section 19;

Y = the total number of shares of Common Stock covered by this Warrant which the Warrantholder has surrendered at such time for cashless exercise (including both shares to be issued to the Warrantholder and shares to be canceled as payment therefor);

A = the Market Price of one share of Common Stock as at the time the net issue election is made; and

B = the Warrant Price in effect under this Warrant at the time the net issue election is made.

The Warrant Shares issued pursuant to this Section 19 shall be deemed to be issued to the exercising holder or such holder's designee, as the record owner of such shares, as of the close of business on the date on which the Net Issue Election Notice shall have been surrendered (or evidence of loss, theft or destruction thereof and security or indemnity satisfactory to the Corporation) to the Corporation.

"**Market Price**" as of a particular date (the "**Valuation Date**") shall mean the following: (a) if the Common Stock is then listed on a national stock exchange, the Market Price shall be the closing sale price of one share of Common Stock on such exchange on the last trading day prior to the Valuation Date, provided that if such stock has not traded in the prior ten (10) trading sessions, the Market Price shall be the average closing price of one share of Common Stock in the most recent ten (10) trading sessions during which the Common Stock has traded; (b) if the Common Stock is then included in the OTC Bulletin Board (the "**OTCBB**"), the Market Price shall be the closing sale price of one share of Common Stock on the OTCBB on the last trading day prior to the Valuation Date or, if no such closing sale price is available, the average of the high bid and the low ask price quoted on the OTCBB as of the end of the last trading day prior to the Valuation Date, provided that if such stock has not traded in the prior ten (10) trading sessions, the Market Price shall be the average closing price of one share of Common Stock in the most recent ten (10) trading sessions during which the Common Stock has traded, (c) if the Common Stock is then included in the "pink sheets," the Market Price shall be the closing sale price of one share of Common Stock on the "pink sheets" on the last trading day prior to the Valuation Date or, if no such closing sale price is available, the average of the high bid and the low ask price quoted on the "pink sheets" as of the end of the last trading day prior to the Valuation Date, provided that if such stock has not traded in the prior ten (10) trading sessions, the Market Price shall be the average closing price of one share of Common Stock in the most recent ten (10) trading sessions during which the Common Stock has traded. The Board of Directors of the Corporation shall respond promptly, in writing, to an inquiry by the Warrantholder prior to the exercise hereunder as to the Market Price of a share of Common Stock as determined by the Board of Directors of the Corporation.

Section 20. Redemption. If the Registration Statement covering the resale of the Warrant Shares underlying all of the Warrants is declared effective by the SEC, and is then effective, and the daily VWAP of the Common Stock for twenty (20) consecutive trading days exceeds $2.25 per share, Warrantholders shall have up to thirty (30) days to exercise this Warrant in accordance with Section 3 at an exercise price $1.25 per Warrant Share. On and after the thirty-first day, any remaining Warrants shall no longer be exercisable and shall be converted into a right to receive $.01 per share for the number of shares for which the Warrant had been exercisable at the end of the thirtieth day.

Section 21. Amendments. This Warrant shall not be amended without the prior written consent of the Corporation and the Requisite Holders; provided, that (x) any such amendment or waiver must apply to all Warrants; and (y) the number of Warrant Shares subject to this Warrant, the Warrant Price and the Expiration Date may not be amended, and the right to exercise this Warrant may not be altered or waived, without the prior written consent of the Warrantholder.

Section 22. Section Headings. The section headings in this Warrant are for the convenience of the Corporation and the Warrantholder and in no way alter, modify, amend, limit or restrict the provisions hereof.

Section 23. Certain Definitions. When used herein, the following terms shall have the respective meanings indicated:

"**Principal Market**" means, as of the Original Issuance Date the OTCBB.

"**Trading Day**" means any day on which the Common Stock is purchased and sold on the Principal Market.

"**VWAP**" on a Trading Day means the volume weighted average price of the Common Stock for such Trading Day on the Principal Market as reported by Bloomberg Financial Markets or, if Bloomberg Financial Markets is not then reporting such prices, by a comparable reporting service of national reputation selected by the Warrantholders and reasonably satisfactory to the Corporation. If VWAP cannot be calculated for the Common Stock on such Trading Day on any of the foregoing bases, then the Corporation shall submit such calculation to an independent investment banking firm of national reputation reasonably acceptable to the Warrantholders, and shall cause such investment banking firm to perform such determination and notify the Corporation and the Warrantholders of the results of determination no later than two (2) Business Days from the time such calculation was submitted to it by the Corporation. All such determinations shall be appropriately adjusted for any stock dividend, stock split or other similar transaction during such period.

IN WITNESS WHEREOF, the Corporation has caused this Warrant to be duly executed, as of the 2nd day of May, 2007.

NOVELOS THERAPEUTICS, INC.

By: _____

Name: _____

Title: _____

APPENDIX A
NOVELOS THERAPEUTICS, INC.
WARRANT EXERCISE FORM

To: NOVELOS THERAPEUTICS, INC.

The undersigned hereby irrevocably elects to exercise the right of purchase represented by the within Warrant ("Warrant") for, and to purchase thereunder by the payment of the Warrant Price and surrender of the Warrant, _____ shares of Common Stock ("Warrant Shares") provided for therein, and requests that certificates for the Warrant Shares be issued as follows:

_____
Name

_____
Address

_____

_____
Federal Tax ID or Social Security No.

and delivered by

- ❑ certified mail to the above address, or
- ❑ electronically (provide DWAC Instructions:_____),

or

- ❑ other (specify: _____).

and, if the number of Warrant Shares shall not be all the Warrant Shares purchasable upon exercise of the Warrant, that a new Warrant for the balance of the Warrant Shares purchasable upon exercise of this Warrant be registered in the name of the undersigned Warrantholder or the undersigned's Assignee as below indicated and delivered to the address stated below.

Dated: _____, ____

Note: The signature must correspond with the name of the registered holder as written on the first page of the Warrant in every particular, without alteration or enlargement or any change whatever, unless the Warrant has been assigned.

Signature:_____
_____
Name (please print)

_____
_____
Address

_____
Federal Identification or
Social Security No.

Assignee:

_____
_____
_____

APPENDIX B

NOVELOS THERAPEUTICS, INC.
NET ISSUE ELECTION NOTICE

To: NOVELOS THERAPEUTICS, INC.

Date: _____

The undersigned hereby elects under Section 19 of the Warrant to surrender the right to purchase _____ shares of Common Stock pursuant to this Warrant and hereby requests the issuance of _____ shares of Common Stock. The certificate(s) for the shares issuable upon such net issue election shall be issued in the name of the undersigned or as otherwise indicated below.

_____
Signature

_____
Name for Registration

_____
Mailing Address

NEITHER THESE SECURITIES NOR THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION (THE "COMMISSION") OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT") AND APPLICABLE STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO (I) AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR (II) AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS OR BLUE SKY LAWS.

Warrant No. ____ Original Issue Date: May 2, 2007

NOVELOS THERAPEUTICS, INC.

WARRANT TO PURCHASE [_____] SHARES OF COMMON STOCK, PAR VALUE $0.00001 PER SHARE

FOR VALUE RECEIVED, **[_____]** ("**Warrantholder**"), is entitled to purchase, subject to the provisions of this Warrant, from NOVELOS THERAPEUTICS, INC. a Delaware corporation ("**Corporation**"), at any time not later than 5:00 P.M., Eastern time, on May 2, 2012 (the "**Expiration Date**"), at an exercise price per share equal to $1.25 (the exercise price in effect being herein called the "**Warrant Price**"), **[_____]** shares ("**Warrant Shares**") of the Corporation's Common Stock, par value $0.00001 per share ("**Common Stock**"). The number of Warrant Shares purchasable upon exercise of this Warrant and the Warrant Price shall be subject to adjustment from time to time as described herein. This Warrant has been issued pursuant to a certain Agreement to Exchange and Consent, dated as of May 2, 2007, by and among the Corporation, Longview Fund, LP, Longview Equity Fund LP, Longview International Equity Fund LP and Sunrise Equity Partners, LP.

Section 1. Registration. The Corporation shall maintain books for the transfer and registration of the Warrant. Upon the initial issuance of this Warrant, the Corporation shall issue and register the Warrant in the name of the Warrantholder.

Section 2. Transfers. As provided herein, this Warrant may be transferred only pursuant to a registration statement filed under the Securities Act, or an exemption from such registration. Subject to such restrictions, the Corporation shall transfer this Warrant from time to time upon the books to be maintained by the Corporation for that purpose, upon surrender thereof for transfer properly endorsed or accompanied by appropriate instructions for transfer and such other documents as may be reasonably required by the Corporation, including, if required by the Corporation, an opinion of its counsel to the effect that such transfer is exempt from the registration requirements of the Securities Act, to establish that such transfer is being made in accordance with the terms hereof, and a new Warrant shall be issued to the transferee and the surrendered Warrant shall be canceled by the Corporation.

Section 3. Exercise of Warrant.

(a) Subject to the provisions hereof, the Warrantholder may exercise this Warrant in whole or in part by means of a cashless exercise at any time prior to its expiration upon surrender of the Warrant (or such portion of this Warrant being so exercised) together with the Net Issue Election Notice annexed hereto as Appendix A duly executed, at the office of the Corporation. Thereupon, and in no event later than three (3) Business Days after the Corporation's receipt of the Net Issue Election Notice, the Corporation shall issue to the Warrantholder certificate(s) for such number of fully paid, validly issued and nonassessable shares of Common Stock as is computed using the formula immediately below. The certificates so delivered shall be in such denominations as may be requested by the holder hereof and shall be registered in the name of such holder or such other name as shall be designated by such holder. If this Warrant shall have been exercised only in part, then, unless this Warrant has expired, the Corporation shall, at its expense, at the time of delivery of such certificates, deliver to the holder a new Warrant representing the number of shares with respect to which this Warrant shall not then have been exercised.

$$X = \frac{Y\ (A - B)}{A}$$

where

X = the number of shares of Common Stock to be issued to the Warrantholder upon exercise of this Warrant pursuant to this Section 18;

Y = the total number of shares of Common Stock covered by this Warrant which the Warrantholder has surrendered at such time for cashless exercise (including both shares to be issued to the Warrantholder and shares to be canceled as payment therefor);

A = the Market Price of one share of Common Stock as at the time the net issue election is made; and

B = the Warrant Price in effect under this Warrant at the time the net issue election is made.

The Warrant Shares issued pursuant to this Section 18 shall be deemed to be issued to the exercising holder or such holder's designee, as the record owner of such shares, as of the close of business on the date on which the Net Issue Election Notice shall have been surrendered (or evidence of loss, theft or destruction thereof and security or indemnity satisfactory to the Corporation) to the Corporation.

"**Market Price**" as of a particular date (the "**Valuation Date**") shall mean the following: (a) if the Common Stock is then listed on a national stock exchange, the Market Price shall be the closing sale price of one share of Common Stock on such exchange on the last Trading Day prior to the Valuation Date, provided that if such stock has not traded in the prior ten (10) trading sessions, the Market Price shall be the average closing price of one share of Common Stock in the most recent ten (10) trading sessions during which the Common Stock has traded; (b) if the Common Stock is then included in the OTC Bulletin Board (the "**OTCBB**"), the Market Price shall be the closing sale price of one share of Common Stock on the OTCBB on the last Trading Day prior to the Valuation Date or, if no such closing sale price is available, the average of the high bid and the low ask price quoted on the OTCBB as of the end of the last Trading Day prior to the Valuation Date, provided that if such stock has not traded in the prior ten (10) trading sessions, the Market Price shall be the average closing price of one share of Common Stock in the most recent ten (10) trading sessions during which the Common Stock has traded, (c) if the Common Stock is then included in the "pink sheets," the Market Price shall be the closing sale price of one share of Common Stock on the "pink sheets" on the last Trading Day prior to the Valuation Date or, if no such closing sale price is available, the average of the high bid and the low ask price quoted on the "pink sheets" as of the end of the last Trading Day prior to the Valuation Date, provided that if such stock has not traded in the prior ten (10) trading sessions, the Market Price shall be the average closing price of one share of Common Stock in the most recent ten (10) trading sessions during which the Common Stock has traded. The Board of Directors of the Corporation shall respond promptly, in writing, to an inquiry by the Warrantholder prior to the exercise hereunder as to the Market Price of a share of Common Stock as determined by the Board of Directors of the Corporation.

(b) (I) In no event shall the Warrantholder be entitled to exercise any portion of this Warrant in excess of that portion of this Warrant upon exercise of which the sum of (1) the number of shares of Common Stock beneficially owned by the Warrantholder and its Affiliates (other than shares of Common Stock which may be deemed beneficially owned through the ownership of the unexercised portion of the Warrant or the unexercised or unconverted portion of any other security of the Warrantholder subject to a limitation on conversion analogous to the limitations contained herein) and (2) the number of shares of Common Stock issuable upon the exercise of the portion of this Warrant with respect to which the determination of this proviso is being made, would result in beneficial ownership by the Warrantholder and its Affiliates of more than 4.99% of the then outstanding shares of Common Stock. For purposes of the proviso to the immediately preceding sentence, beneficial ownership shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and Regulations 13D-G thereunder, except as otherwise provided in clause (1) of such proviso. The Warrantholder may waive the limitations set forth herein by sixty-one (61) days written notice to the Corporation.

(II) In no event shall the Warrantholder be entitled to exercise any portion of this Warrant in excess of that portion of this Warrant upon exercise of which the sum of (1) the number of shares of Common Stock beneficially owned by the Warrantholder and its Affiliates (other than shares of Common Stock which may be deemed beneficially owned through the ownership of the unexercised portion of the Warrant or the unexercised or unconverted portion of any other security of the Warrantholder subject to a limitation on conversion analogous to the limitations contained herein) and (2) the number of shares of Common Stock issuable upon the exercise of the portion of this Warrant with respect to which the determination of this proviso is being made, would result in beneficial ownership by the Warrantholder and its Affiliates of more than 9.99% of the then outstanding shares of Common Stock. For purposes of the proviso to the immediately preceding sentence, beneficial ownership shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended. The Warrantholder may waive the limitations set forth herein by sixty-one (61) days written notice to the Corporation.

Section 4. Compliance with the Securities Act of 1933. The Corporation may cause the legend set forth on the first page of this Warrant to be set forth on each Warrant or similar legend on any security issued or issuable upon exercise of this Warrant, unless counsel for the Corporation is of the opinion as to any such security that such legend is unnecessary.

Section 5. Payment of Taxes. The Corporation will pay any documentary stamp taxes attributable to the initial issuance of Warrant Shares issuable upon the exercise of the Warrant; provided, however, that the Corporation shall not be required to pay any tax or taxes which may be payable in respect of any transfer involved in the issuance or delivery of any certificates for Warrant Shares in a name other than that of the registered holder of this Warrant in respect of which such shares are issued, and in such case, the Corporation shall not be required to issue or deliver any certificate for Warrant Shares or any Warrant until the person requesting the same has paid to the Corporation the amount of such tax or has established to the Corporation's reasonable satisfaction that such tax has been paid. The holder shall be responsible for income taxes due under federal, state or other law, if any such tax is due.

Section 6. Mutilated or Missing Warrants. In case this Warrant shall be mutilated, lost, stolen, or destroyed, the Corporation shall issue in exchange and substitution of and upon cancellation of the mutilated Warrant, or in lieu of and substitution for the Warrant lost, stolen or destroyed, a new Warrant of like tenor and for the purchase of a like number of Warrant Shares, but only upon receipt of evidence reasonably satisfactory to the Corporation of such loss, theft or destruction of the Warrant, and with respect to a lost, stolen or destroyed Warrant, reasonable indemnity or bond with respect thereto, if requested by the Corporation.

Section 7. Reservation of Common Stock. The Corporation hereby represents and warrants that there have been reserved, and the Corporation shall at all applicable times keep reserved until issued (if necessary) as contemplated by this Section 7, out of the authorized and unissued shares of Common Stock, 100% of the number of shares issuable upon exercise of the rights of purchase represented by this Warrant. The Corporation agrees that all Warrant Shares issued upon due exercise of the Warrant shall be, at the time of delivery of the certificates for such Warrant Shares, duly authorized, validly issued, fully paid and non-assessable shares of Common Stock of the Corporation.

Section 8. Adjustments. Subject and pursuant to the provisions of this Section 8, the Warrant Price and number of Warrant Shares subject to this Warrant shall be subject to adjustment from time to time as set forth hereinafter.

(a) If the Corporation shall, at any time or from time to time while this Warrant is outstanding, pay a dividend or make a distribution on its Common Stock in shares of Common Stock, subdivide its outstanding shares of Common Stock into a greater number of shares or combine its outstanding shares of Common Stock into a smaller number of shares or issue by reclassification of its outstanding shares of Common Stock any shares of its capital stock (including any such reclassification in connection with a consolidation or merger in which the Corporation is the continuing corporation), then the number of Warrant Shares purchasable upon exercise of the Warrant and the Warrant Price in effect immediately prior to the date upon which such change shall become effective, shall be adjusted by the Corporation so that the Warrantholder thereafter exercising the Warrant shall be entitled to receive the number of shares of Common Stock or other capital stock which the Warrantholder would have received if the Warrant had been fully exercised immediately prior to such event upon payment of a Warrant Price that has been adjusted to reflect a fair allocation of the economics of such event to the Warrantholder. Such adjustments shall be made successively whenever any event listed above shall occur.

(b) If any capital reorganization, reclassification of the capital stock of the Corporation, consolidation or merger of the Corporation with another corporation in which the Corporation is not the survivor, or sale, transfer or other disposition of all or substantially all of the Corporation's assets to another corporation shall be effected, then, the Corporation shall use its best efforts to ensure that lawful and adequate provision shall be made whereby each Warrantholder shall thereafter have the right to purchase and receive upon the basis and upon the terms and conditions herein specified and in lieu of the Warrant Shares immediately theretofore issuable upon exercise of the Warrant, such shares of stock, securities or assets as would have been issuable or payable with respect to or in exchange for a number of Warrant Shares equal to the number of Warrant Shares immediately theretofore issuable upon exercise of the Warrant, had such reorganization, reclassification, consolidation, merger, sale, transfer or other disposition not taken place, and in any such case appropriate provision shall be made with respect to the rights and interests of each Warrantholder to the end that the provisions hereof (including, without limitation, provision for adjustment of the Warrant Price) shall thereafter be applicable, as nearly equivalent as may be practicable in relation to any shares of stock, securities or assets thereafter deliverable upon the exercise thereof. The Corporation shall not effect any such consolidation, merger, sale, transfer or other disposition unless prior to or simultaneously with the consummation thereof the successor corporation (if other than the Corporation) resulting from such consolidation or merger, or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or entity shall assume the obligation to deliver to the holder of the Warrant, at the last address of such holder appearing on the books of the Corporation, such shares of stock, securities or assets as, in accordance with the foregoing provisions, such holder may be entitled to purchase, and the other obligations under this Warrant. The provisions of this Section 8(b) shall similarly apply to successive reorganizations, reclassifications, consolidations, mergers, sales, transfers or other dispositions.

(c) In case the Corporation shall fix a payment date for the making of a distribution to all holders of Common Stock (including any such distribution made in connection with a consolidation or merger in which the Corporation is the continuing corporation) of evidences of indebtedness or assets (other than cash dividends or cash distributions payable out of consolidated earnings or earned surplus or dividends or distributions referred to in Section 8(a)), or subscription rights or warrants, the Company shall provide notice to the Warrantholder at least 10 days in advance of the fixing of such payment date and the Warrantholder may elect to exercise this Warrant in whole or in part prior to such payment date in accordance with Section 3 hereof.

(d) For the term of this Warrant, in addition to the provisions contained above, the Warrant Price shall be subject to adjustment as provided below. An adjustment to the Warrant Price shall become effective immediately after the payment date in the case of each dividend or distribution and immediately after the effective date of each other event which requires an adjustment.

(e) In the event that, as a result of an adjustment made pursuant to this Section 8, the holder of this Warrant shall become entitled to receive any shares of capital stock of the Corporation other than shares of Common Stock, the number of such other shares so receivable upon exercise of this Warrant shall be subject thereafter to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to the Warrant Shares contained in this Warrant.

Section 9. Fractional Interest. The Corporation shall not be required to issue fractions of Warrant Shares upon the exercise of this Warrant. If any fractional share of Common Stock would, except for the provisions of the first sentence of this Section 9, be deliverable upon such exercise, the Corporation, in lieu of delivering such fractional share, shall pay to the exercising holder of this Warrant an amount in cash equal to the Market Price of such fractional share of Common Stock on the date of exercise.

Section 10. Benefits. Nothing in this Warrant shall be construed to give any person, firm or corporation (other than the Corporation and the Warrantholder) any legal or equitable right, remedy or claim, it being agreed that this Warrant shall be for the sole and exclusive benefit of the Corporation and the Warrantholder.

Section 11. Notices to Warrantholder. Upon the happening of any event requiring an adjustment of the Warrant Price, the Corporation shall promptly give written notice thereof to the Warrantholder at the address appearing in the records of the Corporation, stating the adjusted Warrant Price and the adjusted number of Warrant Shares resulting from such event and setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based. Failure to give such notice to the Warrantholder or any defect therein shall not affect the legality or validity of the subject adjustment.

Section 12. Identity of Transfer Agent. The Transfer Agent for the Common Stock is American Stock Transfer & Trust Company. Upon the appointment of any subsequent transfer agent for the Common Stock or other shares of the Corporation's capital stock issuable upon the exercise of the rights of purchase represented by the Warrant, the Corporation will mail to the Warrantholder a statement setting forth the name and address of such transfer agent.

Section 13. Notices. Unless otherwise provided, any notice required or permitted under this Warrant shall be given in writing and shall be deemed effectively given as hereinafter described (i) if given by personal delivery, then such notice shall be deemed given upon such delivery, (ii) if given by telex or facsimile, then such notice shall be deemed given upon receipt of confirmation of complete transmittal, (iii) if given by mail, then such notice shall be deemed given upon the earlier of (A) receipt of such notice by the recipient or (B) three days after such notice is deposited in first class mail, postage prepaid, and (iv) if given by an internationally recognized overnight air courier, then such notice shall be deemed given one day after delivery to such carrier. All notices shall be addressed as follows: if to the Warrantholder, at its address as set forth in the Corporation's books and records and, if to the Corporation, at the address as follows, or at such other address as the Warrantholder or the Corporation may designate by ten days' advance written notice to the other:

If to the Corporation:

Novelos Therapeutics, Inc.
One Gateway Center, Suite 504
Newton, MA 02458
Attention: Chief Executive Officer
Fax: (617) 964-6331

With a copy to:

Foley Hoag LLP
Seaport World Trade Center West
155 Seaport Boulevard
Boston, MA 02210
Attn: Paul Bork
Fax: (617) 832-7000

Section 14. Successors. All the covenants and provisions hereof by or for the benefit of the Warrantholder shall bind and inure to the benefit of its respective successors and assigns hereunder.

Section 15. Governing Law. This Warrant shall be governed by, and construed in accordance with, the internal laws of the State of New York, without reference to the choice of law provisions thereof. The Corporation and, by accepting this Warrant, the Warrantholder, each irrevocably submits to the exclusive jurisdiction of the courts of the State of New York located in New York County and the United States District Court for the Southern District of New York for the purpose of any suit, action, proceeding or judgment relating to or arising out of this Warrant and the transactions contemplated hereby. Service of process in connection with any such suit, action or proceeding may be served on each party hereto anywhere in the world by the same methods as are specified for the giving of notices under this Warrant. The Corporation and, by accepting this Warrant, the Warrantholder, each irrevocably consents to the jurisdiction of any such court in any such suit, action or proceeding and to the laying of venue in such court. The Corporation and, by accepting this Warrant, the Warrantholder, each irrevocably waives any objection to the laying of venue of any such suit, action or proceeding brought in such courts and irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. **THE CORPORATION AND THE WARRANTHOLDER HEREBY IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING RELATING TO OR ARISING OUT OF THIS WARRANT AND THE TRANSACTIONS CONTEMPLATED HEREBY.**

Section 16. No Rights as Shareholder. Prior to the exercise of this Warrant, the Warrantholder shall not have or exercise any rights as a shareholder of the Corporation by virtue of its ownership of this Warrant.

Section 17. Amendments. This Warrant shall not be amended without the prior written consent of the Corporation and the Warrantholder.

Section 18. Section Headings. The section headings in this Warrant are for the convenience of the Corporation and the Warrantholder and in no way alter, modify, amend, limit or restrict the provisions hereof.

Section 19. Certain Definitions. When used herein, the following terms shall have the respective meanings indicated:

"**Affiliate**" means any person or entity that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a person or entity, as such terms are used in and construed under Rule 144 under the Securities Act.

"**Business Day**" means a day, other than a Saturday or Sunday, on which banks in New York City are open for the general transaction of business.

"**Principal Market**" means, as of the Original Issuance Date the OTCBB.

"**Trading Day**" means any day on which the Common Stock is purchased and sold on the Principal Market.

IN WITNESS WHEREOF, the Corporation has caused this Warrant to be duly executed, as of the 2nd day of May, 2007.

NOVELOS THERAPEUTICS, INC.

By: _____

Name: _____

Title: _____

APPENDIX A

NOVELOS THERAPEUTICS, INC.
NET ISSUE ELECTION NOTICE

To: NOVELOS THERAPEUTICS, INC.

Date: _____

The undersigned hereby elects under Section 3(a) of the Warrant to surrender the right to purchase _____ shares of Common Stock pursuant to this Warrant and hereby requests the issuance of _____ shares of Common Stock. The certificate(s) for the shares issuable upon such net issue election shall be issued in the name of the undersigned or as otherwise indicated below.

_____
Signature

_____
Name for Registration

_____
Mailing Address

Execution Copy

SECURITIES PURCHASE AGREEMENT

THIS SECURITIES PURCHASE AGREEMENT ("**Agreement**") is made as of this 12th day of April, 2007 (the "**Signing Date**") by and among Novelos Therapeutics, Inc., a Delaware corporation (the "**Company**"), Xmark Opportunity Fund, L.P., a Delaware limited partnership ("**Xmark LP**"), Xmark Opportunity Fund, Ltd., a Cayman Islands exempted company ("**Xmark Ltd**"), Xmark JV Investment Partners LLC, a Delaware limited liability company ("**Xmark LLC**" and together with Xmark LP and Xmark Ltd, the "**Xmark Entities**"), Caduceus Master Fund Limited, a Bermuda corporation ("**Caduceus Master**"), Caduceus Capital II, L.P., a Delaware limited partnership ("**Caduceus Capital**"), UBS Eucalyptus Fund, L.L.C., a Delaware registered investment company ("**UBS Eucalyptus**"), PW Eucalyptus Fund, Ltd., a Cayman Islands investment company ("**PW Eucalyptus**") and HFR SHC Aggressive Master Trust, a Bermuda trust ("**HFR**" and together with Caduceus Master, Caduceus Capital, UBS Eucalyptus, PW Eucalyptus, the "**OrbiMed Entities**", and the OrbiMed Entities and the Xmark Entities together, the "**Lead Investors**"), and the other investors set forth on **Schedule I** affixed hereto, as such Schedule may be amended from time to time in accordance with the terms of this Agreement (each an "**Investor**" and collectively the "**Investors**"; for the avoidance of doubt, the Lead Investors are each an Investor).

Recitals:

A. The Company desires, pursuant to this Agreement, to raise up to the Investment Amount (as defined below) through the issuance and sale of the following to the Investors (the "**Private Placement**"): (i) up to 1,500 shares of a newly created series of the Company's Preferred Stock, designated "Series B Convertible Preferred Stock", par value $0.00001 per share (the "**Preferred Stock**"), which Preferred Stock shall have the rights, preferences and privileges set forth in the Certificate of Designations, Preferences and Rights, in the form of **Exhibit A** annexed hereto and made a part hereof (the "**Certificate of Designations**"), and each share of Preferred Stock shall have a stated value of $10,000.00 and shall initially be convertible into shares of the Company's Common Stock, par value $0.00001 per share (the "**Common Stock**"), at a price of $1.00 per share (the "**Conversion Price**"), for an aggregate of 15,000,000 shares of Common Stock; and (ii) warrants to acquire up to 7,500,000 shares of Common Stock, equal to 50% of the number of shares of Common Stock underlying the Preferred Stock on the date of issue, at an exercise price of $1.25 per share, in the form of **Exhibit B** annexed hereto and made a part hereof (the "**Warrants**");

B. The Investors desire to purchase from the Company, and the Company desires to issue and sell to the Investors, upon the terms and conditions stated in this Agreement, such number of shares of Preferred Stock and Warrants to purchase such number of shares of Common Stock as is set forth next to each such Investor's name on **Schedule I** affixed hereto;

C. Subject to the conditions hereinafter set forth, on the date hereof, the Investors will purchase $15,000,000 of the Preferred Stock and Warrants in the Private Placement (the "**Closing**");

D. The Company has engaged Rodman & Renshaw, LLC as its placement agent (the "**Placement Agent**") for the Private Placement on a "best efforts" basis;

E. Contemporaneous with the sale of the Preferred Stock and the Warrants at the Closing, the parties hereto will enter into a Registration Rights Agreement, in the form attached hereto as **Exhibit C** (the "**Registration Rights Agreement**"), pursuant to which, among other things, the Company will provide certain registration rights to the Investors with respect to the Private Placement under the Securities Act of 1933 (as amended, the "**1933 Act**") and the rules and regulations promulgated thereunder, and applicable state securities laws; and

F. The Company and the Investors are executing and delivering this Agreement in reliance upon the exemption from securities registration afforded by the provisions of Regulation D ("**Regulation D**"), as promulgated by the U.S. Securities and Exchange Commission (the "**SEC**") under the 1933 Act and Regulation S **("Regulation S")**, as promulgated by the SEC under the 1933 Act.

NOW, THEREFORE, in consideration of the mutual promises made herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. Definitions. In addition to those terms defined above and elsewhere in this Agreement, for the purposes of this Agreement, the following terms shall have the meanings set forth in this Section 1:

"**1933 Act**" has the meaning set forth in the Recitals.

"**1934 Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"**10-KSB**" has the meaning set forth in Section 5.6.

"**Affiliate**" means, with respect to any Person, any other Person which directly or indirectly Controls, is Controlled by, or is under common Control with, such Person.

"**Agreement**" has the meaning set forth in the Recitals.

"**Alternative Transaction**" has the meaning set forth in Section 8.10.

"**Business Day**" means a day, other than a Saturday or Sunday, on which banks in New York City are open for the general transaction of business.

"**Buy-In Price**" has the meaning set forth in Section 8.15.

"**Certificate of Designations**" has the meaning set forth in the Recitals.

"**Company Counsel Opinion**" means a legal opinion from the Company Counsel, dated as of the applicable Closing Date, in the form attached hereto as **Exhibit D**.

"**Closing**" has the meaning set forth in Section 4.

"**Closing Date**" means, as applicable, the first Closing Date and/or any subsequent Closing Dates.

"**Common Stock**" has the meaning set forth in the Recitals, and also includes any securities into which the Common Stock may be reclassified.

"**Company**" has the meaning set forth in the Recitals.

"**Company Counsel**" means Foley Hoag LLP, counsel to the Company

"**Company's Knowledge**" means the actual knowledge of the officers of the Company, after due inquiry and investigation.

"**Confidential Information**" means trade secrets, confidential information and know-how (including but not limited to ideas, formulae, compositions, processes, procedures and techniques, research and development information, computer program code, performance specifications, support documentation, drawings, specifications, designs, business and marketing plans, and customer and supplier lists and related information).

"**Control**" means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"**Conversion Price**" has the meaning set forth in the Recitals.

"**Conversion Shares**" means the shares of Common Stock issuable upon conversion of the Preferred Stock.

"**Covenant Expiration Event**" has the meaning set forth in Section 8.8.

"**Deadline Date**" has the meaning set forth in Section 8.15.

"**Disclosure Schedules**" has the meaning set forth in Section 5.

"**Eligible Market**" means the Trading Market on which the Common Stock is primarily listed on and quoted for trading, which, as of the Closing Date means the OTC Bulletin Board ("**OTCBB**").

"**Environmental Laws**" has the meaning set forth in Section 5.15.

"**Escrow Amount**" has the meaning set forth in Section 3.1(a).

"**Escrow Termination Date**" means the 15th calendar day after the Signing Date; provided, however, the Lead Investors and the Company may jointly agree to extend the Escrow Termination Date for up to two additional 15-day periods by giving written notice to the Lead Investor Counsel of their election to so extend the Escrow Termination Date, in each case for up to an additional 15 calendar days, and in each such case, the Escrow Termination Date shall be the date specified in such notice; provided, further, however, the Escrow Termination Date shall not be later than May 25 2007, on which date, if the Closing has not occurred, Lead Investor Counsel shall return the Escrow Amount in accordance with Section 3.1(b); provided, further, however, the Escrow Termination Date shall occur upon termination of this Agreement pursuant to Section 8.13.

"**Indemnified Person**" has the meaning set forth in Section 9.3.

"**Intellectual Property**" means all of the following: (i) patents, patent applications, patent disclosures and inventions (whether or not patentable and whether or not reduced to practice); (ii) trademarks, service marks, trade dress, trade names, corporate names, logos, slogans and Internet domain names, together with all goodwill associated with each of the foregoing; (iii) copyrights and copyrightable works; (iv) registrations, applications and renewals for any of the foregoing; (v) trade secrets, Confidential Information and know-how (including, but not limited to, ideas, formulae, compositions, manufacturing and production processes and techniques, research and development information, drawings, specifications, designs, business and marketing plans, and customer and supplier lists and related information); and (vi) computer software (including, but not limited to, data, data bases and documentation).

"**Investment Amount**" means an amount equal to $15,000,000.

"**Investor(s)**" has the meaning set forth in the Recitals.

"**Lead Investors**" has the meaning set forth in the Recitals.

"**Lead Investor Counsel**" has the meaning set forth in Section 3.1(a).

"**Lead Investor Counsel Duties**" has the meaning set forth in Section 3.2(a).

"**Lead Investor Counsel Fees**" has the meaning set forth in Section 10.5.

"**Lead Investor Director**" has the meaning set forth in Section 8.7(a).

"**Lead Investor Observer**" has the meaning set forth in Section 8.7(b).

"**License Agreements**" has the meaning set forth in Section 5.14(b).

"**Losses**" has the meaning set forth in Section 9.2.

"**Material Adverse Effect**" means a material adverse effect on (i) the assets and liabilities, prospects, results of operations, condition (financial or otherwise) or business of the Company and its Subsidiaries taken as a whole, or (ii) the ability of the Company to issue and sell the Securities and to perform its obligations under the Transaction Documents; *provided, however*, that: (A) any adverse effect that results from general economic, business or industry conditions, the taking by the Company of any action permitted or required by the Agreement, or the announcement or pendency of transactions contemplated hereunder, shall not, in and of itself, constitute a "Material Adverse Effect" on the Company, and shall not be considered in determining whether there has been or would be a "Material Adverse Effect" on the Company and (B) a decline in the Company's stock price shall not, in and of itself, constitute a "Material Adverse Effect" on the Company and shall not be considered in determining whether there has been or would be a "Material Adverse Effect" on the Company.

"**Material Contract**" means any contract of the Company or any Subsidiary (i) that was required to be filed as an exhibit to the SEC Filings pursuant to Item 601(b)(4) or Item 601(b)(10) of Regulation S-B of the 1933 Act or (ii) the loss of which could reasonably be expected to have a Material Adverse Effect.

"**OrbiMed Entities**" has the meaning set forth in the Recitals.

"**Person**" means an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.

"**Placement Agent**" has the meaning set forth in the Recitals.

"**Placement Agent Agreement**" means that certain letter from the Company to the Placement Agent, dated February 12, 2007.

"**Placement Agent Fee**" has the meaning set forth in Section 5.19.

"**Preferred Stock**" has the meaning set forth in the Recitals.

"Press Release" has the meaning set forth in Section 8.13.

"**Private Placement**" has the meaning set forth in the Recitals.

"**Registration Rights Agreement**" has the meaning set forth in the Recitals.

"**Regulation D**" has the meaning set forth in the Recitals.

"**Requisite Holders**" shall mean the holders of at least a majority of the then outstanding shares of Preferred Stock which majority must include (i) the Xmark Entities, provided such Xmark Entities have purchased an aggregate of $4,000,000 of Preferred Stock pursuant to this Agreement and hold at least one-third of the Preferred Stock issued to the Xmark Entities at Closing as of the date of determination and (ii) the OrbiMed Entities, provided such OrbiMed Entities have purchased an aggregate of $5,000,000 of Preferred Stock pursuant to this Agreement and hold at least one-third of the Preferred Stock issued to the OrbiMed Entities at Closing as of the date of determination (appropriately adjusted for any stock dividend, stock split, reverse stock split, reclassification, stock combination or other recapitalization occurring after the date hereof).

"Rule 144" has the meaning set forth in Section 8.14.

"**SEC**" has the meaning set forth in the Recitals.

"SEC Filings" has the meaning set forth in Section 5.6.

"**Securities**" means the Preferred Stock, the Conversion Shares, the shares of Common Stock issuable as payment-in-kind dividends on the Preferred Stock in accordance with the terms thereof, the Warrants and the Warrant Shares.

"**Signing Date**" has the meaning set forth in the Recitals.

"**Subsidiary**" has the meaning set forth in Section 5.1.

"**Transaction Documents**" means this Agreement, the Warrants and the Registration Rights Agreement.

"**Warrant Shares**" means the shares of Common Stock issuable upon exercise of the Warrants.

"**Warrants**" has the meaning set forth in the Recitals.

"**Xmark Entities**" has the meaning set forth in the Recitals.

2. Purchase and Sale of Securities.

2.1. Closing. Subject to the terms and conditions of this Agreement, including without limitation, the conditions set forth in Section 7, there shall be a closing at which the Company shall issue and sell, and each Investor listed on **Schedule I** attached hereto, which **Schedule I** may be amended from time to time, with the prior written consent of the Lead Investors, to add additional Investors who agree to purchase Preferred Stock in the Private Placement by executing a counterpart to this Agreement following the date hereof, shall severally, and not jointly, purchase, the number of shares of Preferred Stock and the number of Warrants, in each case, in the respective amounts set forth opposite their names on **Schedule I** affixed hereto, in exchange for the cash consideration set forth as the "Closing Purchase Price" opposite their respective names on **Schedule I** affixed hereto.

3. Escrow.

3.1. (a) Simultaneously with the execution and delivery of this Agreement by an Investor, such Investor shall promptly cause a wire transfer of immediately available funds (U.S. dollars) in an amount representing the "Aggregate Purchase Price" on such Investor's signature page affixed hereto and opposite such Investor's name thereon, to be paid to a non-interest bearing escrow account of Lowenstein Sandler PC, the Lead Investors' counsel ("**Lead Investor Counsel**"), set forth on **Schedule II** affixed hereto (the aggregate amounts received being held in escrow by Lead Investor Counsel are referred to herein as the "**Escrow Amount**"). Lead Investor Counsel shall hold the Escrow Amount in escrow in accordance with Section 3.1(b).

(b) The Lead Investor Counsel shall continue to hold the Escrow Amount in escrow in accordance with and subject to this Agreement, from the date of its receipt of the funds constituting the Escrow Amount until the soonest of:

(i) the Escrow Termination Date, in which case, if Lead Investor Counsel then holds any portion of the Escrow Amount, then: (A) Lead Investor Counsel shall return the portion of the Escrow Amount received from each Investor which it then holds, to each such Investor, in accordance with written wire transfer instructions received from such Investor; and (B) if Lead Investor Counsel has not received written wire transfer instructions from any Investor before the 30th day after the Escrow Termination Date, then Lead Investor Counsel may, in its sole and absolute discretion, either (x) deposit that portion of the Escrow Amount to be returned to such Investor in a court of competent jurisdiction on written notice to such Investor, and Lead Investor Counsel shall thereafter have no further liability with respect to such deposited funds, or (y) continue to hold such portion of the Escrow Amount pending receipt of written wire transfer instructions from such Investor or an order from a court of competent jurisdiction; OR

(ii) in the case of the Closing, receipt of written instructions from the Lead Investors that the Closing shall have been consummated, in which case, Lead Investor Counsel shall release the Escrow Amount constituting the aggregate "Closing Purchase Price" as follows: (A) the cash portion of the Placement Agent Fee applicable to the Placement Agent, (B) the Lead Investor Counsel Fees to the Lead Investor Counsel, and (C) the balance of the aggregate "Closing Purchase Price" to the Company.

3.2. The Company and the Investors acknowledge and agree for the benefit of Lead Investor Counsel (which shall be deemed to be a third party beneficiary of this Section 3 and of Section 10) as follows:

(a) Lead Investor Counsel: (i) is not responsible for the performance by the Company, the Investors or Placement Agent of this Agreement or any of the Transaction Documents or for determining or compelling compliance therewith; (ii) is only responsible for (A) holding the Escrow Amount in escrow pending receipt of written instructions from the Lead Investors directing the release of the Escrow Amount, and (B) disbursing the Escrow Amount in accordance with the written instructions from the Lead Investors, each of the responsibilities of Lead Investor Counsel in clause (A) and (B) is ministerial in nature, and no implied duties or obligations of any kind shall be read into this Agreement against or on the part of Lead Investor Counsel (collectively, the "**Lead Investor Counsel Duties**"); (iii) shall not be obligated to take any legal or other action hereunder which might in its judgment involve or cause it to incur any expense or liability unless it shall have been furnished with indemnification acceptable to it, in its sole discretion; (iv) may rely on and shall be protected in acting or refraining from acting upon any written notice, instruction (including, without limitation, wire transfer instructions, whether incorporated herein or provided in a separate written instruction), instrument, statement, certificate, request or other document furnished to it hereunder and believed by it to be genuine and to have been signed or presented by the proper Person, and shall have no responsibility for making inquiry as to, or for determining, the genuineness, accuracy or validity thereof, or of the authority of the Person signing or presenting the same; (v) may consult counsel satisfactory to it, and the opinion or advice of such counsel in any instance shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in accordance with the opinion or advice of such counsel; and (vi) shall be authorized to receive from the Escrow Amount, on the applicable Closing Date, the Lead Investor Counsel Fees. Documents and written materials referred to in this Section 3.2(a) include, without limitation, e-mail and other electronic transmissions capable of being printed, whether or not they are in fact printed; and any such e-mail or other electronic transmission may be deemed and treated by Lead Investor Counsel as having been signed or presented by a Person if it bears, as sender, the Person's e-mail address.

(b) Lead Investor Counsel shall not be liable to anyone for any action taken or omitted to be taken by it hereunder, except in the case of Lead Investor Counsel's gross negligence or willful misconduct in breach of the Lead Investor Counsel Duties. IN NO EVENT SHALL LEAD INVESTOR COUNSEL BE LIABLE FOR INDIRECT, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGE OR LOSS (INCLUDING BUT NOT LIMITED TO LOST PROFITS) WHATSOEVER, EVEN IF LEAD INVESTOR COUNSEL HAS BEEN INFORMED OF THE LIKELIHOOD OF SUCH LOSS OR DAMAGE AND REGARDLESS OF THE FORM OF ACTION.

(c) The Company and the Investors hereby indemnify and hold harmless Lead Investor Counsel from and against any and all loss, liability, cost, damage and expense, including, without limitation, reasonable counsel fees and expenses, which Lead Investor Counsel may suffer or incur by reason of any action, claim or proceeding brought against Lead Investor Counsel arising out of or relating to the performance of the Lead Investor Counsel Duties, unless such action, claim or proceeding is exclusively the result of the willful misconduct, bad faith or gross negligence of Lead Investor Counsel.

(d) Lead Investor Counsel has acted as legal counsel to one or more of the Investors in connection with this Agreement and the other Transaction Documents, is merely acting as a stakeholder under this Agreement and is, therefore, hereby authorized to continue acting as legal counsel to such Lead Investors including, without limitation, with regard to any dispute arising out of this Agreement, the other Transaction Documents, the Escrow Amount or any other matter. Each of the Company and the Investors hereby expressly consents to permit Lead Investor Counsel to represent such Investors in connection with all matters relating to this Agreement, including, without limitation, with regard to any dispute arising out of this Agreement, the other Transaction Documents, the Escrow Amount or any other matter, and hereby waives any conflict of interest or appearance of conflict or impropriety with respect to such representation. Each of the Company and the Investors has consulted with its own counsel specifically about this Section 3 to the extent they deemed necessary, and has entered into this Agreement after being satisfied with such advice.

(e) Lead Investor Counsel shall have the right at any time to resign for any reason and be discharged of its duties as escrow agent hereunder (including without limitation the Lead Investor Counsel Duties) by giving written notice of its resignation to the Company and the Lead Investors at least ten (10) calendar days prior to the specified effective date of such resignation. All obligations of the Lead Investor Counsel hereunder shall cease and terminate on the effective date of its resignation and its sole responsibility thereafter shall be to hold the Escrow Amount, for a period of ten (10) calendar days following the effective date of resignation, at which time,

(i) Lead Investor Counsel shall be entitled to receive from the Escrow Amount the Lead Investor Counsel Fees through and including the effective date of resignation; and

(ii) if a successor escrow agent shall have been appointed and have accepted such appointment in a writing to both the Company and the Lead Investors, then upon written notice thereof given to each of the Investors, the Lead Investor Counsel shall deliver the Escrow Amount to the successor escrow agent, and upon such delivery, Lead Investor Counsel shall have no further liability or obligation; or

(iii) if a successor escrow agent shall not have been appointed, for any reason whatsoever, Lead Investor Counsel shall at its option in its sole discretion, either (A) deliver the Escrow Amount to a court of competent jurisdiction selected by Lead Investor Counsel and give written notice thereof to the Company and the Investors, or (B) continue to hold Escrow Amount in escrow pending written direction from the Company and the Lead Investors in form and formality satisfactory to Lead Investor Counsel.

(f) In the event that the Lead Investor Counsel shall be uncertain as to its duties or rights hereunder or shall receive instructions with respect to the Escrow Amount or any portion thereunder which, in its sole discretion, are in conflict either with other instructions received by it or with any provision of this Agreement, Lead Investor Counsel shall have the absolute right to suspend all further performance under this Agreement (except for the safekeeping of such Escrow Amount) until such uncertainty or conflicting instructions have been resolved to the Lead Investor Counsel's sole satisfaction by final judgment of a court of competent jurisdiction, joint written instructions from the Company and all of the Investors, or otherwise. In the event that any controversy arises between the Company and one or more of the Investors or any other party with respect to this Agreement or the Escrow Amount, the Lead Investor Counsel shall not be required to determine the proper resolution of such controversy or the proper disposition of the Escrow Amount, and shall have the absolute right, in its sole discretion, to deposit the Escrow Amount with the clerk of a court selected by the Lead Investor Counsel and file a suit in interpleader in that court and obtain an order from that court requiring all parties involved to litigate in that court their respective claims arising out of or in connection with the Escrow Amount. Upon the deposit by the Lead Investor Counsel of the Escrow Amount with the clerk of such court in accordance with this provision, the Lead Investor Counsel shall thereupon be relieved of all further obligations and released from all liability hereunder.

(g) The provisions of this Section 3 shall survive any termination of this Agreement.

4. Closings.

4.1 Place. The closings of the transactions contemplated by this Agreement (the "**Closing**") shall take place at the offices of Lead Investor Counsel, 1251 Avenue of the Americas, New York, New York, or at such other location and on such other date as the Company and the Lead Investors shall mutually agree, on the Closing Date.

4.2 Closing. Upon satisfaction of the conditions to Closing set forth in Section 7 hereof, the Lead Investors shall instruct Lead Investor Counsel to immediately release, and upon receipt of such instructions, Lead Investor Counsel shall release, that portion of the Escrow Amount constituting the aggregate "Closing Purchase Price" as follows: (A) the portion of the Cash Placement Agent Fee applicable to the Placement Agent, (B) the Lead Investor Counsel Fees to the Lead Investor Counsel, and (C) the balance of the aggregate "Closing Purchase Price" to the Company (the date of receipt of such balance by the Company is hereinafter referred to as the "**Closing Date**"). On the Closing Date, the Company shall issue or cause to be issued to each Investor a certificate or certificates, registered in such name or names as each such Investor may designate, representing the number of shares of Preferred Stock as is set forth opposite such Investor's name on **Schedule I** affixed hereto and shall also issue to each such Investor, or such Investor's respective designees, the number of Warrants as is set forth opposite such Investor's name on **Schedule I** affixed hereto.

5. Representations and Warranties of the Company. The Company hereby represents and warrants to the Investors on and as of the Signing Date and on the Closing Date, knowing and intending their reliance hereon, that, except as set forth in the schedules delivered on the Signing Date (collectively, the "**Disclosure Schedules**"):

5.1. Organization, Good Standing and Qualification. Each of the Company and its Subsidiaries, a complete list of which is set forth in Schedule 5.1 hereto ("**Subsidiaries**"), is a corporation duly incorporated, validly existing and in good standing under the laws of the jurisdiction of its incorporation and has all requisite corporate power and authority to carry on its business as now conducted and to own its properties. Each of the Company and its Subsidiaries is duly qualified to do business as a foreign corporation and is in good standing in each jurisdiction in which the conduct of its business or its ownership or its leasing of property makes such qualification or licensing necessary, unless the failure to so qualify would not have a Material Adverse Effect.

5.2. Authorization. The Company has full power and authority and has taken all requisite action on the part of the Company, its officers, directors and stockholders necessary for (i) the authorization, execution and delivery of the Transaction Documents and the Certificate of Designations, (ii) authorization of the performance of all obligations of the Company hereunder or thereunder, and (iii) the authorization, issuance (or reservation for issuance) and delivery of the Securities. The Transaction Documents constitute the legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their respective terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability, relating to or affecting creditors' rights generally.

5.3. Capitalization.

(a) Schedule 5.3 sets forth (i) the authorized capital stock of the Company on the date hereof, (ii) the number of shares of capital stock issued and outstanding, (iii) the number of shares of capital stock issuable pursuant to the Company's stock plans, and (iv) the number of shares of capital stock issuable and reserved for issuance pursuant to securities (other than the Securities) exercisable for, or convertible into or exchangeable for any shares of capital stock of the Company. All of the issued and outstanding shares of the Company's capital stock have been duly authorized and validly issued and are fully paid, nonassessable and free of pre-emptive rights and were issued in full compliance with applicable law and any rights of third parties. All of the issued and outstanding shares of capital stock of each Subsidiary have been duly authorized and validly issued and are fully paid, nonassessable and free of pre-emptive rights, were issued in full compliance with applicable law and any rights of third parties and are owned by the Company, beneficially and of record, and, except as described on Schedule 5.3, are subject to no lien, encumbrance or other adverse claim. No Person is entitled to pre-emptive or similar statutory or contractual rights with respect to any securities of the Company. Except as described on Schedule 5.3, there are no outstanding warrants, options, convertible securities or other rights, agreements or arrangements of any character under which the Company or any of its Subsidiaries is or may be obligated to issue any equity securities of any kind and, except as contemplated by this Agreement, neither the Company nor any of its Subsidiaries is currently in negotiations for the issuance of any equity securities of any kind. Except as described on Schedule 5.3 and except for the Registration Rights Agreement, there are no voting agreements, buy-sell agreements, option or right of first purchase agreements or other agreements of any kind among the Company and any of its security holders relating to the securities of the Company. Except as described on Schedule 5.3, the Company has not granted any Person the right to require the Company to register any of its securities under the 1933 Act, whether on a demand basis or in connection with the registration of securities of the Company for its own account or for the account of any other Person.

(b) Schedule 5.3 sets forth a true and complete table setting forth the pro forma capitalization of the Company on a fully diluted basis giving effect to (i) the issuance of the Preferred Stock and the Warrants at the time of the Closing, (ii) any adjustments in other securities resulting from the issuance of the Preferred Stock and the Warrants at the time of the Closing, and (iii) the exercise or conversion of all outstanding securities. Except as described on Schedule 5.3, the issuance and sale of the Securities hereunder will not obligate the Company to issue shares of Common Stock or other securities to any other Person (other than the Investors) and will not result in the adjustment of the exercise, conversion, exchange or reset price of any outstanding security.

(c) Except as set forth on Schedule 5.3, the Company does not have outstanding stockholder purchase rights or any similar arrangement in effect giving any Person the right to purchase any equity interest in the Company upon the occurrence of certain events.

5.4. Valid Issuance. The Preferred Stock has been duly and validly authorized and when issued to the Investors in accordance with the terms of this Agreement will be validly issued, fully paid and nonassessable, shall have the rights, preferences and limitations set forth in the Certificate of Designations and shall be free and clear of all liens, claims, encumbrances and restrictions, except for restrictions on transfer set forth in the Transaction Documents and the Certificate of Designations or imposed by applicable securities laws. Upon the due conversion of the Preferred Stock, the Conversion Shares will be validly issued, fully paid and nonassessable, and shall be free and clear of all liens, claims, encumbrances and restrictions, except for restrictions on transfer set forth in the Transaction Documents and the Certificate of Designations or imposed by applicable securities laws. The Warrants have been duly and validly authorized and, upon the due exercise of the Warrants, the Warrant Shares will be validly issued, fully paid and non-assessable, and shall be free and clear of all liens, claims, encumbrances and restrictions, except for restrictions on transfer set forth in the Transaction Documents and the Certificate of Designations or imposed by applicable securities laws. The Company has reserved a sufficient number of shares of Common Stock for issuance upon conversion of the Preferred Stock and exercise of the Warrants.

5.5. Consents. The execution, delivery and performance by the Company of the Transaction Documents and the Certificate of Designations and the offer, issuance and sale of the Securities require no consent of, action by or in respect of, or filing with, any Person, governmental body, agency, or official other than those consents set forth on Schedule 5.5 and filings that have been made pursuant to applicable state securities laws and post-sale filings pursuant to applicable state and federal securities laws which the Company undertakes to file within the applicable time periods. The Company has taken all action necessary to exempt (i) the issuance and sale of the Securities, (ii) the issuance of the Conversion Shares upon due conversion of the Preferred Stock, (iii) the issuance of the Warrant Shares upon due exercise of the Warrants, and (iv) the other transactions contemplated by the Transaction Documents from the provisions of any anti-takeover, business combination or control share law or statute binding on the Company or to which the Company or any of its assets and properties may be subject or any provision of the Company's Certificate of Incorporation, Bylaws or any stockholder rights agreement that is or could become applicable to the Investors as a result of the transactions contemplated hereby, including without limitation, the issuance of the Securities and the ownership, disposition or voting of the Securities by the Investors or the exercise of any right granted to the Investors pursuant to this Agreement, the Certificate of Designations or the other Transaction Documents.

5.6. Delivery of SEC Filings; Business. Copies of the Company's most recent Annual Report on Form 10-KSB for the fiscal year ended December 31, 2006 (the "**10-KSB**"), and all other reports filed by the Company pursuant to the 1934 Act since the filing of the 10-KSB and prior to the date hereof (collectively, the "**SEC Filings**") are available on EDGAR. The SEC Filings are the only filings required of the Company pursuant to the 1934 Act for such period. The Company and its Subsidiaries are engaged only in the business described in the SEC Filings and the SEC Filings contain a complete and accurate description in all material respects of the business of the Company and its Subsidiaries, taken as a whole.

5.7. No Material Adverse Change. Except as contemplated herein, identified and described in the SEC Filings or as described on Schedule 5.7(a), since January 1, 2007, there has not been:

(i) any change in the consolidated assets, liabilities, financial condition or operating results of the Company from that reflected in the financial statements included in the SEC Filings, except for changes in the ordinary course of business which have not and could not reasonably be expected to have a Material Adverse Effect, individually or in the aggregate;

(ii) any declaration or payment of any dividend, or any authorization or payment of any distribution, on any of the capital stock of the Company, or any redemption or repurchase of any securities of the Company;

(iii) any material damage, destruction or loss, whether or not covered by insurance to any assets or properties of the Company or its Subsidiaries;

(iv) any waiver, not in the ordinary course of business, by the Company or any Subsidiary of a material right or of a material debt owed to it;

(v) any satisfaction or discharge of any lien, claim or encumbrance or payment of any obligation by the Company or a Subsidiary, except in the ordinary course of business and which is not material to the assets, properties, financial condition, operating results, prospects or business of the Company and its Subsidiaries taken as a whole;

(vi) any change or amendment to the Company's Certificate of Incorporation or Bylaws, or material change to any material contract or arrangement by which the Company or any Subsidiary is bound or to which any of their respective assets or properties is subject;

(vii) any material labor difficulties or labor union organizing activities with respect to employees of the Company or any Subsidiary;

(viii) any transaction entered into by the Company or a Subsidiary other than in the ordinary course of business;

(ix) the loss of the services of any key employee, or material change in the composition or duties of the senior management of the Company or any Subsidiary;

(x) the loss or threatened loss of any customer which has had or could reasonably be expected to have a Material Adverse Effect; or

(xi) any other event or condition of any character that has had or could reasonably be expected to have a Material Adverse Effect.

5.8. SEC Filings.

(a) At the time of filing thereof, the SEC Filings complied as to form in all material respects with the requirements of the 1934 Act and did not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. The Company is not (with or without the lapse of time or the giving of notice, or both) in breach or default of any Material Contract and, to the Company's Knowledge, no other party to any Material Contract is (with or without the lapse of time or the giving of notice, or both) in breach or default of any Material Contract. Neither the Company nor any Subsidiary has received any notice of the intention of any party to terminate any Material Contract.

(b) Except as set forth on Schedule 5.8(b), the Company's Post-Effective Amendment No. 2 to Registration Statement on Form SB-2 (No. 333-133043), filed by the Company pursuant to the 1933 Act and the rules and regulations thereunder, as of the date such post-effective amendment became effective, complied as to form in all material respects with the 1933 Act and did not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading; and each prospectus relating to such post-effective amendment filed pursuant to Rule 424(b) under the 1933 Act, as of its issue date did not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading.

5.9. No Conflict, Breach, Violation or Default. The execution, delivery and performance of the Transaction Documents and the Certificate of Designations by the Company and the issuance and sale of the Securities will not conflict with or result in a breach or violation of any of the terms and provisions of, or constitute a default under (i) the Company's Certificate of Incorporation or Bylaws, both as in effect on the date hereof (true and accurate copies of which have been provided to the Investors before the date hereof), or (ii)(a) any statute, rule, regulation or order of any governmental agency or body or any court, domestic or foreign, having jurisdiction over the Company, any Subsidiary or any of their respective assets or properties, or (b) except as set forth on Schedule 5.9, any agreement or instrument to which the Company or any Subsidiary is a party or by which the Company or a Subsidiary is bound or to which any of their respective assets or properties is subject.

5.10. Tax Matters. Each of the Company and each Subsidiary has timely prepared and filed all tax returns required to have been filed by the Company or such Subsidiary with all appropriate governmental agencies and timely paid all taxes shown thereon or otherwise owed by it. The charges, accruals and reserves on the books of the Company in respect of taxes for all fiscal periods are adequate in all material respects, and there are no material unpaid assessments against the Company or any Subsidiary nor, to the Company's Knowledge, any basis for the assessment of any additional taxes, penalties or interest for any fiscal period or audits by any federal, state or local taxing authority except for any assessment which is not material to the Company and its Subsidiaries, taken as a whole. All taxes and other assessments and levies that the Company or any Subsidiary is required to withhold or to collect for payment have been duly withheld and collected and paid to the proper governmental entity or third party when due. There are no tax liens or claims pending or, to the Company's Knowledge, threatened against the Company or any Subsidiary or any of their respective assets or properties. Except as described on Schedule 5.10, there are no outstanding tax sharing agreements or other such arrangements between the Company and any Subsidiary or other corporation or entity. Neither the Company nor any Subsidiary is presently undergoing any audit by a taxing authority, or has waived or extended any statute of limitations at the request of any taxing authority.

5.11. Title to Properties. Except as disclosed in the SEC Filings or as set forth on Schedule 5.11, the Company and each Subsidiary has good and marketable title to all real properties and all other properties and assets owned by it, in each case free from liens, encumbrances and defects that would materially affect the value thereof or materially interfere with the use made or currently planned to be made thereof by them; and except as disclosed in the SEC Filings, the Company and each Subsidiary holds any leased real or personal property under valid and enforceable leases with no exceptions that would materially interfere with the use made or currently planned to be made thereof by them.

5.12. Certificates, Authorities and Permits. The Company and each Subsidiary possess adequate certificates, authorities or permits issued by appropriate governmental agencies or bodies necessary to conduct the business now operated by it, and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any such certificate, authority or permit that, if determined adversely to the Company or such Subsidiary, could reasonably be expected to have a Material Adverse Effect, individually or in the aggregate.

5.13. No Labor Disputes. No material labor dispute with the employees of the Company or any Subsidiary exists or, to the Company's Knowledge, is imminent.

5.14. Intellectual Property.

(a) All Intellectual Property of the Company and its Subsidiaries is currently in compliance with all legal requirements (including timely filings, proofs and payments of fees) and is valid and enforceable. Except as listed on Schedule 5.14(a), no Intellectual Property of the Company or its Subsidiaries which is necessary for the conduct of Company's and each of its Subsidiaries' respective businesses as currently conducted or as currently proposed to be conducted has been or is now involved in any cancellation, dispute or litigation, and, to the Company's Knowledge, no such action is threatened. Except as listed on Schedule 5.14(a), no patent of the Company or its Subsidiaries has been or is now involved in any interference, reissue, re-examination or opposition proceeding.

(b) All of the licenses and sublicenses and consent, royalty or other agreements concerning Intellectual Property which are necessary for the conduct of the Company's and each of its Subsidiaries' respective businesses as currently conducted or as currently proposed to be conducted to which the Company or any Subsidiary is a party or by which any of their assets are bound (other than generally commercially available, non-custom, off-the-shelf software application programs having a retail acquisition price of less than $25,000 per license) (collectively, "**License Agreements**") are valid and binding obligations of the Company or its Subsidiaries that are parties thereto and, to the Company's Knowledge, the other parties thereto, enforceable in accordance with their terms, except to the extent that enforcement thereof may be limited by bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or other similar laws affecting the enforcement of creditors' rights generally, and there exists no event or condition which will result in a material violation or breach of or constitute (with or without due notice or lapse of time or both) a default by the Company or any of its Subsidiaries under any such License Agreement.

(c) The Company and its Subsidiaries own or have the valid right to use all of the Intellectual Property that is necessary for the conduct of the Company's and each of its Subsidiaries' respective businesses as currently conducted or as currently proposed to be conducted, free and clear of all liens, encumbrances, adverse claims or obligations to license all such owned Intellectual Property and Confidential Information, other than licenses entered into in the ordinary course of the Company's and its Subsidiaries' businesses. The Company and its Subsidiaries have a valid and enforceable right to use all third party Intellectual Property and Confidential Information used or held for use in the respective businesses of the Company and its Subsidiaries as currently conducted or as currently proposed to be conducted.

(d) To the Company's Knowledge, the conduct of the Company's and its Subsidiaries' businesses as currently conducted and as currently proposed to be conducted does not and will not infringe any Intellectual Property rights of any third party or any confidentiality obligation owed to a third party. To the Company's Knowledge, the Intellectual Property and Confidential Information of the Company and its Subsidiaries which are necessary for the conduct of Company's and each of its Subsidiaries' respective businesses as currently conducted or as currently proposed to be conducted are not being infringed by any third party. Except as set forth on Schedule 5.14(d), there is no litigation or order pending or outstanding or, to the Company's Knowledge, threatened or imminent, that seeks to limit or challenge or that concerns the ownership, use, validity or enforceability of any Intellectual Property or Confidential Information of the Company and its Subsidiaries and the Company's and its Subsidiaries' use of any Intellectual Property or Confidential Information owned by a third party, and, to the Company's Knowledge, there is no valid basis for the same.

(e) The consummation of the transactions contemplated hereby will not result in the alteration, loss, impairment of or restriction on the Company's or any of its Subsidiaries' ownership or right to use any of the Intellectual Property or Confidential Information which is necessary for the conduct of the Company's and each of its Subsidiaries' respective businesses as currently conducted or as currently proposed to be conducted.

(f) To the Company's Knowledge, all software owned by the Company or any of its Subsidiaries, and, to the Company's Knowledge, all software licensed from third parties by the Company or any of its Subsidiaries, (i) is free from any material defect, bug, virus, or programming, design or documentation error; (ii) operates and runs in a reasonable and efficient business manner; and (iii) conforms in all material respects to the specifications and purposes thereof.

(g) The Company and its Subsidiaries have taken reasonable steps to protect the Company's and its Subsidiaries' rights in their Intellectual Property and Confidential Information. Each employee, consultant and contractor who has had access to Confidential Information which is necessary for the conduct of Company's and each of its Subsidiaries' respective businesses as currently conducted or as currently proposed to be conducted has executed an agreement to maintain the confidentiality of such Confidential Information and has executed appropriate agreements that are substantially consistent with the Company's standard forms therefor. To the Company's Knowledge, there has been no material disclosure of any of the Company's or its Subsidiaries' Confidential Information to any third party without the Company's consent.

5.15. Environmental Matters. Neither the Company nor any Subsidiary (i) is in violation of any statute, rule, regulation, decision or order of any governmental agency or body or any court, domestic or foreign, relating to the use, disposal or release of hazardous or toxic substances or relating to the protection or restoration of the environment or human exposure to hazardous or toxic substances (collectively, "**Environmental Laws**"), (ii) owns or operates any real property contaminated with any substance that is subject to any Environmental Laws, (iii) is liable for any off-site disposal or contamination pursuant to any Environmental Laws, and (iv) is subject to any claim relating to any Environmental Laws; which violation, contamination, liability or claim has had or could reasonably be expected to have a Material Adverse Effect, individually or in the aggregate; and there is no pending or, to the Company's Knowledge, threatened investigation that might lead to such a claim.

5.16. Litigation. Except as disclosed in the SEC Filings, there are no pending actions, suits or proceedings against or affecting the Company, its Subsidiaries or any of its or their properties; and to the Company's Knowledge, no such actions, suits or proceedings are threatened or contemplated.

5.17. Financial Statements. The financial statements included in each SEC Filing fairly present the consolidated financial position of the Company as of the dates shown and its consolidated results of operations and cash flows for the periods shown, and such financial statements have been prepared in conformity with United States generally accepted accounting principles applied on a consistent basis. Except as set forth in the financial statements of the Company included in the SEC Filings filed prior to the date hereof, neither the Company nor any of its Subsidiaries has incurred any liabilities, contingent or otherwise, except those which, individually or in the aggregate, have not had or could not reasonably be expected to have a Material Adverse Effect.

5.18. Insurance Coverage. The Company and each Subsidiary maintains in full force and effect insurance coverage and the Company reasonably believes such insurance coverage is adequate.

5.19. Brokers and Finders. Except for the commission consisting of cash and warrants to be paid (the "**Placement Agent Fee**") to the Placement Agent pursuant to the terms of the Placement Agent Agreement as disclosed in Schedule 5.19 and the warrants and fees issuable and payable to the holders of the Company's Series A 8% Cumulative Convertible Preferred Stock as disclosed on Schedule 5.19, no Person will have, as a result of the transactions contemplated by this Agreement, any valid right, interest or claim against or upon the Company, any Subsidiary or any Investor for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of the Company.

5.20. No Directed Selling Efforts or General Solicitation. Neither the Company nor any Affiliate, nor any Person acting on its behalf has conducted any "general solicitation" or "general advertising" (as those terms are used in Regulation D) in connection with the offer or sale of any of the Securities.

5.21. No Integrated Offering. Neither the Company nor any of its Affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any Company security or solicited any offers to buy any security, under circumstances that would adversely affect reliance by the Company on Section 4(2) of the 1933 Act for the exemption from the registration requirements imposed under Section 5 of the 1933 Act for the transactions contemplated hereby or would require such registration the 1933 Act.

5.22. Private Placement. Subject to the accuracy of the representations and warranties of the Investors contained in Section 6 hereof, the offer and sale of the Securities to the Investors as contemplated hereby is exempt from the registration requirements of the 1933 Act.

5.23. Questionable Payments**.** Neither the Company nor any of its Subsidiaries nor, to the Company's Knowledge, any of their respective current or former stockholders, directors, officers, employees, agents or other Persons acting on behalf of the Company or any Subsidiary, has on behalf of the Company or any Subsidiary or in connection with their respective businesses: (a) used any corporate funds for unlawful contributions, gifts, entertainment or other unlawful expenses relating to political activity; (b) made any direct or indirect unlawful payments to any governmental officials or employees from corporate funds; (c) established or maintained any unlawful or unrecorded fund of corporate monies or other assets; (d) made any false or fictitious entries on the books and records of the Company or any Subsidiary; or (e) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment of any nature.

5.24. Transactions with Affiliates . Except as disclosed in SEC Filings made on or prior to the date hereof, none of the officers or directors of the Company or a Subsidiary and, to the Company's Knowledge, none of the employees of the Company is presently a party to any transaction with the Company or a Subsidiary or to a presently contemplated transaction (other than for services as employees, officers and directors) that would be required to be disclosed pursuant to Item 404 of Regulation S-B promulgated under the 1933 Act.

5.25. Trading Compliance. The Common Stock is traded on the OTCBB and the Company has taken no action designed to, or which to the Company's Knowledge is likely to have the effect of, causing the Common Stock not to continue to be traded on the OTCBB. No order ceasing or suspending trading in any securities of the Company or prohibiting the issuance and/or sale of the Securities is in effect and no proceedings for such purpose are pending or threatened.

6. Representations and Warranties of the Investors. Each of the Investors hereby severally, and not jointly, represents and warrants to the Company on and as of the Signing Date and on the applicable Closing Date, knowing and intending that the Company rely thereon, that:

6.1. Authorization. The execution, delivery and performance by the Investor of the Transaction Documents to which such Investor is a party have been duly authorized and will each constitute the valid and legally binding obligation of the Investor, enforceable against the Investor in accordance with their respective terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability, relating to or affecting creditors' rights generally.

6.2. Purchase Entirely for Own Account. The Securities to be received by the Investor hereunder will be acquired for the Investor's own account, not as nominee or agent, and not with a view to the resale or distribution of any part thereof in violation of the 1933 Act, and the Investor has no present intention of selling, granting any participation in, or otherwise distributing the same in violation of the 1933 Act. The Investor is not a registered broker dealer or an entity engaged in the business of being a broker dealer.

6.3. Investment Experience. The Investor acknowledges that it can bear the economic risk and complete loss of its investment in the Securities and has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment contemplated hereby. The Investor has significant experience in making private investments, similar to the purchase of the Securities hereunder.

6.4. Disclosure of Information. The Investor has had an opportunity to receive all additional information related to the Company requested by it and to ask questions of and receive answers from the Company regarding the Company, its business and the terms and conditions of the offering of the Securities. The Investor acknowledges receipt of copies of and its satisfactory review of the SEC Filings. Neither such inquiries nor any other due diligence investigation conducted by the Investor shall modify, amend or affect the Investor's right to rely on the Company's representations and warranties contained in this Agreement.

6.5. Restricted Securities. The Investor understands that the Securities are characterized as "restricted securities" under the U.S. federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such laws and applicable regulations such securities may be resold without registration under the 1933 Act only in certain limited circumstances.

6.6. Legends.

(a) It is understood that, except as provided below, certificates evidencing such Securities may bear the following or any similar legend:

"THE SECURITIES REPRESENTED HEREBY MAY NOT BE TRANSFERRED UNLESS (I) SUCH SECURITIES HAVE BEEN REGISTERED FOR SALE PURSUANT TO THE SECURITIES ACT OF 1933, AS AMENDED, OR (II) THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL SATISFACTORY TO IT THAT SUCH TRANSFER MAY LAWFULLY BE MADE WITHOUT REGISTRATION UNDER THE SECURITIES ACT OF 1933 OR QUALIFICATION UNDER APPLICABLE STATE SECURITIES LAWS."

(b) If required by the authorities of any state in connection with the issuance of sale of the Securities, the legend required by such state authority.

(c) From and after the earlier of (i) the effectiveness of the registration of the Conversion Shares and the Warrant Shares for resale pursuant to the Registration Rights Agreement and (ii) the time when such Securities may be transferred pursuant to Rule 144(k) of the 1933 Act, the Company shall, upon an Investor's written request, promptly cause certificates evidencing such Securities to be replaced with certificates which do not bear such restrictive legends. When the Company is required to cause unlegended certificates to replace previously issued legended certificates, if unlegended certificates are not delivered to an Investor within three (3) Business Days of submission by that Investor of legended certificate(s) to the Company's transfer agent together with a representation letter in customary form, the Company shall be liable to the Investor for liquidated damages equal to 1.5% of the aggregate purchase price of the Securities evidenced by such certificate(s) for each 30-day period (or portion thereof) beyond such three (3) Business Day-period that the unlegended certificates have not been so delivered.

(d) Each Investor, severally and not jointly with the other Investors, agrees that the removal of the restrictive legend from certificates representing Securities as set forth in this Section 6.6 is predicated upon the warranty of the Investors to sell any Securities pursuant to either the registration requirements of the Securities Act, including any applicable prospectus delivery requirements, or an exemption therefrom.

6.7. Accredited Investor. The Investor is an "accredited investor" as defined in Rule 501(a) of Regulation D, as amended, under the 1933 Act.

6.8. No General Solicitation. The Investor did not learn of the investment in the Securities as a result of any "general advertising" or "general solicitation" as those terms are contemplated in Regulation D, as amended, under the 1933 Act.

6.9. Brokers and Finders. No Person will have, as a result of the transactions contemplated by this Agreement, any valid right, interest or claim against or upon the Company, any Subsidiary or any other Investor for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of the Investor.

7. Conditions to Closing.

7.1. Conditions to the Investors' Obligations. The obligation of the Investors to purchase the Securities at Closing is subject to the fulfillment to the Lead Investors' satisfaction, on or prior to the Closing Date, of the following conditions, any of which may be waived in writing by the Lead Investors:

(a) The representations and warranties made by the Company in Section 5 hereof that are qualified as to materiality shall be true and correct in all respects, and those not so qualified shall be true and correct in all material respects, at all times prior to and on the Closing Date. The Company shall have performed in all material respects all obligations herein required to be performed or observed by it on or prior to the relevant Closing Date;

(b) The Company shall have obtained in a timely fashion any and all consents, permits, approvals, registrations and waivers necessary or appropriate for consummation of the purchase and sale of the Securities then being issued and sold, and all of which shall be and remain so long as necessary in full force and effect;

(c) The Company shall have executed and delivered a counterpart to the Registration Rights Agreement to the Investors;

(d) No judgment, writ, order, injunction, award or decree of or by any court, or judge, justice or magistrate, including any bankruptcy court or judge, or any order of or by any governmental authority, shall have been issued, and no action or proceeding shall have been instituted by any governmental authority, or self-regulatory organization enjoining or preventing the consummation of the transactions contemplated hereby or in the other Transaction Documents;

(e) The Company shall have delivered a Certificate, executed on behalf of the Company by its Chief Executive Officer or its Chief Financial Officer, dated as of the Closing Date, certifying to the fulfillment of the conditions specified in subsections (a), (b), (d) and (h) of this Section 7.1;

(f) The Company shall have delivered a Certificate, executed on behalf of the Company by its Secretary, dated as of the Closing Date, certifying the resolutions adopted by the Board of Directors of the Company approving the transactions contemplated by this Agreement and the other Transaction Documents and the issuance and sale of the Securities, certifying the current versions of the Certificate of Incorporation and Bylaws of the Company and certifying as to the signatures and authority of persons signing the Transaction Documents and all related documents on behalf of the Company;

(h) The Company shall have delivered to the Investors a duly executed exchange agreement, dated as of the Closing Date, between the Company and the holders of the Company's Series A Preferred Stock, which exchange agreement, together with the certificate of designations for Series C Preferred Stock attached thereto, shall be in form and substance reasonably satisfactory to the Lead Investors and which shall be in full force and effect;

(i) The Investors shall have received the applicable Company Counsel Opinion;

(j) No stop order or suspension of trading shall have been imposed by any Person with respect to public trading in the Common Stock;

(k) The Company shall have delivered evidence satisfactory to the Lead Investors of the filing of the Certificate of Designations with the Secretary of State of the State of Delaware; and

(l) The Escrow Amount shall, as of the Closing, equal or exceed the Investment Amount.

7.2. Conditions to Obligations of the Company. The Company's obligation to sell and issue the Securities at Closing is subject to the fulfillment to the satisfaction by the Company on or prior to the Closing Date of the following conditions, any of which may be waived in writing by the Company:

(a) The holders of the Company's Series A Preferred Stock shall have delivered a duly executed exchange agreement effective as of the Closing Date and the Company shall have filed a certificate of designations for Series C Preferred Stock to effect the exchange pursuant thereto.

(b) The representations and warranties made by the Investors in Section 6 hereof shall be true and correct in all material respects when made, and shall be true and correct in all material respects on the Closing Date with the same force and effect as if they had been made on and as of said date;

(c) The Investors shall have executed and delivered the Registration Rights Agreement to the Company;

(d) Each of the Investors shall have delivered to Lead Investor Counsel the "Aggregate Purchase Price" set forth opposite such Investor's name on **Schedule I** affixed hereto; and

(e) No judgment, writ, order, injunction, award or decree of or by any court, or judge, justice or magistrate, including any bankruptcy court or judge, or any order of or by any governmental authority, shall have been issued, and no action or proceeding shall have been instituted by any governmental authority, or self-regulatory organization enjoining or preventing the consummation of the transactions contemplated hereby or in the other Transaction Documents.

8. Covenants and Agreements of the Company**.**

8.1. Reservation of Common Stock. The Company shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of providing for the conversion of the Preferred Stock and the exercise of the Warrants, such number of shares of Common Stock as shall from time to time equal 125% (which percentage shall be decreased to 100% in the event the Company's shareholders do no approve an amendment to the Company's certificate of incorporation to increase the number of authorized shares of Common Stock to 150,000,000) of the number of shares sufficient to permit the conversion of the Preferred Stock and the exercise of the Warrants issued pursuant to this Agreement in accordance with their respective terms, without regard to any exercise limitations contained therein.

8.2. Amendment to Charter. The Company shall present to its shareholders for approval at its next annual meeting of shareholders an amendment to its certificate of incorporation to increase the number of authorized shares of Common Stock to 150,000,000, and the Company shall file as soon as practicable thereafter such approval.

8.3. No Conflicting Agreements. The Company will not take any action, enter into any agreement or make any commitment that would conflict or interfere in any material respect with the Company's obligations to the Investors under the Transaction Documents.

8.4. Insurance. The Company shall not materially reduce the insurance coverages described in Section 5.18.

8.5. Compliance with Laws. The Company will comply in all material respects with all applicable laws, rules, regulations, orders and decrees of all governmental authorities, except to the extent non-compliance would not have a Material Adverse Effect.

8.6. Termination of Certain Covenants. The provisions of Sections 8.2 through 8.5 shall terminate and be of no further force and effect upon the date on which the Company's obligations under the Registration Rights Agreement to register and maintain the effectiveness of any registration covering the Registrable Securities (as such term is defined in the Registration Rights Agreement) shall terminate. The provisions of Sections 8.7 through 8.15 shall survive indefinitely.

8.7 Board/Observer Rights.

(a) From and after the Closing until such time as the Xmark Entities are no longer Requisite Holders, the Xmark Entities shall have the right to designate one (1) member to the Company's Board of Directors (the "**Lead Investor Director**"). The Company shall use its best efforts to cause the Lead Investor Director to be elected to the Company's Board of Directors. The Xmark Entities shall have the right to remove or replace the Lead Investor Director by giving notice to such Lead Investor Director and the Company, and the Company shall use its best efforts to effect the removal or replacement of any such Lead Investor Director. Subject to any limitations imposed by applicable law, the Lead Investor Director shall be entitled to the same perquisites, including stock options, reimbursement of expenses and other similar rights in connection with such person's membership on the Board of Directors of the Company, as every other non-employee member of the Board of Directors of the Company.

(b) From and after the Closing until such time as the Lead Investors are no longer Requisite Holders the Lead Investors shall have the right to designate one (1) observer to attend all meetings of the Company's Board of Directors, committees thereof and access to all information made available to members of the Board (the "**Lead Investor Observer**"). The Lead Investor Observer shall have the same rights as those who customarily attend such position. Notwithstanding the foregoing, the Company reserves the right to exclude the Lead Investor Observer from access to any material, meeting or portion thereof if the Company believes, based on an opinion from its counsel, that such exclusion is necessary to preserve attorney-client, work product or similar privilege. The Lead Investor Observer shall hold in confidence and trust and not use or disclose any confidential information provided to or learned by him or her in connection with the Lead Investor Observer's rights hereunder for any purpose other than the monitoring and administration of the transactions contemplated hereby, unless otherwise required by law, so long as such information is not in the public domain. If requested by the Company, the Lead Investor Observer shall execute a standard confidentiality agreement prior to attending any meetings.

8.8 Affirmative Covenants. From and after the Signing Date until the Escrow Termination Date (after taking into account any extensions of the Escrow Termination Date)(the "**Covenant Expiration Event**"), the Company shall (and shall cause its Subsidiaries to):

(a) use its best efforts to consummate the Closing on or before the Escrow Termination Date;

(b) use its best efforts to keep in full force and effect its corporate existence and all material rights, franchises, intellectual property rights and goodwill relating or pertaining to its businesses;

(c) conduct its operations only in the ordinary course of business consistent with past practice;

(d) maintain its books, accounts and records in accordance with past practice or as required by generally accepted accounting principles;

(e) duly pay and discharge, or cause to be paid and discharged, before the same shall become overdue, all taxes, assessments and other governmental charges imposed upon it and its properties (real and personal), sales and activities, or any part thereof, or upon the income or profits therefrom, as well as all claims for labor, materials, or supplies that if unpaid could reasonably be expected to by law become a lien on any of its property; provided that any such tax, assessment, charge, levy or claim need not be paid if the validity or amount thereof shall currently be contested in good faith by appropriate proceedings and if the Company or any Subsidiary shall have set aside on its books adequate reserves with respect thereto in accordance with generally accepted accounting principals, consistently applied; and provided, further that it pay all such taxes, assessments, charges, levies or claims forthwith upon the commencement of proceedings to foreclose any lien or other encumbrance that may have attached as security therefore;

(f) use its best efforts to obtain all authorizations, consents, waivers, approvals or other actions and to make all filings and applications necessary or desirable to consummate the transactions contemplated hereby and to cause the conditions to the obligation to close to be satisfied;

(g) promptly notify the Investors in writing if, to the Company's Knowledge, (i) any of the representations and warranties (together with the Disclosure Schedules) made by it herein or in any of the other Transaction Document cease to be accurate and complete in all material respects, or (ii) it fails to comply with or satisfy any material covenant, condition or agreement to be complied with or satisfied by it hereunder or under any other Transaction Document;

(h) give notice to the Investors in writing within three (3) days of becoming aware of any litigation or proceedings threatened in writing against the Company or any of its Subsidiaries or any of its directors or officers or any pending litigation and proceedings affecting the Company or any of its Subsidiaries or any of its directors or officers or to which any of them is or becomes a party involving a claim against any of them, stating the nature and status of such litigation or proceedings, provided, however, that the Investors shall not be provided with material non-public information without their express prior written consent;

(i) promptly notify the Investors in writing of the occurrence of any breach of any term of this Agreement; and

(j) comply in all material respects with (i) the applicable laws and regulations wherever its business is conducted, (ii) the provisions of its Certificate of Incorporation and Bylaws, (iii) all material agreements by which the Company, its Subsidiaries or any of their respective properties may be bound, and (iv) all applicable decrees, orders, and judgments.

8.9 Negative Covenants. From and after the Signing Date until the occurrence of the Covenant Expiration Event, without the prior written consent of the Lead Investors, the Company shall not (and shall cause its respective Subsidiaries not to):

(a) take any action that would likely result in the representations and warranties set forth herein (other than representations made as of a particular date) becoming false or inaccurate in any material respect (or, as to representations and warranties, which, by their terms, are qualified as to materiality, becoming false or inaccurate in any respect);

(b) take or omit to be taken any action, or permit any of its Affiliates to take or to omit to take any action, which would reasonably be expected to result in a Material Adverse Effect;

(c) directly or indirectly, merge or consolidate with any Person, or sell, transfer, lease or otherwise dispose of all or any substantial portion of its assets in one transaction or a series of related transactions,

(d) except for the filing of the Certificate of Designations, amend, alter or modify, its Certificate of Incorporation (except for such amendments to increase the number of authorized capital stock of the Company to 150,000,000 and the filing of a Series C Certificate of Designations upon the exchange of the Series A 8% Cumulative Convertible Preferred Stock as contemplated hereby) or Bylaws, or change its jurisdiction of organization, structure, status or existence, or liquidate or dissolve itself;

(e) (i) increase the compensation or benefits payable or to become payable to its directors, officers or employees other than pursuant to the terms of any agreement as in effect on the Signing Date, (ii) pay any compensation or benefits not required by any existing plan or arrangement (including the granting of stock options, stock appreciation rights, shares of restricted stock or performance units) or grant any severance or termination pay to (except pursuant to existing agreements, plans or policies), or enter into any employment or severance agreement with, any director, officer or other employee, or (iii) establish, adopt, enter into, amend or take any action to accelerate rights under any collective bargaining, bonus, profit sharing, thrift, compensation, stock option, restricted stock, pension, retirement, savings, welfare, deferred compensation, employment, termination, severance or other employee benefit plan, agreement, trust, fund, policy or arrangement for the benefit or welfare of any directors, officers or current or former employees, except in each case to the extent required by applicable law;

(f) make any loans to its directors, officers or stockholders;

(g) waive, release, assign, settle or compromise any material rights, claims or litigation;

(h) create, incur, assume or suffer to exist, or increase the amount of, any liability for borrowed money, directly or indirectly other than: (i) indebtedness existing on the date hereof; and (ii) purchase money indebtedness of the Company (including, without limitation, capital leases to the extent secured by purchase money security interests in equipment acquired pursuant thereto);

(i) assume, endorse, be or become liable for or guaranty the obligations of any other Person except in the ordinary course of business;

(j) directly or indirectly, pay any dividends or distributions on, or purchase, redeem or retire, any shares of any class of its capital stock or other equity interests or any securities convertible into capital stock, whether now or hereafter outstanding, or make any payment on account of or set apart assets for a sinking or other analogous fund for, the purchase, redemption, defeasance, retirement or other acquisition of its capital stock or other equity interests, or make any other distribution in respect thereof, either directly or indirectly, whether in cash or property or in obligations of the Company or any of its Subsidiaries;

(k) enter into any transaction with any Affiliates or its or any of its Affiliate's equity holders, directors, officers, employees (including upstreaming and downstreaming of cash and intercompany advances and payments) in an amount in excess of $25,000 in the aggregate or amend any material provision of any agreement with any Affiliate, or waive any material right of the Company or any Subsidiary under any such agreement;

(l) at any time create any direct or indirect Subsidiary, enter into any joint venture or similar arrangement or become a partner in any general or limited partnership or enter into any management contract permitting third party management rights with respect to the business of the Company or any of its Subsidiaries;

(m) cancel any liability or debt owed to it, except for consideration equal to or exceeding the outstanding balance of such liability or debt, and in any event, in the ordinary course of business;

(n) create, incur, assume or suffer to exist, any lien, charge or other encumbrance on any of their or its respective properties or assets now owned or hereafter acquired;

(o) make any changes in any of its business objectives, purposes, or operations or engage in any business other than that presently engaged in or presently proposed to be engaged in by the Company;

(p) issue any capital stock or any security or instrument which, pursuant to its terms, may be converted, exercised or exchanged for capital stock, other than upon the conversion or exercise of any presently outstanding options, warrants or convertible securities; or

(q) enter into an agreement to do any of the foregoing.

8.10. No Solicitation or Negotiation. The Company agrees that from and after the Signing Date until the occurrence of the Covenant Expiration Event, neither the Company, nor any of its Subsidiaries, Affiliates, officers, directors, representatives or agents will: (1) solicit, initiate, consider, encourage or accept any other proposals or offers from any Person (i) relating to any acquisition or purchase of all or any portion of the capital stock of the Company or assets of the Company, or (ii) to enter into any merger, consolidation, reorganization, or other business combination with the Company (each of the events described in clauses (i) and (ii) an "**Alternative Transaction**"), or (2) participate in any discussions, conversations, negotiations or other communications regarding, or furnish to any other Person any information with respect to, or otherwise cooperate in any way, assist or participate in, facilitate or encourage any effort or attempt by any other Person to seek to do any Alternative Transaction. The Company shall immediately cease and cause to be terminated all existing discussions, conversations, negotiations and other communications with any Persons conducted heretofore with respect to any of the foregoing. The Company shall notify the Investors promptly if any such proposal or offer, or any inquiry or other contact with any Person with respect thereto, is made and shall, in any such notice to the Investors, indicate in reasonable detail the identity of the Person making such proposal, offer, inquiry or contact and the terms and conditions of such proposal, offer, inquiry or other contact. The Company agrees not to, without the prior written consent of the Requisite Holders, release any Person from, or waive any provision of, any confidentiality or standstill agreement to which it is a party. For the purposes of clarification, joint ventures or other similar collaborative transactions with non-financial participants which are not primarily intended to raise capital shall not be deemed an Alternative Transaction.

8.11. Trading. The Company shall promptly following the date hereof secure and maintain the listing of the Conversion Shares and the Warrant Shares upon each securities exchange or quotation system upon which the Common Stock is then traded, so that as of the relevant Closing Date such Conversion Shares and Warrant Shares shall have been authorized for trading on the relevant securities exchange or quotation system.

8.12. Use of Proceeds. The Company will use the proceeds from the sale of the Securities for general corporate purposes, and not for (i) the repayment of any outstanding indebtedness for borrowed money of the Company or any of its Subsidiaries or (ii) redemption or repurchase of any of its or its Subsidiaries' equity securities.

8.13. Press Release. On or before 9:00 a.m., New York City time, on the first Business Day following the date of this Agreement, the Company shall issue a press release, which shall have been reviewed and approved by the Lead Investors, announcing the transactions contemplated by the Transaction Documents (the "**Press Release**"). In addition, the Company will file a Current Report on Form 8-K with the SEC describing the terms of the Transaction Documents (and including as exhibits to such Current Report on Form 8-K the material Transaction Documents (including, without limitation, this Agreement and the Registration Rights Agreement)). Without any such Investor's prior consent, the Company agrees not to disclose in the Press Release the names, addresses or any other information about an Investor, except as required by law and to satisfy its obligations under the Registration Rights Agreement.

8.14. Furnishing of Information. As long as any Investor owns Securities, the Company covenants to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the 1934 Act. As long as any Investor owns Preferred Shares, Warrants or the Warrant Shares, if the Company is not required to file reports pursuant to such laws, it will prepare and furnish to the Investors and make publicly available in accordance with Rule 144(c) promulgated by the SEC pursuant to the 1933 Act, as such Rule may be amended from time to time, such information as is required for the Investors to sell the Preferred Shares and Warrant Shares under Rule 144 promulgated by the SEC pursuant to the 1933 Act, as such Rule may be amended from time to time ("**Rule 144**"). The Company further covenants that it will take such further action as any holder of Preferred Shares, Warrants or the Warrant Shares may reasonably request, all to the extent required from time to time to enable such Person to sell the Preferred Shares and Warrant Shares without registration under the 1933 Act within the limitation of the exemptions provided by Rule 144.

8.15. Buy-In. If the Company shall fail for any reason or for no reason to issue to an Investor unlegended certificates within three (3) Business Days of receipt of documents necessary for the removal of the legend set forth above (the "**Deadline Date**"), then, in addition to all other remedies available to such Investor, if on or after the Business Day immediately following such three (3) Business Day period, such Investor or Investor's broker, acting on behalf of such Investor, purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the holder of shares of Common Stock that such Investor anticipated receiving from the Company without any restrictive legend, then the Company shall, within three (3) Business Days after such Investor's request and in such Investor's sole discretion, either (i) pay cash to the Investor in an amount equal to such Investor's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased (the "**Buy-In Price**"), at which point the Company's obligation to deliver such certificate (and to issue such shares of Common Stock) shall terminate, or (ii) promptly honor its obligation to deliver to such Investor a certificate or certificates representing such shares of Common Stock and pay cash to the Investor in an amount equal to the excess (if any) of the Buy-In Price over the product of (a) such number of shares of Common Stock, times (b) the closing bid price on the Deadline Date.

8.16. Limited Participation Right. In the event the Requisite Holders approve an amendment to the Certificate of Designations which materially adversely affects all of the Investors, and if, during the twelve (12) month period following such amendment, the Company agrees to sell, offers for sale or solicits offers to buy its securities in a transaction in which one or more Lead Investors participates, the Company shall provide notice of such transaction to each Investor who held shares of Preferred Stock on the date of such amendment and on the date of such transaction (each, an "Eligible Investor") and shall give each Eligible Investor the right to participate in such transaction on a pro rata basis among the participating Lead Investors and the Eligible Investors (based upon the number of shares of Preferred Stock held by the Investors participating in the transaction at the time of such transaction).

9. Survival and Indemnification.

9.1. Survival. Subject to Section 8.6, all representations, warranties, covenants and agreements contained in this Agreement shall be deemed to be representations, warranties, covenants and agreements as of the date hereof and shall survive the Closing Date until the third anniversary thereof; provided, however, that the provisions contained in: (a) Sections 3.2, 5.4, 9.1, 9.2 and 9.3 hereof shall survive indefinitely; and (b) Sections 5.10 and 5.15 shall survive until 90 days after the applicable statute of limitations.

9.2. Indemnification. The Company agrees to indemnify and hold harmless, each Investor and its Affiliates and the directors, officers, employees and agents of each Investor and its Affiliates, from and against any and all losses, claims, damages, liabilities and expenses (including without limitation reasonable attorney fees and disbursements and other expenses incurred in connection with investigating, preparing or defending any action, claim or proceeding, pending or threatened and the costs of enforcement hereof) (collectively, "**Losses**") to which such Person may become subject as a result of any breach of representation, warranty, covenant or agreement made by, or to be performed on the part of, the Company under the Transaction Documents, and will reimburse any such Person for all such amounts as they are incurred by such Person.

9.3. Conduct of Indemnification Proceedings. Promptly after receipt by any Person (the **"Indemnified Person**") of notice of any demand, claim or circumstances which would or might give rise to a claim or the commencement of any action, proceeding or investigation in respect of which indemnity may be sought pursuant to Section 9.2, such Indemnified Person shall promptly notify the Company in writing and the Company shall assume the defense thereof, including the employment of counsel reasonably satisfactory to such Indemnified Person, and shall assume the payment of all fees and expenses; provided, however, that the failure of any Indemnified Person so to notify the Company shall not relieve the Company of its obligations hereunder except to the extent that the Company is actually and materially prejudiced by such failure to notify. In any such proceeding, any Indemnified Person shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such Indemnified Person unless: (i) the Company and the Indemnified Person shall have mutually agreed to the retention of such counsel; (ii) in the reasonable judgment of counsel to such Indemnified Person (A) representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them, or (B) the Company shall have failed to promptly assume the defense of such proceeding. The Company shall not be liable for any settlement of any proceeding effected without its written consent, which consent shall not be unreasonably withheld, delayed or conditioned, but if settled with such consent, or if there be a final judgment for the plaintiff, the Company shall indemnify and hold harmless such Indemnified Person from and against any Losses by reason of such settlement or judgment. Without the prior written consent of the Indemnified Person, which consent shall not be unreasonably withheld, delayed or conditioned, the Company shall not effect any settlement of any pending or threatened proceeding in respect of which any Indemnified Person is or could have been a party and indemnity could have been sought hereunder by such Indemnified Party, unless such settlement includes an unconditional release of such Indemnified Person from all liability arising out of such proceeding.

10. Miscellaneous.

10.1. Successors and Assigns. This Agreement may not be assigned by a party hereto without the prior written consent of the Company and the Lead Investors; provided, however, that an Investor may assign its rights and delegate its duties hereunder in whole or in part to an Affiliate or to a third party acquiring some or all of its Securities in a private transaction without the prior written consent of the Company or the other Investors, after notice duly given by such Investor to the Company; provided, that no such assignment or obligation shall affect the obligations of such Investor hereunder. The provisions of this Agreement shall inure to the benefit of and be binding upon the respective permitted successors and assigns of the parties. Except for the Lead Investor Counsel, which is an express intended third party beneficiary of this Agreement, and except for provisions of this Agreement expressly to the contrary, nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement.

10.2. Counterparts; Faxes. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Agreement may also be executed via facsimile, which shall be deemed an original.

10.3. Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

10.4. Notices. Unless otherwise provided, any notice required or permitted under this Agreement shall be given in writing and shall be deemed effectively given as hereinafter described (i) if given by personal delivery, then such notice shall be deemed given upon such delivery, (ii) if given by telex or telecopier, then such notice shall be deemed given upon receipt of confirmation of complete transmittal, (iii) if given by mail, then such notice shall be deemed given upon the earlier of (A) receipt of such notice by the recipient or (B) three (3) Business Days after such notice is deposited in first class mail, postage prepaid, and (iv) if given by a nationally recognized overnight air courier, then such notice shall be deemed given one (1) Business Day after delivery to such carrier. All notices shall be addressed to the party to be notified at the address as follows, or at such other address as such party may designate by ten (10) days' advance written notice to the other party:

If to the Company:

Novelos Therapeutics, Inc.
One Gateway Center, Suite 504
Newton, MA 02458
Attention: Chief Executive Officer
Fax: (617) 964-6331

With a copy to:

Foley Hoag LLP
Seaport World Trade Center West
155 Seaport Boulevard
Boston, MA 02210
Attn: Paul Bork
Fax: (617) 832-7000

If to any of the Investors:

to the addresses set forth on **Schedule I** affixed hereto.

With a copy to:

Lowenstein Sandler PC
1251 Avenue of the Americas
New York, NY 10020
Attn: Steven E. Siesser, Esq.
Fax: (973) 597-2507

10.5. Expenses. The Company shall pay the Lead Investors for their reasonable out-of-pocket expenses, including the reasonable fees and expenses of Lead Investor Counsel in connection with the Private Placement (which Lead Investor Counsel Fees shall include, without limitation, the fees and expenses associated with the negotiation, preparation and execution and delivery of this Agreement and the other Transaction Documents and any amendments, modifications or waivers thereto)(the "**Lead Investor Counsel Fees**"), in an amount not to exceed $100,000 (of which $25,000 has already been paid to the Lead Investor Counsel) through the Closing Date. The Lead Investor Counsel Fees shall be paid to Lead Investor Counsel on the Closing Date by release to Lead Investor Counsel of the portion of the Escrow Amount equal to the Lead Investor Counsel Fees applicable to such Closing Date. Except as set forth above, the Company and the Investors shall each bear their own expenses in connection with the negotiation, preparation, execution and delivery of this Agreement. In the event that legal proceedings are commenced by any party to this Agreement against another party to this Agreement in connection with this Agreement or the other Transaction Documents, the party or parties which do not prevail in such proceedings shall severally, but not jointly, pay their pro rata share of the reasonable attorneys' fees and other reasonable out-of-pocket costs and expenses incurred by the prevailing party in such proceedings.

10.6. Amendments and Waivers. This Agreement shall not be amended and the observance of any term of this Agreement shall not be waived (either generally or in a particular instance and either retroactively or prospectively) without the prior written consent of the Company and the Requisite Holders; provided, however, that any provision affecting the rights or obligations of Lead Investor Counsel, shall not be waived or amended without the prior written consent of the Lead Investor Counsel. Any amendment or waiver effected in accordance with this Section 10.6 shall be binding upon each holder of any Securities purchased under this Agreement at the time outstanding, each future holder of all such Securities, and the Company.

10.7. Publicity. Except as provided in Section 8.13, No public release or announcement concerning the transactions contemplated hereby shall be issued by the Company or the Investors without the prior consent of the Company (in the case of a release or announcement by the Investors) or the Lead Investors, as representative of the Investors (in the case of a release or announcement by the Company) (which consents shall not be unreasonably withheld), except as such release or announcement may be required by law or the applicable rules or regulations of any securities exchange or securities market on which the Securities are then listed and trading, in which case the Company or the Lead Investors, as the case may be, shall allow the Investors or the Company, as applicable, to the extent reasonably practicable in the circumstances, reasonable time to comment on such release or announcement in advance of such issuance.

10.8. Severability. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof but shall be interpreted as if it were written so as to be enforceable to the maximum extent permitted by applicable law, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. To the extent permitted by applicable law, the parties hereby waive any provision of law which renders any provision hereof prohibited or unenforceable in any respect.

10.9. Entire Agreement. This Agreement, including the Exhibits and Disclosure Schedules, and the other Transaction Documents constitute the entire agreement among the parties hereof with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings, both oral and written, between the parties with respect to the subject matter hereof and thereof. Prior drafts or versions of this Agreement shall not be used to interpret this Agreement.

10.10. Further Assurances. The parties shall execute and deliver all such further instruments and documents and take all such other actions as may reasonably be required to carry out the transactions contemplated hereby and to evidence the fulfillment of the agreements herein contained.

10.11. Governing Law; Consent to Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of New York without regard to the choice of law principles thereof. Each of the parties hereto irrevocably submits to the exclusive jurisdiction of the courts of the State of New York located in New York County and the United States District Court for the Southern District of New York for the purpose of any suit, action, proceeding or judgment relating to or arising out of this Agreement and the transactions contemplated hereby. Service of process in connection with any such suit, action or proceeding may be served on each party hereto anywhere in the world by the same methods as are specified for the giving of notices under this Agreement. Each of the parties hereto irrevocably consents to the jurisdiction of any such court in any such suit, action or proceeding and to the laying of venue in such court. Each party hereto irrevocably waives any objection to the laying of venue of any such suit, action or proceeding brought in such courts and irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. **THE COMPANY AND EACH OF THE INVESTORS HEREBY IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING RELATING TO OR ARISING OUT OF THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED HEREBY.**

[signature page follows]

[Company Signature Page]

I N WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

NOVELOS THERAPEUTICS, INC.

By: /s/ Harry S. Palmin

Name: Harry S. Palmin
Title: President and CEO

[Investor Signature Page]

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Date: April 12, 2007

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Xmark Opportunity Fund, Ltd.

Print name of entity

By: Xmark Opportunity Manager, LLC,

its Investment Manager

By: Xmark Opportunity Partners, LLC,

its Sole Member

By: Xmark Capital Partners, LLC,

its Managing Member

By: /s/ Mitchell D. Kaye

Name: Mitchell D. Kaye
Title: Chief Executive Officer

Cayman Islands

Print jurisdiction of organization of entity

Address:

Address:

301 Tresser Blvd, Suite 1320
Stamford, CT 06901

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 2,000,000.00

[Investor Signature Page]

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Date: April 12, 2007

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Xmark Opportunity Fund, L.P.

Print name of entity

By: Xmark Opportunity GP, LLC

its General Partner

By: Xmark Opportunity Partners, LLC,

its Sole Member

By: Xmark Capital Partners, LLC,

its Managing Member

By: /s/ Mitchell D. Kaye

Name: Mitchell D. Kaye
Title: Chief Executive Officer

Delaware

Print jurisdiction of organization of entity

Address:

Address:

301 Tresser Blvd, Suite 1320
Stamford, CT 06901

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 1,000,000.00

[Investor Signature Page]

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Date: April 12, 2007

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Xmark JV Investment Partners, LLC

Print name of entity

By: Xmark Opportunity Partners, LLC

its Investment Manager

By: Xmark Capital Partners, LLC,

its Managing Member

By: /s/ Mitchell D. Kaye

Name: Mitchell D. Kaye
Title: Chief Executive Officer

Delaware

Print jurisdiction of organization of entity

Address:

301 Tresser Blvd, Suite 1320
Stamford, CT 06901

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 1,000,000.00

[Investor Signature Page]

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Date: April 12, 2007

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Caduceus Capital Master Fund Limited

Print name of entity

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

Print jurisdiction of organization of entity

Address:
c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 2,000,000.00

[Investor Signature Page]

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Date: April 12, 2007

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Caduceus Capital II, L.P.

Print name of entity

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

Print jurisdiction of organization of entity

Address:
c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 1,300,000.00

[Investor Signature Page]

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Date: April 12, 2007

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

UBS Eucalyptus Fund, L.L.C.

Print name of entity

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

Print jurisdiction of organization of entity

Address:
c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 1,300,000.00

[Investor Signature Page]

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Date: April 12, 2007

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

HFR SHC Aggressive Master Trust

Print name of entity

By: /s/ Dora Hines

Name: Dora Hines
Title: for and on behalf of HFR Asset Management, LLC as attorney-in-fact

Print jurisdiction of organization of entity

Address:

Butterfield Fund Services (Bermuda) Limited
65 Front Street
Hamilton HM11
Bermuda
Re: HFR SHC Aggressive Master Trust

Send correspondence to:

c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 250,000

[Investor Signature Page]

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Date: April 12, 2007

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

PW Eucalyptus Fund, Ltd.

Print name of entity

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

Print jurisdiction of organization of entity

Address:
c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 150,000

[Investor Signature Page]

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Date: April 12, 2007

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Knoll Capital Fund II Master Fund Ltd.

Print name of entity

By: /s/ Fred Knoll

Name: Fred Knoll
Title: KOM Capital Management
Investment Manager

Print jurisdiction of organization of entity

Address:
c/o KOM Capital Management
666 Fifth Avenue, Suite 3702,
New York, NY 10103

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 2,000,000.00

[Investor Signature Page]

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Date: April 12, 2007

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Europa International, Inc.

Print name of entity

By: /s/ Fred Knoll

Name: Fred Knoll
Title: Knoll Capital Management
Investment Manager for
Europa International, Inc.

Print jurisdiction of organization of entity

Address:
c/o Knoll Capital Management
666 Fifth Avenue, Suite 3702,
New York, NY 10103

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 2,000,000.00

Signature Page for Securities Purchase Agreement
Dated: April 12, 2007
Between Novelos Therapeutics, Inc. and Hunt-BioVentures, L.P.

IN WITNESS WHEREOF, the undersigned has executed this Securities Purchase Agreement or caused its duly authorized officers to execute this Securities Purchase Agreement as of the date first above written.

Hunt-BioVentures, L.P., a Delaware Limited Partnership

By: HBV GP, L.L.C., its General Partner

By: /s/ J. Fulton Murray, III

J. Fulton Murray, III, Manager

Aggregate dollar amount of Securities committed to be purchased pursuant to the terms of the Agreement:

Aggregate Purchase Price:	$ 2,000,000.00

SCHEDULE I

INVESTORS

CLOSING

Name of Investor	Closing Purchase Price	Number of Shares of Preferred Stock	Number of Warrants
Xmark Opportunity Fund, Ltd.	$ 2,000,000	40	1,000,000
Xmark Opportunity Fund, L.P.	$ 1,000,000	20	500,000
Xmark JV Investment Partners, LLC	$ 1,000,000	20	500,000
Caduceus Capital Master Fund Limited	$ 2,000,000	40	1,000,000
Caduceus Capital II, L.P.	$ 1,300,000	26	650,000
UBS Eucalyptus Fund, L.L.C.	$ 1,300,000	26	650,000
HFR SHC Aggressive Master Trust	$ 250,000	5	125,000
PW Eucalyptus Fund, Ltd.	$ 150,000	3	75,000
Knoll Capital Fund II Master Fund, Ltd.	$ 2,000,000	40	1,000,000
Europa International, Inc.	$ 2,000,000	40	1,000,000
Hunt-BioVentures, L.P.	$ 2,000,000	40	1,000,000

SCHEDULE II

Lead Investor Counsel Wire Instructions
For Escrow Amount

Wire Room of: PNC Bank New Jersey
ABA # 031207607
For credit to: Lowenstein Sandler PC Special Trust Account I
Account # 8025720174

Exhibits

Exhibit A	Certificate of Designations
Exhibit B	Form of Warrant
Exhibit C	Registration Rights Agreement
Exhibit D	Company Counsel Opinion

Schedules

Schedule 5.1	Subsidiaries
Schedule 5.3	Capitalization
Schedule 5.5	Consents
Schedule 5.7(a)	Material Adverse Changes
Schedule 5.8(b)	SEC Filings
Schedule 5.9	Conflicts
Schedule 5.10	Taxes
Schedule 5.11	Title to Properties
Schedule 5.14(a)	Intellectual Property
Schedule 5.14(d)	IP Litigation
Schedule 5.19	Brokers and Finders

Exhibit A

Certificate of Designations

[See Exhibit 3.2 of this filing]

Exhibit B

Form of Warrant

[See Exhibit 4.1 of this filing]

Exhibit C

Registration Rights Agreement

[See Exhibit 10.3 of this filing]

Exhibit D

Company Counsel Opinion

May 2, 2007

TO: Each of the Purchasers under the Securities Purchase Agreement

Re: Securities Purchase Agreement

Ladies and Gentlemen:

We have acted as counsel for Novelos Therapeutics, Inc., a Delaware corporation (the "Company"), in connection with the negotiation of the Securities Purchase Agreement by and among the purchasers signatory thereto (the "Purchasers") and the Company dated as of April 12, 2007 (as amended on May 2, 2007, the "Purchase Agreement") and the Registration Rights Agreement between the Purchasers and the Company dated as of even date herewith (the "Registration Rights Agreement"). The Purchase Agreement provides for the issuance and sale by the Company of (i) 300 shares of a newly created series of the Company's Preferred Stock, designated "Series B Convertible Preferred Stock", par value $0.00001 per share (the "Preferred Stock"), which Preferred Stock shall have the rights, preferences and privileges set forth in the Certificate of Designations, Preferences and Rights (the "Certificate of Designations"), a stated value of $50,000.00 per share and shall initially be convertible into shares of the Company's Common Stock, par value $0.00001 per share (the "Common Stock"), at a price of $1.00 per share, and (ii) warrants to purchase up to 7,500,000 shares of Common Stock of the Company (the "Warrants") (the shares of Common Stock issuable upon conversion of the Preferred Stock are referred to herein as the "Conversion Shares" and the shares of Common Stock issuable upon exercise of the Warrants are referred to herein as the "Warrant Shares") (the Purchase Agreement, Registration Rights Agreement and Warrants are collectively referred to herein as the "Transaction Documents"). All terms used herein have the meanings defined for them in the Purchase Agreement unless otherwise defined herein.

This opinion is furnished to you pursuant to the Purchase Agreement. In rendering the opinions expressed below, we have examined originals or copies of: (i) the Transaction Documents, (ii) the Company's Certificate of Incorporation, as amended through the date hereof ("Certificate of Incorporation"), and (iii) the Company's By-laws, as in effect on the date hereof (the "By-laws"), and we have examined and considered such corporate records, certificates and matters of law as we have deemed appropriate as a basis for our opinions set forth below. In rendering the opinions expressed below, we have relied, as to factual matters, upon the representations and warranties of the Company contained in the Transaction Documents.

Based upon and subject to the foregoing, we are of the opinion that:

1. The Company is a corporation validly existing and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to carry on its business as it is currently being conducted, to own, lease and operate its properties and assets, and to enter into and perform its obligations under the Transaction Documents and the Certificate of Designations. The Company is qualified as a foreign corporation to do business and is in good standing in the Commonwealth of Massachusetts.

2. The execution, delivery and performance by the Company of the Transaction Documents, the issuance of the Preferred Stock and the Warrants, the issuance of the Conversion Shares upon due conversion of the Preferred Stock and the issuance o f the Warrant Shares upon due exercise of the Warrants have been duly authorized by all requisite corporate action on the part of the Company and do not require any further approval of its directors or stockholders.

3. Each of the Transaction Documents has been duly executed and delivered by the Company and constitutes a valid and binding obligation of the Company, enforceable against the Company in accordance with its terms.

4. The Certificate of Designations has been filed with the Secretary of State of the State of Delaware. The Preferred Stock has the relative rights, preferences and limitations set forth in the Certificate of Designations.

5. The execution and delivery by the Company of each of the Transaction Documents, the issuance of the Preferred Stock and Warrants, the issuance of the Conversion Shares upon due conversion of the Preferred Stock and the issuance of the Warrant Shares upon due exercise of the Warrants and the performance by the Company of the Transaction Documents will not violate or contravene or be in conflict with (a) any provision of the Certificate of Incorporation of By-laws; (b) any provision of the General Corporation Law of the State of Delaware and any provision of any federal or Massachusetts law, rule or regulation applicable to the Company in transactions of the nature contemplated by the Transaction Documents; (c) any order, judgment or decree of any court or other governmental agency which is known to us and which is binding on the Company or any of its property; (d) any agreement, indenture or other written agreement or understanding to which the Company or a Subsidiary is a party which has been identified as a material agreement in the certificate of the Chief Executive Officer of the Company attached hereto (collectively, "Material Agreements").

6. No further consents, approvals, authorizations, registrations, declarations or filings are required to be obtained or made by the Company from or with any federal or Massachusetts governmental authority or pursuant to the General Corporation Law of the State of Delaware or from any other Person under any Material Agreement in order for it to execute and deliver each of the Transaction Documents, to issue the Preferred Stock and Warrants, to issue the Conversion Shares upon due conversion of the Preferred Stock, to issue the Warrant Shares upon due exercise of the Warrants and to perform its obligations under the Transaction Documents, other than those consents, approvals, authorizations, registrations, declarations or filings that have already been obtained and remain in full force and effect and except for (a) the filing of a Form D (the "Form D") with the Securities and Exchange Commission pursuant to Regulation D promulgated under the Securities Act of 1933, as amended (the "Securities Act") and (b) the filing of the Form D with requisite state jurisdictions.

7. The shares of Preferred Stock, upon payment as provided in the Purchase Agreement, will be validly issued, fully paid and non-assessable. The shares of Common Stock issuable upon conversion of the Preferred Stock and exercise of the Warrants have been duly authorized and, upon issuance and delivery upon conversion of such Preferred Stock in accordance with the terms of the Purchase Agreement and exercise of such Warrants in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable. Other than as disclosed in the Purchase Agreement, and the Disclosure Schedules delivered in connection with the Purchase Agreement, there are no statutory preemptive rights or, to the best of our knowledge, any options, warrants or other such rights evidenced by written instruments presently outstanding to purchase any of the authorized but unissued capital stock of the Company.

8. Assuming the accuracy of the representations and warranties of the Purchasers set forth in Section 6 of the Purchase Agreement, the offer, issuance and sale to the Purchasers pursuant to the Purchase Agreement of (i) the Preferred Stock and Warrants, (ii) the Conversion Shares if the Preferred Stock were converted by the Purchasers on the date hereof and (iii) the Warrant Shares issuable upon exercise of the Warrants if the Warrants were exercised by the Purchasers on the date hereof, are exempt from the registration requirements of the Securities Act.

The opinions expressed herein are subject to the following assumptions, limitations, qualifications and exceptions:

(a) We have made such legal and factual examinations and inquiries as we have deemed advisable or necessary for the purpose of rendering this opinion.

(b) We have examined, among other things, originals or copies of such corporate records of the Company, certificates of public officials and such other documents and questions of law that we consider necessary or advisable for the purpose of rendering this opinion. In such examination we have assumed the genuineness of all signatures or original documents, the authenticity and completeness of all documents submitted to us as originals, the conformity to original documents of all copies submitted to us as copies thereof, the legal capacity of natural persons, and the due execution and delivery of all documents (except as to due execution and delivery by the Company) where due execution and delivery are a prerequisite to the effectiveness thereof.

(c) As used in this opinion, the expression “to our knowledge” refers to the current actual knowledge of the attorneys of this firm who have worked on matters for the Company solely in connection with the Transaction Documents and the transactions contemplated thereby.

(d) For purposes of this opinion, we have assumed that you have all requisite power and authority, and have taken any and all necessary corporate action, to execute and deliver the Transaction Documents, and we are assuming that the representations and warranties made by the Purchasers in the Transaction Documents and pursuant thereto are true and correct.

(e) Our opinion is based upon our knowledge of the facts as of the date hereof and assumes no event will take place in the future which would affect the opinions set forth herein other than future events contemplated by the Transaction Documents. We assume no duty to communicate with you with respect to any change in law or facts which comes to our attention hereafter.

(f) In rendering the opinion in paragraph 1 with respect to legal existence and good standing of the Company in the State of Delaware, we have relied solely upon a certificate of the Secretary of State of Delaware and we express such opinion as of the date of such certificate. In rendering the opinion in paragraph 1 with respect to the qualification and good standing of the Company in The Commonwealth of Massachusetts, we have relied solely upon a certificate of the Secretary of State of Massachusetts and we express such opinion as of the date of such certificate. We express no opinion as to the tax good standing of the Company.

We have made such examination of Massachusetts law, federal law, and the Delaware General Corporation Law as we have deemed necessary for the purpose of this opinion. In rendering opinions concerning the Delaware General Corporation Law, we have, with your consent, relied exclusively upon a review of published statutes. We express no opinion herein as to the laws of any jurisdiction other than The Commonwealth of Massachusetts, the federal laws of the United States of America and the Delaware General Corporation Law.

The opinions expressed herein are qualified to the extent that (1) the enforceability of any provisions of the Transaction Documents or any instrument or of any right granted thereunder may be subject to or affected by any bankruptcy, reorganization, insolvency, fraudulent conveyance, moratorium or other similar law of general application relating to or affecting the rights or remedies of creditors generally, which law may be in effect from time to time, (2) the remedy of specific performance or any other equitable remedy may be unavailable or may be withheld as a matter of judicial discretion, (3) equitable principles and principles of public policy may be applied in construing or enforcing the provisions of the Transaction Documents or of any other agreement, instrument or document, and (4) the enforceability, validity or binding effect of any remedial provision of the Transaction Documents may be limited by applicable law which may limit particular rights and remedies but not so as to interfere materially with the practical realization of the benefits intended to be provided to you by the Transaction Documents. In addition, the opinions expressed herein are subject to the qualification that the enforcement of any of your rights are in all cases subject to the your implied duty of good faith and fair dealing.

We express no opinion herein as to the validity or enforceability of any provision of the Transaction Documents or any other instrument or document to the extent that such provision purports to (1) constitute a waiver by the Company of any statutory right except where advance waiver is expressly permitted by the relevant statute; (2) require the Company to indemnify or to hold harmless you or any other person or entity from the consequences of any negligent or other wrongful act or omission of you or such other person or entity; (3) provide for indemnification or contribution by the Company in connection with the Transaction Documents, the transactions contemplated thereby or otherwise to the extent such indemnification or contribution may be limited by applicable laws or as a matter of public policy; or (4) constitute a waiver of any right to a hearing on or adjudication of any issue or the right to trial by jury. We express no opinion with respect to whether any of the provisions of the Transaction Documents or the transactions contemplated by the Transaction Documents comply with the usury laws of any jurisdiction.

This opinion shall be interpreted in accordance with the Legal Opinions Principles issued by the Committee on Legal Opinions of the American Bar Association's Business Law Section as published in 53 Business Lawyer 831 (May 1998).

This opinion is furnished to the Purchasers solely for their benefit in connection with the transactions described above and, except as otherwise expressly set forth herein, may not be relied upon by any other person or for any other purpose without our prior written consent, except that the opinions expressed in paragraph (7) and (8) above may be relied upon by American Stock Transfer & Trust Company as Transfer Agent.

Very truly yours,

FOLEY HOAG LLP

By: _____

A Partner

Schedule 5.1

Subsidiaries

None.

Schedule 5.3

Capitalization

5.3(a)(i) At the date hereof authorized capital stock of the Company consists of 100,000,000 shares of $.00001 par value common stock and 7,000 shares of preferred stock.

5.3(a)(ii) At the date hereof there are 39,235,272 shares of common stock outstanding and 3,264 shares of preferred stock outstanding.

5.3(a)(iii) At the date hereof there are 3,612,651 shares of common stock issuable pursuant to the Company's stock plans.

5.3(a)(iv) At the date hereof, the following shares are reserved for future issuance upon exercise of stock options or warrants or conversion of preferred stock:

2000 Stock Option Plan	73,873
2006 Stock Incentive Plan	5,000,000
Options issued outside of formalized plans	2,578,778
Warrants	14,561,449
Preferred stock	4,231,104
Total shares reserved for future issuance	26,445,204

Schedule 5.3 (continued)

5.3(a) Other

The following is a listing of documents available on EDGAR that contain the rights of Novelos security holders at the date hereof:

Document Description	Filed with Form	Filing Date	Exhibit No.
Certificate of Designations of Series A cumulative convertible preferred stock	8-K	October 3, 2005	99.2
2000 Stock Option and Incentive Plan	SB-2	November 16, 2005	10.2
Form of 2004 non-plan non-qualified stock option	SB-2	November 16, 2005	10.3
Form of non-plan non-qualified stock option used from February to May 2005	SB-2	November 16, 2005	10.4
Form of non-plan non-qualified stock option used after May 2005	SB-2	November 16, 2005	10.5
Form of common stock purchase warrant issued in March 2005	SB-2	November 16, 2005	10.6
Form of securities purchase agreement dated May 2005	8-K	June 2, 2005	99.1
Form of subscription agreement dated September 30, 2005	8-K	October 3, 2005	99.1
Form of Class A common stock purchase warrant dated September 30, 2005	8-K	October 3, 2005	99.3
Form of share escrow agreement	8-K	November 3, 2005	10.3
Form of securities purchase agreement dated March 2, 2006	8-K	March 3, 2006	99.2
Form of common stock purchase warrant dated March 2006	8-K	March 3, 2006	99.3
2006 Stock Incentive Plan	10-QSB	November 6, 2006	10.1
Form of Incentive Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan	8-K	December 15, 2006	10.1
Form of Non-Statutory Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan	8-K	December 15, 2006	10.2
Form of Non-Statutory Director Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan	8-K	December 15, 2006	10.3

Schedule 5.3 (continued)

5.3(b) The following table sets forth the pro forma capitalization of the Company on a fully diluted basis giving effect to (i) the issuance of Preferred Stock and the Warrants at the time of Closing, (ii) any adjustments in other securities resulting from the issuance of the Preferred Stock and the Warrants at the time of Closing, and (iii) the exercise or conversion of all outstanding securities:

NVLT - Proforma Capital Structure

	Upon Closing of Series B Financing				
	Number	Effective conv. rate	Common stock equival.	Exer. Price	Total cash
Cash, cash equivalents[1]					$11,594,000
Common stock outstanding	39,235,272		39,235,272		
Preferred stock					
Series A[2]	3,264	1.00	3,264,000		
Series B[2]	1,500	1.00	15,000,000		$13,700,000
Warrants					
2005 Bridge Financing	720,000		720,000	$0.625	cashless
2005 PIPE and Series A Preferred[4]	6,149,578		6,149,578	$1.00	$6,149,578
2006 PIPE[5]	10,270,018		10,270,018	$2.20	$22,594,040
Series B & Placement Agent	8,400,000		8,400,000	$1.25	$10,500,000
Series A (subordination)[6]	1,333,333		1,333,333	$1.25	cashless
Stock options outstanding	3,612,651		3,612,651	$0.7106	$2,567,150
					$ 67,104,767
Stock options reserved for issuance under 2006 plan			4,040,000		
Fully diluted shares			92,024,852		

Notes:
[1] As of Dec 31, 2006
[2] Conversion price will be reduced from $1.35 to $1.00 in connection with the Series B financing
[3] Estimated net proceeds from the Series B financing
[4] Includes 1,342,915 warrants to be issued pursuant to anti-dilution adjustments in connection with the Series B Financing; price adjustment from $1.35
[5] Includes 1,235,232 warrants to be issued pursuant to anti-dilution adjustments in connection with the Series B Financing; price adjustment from $2.50
[6] Represents additional warrants to be issued holders of Series A Preferred stock as consideration for their consent to subordinate to Series B

Schedule 5.5

Consents

In connection with the closing of the preferred stock and warrant financing, we anticipate entering into an Agreement to Exchange and Consent with the holders of our Series A 8% Cumulative Convertible Preferred Stock ("Series A Investors"). The agreement provides that Novelos will issue a total of 1,333,333 warrants to purchase shares of our common stock at $1.25 per share together with a cash payment totaling $40,000 to Series A Investors in exchange for their consent to exchange all their shares of Series A Preferred Stock for shares of Series C Preferred Stock that is junior to the Series B Preferred Stock.

Schedule 5.7(a)

Material Adverse Changes

Since January 1, 2007, Novelos has paid dividends totaling $65,280 to holders of Series A 8% Cumulative Convertible Preferred Stock.

Schedule 5.8b

SEC Filings

None.

Schedule 5.9

Conflicts

The Series A Preferred Stock's Certificate of Designations contains certain prohibitions on amendments to the Company's Certificate of Incorporation which would change the relative seniority rights of the Series A Preferred Stock or create a series of capital stock entitled to seniority as to the payment of dividends or liquidation preference in relation to the Series A Preferred Stock.

In connection with the closing of the preferred stock and warrant financing, we anticipate entering into an Agreement to Exchange and Consent with the holders of Series A Preferred Stock whereby each holder consents to the issuance of the Series B Preferred Stock and the filing of the Certificate of Designations setting forth the relative rights, privileges and preferences of the Series B Preferred Stock and each holder of the Series A Preferred Stock agrees to exchange all shares of Series A Preferred Stock owned by such holder for shares of Series C Preferred Stock that are junior to the Series B Preferred Stock.

As consideration for the consent of the holders of Series A Preferred Stock described above the Company has agreed to issue warrants to purchase an aggregate of 1,333,333 shares of Common Stock at an exercise price per share of $1.25 and pay a $40,000 restructuring fee to the holders of Series A Preferred Stock

Schedule 5.10

Taxes

None.

Schedule 5.11

Title to Properties

As disclosed in our 10-KSB for the year ended December 31, 2006, in connection with the purchase of chemotherapy drugs to be used in Phase 3 clinical trial activities outside of the United States the Company was required to enter into a standby letter of credit arrangement with a bank, expiring in August 2007. At the date hereof, the balance on the standby letter of credit equals the remaining purchase commitment of approximately $837,000. In connection with the letter of credit, at the date hereof, the Company has pledged cash of approximately $995,000 to the bank as collateral on the letter of credit. The pledged cash is included in our restricted cash balance. Also included in restricted cash is approximately $57,000 of cash held in escrow as contractually required under an employment agreement.

Schedule 5.14 (a)

Intellectual Property

None.

Schedule 5.14 (d)

IP Litigation

None.

Schedule 5.19

Brokers and Finders

On February 12, 2007 the Company entered into a letter agreement with the Placement Agent that requires the Company to pay the Placement Agent a cash placement fee of 7% of the aggregate proceeds from the Private Placement. The letter agreement also provides that the Company will issue warrants to the Placement Agent equal to 6% of the total shares underlying the Preferred Stock issued in the Private Placement and reimburse the Placement Agent for reasonable and documented out of pocket expenses, not to exceed $25,000 without the prior approval of the Company.

In connection with the closing of the preferred stock and warrant financing, we anticipate entering into an Agreement to Exchange and Consent with the holders of our Series A 8% Cumulative Convertible Preferred Stock ("Series A Investors"). The agreement provides that Novelos will issue a total of 1,333,333 warrants to purchase shares of our common stock at $1.25 per share together with a cash payment totaling $40,000 to Series A Investors in exchange for their consent to exchange the shares of Series A Preferred Stock for shares of Series C Preferred Stock that are subordinate to the Series B Preferred Stock.

May 2, 2007

Xmark Opportunity Fund, L.P.
Xmark Opportunity Fund, Ltd.
Xmark JV Investment Partners LLC
301 Tresser Blvd, Suite 1320
Stamford, CT 06901

Caduceus Master Fund Limited
Caduceus Capital II, L.P.
UBS Eucalyptus Fund, L.L.C.
PW Eucalyptus Fund, Ltd.
HFR SHC Aggressive Master Trust
c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

Ladies and Gentlemen:

Reference is made herein to that certain Securities Purchase Agreement (the "Original Purchase Agreement"), dated as of April 12, 2007, by and among Novelos Therapeutics, Inc., a Delaware corporation (the "Company"), Xmark Opportunity Fund, L.P., a Delaware limited partnership ("Xmark LP"), Xmark Opportunity Fund, Ltd., a Cayman Islands exempted company ("Xmark Ltd"), Xmark JV Investment Partners LLC, a Delaware limited liability company ("Xmark LLC" and together with Xmark LP and Xmark Ltd, the "Xmark Entities"), Caduceus Master Fund Limited, a Bermuda corporation ("Caduceus Master"), Caduceus Capital II, L.P., a Delaware limited partnership ("Caduceus Capital"), UBS Eucalyptus Fund, L.L.C., a Delaware registered investment company ("UBS Eucalyptus"), PW Eucalyptus Fund, Ltd., a Cayman Islands investment company ("PW Eucalyptus") and HFR SHC Aggressive Master Trust, a Bermuda trust ("HFR" and together with Caduceus Master, Caduceus Capital, UBS Eucalyptus, PW Eucalyptus, the "OrbiMed Entities", and the OrbiMed Entities and the Xmark Entities together, the "Lead Investors"), and the other investors set forth on Schedule I affixed thereto (each an "Investor" and collectively the "Investors"; for the avoidance of doubt, the Lead Investors are each an Investor) All capitalized terms used, but not otherwise defined, herein shall have the meanings ascribed to such terms in the Original Purchase Agreement.

The terms of the Original Purchase Agreement are hereby amended by the Company and the Lead Investors as follows (which amended terms shall be binding on all Investors as provided for in the Original Purchase Agreement):

1. Recital A of the Original Purchase Agreement is hereby amended (i) to change the number of shares of Preferred Stock to be issued pursuant to the Original Purchase Agreement from "up to 1,500 shares" to "up to 300 shares" and (ii) to change the stated value of the Preferred Stock from "$10,000.00" to "$50,000.00".

2. Schedule I of the Original Purchase Agreement is hereby amended to reduce the number of shares of Preferred Stock being purchased by each Investor by dividing (i) the number of shares listed under the heading "Number of Shares of Preferred Stock" on Schedule I of the Original Purchase Agreement with respect to each Investor by (ii) five (5).

3. The form of Certificate of Designations attached as Exhibit A to the Original Purchase Agreement is hereby replaced in its entirety with the form of Certificate of Designations attached hereto as **Exhibit A** and made a part hereof.

Unless otherwise provided herein, all rights and obligations of the Investors set forth in the Original Purchase Agreement shall remain in full force and effect in accordance with the terms and conditions set forth in the Original Purchase Agreement.

Please confirm that the foregoing correctly and completely sets forth our understanding of the subject matter contained herein by signing where indicated below.

Very truly yours,

NOVELOS THERAPEUTICS, INC.

By: /s/ Harry S. Palmin

Name: Harry S. Palmin
Title: President and CEO

XMARK OPPORTUNITY FUND, LTD.

By: Xmark Opportunity Manager, LLC,
its Investment Manager

By: Xmark Opportunity Partners, LLC,
its Sole Member

By: Xmark Capital Partners, LLC,
its Managing Member

By: /s/ Mitchell D. Kaye

Name: Mitchell D. Kaye
Title: Chief Executive Officer

XMARK OPPORTUNITY FUND, L.P.

By: Xmark Opportunity GP, LLC,
its General Partner

By: Xmark Opportunity Partners, LLC,
its Sole Member

By: Xmark Capital Partners, LLC,
its Managing Member

By: /s/ Mitchell D. Kaye

Name: Mitchell D. Kaye
Title: Chief Executive Officer

XMARK JV INVESTMENT PARTNERS, LLC

By: Xmark Opportunity Partners, LLC,
its Investment Manager

By: Xmark Capital Partners, LLC,
its Managing Member

By: /s/ Mitchell D. Kaye

Name: Mitchell D. Kaye
Title: Chief Executive Officer

CADUCEUS MASTER FUND LIMITED

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

CADUCEUS CAPITAL II, L.P.

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

UBS EUCALYPTUS FUND, L.L.C.

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

PW EUCALYPTUS FUND, LTD.

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

HFR SHC AGGRESSIVE MASTER TRUST

By: /s/ Dora Hines

Name: Dora Hines, for and on behalf of HFR Asset Management, LLC
Title: Attorney-in-fact

Exhibit A

Certificate of Designations

[See Exhibit 3.2 of this filing]

Execution Copy

REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (the "**Agreement"**) is made and entered into as of this 2nd day of May, 2007 by and among Novelos Therapeutics, Inc., a Delaware corporation (the "**Company**"), and the "**Investors**" named in that certain Securities Purchase Agreement, dated April 12, 2007, by and among the Company and the Investors (as amended on May 2, 2007, the "**Securities Purchase Agreement**"). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Securities Purchase Agreement.

The parties hereby agree as follows:

1. Certain Definitions.

As used in this Agreement, the following terms shall have the following meanings:

"**Holders**" shall mean the Investors**,** the Lead Investors and any Affiliate or permitted transferee thereof who is a subsequent holder of any Shares, Warrants or Registrable Securities.

"**Investors**" shall mean the Investors identified in the Securities Purchase Agreement.

"**Lead Investors**" shall mean Xmark Opportunity Fund, L.P., a Delaware limited partnership, Xmark Opportunity Fund, Ltd., a Cayman Islands exempted company, Xmark JV Investment Partners LLC, a Delaware limited liability company, Caduceus Master Fund Limited, a Bermuda corporation, Caduceus Capital II, L.P., a Delaware limited partnership, UBS Eucalyptus Fund, L.L.C., a Delaware registered investment company, PW Eucalyptus Fund, Ltd., a Cayman Islands investment company and HFR SHC Aggressive Master Trust, a Bermuda trust, so long as they continue to own any Shares, and thereafter, any action or consent required of the Lead Investors shall be satisfied by a majority of the Holders.

"**NASD**" shall mean the National Association of Securities Dealers, Inc.

"**Preferred Stock**" means the Series B Convertible Preferred Stock, par value $0.00001 per share

"**Prospectus**" shall mean the prospectus included in any Registration Statement, as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by such Registration Statement and by all other amendments and supplements to the prospectus, including post-effective amendments and all material incorporated by reference in such prospectus.

"**Register**," "**registered**" and "**registration**" refer to a registration made by preparing and filing a Registration Statement or similar document in compliance with the 1933 Act (as defined below), and the declaration or ordering of effectiveness of such Registration Statement or document.

"**Registrable Securities**" shall mean the shares of Common Stock issuable (i) upon conversion of the Preferred Stock issued pursuant to the Securities Purchase Agreement, (ii) issuable as payment-in-kind dividends on the Preferred Stock in accordance with the terms thereof, (iii) upon the exercise of the Warrants, and (iv) with respect to or in exchange for Registrable Securities; provided, that, a security shall cease to be a Registrable Security upon sale pursuant to a Registration Statement.

"**Registration Statement**" shall mean any registration statement of the Company filed under the 1933 Act that covers the resale of any of the Registrable Securities pursuant to the provisions of this Agreement, amendments and supplements to such Registration Statement, including post-effective amendments, and all exhibits and all material incorporated by reference in such Registration Statement.

2. Registration.

(a) Registration Statement. Promptly following the Closing of the purchase and sale of the Preferred Stock contemplated by the Securities Purchase Agreement (the "**Closing Date**"), but in no event after thirty (30) calendar days after the Closing Date (the "**Filing Deadline**"), the Company shall prepare and file with the SEC one Registration Statement on Form SB-2 covering the resale of all of the Registrable Securities without regard to any limitation on the conversion of shares of Preferred Stock or exercise of the Warrants and assuming that all dividends payable on the Preferred Stock pursuant to the term thereof shall be payment-in shares of common stock. Such Registration Statement shall include the plan of distribution attached hereto as Exhibit A. Such Registration Statement also shall cover, to the extent allowable under the 1933 Act and the rules promulgated thereunder (including Rule 416), such indeterminate number of additional shares of Common Stock resulting from stock splits, stock dividends or similar transactions with respect to the Registrable Securities. The Registration Statement (and each amendment or supplement thereto, and each request for acceleration of effectiveness thereof) shall be provided in accordance with Section 3(c) to the Holders and their respective counsel prior to its filing or other submission. If a Registration Statement covering the Registrable Securities is not filed with the SEC on or prior to the Filing Deadline, the Company will make pro rata payments to each Holder, as liquidated damages and not as a penalty, in an amount equal to 1.5% of the aggregate amount invested by such Holder (the amount invested by a Holder shall include the purchase price of the Shares acquired by such Holder and shall exclude any amount attributable to the Warrants acquired by such Holder pursuant to the Securities Purchase Agreement) for each 30-day period or pro rata for any portion thereof following the date by which such Registration Statement should have been filed for which no Registration Statement is filed with respect to the Registrable Securities. Such payments shall be in partial compensation to the Holders, and shall not constitute the Holders' exclusive remedy for such events. Such payments shall be made to each Holder in cash. The amounts payable as liquidated damages pursuant to this paragraph shall be payable in lawful money of the United States, and amounts payable as liquidated damages shall be paid within two (2) Business Days of the last day of each such 30-day period during which the Registration Statement should have been filed for which no Registration Statement was filed with respect to the Registrable Securities.

(b) Expenses. The Company will pay all expenses associated with each registration, including filing and printing fees, counsel and accounting fees and expenses, costs associated with clearing the Registrable Securities for sale under applicable state securities laws and listing fees, but excluding the fees and disbursements of more than one law firm serving as counsel to the Holders, and discounts, commissions, fees of underwriters, selling brokers, dealer managers or similar securities industry professionals with respect to the Registrable Securities being sold.

(c) Effectiveness.

(i) The Company shall use its best efforts to have the Registration Statement declared effective not later than the earlier to occur of (x) the 90th day immediately following the Closing Date, (y) five (5) Business Days following the Company's receipt of a no-review letter from the SEC relating to the Registration Statement, or (z) the 120th day following the Closing Date if the Company's receives a review from the SEC relating to the Registration Statement; provided, however, if the Registration Statement is not declared effective within the time period set forth above, the Company shall continue to use its best efforts to have the Registration Statement declared effective as soon as possible thereafter. If (A) the Registration Statement has not been declared effective by the earlier of (x) or (z) in the preceding sentence, or (B) after a Registration Statement has been declared effective by the SEC, sales cannot be made pursuant to such Registration Statement for any reason (including, without limitation, by reason of a stop order, or the Company's failure to update the Registration Statement), but except as excused pursuant to subsection (ii) below, then the Company will make pro rata payments to each Holder, as liquidated damages and not as a penalty, in an amount equal to 1.5% of the aggregate amount invested by such Holder (the amount invested by a Holder shall include the purchase price of the Shares acquired by such Holder and shall exclude any amount attributable to the Warrants acquired by such Holder pursuant to the Securities Purchase Agreement) for each 30-day period or pro rata for any portion thereof following the date (1) by which such Registration Statement should have been effective as described in (A) above had the Company used its best efforts to have the Registration Statement declared effective or (2) sales cannot be made pursuant to such Registration Statement after it has been declared effective as described in (B) above (the "**Blackout Period**"). Such payments shall be in partial compensation to the Holders, and shall not constitute the Holders' exclusive remedy for such events. The Blackout Period shall terminate upon (x) the effectiveness of the Registration Statement in the case of (A) above; and (y) the Registration Statement again being available for sales by the Holders in the case of (B) above. The amounts payable as liquidated damages pursuant to this paragraph shall be payable in lawful money of the United States, and amounts payable as liquidated damages shall be paid within two (2) Business Days of the last day of each 30-day period following the commencement of the Blackout Period until the termination of the Blackout Period.

(ii) For not more than fifteen (15) consecutive days or for a total of not more than thirty (30) days in any twelve (12) month period, the Company may delay the disclosure of material non-public information concerning the Company, by terminating or suspending effectiveness of any registration contemplated by this Section 2 without incurring liability for liquidated damages pursuant to Section 2(c)(i), if the disclosure of such material non-public information at the time is not, in the good faith opinion of the Company, in the best interests of the Company (an "**Allowed Delay**"); provided, that the Company shall promptly (a) notify the Holders in writing of the existence of (but in no event, without the prior written consent of a Holder, shall the Company disclose to such Holder any of the facts or circumstances regarding) material non-public information giving rise to an Allowed Delay, and (b) advise the Holders in writing to cease all sales under the Registration Statement until the end of the Allowed Delay.

(d) Underwritten Offering. If any offering pursuant to a Registration Statement filed pursuant to Section 2(a) hereof involves an underwritten offering, the Company shall have the right to select an investment banker and manager to administer the offering, subject to the reasonable satisfaction of the Requisite Holders.

3. Company Obligations. The Company will use its best efforts to effect the registration of the Registrable Securities in accordance with the terms hereof, and pursuant thereto the Company will, as expeditiously as possible:

(a) use its best efforts to cause such Registration Statement to become effective and to remain continuously effective for a period that will terminate upon the earlier of (i) the date on which all Registrable Securities covered by such Registration Statement, as amended from time to time, have been sold and (ii) two years from the Closing Date;

(b) prepare and file with the SEC such amendments and post-effective amendments to the Registration Statement and the Prospectus as may be necessary to keep the Registration Statement effective for the period specified in Section 3(a) and to comply with the provisions of the 1933 Act and the 1934 Act with respect to the distribution of all Registrable Securities;

(c) provide copies to and permit counsel to the Investors to review each Registration Statement and all amendments thereto no fewer than three (3) days prior to their filing with the SEC and not file any document to which such counsel reasonably objects within three (3) days following receipt by such counsel of such Registration Statement and/or amendments thereto;

(d) furnish to the Holders and their legal counsel (i) promptly after the same is prepared and publicly distributed, filed with the SEC, or received by the Company (but not later than two (2) Business Days after the filing date, receipt date or sending date, as the case may be), an electronic copy of any Registration Statement and any amendment thereto, each preliminary prospectus and Prospectus and each amendment or supplement thereto, and each letter written by or on behalf of the Company to the SEC or the staff of the SEC, and each item of correspondence from the SEC or the staff of the SEC, in each case relating to such Registration Statement (other than any portion thereof which contains information for which the Company has sought confidential treatment), and (ii) such number of copies of a Prospectus, including a preliminary prospectus, and all amendments and supplements thereto and such other documents as each Holder may reasonably request in order to facilitate the disposition of the Registrable Securities owned by such Holder, which in any event, shall not exceed ten (10) Prospectuses;

(e) in the event the Company selects an underwriter for the offering, the Company shall enter into and perform its reasonable obligations under an underwriting agreement, in usual and customary form, including, without limitation, customary indemnification and contribution obligations, with the underwriter of such offering;

(f) if required by the underwriter, the Company shall furnish, on the effective date of the Registration Statement (i) an opinion, dated as of such date, from independent legal counsel representing the Company for purposes of such Registration Statement, in form, scope and substance as is customarily given in an underwritten public offering, addressed to the underwriter and (ii) a letter, dated such date, from the Company's independent certified public accountants in form and substance as is customarily given by independent certified public accountants to underwriters in an underwritten public offering, addressed to the underwriter and the Holders;

(g) use its reasonable best efforts to prevent the issuance of any stop order or other suspension of effectiveness and, if such order is issued, obtain the withdrawal of any such order at the earliest possible moment;

(h) prior to any public offering of Registrable Securities, use its reasonable best efforts to register or qualify or cooperate with the Holders and their counsel in connection with the registration or qualification of such Registrable Securities for offer and sale under the securities or blue sky laws of such jurisdictions reasonably requested by the Holders and do any and all other reasonable acts or things necessary or advisable to enable the distribution in such jurisdictions of the Registrable Securities covered by the Registration Statement;

(i) cause all Registrable Securities covered by a Registration Statement to be listed or traded on each securities exchange, interdealer quotation system or other market on which similar securities issued by the Company are then listed or traded;

(j) immediately notify the Holders, at any time when a Prospectus relating to the Registrable Securities is required to be delivered under the 1933 Act, upon discovery that, or upon the happening of any event as a result of which, the Prospectus included in such Registration Statement, as then in effect, includes an untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing, and at the request of any such Holder, promptly prepare and furnish to such Holder a reasonable number of copies of a supplement to or an amendment of such Prospectus as may be necessary so that, as thereafter delivered to the purchasers of such Registrable Securities, such Prospectus shall not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing; and

(k) otherwise use its best efforts to comply with all applicable rules and regulations of the SEC under the 1933 Act and the 1934 Act and take such other actions as may be reasonably necessary to facilitate the registration of the Registrable Securities hereunder; and make available to its security holders, as soon as reasonably practicable, but not later than the Availability Date (as defined below), an earnings statement covering a period of at least twelve (12) months, beginning after the effective date of each Registration Statement, which earnings statement shall satisfy the provisions of Section 11(a) of the 1933 Act (for the purpose of this subsection 3(k), "**Availability Date**" means the 45th day following the end of the fourth fiscal quarter that includes the effective date of such Registration Statement, except that, if such fourth fiscal quarter is the last quarter of the Company's fiscal year, "**Availability Date**" means the 90th day after the end of such fourth fiscal quarter).

4. Due Diligence Review; Information. Upon receipt of an appropriate confidentiality agreement, the Company shall make available, during normal business hours, for inspection and review by the Holders, advisors to and representatives of the Holders (who may or may not be affiliated with the Holders), and any underwriter participating in any disposition of Common Stock on behalf of the Holders pursuant to a Registration Statement or amendments or supplements thereto or any blue sky, NASD or other filing, all financial and other records, all filings with the SEC, and all other corporate documents and properties of the Company as may be reasonably necessary for the purpose of such review, and cause the Company's officers, directors and employees, within a reasonable time period, to supply all such information reasonably requested by the Holders or any such representative, advisor or underwriter in connection with such Registration Statement (including, without limitation, in response to all questions and other inquiries reasonably made or submitted by any of them), prior to and from time to time after the filing and effectiveness of the Registration Statement for the sole purpose of enabling the Holders and such representatives, advisors and underwriters and their respective accountants and attorneys to conduct initial and ongoing due diligence with respect to the Company and the accuracy of such Registration Statement.

Notwithstanding the foregoing, the Company shall not disclose material nonpublic information to the Holders, or to advisors to or representatives of the Holders, unless prior to disclosure of such information the Company identifies such information as being material nonpublic information and provides the Holders, such advisors and representatives with the opportunity to accept or refuse to accept such material nonpublic information for review.

5. Obligations of the Holders.

(a) Each Holder agrees to furnish to the Company a completed Questionnaire in the form attached to this Agreement as Exhibit B (a "Selling Shareholder Questionnaire") not more than 10 Trading Days after the Closing Date. A Holder who fails to furnish a Selling Stockholder Questionnaire within 10 Trading Days after the Closing Date may have its Registrable Securities excluded from the Registration Statement.

(b) Each Holder, by its acceptance of the Registrable Securities, agrees to cooperate with the Company as reasonably requested by the Company in connection with the preparation and filing of a Registration Statement hereunder, unless such Holder has notified the Company in writing of its election to exclude all of its Registrable Securities from such Registration Statement.

(c) In the event the Company, at the request of the Holders, determines to engage the services of an underwriter, each such Holder agrees to enter into and perform its obligations under an underwriting agreement, in usual and customary form, including, without limitation, customary indemnification and contribution obligations, with the managing underwriter of such offering and take such other actions as are reasonably required in order to expedite or facilitate the dispositions of the Registrable Securities.

(d) Each Holder agrees that, upon receipt of any notice from the Company of the happening of any event rendering a Registration Statement no longer effective, such Holder will immediately discontinue disposition of Registrable Securities pursuant to the Registration Statement covering such Registrable Securities, until the Holder's receipt of copies of the supplemented or amended Prospectus filed with the SEC and declared effective and, if so directed by the Company, the Holder shall deliver to the Company (at the expense of the Company) or destroy (and deliver to the Company a certificate of destruction) all copies in the Holder's possession of the Prospectus covering the Registrable Securities current at the time of receipt of such notice.

(e) No Holder may participate in any third party underwritten registration hereunder unless it (i) agrees to sell the Registrable Securities on the basis provided in any underwriting arrangements in usual and customary form entered into by the Company, (ii) completes and executes all questionnaires, powers of attorney, indemnities, underwriting agreements and other documents reasonably required under the terms of such underwriting arrangements, and (iii) agrees to pay its pro rata share of all underwriting discounts and commissions. Notwithstanding the foregoing, no Holder shall be required to make any representations to such underwriter, other than those with respect to itself and the Registrable Securities owned by it, including its right to sell the Registrable Securities, and any indemnification in favor of the underwriter by the Holders shall be several and not joint and limited in the case of any Holder, to the net proceeds received by such Holder from the sale of its Registrable Securities. The scope of any such indemnification in favor of an underwriter shall be limited to the same extent as the indemnity provided in Section 6(b) hereof.

6. Indemnification.

(a) Indemnification by the Company. The Company will indemnify and hold harmless each Holder and any controlling person (as defined in Section 15 of the 1933 Act) and their respective officers, directors, members, employees and agents, successors and assigns (the "Indemnified Persons"), against any losses, claims, damages or liabilities, joint or several, to which such Indemnified Person may become subject under the 1933 Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon: (i) any untrue statement or alleged untrue statement of any material fact contained in any Registration Statement, any preliminary prospectus or final prospectus contained therein, or any amendment or supplement thereof; (ii) any blue sky application or other document executed by the Company specifically for blue sky compliance or based upon written information furnished by the Company filed in any state or other jurisdiction in order to qualify any or all of the Registrable Securities under the securities laws thereof (any such application, document or information herein called a **"Blue Sky Application"**); (iii) the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading; (iv) any violation by the Company, or its directors, officers, employees or agents of any rule or regulation promulgated under the 1933 Act applicable to the Company or its directors, officers, employees or agents and relating to action or inaction required of the Company or any of them in connection with such registration; or (v) any failure to register or qualify the Registrable Securities included in any such Registration Statement in any state where the Company or its agents has affirmatively undertaken or agreed in writing that the Company will undertake such registration or qualification on a Holder's behalf (the undertaking of any underwriter chosen by the Company being attributed to the Company) and will reimburse such Holder, and each such officer, director or member and each such controlling person for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action; provided, however, that the Company will not be liable in any such case if and to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in conformity with information furnished in writing by such Holder or any such controlling person specifically for use in such Registration Statement or Prospectus.

(b) Indemnification by the Holders. In connection with any Registration Statement pursuant to the terms of this Agreement, each Holder will furnish to the Company in writing such information as the Company reasonably requests concerning such Holder or the proposed manner of such Holder's distribution for use in connection with any Registration Statement or Prospectus and agrees, severally but not jointly, to indemnify and hold harmless, to the fullest extent permitted by law, the Company, its Subsidiaries and its and their respective directors, officers, employees, shareholders and each person who controls the Company (within the meaning of the 1933 Act) against any losses, claims, damages, liabilities and expenses (including reasonable attorney fees) resulting from any untrue statement of a material fact or any omission of a material fact required to be stated in the Registration Statement or Prospectus or preliminary prospectus or amendment or supplement thereto or necessary to make the statements therein not misleading, to the extent, but only to the extent that such untrue statement or omission is contained in any information furnished in writing by such Holder to the Company specifically for inclusion in such Registration Statement or Prospectus or amendment or supplement thereto. In no event shall the liability of a Holder be greater in amount than the aggregate dollar amount of the proceeds (net of all expenses paid by such Holder and the amount of any damages such Holder has otherwise been required to pay by reason of such untrue statement or omission) received by such Holder upon the sale of the Registrable Securities included in the Registration Statement giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. Any person entitled to indemnification hereunder shall (i) give prompt notice to the indemnifying party of any claim with respect to which it seeks indemnification and (ii) permit such indemnifying party to assume the defense of such claim with counsel reasonably satisfactory to the indemnified party; provided that any person entitled to indemnification hereunder shall have the right to employ separate counsel and to participate in the defense of such claim, but the fees and expenses of such counsel shall be at the expense of such person unless (a) the indemnifying party has agreed to pay such fees or expenses, or (b) the indemnifying party shall have failed to assume the defense of such claim and employ counsel reasonably satisfactory to such person or (c) in the reasonable judgment of any such person, based upon advice of its counsel, a conflict of interest exists between such person and the indemnifying party with respect to such claims (in which case, if the person notifies the indemnifying party in writing that such person elects to employ separate counsel at the expense of the indemnifying party, the indemnifying party shall not have the right to assume the defense of such claim on behalf of such person); and provided, further, that the failure of any indemnified party to give notice as provided herein shall not relieve the indemnifying party of its obligations hereunder, except to the extent that such failure to give notice shall materially adversely affect the indemnifying party in the defense of any such claim or litigation. It is understood that the indemnifying party shall not, in connection with any proceeding in the same jurisdiction, be liable for fees or expenses of more than one separate firm of attorneys at any time for all such indemnified parties. No indemnifying party will, except with the consent of the indemnified party, consent to entry of any judgment or enter into any settlement that does not include as an unconditional term thereof the giving by the claimant or plaintiff to such indemnified party of a release from all liability in respect of such claim or litigation.

(d) Contribution. If for any reason the indemnification provided for in the preceding paragraphs (a) and (b) is unavailable to an indemnified party or insufficient to hold it completely harmless, other than as expressly specified therein, then the indemnifying party shall contribute to the amount paid or payable by the indemnified party as a result of such loss, claim, damage or liability in such proportion as is appropriate to reflect the relative fault of the indemnified party and the indemnifying party, as well as any other relevant equitable considerations. No person guilty of fraudulent misrepresentation within the meaning of Section 11(f) of the 1933 Act shall be entitled to contribution from any person not guilty of such fraudulent misrepresentation. In no event shall the contribution obligation of a Holder be greater in amount than the aggregate dollar amount of the proceeds (net of all expenses paid by such holder and the amount of any damages such Holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission) received by it upon the sale of the Registrable Securities giving rise to such contribution obligation.

7. Miscellaneous.

(a) Amendments and Waivers. This Agreement shall not be amended except by a writing signed by (i) the Company and (ii) the Requisite Holders. The Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company shall have obtained the written consent to such amendment, action or omission to act, of the Requisite Holders.

(b) Notices. All notices and other communications provided for or permitted hereunder shall be made as set forth in Section 10.4 of the Securities Purchase Agreement.

(c) Assignments and Transfers by Holders. The provisions of this Agreement shall be binding upon and inure to the benefit of the Holders and their respective successors and assigns. A Holder may transfer or assign, in whole or from time to time in part, to one or more persons its rights hereunder in connection with the transfer of Registrable Securities by such Holder to such person, provided, that, such Holder complies with all applicable laws thereto and provides written notice of assignment to the Company promptly after such assignment is effected.

(d) Assignments and Transfers by the Company. This Agreement shall not be assigned by the Company without the prior written consent of each Holder, except that without the prior written consent of the Holders, but after notice duly given, the Company shall assign its rights and delegate its duties hereunder to any successor-in-interest corporation, and such successor-in-interest shall assume such rights and duties, in the event of a merger or consolidation of the Company with or into another corporation or the sale of all or substantially all of the Company's assets.

(e) Benefits of the Agreement. The terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective permitted successors and assigns of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

(f) Counterparts; Faxes. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Agreement may also be executed via facsimile, which shall be deemed an original.

(g) Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

(h) Severability. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof but shall be interpreted as if it were written so as to be enforceable to the maximum extent permitted by applicable law, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. To the extent permitted by applicable law, the parties hereby waive any provision of law which renders any provisions hereof prohibited or unenforceable in any respect.

(i) Further Assurances. The parties shall execute and deliver all such further instruments and documents and take all such other actions as may reasonably be required to carry out the transactions contemplated hereby and to evidence the fulfillment of the agreements herein contained.

(j) Entire Agreement. This Agreement is intended by the parties as a final expression of their agreement and intended to be a complete and exclusive statement of the agreement and understanding of the parties hereto in respect of the subject matter contained herein. This Agreement supersedes all prior agreements and understandings between the parties with respect to such subject matter.

(k) Governing Law; Consent to Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of New York without regard to the choice of law principles thereof. Each of the parties hereto irrevocably submits to the exclusive jurisdiction of the courts of the State of New York located in New York County and the United States District Court for the Southern District of New York for the purpose of any suit, action, proceeding or judgment relating to or arising out of this Agreement and the transactions contemplated hereby. Service of process in connection with any such suit, action or proceeding may be served on each party hereto anywhere in the world by the same methods as are specified for the giving of notices under this Agreement. Each of the parties hereto irrevocably consents to the jurisdiction of any such court in any such suit, action or proceeding and to the laying of venue in such court. Each party hereto irrevocably waives any objection to the laying of venue of any such suit, action or proceeding brought in such courts and irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. **THE COMPANY AND EACH OF THE HOLDERS HEREBY IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING RELATING TO OR ARISING OUT OF THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED HEREBY.**

[Signature Pages Follow]

[Company Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the Company has executed this Agreement or caused its duly authorized officer to execute this Agreement as of the date first above written.

NOVELOS THERAPEUTICS, INC.

By: /s/ Harry S. Palmin

Name: Harry S. Palmin
Title: President and CEO

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Xmark Opportunity Fund, Ltd.

Print name of entity

By: Xmark Opportunity Manager, LLC,

its Investment Manager

By: Xmark Opportunity Partners, LLC,

its Sole Member

By: Xmark Capital Partners, LLC,

its Managing Member

By: /s/ Mitchell D. Kaye

Name: Mitchell D. Kaye
Title: Chief Executive Officer

Address:

301 Tresser Blvd, Suite 1320
Stamford, CT 06901

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Xmark Opportunity Fund, L.P.

Print name of entity

By: Xmark Opportunity GP, LLC

its General Partner

By: Xmark Opportunity Partners, LLC,

its Sole Member

By: Xmark Capital Partners, LLC,

its Managing Member
By: /s/ Mitchell D. Kaye

Name: Mitchell D. Kaye
Title: Chief Executive Officer

Address:

301 Tresser Blvd, Suite 1320
Stamford, CT 06901

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

_____

(Signature)

_____

(Printed Name)

Address:

_____

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Xmark JV Investment Partners, LLC

Print name of entity

By: Xmark Opportunity Partners, LLC

its Investment Manager

By: Xmark Capital Partners, LLC,

its Managing Member

By: /s/ Mitchell D. Kaye

Name: Mitchell D. Kaye
Title: Chief Executive Officer

Address:

301 Tresser Blvd, Suite 1320
Stamford, CT 06901

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Caduceus Capital Master Fund Limited

Print name of entity

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

Address:
c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Caduceus Capital II, L.P.

Print name of entity

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

Address:
c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

_____

(Signature)

_____

(Printed Name)

Address:

_____

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

UBS Eucalyptus Fund, L.L.C.

Print name of entity

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

Address:
c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

HFR SHC Aggressive Master Trust

Print name of entity

By: /s/ Dora Hines

Name: Dora Hines
Title: for and on behalf of HFR Asset Management, LLC as attorney-in-fact

Address:
c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

_____

(Signature)

_____

(Printed Name)

Address:

_____

_____

_____

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

PW Eucalyptus Fund, Ltd.

Print name of entity

By: /s/ Samuel D. Isaly

Name: Samuel D. Isaly
Title: Managing Partner, OrbiMed Advisors LLC

Print jurisdiction of organization of entity

Address:
c/o OrbiMed Advisors LLC
767 Third Avenue, 30th Floor
New York, NY 10017

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

(Signature)

(Printed Name)

Address:

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Knoll Capital Fund II Master Fund Ltd.

Print name of entity

By: /s/ Fred Knoll

Name: Fred Knoll
Title: KOM Capital Management
Investment Manager

Address:
c/o KOM Capital Management
666 Fifth Avenue, Suite 3702,
New York, NY 10103

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

_____

(Signature)

_____

(Printed Name)

Address:

_____

IF A CORPORATION, PARTNERSHIP, TRUST, ESTATE OR OTHER ENTITY:

Europa International, Inc.

Print name of entity

By: /s/ Fred Knoll

Name: Fred Knoll
Title: Knoll Capital Management
Investment Manager for
Europa International, Inc.

Address:
c/o Knoll Capital Management
666 Fifth Avenue, Suite 3702,
New York, NY 10103

[Holder Signature Page to Registration Rights Agreement]

IN WITNESS WHEREOF, the undersigned has executed this Agreement or caused its duly authorized officers to execute this Agreement as of the date first above written.

IF AN INDIVIDUAL:

_____

(Signature)

_____

(Printed Name)

Address:

_____

IF A CORPORATION, PARTNERSHIP,
TRUST, ESTATE OR OTHER ENTITY:

Hunt Bio-Ventures, L.P. a Delaware Limited Partnership

Print name of entity

By: HBV GP, L.L.C.

its General Partner

By: /s/ J. Fulton Murray, III

Name: J. Fulton Murray III
Title: Manager

Address:
Fountain Place
1445 Ross At Field
Dallas, TX 75202

Plan of Distribution

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, provided that they meet the criteria and conform to the requirements of that rule.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (1) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or (2) the date on which the shares may be sold pursuant to Rule 144(k) of the Securities Act.

Selling Stockholder Questionnaire

To: Novelos Therapeutics, Inc.
c/o Foley Hoag LLP
155 Seaport Boulevard
Boston, MA 02210
Attention: Amanda Kirouac, Esq.
Facsimile: (617) 832-1000

Reference is made to the Registration Rights Agreement (the "Agreement"), made between Novelos Therapeutics, Inc., a Delaware corporation (the "Company"), and the Holders noted therein.

Pursuant to Section 5(a) of the Agreement, the undersigned hereby furnishes to the Company the following information for use by the Company in connection with the preparation of the Registration Statement.

(1) Name and Contact Information:

Full legal name of record holder:	
Address of record holder:	
Social Security Number or Taxpayer identification number of record holder:	
Identity of beneficial owner (if different than record holder):	
Name of contact person:	
Telephone number of contact person:	
Fax number of contact person:	
E-mail address of contact person:	

(2) Beneficial Ownership of Registrable Securities:

(a) Number of Registrable Securities owned by Selling Stockholder:

(b) Number of Registrable Securities requested to be registered:

(3) Beneficial Ownership of Other Securities of the Company Owned by the Selling Stockholder:

Except as set forth below in this Item (3), the undersigned is not the beneficial or registered owner of any securities of the Company other than the Registrable Securities listed above in Item (2)(a).

Type and amount of other securities beneficially owned by the Selling Stockholder:

(4) Relationships with the Company:

Except as set forth below, neither the undersigned nor any of its affiliates, officers, directors or principal equity holders (5% or more) has held any position or office or has had any other material relationship with the Company (or its predecessors or affiliates) during the past three years.

State any exceptions here:

(5) Plan of Distribution:

Except as set forth below, the undersigned intends to distribute pursuant to the Registration Statement the Registrable Securities listed above in Item (2) in accordance with the "Plan of Distribution" section set forth therein:

State any exceptions here:

(6) Selling Stockholder Affiliations:

(a) Is the Selling Stockholder a registered broker-dealer?

(b) Is the Selling Stockholder an affiliate of a registered broker-dealer(s)? (For purposes of this response, an "affiliate" of, or person "affiliated" with, a specified person, is a person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the person specified.)

(c) If the answer to Item (6)(b) is yes, identify the registered broker-dealer(s) and describe the nature of the affiliation(s):

(d) If the answer to Item (6)(b) is yes, did the Selling Stockholder acquire the Registrable Securities in the ordinary course of business (if not, please explain)?

(e) If the answer to Item (6)(b) is yes, did the Selling Stockholder, at the time of purchase of the Registrable Securities, have any agreements, plans or understandings, directly or indirectly, with any person to distribute the Registrable Securities (if yes, please explain)?

(7) Voting or Investment Control over the Registrable Securities:

If the Selling Stockholder is not a natural person, please identify the natural person or persons who have voting or investment control over the Registrable Securities listed in Item (2) above:

Pursuant to Section 2(c) of the Agreement, the undersigned acknowledges that the Company may, by notice to the Holder at its last known address, suspend or withdraw the Registration Statement and require that the undersigned immediately cease sales of Registrable Securities pursuant to the Registration Statement under certain circumstances described in the Agreement. At any time that such notice has been given, the undersigned may not sell Registrable Securities pursuant to the Registration Statement.

The undersigned hereby agrees to sell such shares only pursuant to and in the manner contemplated by the Registration Statement, including the Plan of Distribution section contained therein (in substantially the form attached hereto as Exhibit A), or pursuant to an exemption from the registration requirements under the Securities Act. The undersigned hereby further acknowledges that pursuant to Section 6(b) of the Agreement, the undersigned shall indemnify the Company and each of its directors and officers against, and hold the Company and each of its directors and officers harmless from, any losses, claims, damages, expenses or liabilities (including reasonable attorneys fees) to which the Company or its directors and officers may become subject by reason of any statement or omission in the Registration Statement made in reliance upon, or in conformity with, a written statement by the undersigned, including the information furnished in this Questionnaire by the undersigned.

By signing below, the undersigned consents to the disclosure of the information contained herein in its answers to Items (1) through (7) above and the inclusion of such information in the Registration Statement, any amendments thereto and the related prospectus. The undersigned understands that such information will be relied upon by the Company in connection with the preparation or amendment of the Registration Statement and the related prospectus.

The undersigned has reviewed the answers to the above questions and affirms that the same are true, complete and accurate. THE UNDERSIGNED AGREES TO NOTIFY THE COMPANY IMMEDIATELY OF ANY MATERIAL CHANGES IN THE FOREGOING INFORMATION.

Dated: _____ , 2007

Signature of Record Holder
(Please sign your name in exactly the same manner as the certificate(s) for the shares being registered)

[RODMAN & RENSHAW LETTERHEAD]

February 12, 2007

STRICTLY CONFIDENTIAL

Harry Palmin
Chief Executive Officer & President
Novelos Therapeutics, Inc.
One Gateway Center, Suite 504
Newton, MA 02458

Dear Mr. Palmin:

This letter (the "Agreement") constitutes the agreement between Novelos Therapeutics, Inc. (the "Company") and Rodman & Renshaw, LLC ("Rodman") that Rodman shall serve as the lead placement agent (the "Services") for the Company, on a "best efforts" basis, in connection with the proposed offer and placement (the "Offering") by the Company of securities of the Company (the "Securities"). Rodman shall be authorized to utilize sub-placement agents with the prior consent of the Company, provided that the use of any sub-placement agent by Rodman shall not increase any fees (including cash or warrants) or expenses payable by the Company under this Agreement. The terms of the Offering and the Securities shall be mutually agreed upon by the Company and the investors and nothing herein implies that Rodman would have the power or authority to bind the Company or create an obligation for the Company to issue any Securities or complete the Offering. The Company expressly acknowledges and agrees that Rodman's obligations hereunder are on a reasonable best efforts basis only and that the execution of this Agreement does not constitute a commitment by Rodman to purchase the Securities and does not ensure the successful placement of the Securities or any portion thereof or the success of Rodman with respect to securing any other financing on behalf of the Company.

A. Fees and Expenses. In connection with the Services described above, the Company shall pay to Rodman the following compensation:

1. Placement Agent's Fee. The Company shall pay to Rodman a cash placement fee (the "Placement Agent's Fee") equal to 7% of the aggregate purchase price paid by each purchaser of Securities that are placed in the Offering.

2. Warrants. As additional compensation for the Services the Company shall issue to Rodman or its designees at the closing of the Offering (the "Closing"), warrants (the "Rodman Warrants") to purchase that number of shares of common stock of the Company ("Shares") equal to 6% of the aggregate number of Shares placed in the Offering, plus any shares underlying any convertible Securities sold in the Offering. The Rodman Warrants shall have the same terms, including exercise price and registration rights as the warrants issued to investors ("Investors") in the Offering.

3. Expenses. In addition to any fees payable to Rodman hereunder, but only if an Offering is consummated, the Company hereby agrees to reimburse Rodman for all reasonable and documented travel and other out-of-pocket expenses incurred in connection with Rodman's engagement, including the reasonable fees and expenses of Rodman's counsel. Such reimbursement shall be limited to $25,000 without prior written approval by the Company.

B. Term and Termination of Engagement. The term (the "Term") of Rodman's engagement will begin on the date hereof and end on the earlier of the consummation of the Offering or 15 days after the receipt by either party hereto of written notice of termination; provided that no such notice may be given by the Company for a period of 30 days after the date hereof. Notwithstanding anything to the contrary contained herein, the provisions concerning confidentiality, indemnification, contribution and the Company's obligations to pay fees and reimburse expenses contained herein will survive any expiration or termination of this Agreement.

C. Fee Tail. Rodman shall be entitled to a Placement Agent's Fee and Rodman Warrants, calculated in the manner provided in Paragraph A, with respect to any subsequent public or private offering or other financing or capital-raising transaction of any kind ("Subsequent Financing") to the extent that such financing or capital is provided to the Company by investors whom Rodman had introduced to the Company during the Term, excluding existing stockholders of the Company, if such Subsequent Financing is consummated at any time within the 12-month period following the expiration or termination of this Agreement (the "Tail Period"). Promptly following the Closing or termination of this agreement, Rodman will provide Company with written notice of the parties introduced to the Company by Rodman.

D. Use of Information. The Company will furnish Rodman such written information as Rodman reasonably requests in connection with the performance of its services hereunder. The Company understands, acknowledges and agrees that, in performing its services hereunder, Rodman will use and rely entirely upon such information as well as publicly available information regarding the Company and that Rodman does not assume responsibility for independent verification of the accuracy or completeness of any information, whether publicly available or otherwise furnished to it, concerning the Company including, without limitation, any financial information, forecasts or projections considered by Rodman in connection with the provision of its services.

E. Confidentiality. In the event of the consummation or public announcement of any Offering, Rodman shall have the right to disclose its participation in such Offering, including, without limitation, the placement at its cost of "tombstone" advertisements in financial and other newspapers and journals. Rodman agrees not to use any confidential information concerning the Company provided to Rodman by the Company for any purposes other than those contemplated under this Agreement.

F. Securities Matters. The Company shall be responsible for any and all compliance with the securities laws applicable to it, including Regulation D and the Securities Act of 1933, and Rule 506 promulgated thereunder, and unless otherwise agreed in writing, all state securities ("blue sky") laws. Rodman agrees to cooperate with counsel to the Company in that regard.

G. Rodman Representations and Warranties. Rodman represents and warrants that: (i) it is duly registered as a broker-dealer pursuant to the Securities and Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder and is a member in good standing of the NASD, (ii) during the course of the Offering, it will not make any untrue statement of a material fact, or omit to state a material fact required to be stated by it or necessary to make any statement made by it not misleading, concerning the Offering or any matters set forth in or contemplated by the Offering materials (it being understood that the statements made in such materials are deemed to be made by the Company and not by Rodman), (iii) Rodman will not offer, offer to sell or sell any Shares or Warrants on the basis of any written communications or documents relating to the Company or its business other than the Offering materials, (iv) Rodman will not engage in any form of general solicitation or general advertising which is prohibited by Regulation D in connection with the Offering, (v) Rodman will not offer to sell or sell any Shares or Warrants to any investor unless Rodman believes and has reason to believe, based on such investigation believed by it to be appropriate, that such investor is an "accredited investor" as defined in Regulation D, Rules 501, of the Act, and (vi) Rodman will cooperate fully with the Company and its counsel with respect to compliance with all applicable federal, state and foreign securities and "blue sky" laws applicable to the Offering.

H. Indemnity.

1. In connection with the Company's engagement of Rodman as placement agent, the Company hereby agrees to indemnify and hold harmless Rodman and its controlling persons and the respective directors, officers, shareholders, agents and employees of any of the foregoing (collectively the "Indemnified Persons"), from and against any and all claims, actions, suits, proceedings (including those of shareholders), damages, liabilities and expenses incurred by any of them (including the reasonable fees and expenses of counsel), (collectively a "Claim"), which are (A) related to or arise out of (i) any actions taken or omitted to be taken (including any untrue statements made or any statements omitted to be made) by the Company, or (ii) any actions taken or omitted to be taken by any Indemnified Person in connection with the Company's engagement of Rodman, or (B) otherwise relate to or arise out of Rodman's activities on the Company's behalf under Rodman's engagement, and the Company shall reimburse any Indemnified Person for all expenses (including the reasonable fees and expenses of counsel) incurred by such Indemnified Person in connection with investigating, preparing or defending any such claim, action, suit or proceeding, whether or not in connection with pending or threatened litigation in which any Indemnified Person is a party. The Company will not, however, be responsible for any Claim, which is finally judicially determined to have resulted from the recklessness, gross negligence or willful misconduct of any person seeking indemnification for such Claim. The Company further agrees that no Indemnified Person shall have any liability to the Company for or in connection with the Company's engagement of Rodman except for any Claim incurred by the Company as a result of such Indemnified Person's recklessness, gross negligence or willful misconduct.

2. The Company further agrees that it will not, without the prior written consent of Rodman, settle, compromise or consent to the entry of any judgment in any pending or threatened Claim in respect of which indemnification may be sought hereunder (whether or not any Indemnified Person is an actual or potential party to such Claim), unless such settlement, compromise or consent includes an unconditional, irrevocable release of each Indemnified Person from any and all liability arising out of such Claim.

3. Promptly upon receipt by an Indemnified Person of notice of any complaint or the assertion or institution of any Claim with respect to which indemnification is being sought hereunder, such Indemnified Person shall notify the Company in writing of such complaint or of such assertion or institution but failure to so notify the Company shall not relieve the Company from any obligation it may have hereunder, except and only to the extent such failure results in the forfeiture by the Company of substantial rights and defenses. If the Company so elects or is requested by such Indemnified Person, the Company will assume the defense of such Claim, including the employment of counsel reasonably satisfactory to such Indemnified Person and the payment of the fees and expenses of such counsel. In the event, however, that legal counsel to such Indemnified Person reasonably determines that having common counsel would present such counsel with a conflict of interest or if the defendant in, or target of, any such Claim, includes an Indemnified Person and the Company, and legal counsel to such Indemnified Person reasonably concludes that there may be legal defenses available to it or other Indemnified Persons different from or in addition to those available to the Company, then such Indemnified Person may employ its own separate counsel, reasonably satisfactory to the Company, to represent or defend him, her or it in any such Claim and the Company shall pay the reasonable fees and expenses of such counsel. Notwithstanding anything herein to the contrary, if the Company fails timely or diligently to defend, contest, or otherwise protect against any Claim, the relevant Indemnified Party shall have the right, but not the obligation, to defend, contest, compromise, settle, assert crossclaims, or counterclaims or otherwise protect against the same, and shall be fully indemnified by the Company therefor, including without limitation, for the reasonable fees and expenses of its counsel and all amounts paid as a result of such Claim or the compromise or settlement thereof. In addition, with respect to any Claim in which the Company assumes the defense, the Indemnified Person shall have the right to participate in such Claim and to retain his, her or its own counsel therefor at his, her or its own expense.

4. The Company agrees that if any indemnity sought by an Indemnified Person hereunder is held by a court to be unavailable for any reason then (whether or not Rodman is the Indemnified Person), the Company and Rodman shall contribute to the Claim for which such indemnity is held unavailable in such proportion as is appropriate to reflect the relative benefits to the Company, on the one hand, and Rodman on the other, in connection with Rodman's engagement referred to above, subject to the limitation that in no event shall the amount of Rodman's contribution to such Claim exceed the amount of fees actually received by Rodman from the Company pursuant to Rodman's engagement. The Company hereby agrees that the relative benefits to the Company, on the one hand, and Rodman on the other, with respect to Rodman's engagement shall be deemed to be in the same proportion as (a) the total value paid or proposed to be paid or received by the Company or its stockholders as the case may be, pursuant to the Offering (whether or not consummated) for which Rodman is engaged to render services bears to (b) the fee paid or proposed to be paid to Rodman in connection with such engagement.

5. The Company's indemnity, reimbursement and contribution obligations under this Agreement (a) shall be in addition to, and shall in no way limit or otherwise adversely affect any rights that any Indemnified Party may have at law or at equity and (b) shall be effective whether or not the Company is at fault in any way.

I. Limitation of Engagement to the Company. The Company acknowledges that Rodman has been retained only by the Company, that Rodman is providing services hereunder as an independent contractor (and not in any fiduciary or agency capacity) and that the Company's engagement of Rodman is not deemed to be on behalf of, and is not intended to confer rights upon, any shareholder, owner or partner of the Company or any other person not a party hereto as against Rodman or any of its affiliates, or any of its or their respective officers, directors, controlling persons (within the meaning of Section 15 of the Act or Section 20 of the Securities Exchange Act of 1934), employees or agents. Unless otherwise expressly agreed in writing by Rodman, no one other than the Company is authorized to rely upon this Agreement or any other statements or conduct of Rodman, and no one other than the Company is intended to be a beneficiary of this Agreement. The Company acknowledges that any recommendation or advice, written or oral, given by Rodman to the Company in connection with Rodman's engagement is intended solely for the benefit and use of the Company's management and directors in considering a possible Offering, and any such recommendation or advice is not on behalf of, and shall not confer any rights or remedies upon, any other person or be used or relied upon for any other purpose. Rodman shall not have the authority to make any commitment binding on the Company. The Company, in its sole discretion, shall have the right to reject any investor introduced to it by Rodman. Rodman will be entitled to rely on the representations and warranties of the Company contained in the purchase agreement and related transaction documents as if the representations and warranties were made directly to Rodman by the Company.

J. Limitation of Rodman's Liability to the Company. Rodman and the Company further agree that neither Rodman nor any of its controlling persons (within the meaning of Section 15 of the Act or Section 20 of the Exchange Act of 1934), nor their respective officers, directors, employees or agents shall have any liability to the Company, its security holders or creditors, or any person asserting claims on behalf of or in the right of the Company (whether direct or indirect, in contract, tort, for an act of negligence or otherwise) for any losses, fees, damages, liabilities, costs, expenses or equitable relief arising out of or relating to this Agreement or the Services rendered hereunder, except for losses, fees, damages, liabilities, costs or expenses that arise out of or are based on any action of or failure to act by Rodman and that are finally judicially determined to have resulted solely from the recklessness, gross negligence or willful misconduct of Rodman.

K. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York applicable to agreements made and to be fully performed therein. Any disputes which arise under this Agreement, even after the termination of this Agreement, will be heard only in the state or federal courts located in the City of New York, State of New York. The parties hereto expressly agree to submit themselves to the jurisdiction of the foregoing courts in the City of New York, State of New York. The parties hereto expressly waive any rights they may have to contest the jurisdiction, venue or authority of any court sitting in the City and State of New York. Any rights to trial by jury with respect to any such action, proceeding or suit are hereby waived by Rodman and the Company.

L. Notices. All notices hereunder will be in writing and sent by certified mail, hand delivery, overnight delivery or telefax, if sent to Rodman, to Rodman & Renshaw, LLC, 1270 Avenue of the Americas, 16th Floor, New York, NY 10020, Telefax number (212) 356-0536, Attention: Thomas Pinou, and if sent to the Company, to Novelos Therapeutics, Inc., One Gateway Center, Suite 504, Newton, MA 02458, Telefax number 617-681-0302, Attention: Joanne M. Protano with a copy to Foley Hoag LLP, 155 Seaport Boulevard, Boston, MA 02210, Attention: Paul Bork, Esq., Telefax number 617-832-7000. Notices sent by certified mail shall be deemed received five days thereafter, notices sent by hand delivery or overnight delivery shall be deemed received on the date of the relevant written record of receipt, and notices delivered by telefax shall be deemed received as of the date and time printed thereon by the telefax machine.

M. Miscellaneous. This Agreement shall not be modified or amended except in writing signed by Rodman and the Company. This Agreement shall be binding upon and inure to the benefit of both Rodman and the Company and their respective assigns, successors, and legal representatives. This Agreement constitutes the entire agreement of Rodman and the Company with respect to the subject matter hereof and supersedes any prior agreements. If any provision of this Agreement is determined to be invalid or unenforceable in any respect, such determination will not affect such provision in any other respect, and the remainder of the Agreement shall remain in full force and effect. This Agreement may be executed in counterparts (including facsimile counterparts), each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

In acknowledgment that the foregoing correctly sets forth the understanding reached by Rodman and the Company, please sign in the space provided below, whereupon this letter shall constitute a binding Agreement as of the date indicated above.

Very truly yours,

RODMAN & RENSHAW, LLC

By: /s/ Thomas G. Pinou

Name: Thomas G. Pinou
Title: Chief Financial Officer

Accepted and Agreed:

NOVELOS THERAPEUTICS, INC.

By /s/ Harry S. Palmin

Name: Harry S. Palmin
Title: President & CEO

AGREEMENT TO EXCHANGE AND CONSENT

This Agreement to Exchange and Consent (the "Agreement"), dated as of May 1, 2007, is entered into by and among Novelos Therapeutics, Inc., a Delaware corporation (the "Company"), and each of the signatories hereto (collectively, the "Series A Investors").

WHEREAS, each of the Series A Investors is the holder of shares of Series A 8% Cumulative Convertible Preferred Stock, $.00001 par value per share (the "Series A Preferred Stock") and warrants to purchase ("Series A Warrants") shares of its common stock, $.00001 par value per share (the "Common Stock"), acquired pursuant to a Subscription Agreement dated September 30, 2005 or October 3, 2005 (the "Subscription Agreement");

WHEREAS, the Subscription Agreement requires the Company to file a Registration Statement with the SEC to register 175% of the shares of common stock issuable upon conversion of the Series A Preferred Stock and 100% of the shares of common stock issuable upon exercise of the Series A Warrants (the "Registrable Securities") and Section 11.1(iv) of the Subscription Agreement provides that the Registrable Securities shall be reserved and set aside exclusively for the benefit of the Series A Investors and not issued, employed or reserved for anyone other than the Series A Investors;

WHEREAS, the Series A Preferred Stock's Certificate of Designations ("Certificate of Designations") contains certain prohibitions on amendments to the Company's Certificate of Incorporation which would change the relative seniority rights of the Series A Preferred Stock or create a series of capital stock entitled to seniority as to the payment of dividends or liquidation preference in relation to the Series A Preferred Stock;

WHEREAS, the Company expects to issue and sell shares of a new series of its Preferred Stock ("Series B Preferred Stock") and warrants to purchase Common Stock to one or more accredited investors (the "Series B Investors") in a transaction, and as a condition to such transaction the Series B Investors require this Agreement;

NOW, THEREFORE, in consideration of the promises referred to below, each of the undersigned Series A Investors, hereby agree with the Company, as follows:

1. Each of the Series A Investors hereby consents to the issuance of the Series B Preferred Stock and the filing of the Series B Certificate of Designations, substantially in the form attached hereto as Exhibit A, setting forth the relative rights, privileges and preferences of the Series B Preferred Stock.

2. Each of the Series A Investors hereby agrees to exchange all shares of Series A Preferred Stock owned by such Series A Investor for the number of shares of Series C Preferred Stock set forth on Schedule I hereto having the relative rights, privileges and preferences set forth in the Series C Certificate of Designations (the "Exchange"), in the form attached hereto as Exhibit B (the "Series C Certificate of Designations").

3. Each of the Series A Investors hereby waives its rights to have the full amount of the Registrable Securities reserved in the Registration Statement exclusively for each Series A Investor's benefit as required by Section 11.1(iv) of the Subscription Agreement, and each Series A Investors agrees that after the issuance and sale of the Series B Preferred Stock, 2,696,283 shares of Common Stock issuable upon conversion of the Series C Preferred Stock and 969,696 shares of Common Stock issuable upon exercise of the Series A Warrants will be reserved in the Registration Statement exclusively for each Series A Investor's benefit.

4. As consideration for the consent of the Series A Investors pursuant to Section 1 hereof, the Exchange pursuant to Section 2, and the waiver of the Series A Investors pursuant to Section 3 the Company agrees to issue warrants to purchase an aggregate of 1,333,333 shares of Common Stock at an exercise price per share of $1.25, such warrants to be substantially in the form attached hereto as Exhibit C (the "Warrants") and $40,000 as an allowance to defray costs and expenses associated with the execution and delivery of this Agreement (the "Allowance"). The allocation of Warrants and the Allowance among the undersigned Series A Investors will be as set forth on Schedule I attached hereto. In addition, at the time of the Exchange each Series A Investor shall receive in cash the dividend accrued on each share of Series A Preferred Stock from April 1, 2007 through the day immediately preceding the date of the Exchange.

5. The Company represents and warrants to and agrees with each Series A Investor that:

(a) After the Exchange, the holding period of the Series C Preferred Stock, the Common Stock issuable upon conversion of the Series C Preferred Stock (the "Conversion Shares") and the Series A Warrants for purposes of Rule 144 under the Securities Act of 1933 (the "1933 Act") shall have commenced on the same date as the holding period of the Series A Preferred Stock.

(b) The Registration Statement filed with the SEC under Registration Nos.: 333-133043 and 333-129744, as amended, will be supplemented (the "Supplement") by the Company on or prior to the 4th business day following the Exchange, to reflect the transactions described in this Agreement, the issuance of the Series B Preferred Stock and all other matters so that upon the filing of the Supplement with the SEC, the Registration Statement will be current and effective with regard to the public resale of the Registrable Securities, which term excludes the Warrants or the shares of Common Stock issuable upon exercise of the Warrants (the "Warrant Shares").

(c) This Agreement, the Warrants and any other agreements delivered together with this Agreement (collectively, "Exchange Documents") and the Series C Certificate of Designations have been duly authorized, executed and delivered by the Company and the Exchange Documents are valid and binding agreements enforceable in accordance with their terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights generally, principles of equity and principles of public policy. The Company has full corporate power and authority necessary to enter into and deliver the Exchange Documents and the Series C Certificate of Designations and to perform its obligations thereunder.

(d) No consent, approval, authorization or order of any court or governmental authority having jurisdiction over the Company nor the Company's shareholders is required for the execution by the Company of the Exchange Documents and Series C Certificate of Designations and compliance and performance by the Company of its obligations under the Exchange Documents, including, without limitation, the issuance of the Series C Preferred Stock, the Conversion Shares, the Warrants and the Warrant Shares (the Series C Preferred Stock, the Conversion Shares, the Warrants and the Warrant Shares are collectively referred to herein as the "Securities").

(e) Assuming the representations and warranties of the Series A Investors in Section 6 are true and correct, neither the issuance of the Securities nor the performance of the Company's obligations under this Agreement and the other Exchange Documents by the Company will:

(i) violate, conflict with, result in a breach of, or constitute a default of a material nature under (A) the certificate of incorporation or bylaws of the Company, (B) to the Company's knowledge, any decree, judgment, order, law, treaty, rule or regulation applicable to the Company of any court or governmental authority having jurisdiction over the Company or over the properties or assets of the Company, (C) the terms of any bond, debenture, note or any other evidence of indebtedness for borrowed money, or any material agreement, stock option or other similar plan, indenture, lease, mortgage, deed of trust or other instrument to which the Company is a party, or by which it is bound, or to which any of the material properties of the Company is subject; or

(ii) result in the creation or imposition of any lien, charge or encumbrance upon the Securities or any of the assets of the Company; or

(iii) result in the activation of any anti-dilution rights or a reset or repricing of any debt or security instrument of any other creditor or equity holder of the Company, nor result in the acceleration of the due date of any obligation of the Company.

(f) Upon issuance, the Series C Preferred Stock, the Conversion Shares and the Warrant Shares:

(i) are, or will be, free and clear of any security interests, liens, claims or other encumbrances, subject to restrictions upon transfer under the 1933 Act and any applicable state securities laws;

(ii) have been, or will be, duly and validly authorized and on the date of issuance of the Conversion Shares and issuance of the Warrant Shares upon exercise of the Warrants will be duly and validly issued, fully paid and nonassessable;

(iii) will not have been issued or sold in violation of any preemptive or other similar rights of the holders of any securities of the Company; and

(iv) will not result in a violation of Section 5 under the 1933 Act.

(g) Upon the issuance and sale of the Series B Preferred Stock the exercise price of the Series A Warrants shall be adjusted to $1.00 per share.

(h) The Company will not reissue any shares of Series B Preferred Stock after such shares of Series B Preferred Stock have been converted or redeemed.

6. Each Series A Investor hereby represents and warrants to and agrees with the Company only as to each Series A Investor that:

(a) The Series A Investor is, and will be at the time of the Exchange and exercise of the Warrants, an "accredited investor", as such term is defined in Regulation D promulgated by the SEC under the 1933 Act, is experienced in investments and business matters, has made investments of a speculative nature and has purchased securities of United States publicly-owned companies in private placements in the past and, with its representatives, has such knowledge and experience in financial, tax and other business matters as to enable the Series A Investor to utilize the information made available by the Company to evaluate the merits and risks of and to make an informed investment decision with respect to the proposed transaction, which represents a speculative investment.

(b) The Series A Investor owns the Series A Preferred Stock free and clear of any liens and encumbrances of third parties.

(c) The Series A Investor understands and agrees that the shares of Series C Preferred Stock, the Warrants and Warrant Shares have not been registered under the 1933 Act or any applicable state securities laws, by reason of their issuance in a transaction that does not require registration under the 1933 Act (based in part on the accuracy of the representations and warranties of Series A Investors contained herein), and that such Securities must be held indefinitely unless a subsequent disposition is registered under the 1933 Act or any applicable state securities laws or is exempt from such registration.

(d) The shares of Series C Preferred Stock, the Warrants and the Warrant Shares shall bear the following or similar legend:

“THE SECURITIES REPRESENTED HEREBY MAY NOT BE TRANSFERRED UNLESS (I) SUCH SECURITIES HAVE BEEN REGISTERED FOR SALE PURSUANT TO THE SECURITIES ACT OF 1933, AS AMENDED, OR (II) THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL SATISFACTORY TO IT THAT SUCH TRANSFER MAY LAWFULLY BE MADE WITHOUT REGISTRATION UNDER THE SECURITIES ACT OF 1933 OR QUALIFICATION UNDER APPLICABLE STATE SECURITIES LAWS.”

7. This Agreement shall be effective immediately. The Company shall deliver the consideration described in Section 4 concurrently with the filing of the Series C Certificate of Designations. Immediately upon the filing of the Series C Certificate of Designations (with no further action required by the Company or the Series A Investors), each share of Series A Preferred Stock will automatically convert into 1/12 of a share of Series C Preferred Stock. Following the Exchange, at the request of any Series A Investor, the Company will issue new Series C Preferred Stock certificates in replacement of the existing Series A Preferred Stock certificates. If for any reason the Series C Certificate of Designations is not filed on or before May 30, 2007, this Agreement shall terminate and the transactions contemplated hereby will be deemed for all purposes to have been abandoned.

8. Upon the Exchange, the Company will deliver an opinion of counsel to the Company with regard to the matters set forth in Section 5(a), in a form satisfactory to the Series A Investors.

9. This Agreement shall be governed by and construed in accordance with the laws of the State of New York without regard to conflicts of laws principles that would result in the application of the substantive laws of another jurisdiction. Any action brought by either party against the other concerning the transactions contemplated by this Agreement shall be brought only in the civil or state courts of New York or in the federal courts located in New York County. THE PARTIES AND THE INDIVIDUALS EXECUTING THIS AGREEMENT AND OTHER AGREEMENTS REFERRED TO HEREIN OR DELIVERED IN CONNECTION HEREWITH ON BEHALF OF THE COMPANY AGREE TO SUBMIT TO THE JURISDICTION OF SUCH COURTS AND WAIVE TRIAL BY JURY. The prevailing party shall be entitled to recover from the other party its reasonable attorney's fees and costs. In the event that any provision of this Agreement or any other agreement delivered in connection herewith is invalid or unenforceable under any applicable statute or rule of law, then such provision shall be deemed inoperative to the extent that it may conflict therewith and shall be deemed modified to conform with such statute or rule of law. Any such provision which may prove invalid or unenforceable under any law shall not affect the validity or enforceability of any other provision of any agreement.

10. The following sections of the Subscription Agreement are hereby incorporated by reference for the benefit of the holders of Series C Preferred Stock, except to the extent the same are modified pursuant to this Agreement and the Series C Certificate of Designations: Section 6, Section 7.1, Section 7.2, Section 7.7, Sections 9(a), (b), (d), (g)-(m), (p) and (s), Section 10, Section 11, Sections 12(b)-(e) and Section 13(f).

11. The Series A Investors hereby expressly agree that upon the Exchange, the Series A Investors will no longer have the right to nominate one person to the Company’s board of directors.

12. Unless otherwise provided, any notice required or permitted under this Agreement shall be given in writing and shall be deemed effectively given as hereinafter described (i) if given by personal delivery, then such notice shall be deemed given upon such delivery, (ii) if given by telex or telecopier, then such notice shall be deemed given upon receipt of confirmation of complete transmittal, (iii) if given by mail, then such notice shall be deemed given upon the earlier of (A) receipt of such notice by the recipient or (B) three (3) Business Days after such notice is deposited in first class mail, postage prepaid, and (iv) if given by a nationally recognized overnight air courier, then such notice shall be deemed given one (1) Business Day after delivery to such carrier. All notices shall be addressed to the party to be notified at the address as follows, or at such other address as such party may designate by ten (10) days' advance written notice to the other party:

If to the Company:

Novelos Therapeutics, Inc.
One Gateway Center, Suite 504
Newton, MA 02458
Attention: Chief Executive Officer
Fax: (617) 964-6331

With a copy to:

Foley Hoag LLP
Seaport World Trade Center West
155 Seaport Boulevard
Boston, MA 02210
Attn: Paul Bork
Fax: (617) 832-7000

If to any of the Series A Investors:

to the addresses set forth on Schedule I affixed hereto.

With a copy to:

Grushko & Mittman, P.C.
551 Fifth Avenue, Suite 1601
New York, NY 10176
Attn: Edward Grushko, Esq.
Fax: (212) 697-3575

13. This Agreement may be executed in any number of counterparts, each such counterpart shall be deemed to be an original instrument, and all such counterparts together shall constitute but one agreement. Facsimile transmission of execution copies or signature pages for this Waiver shall be legal, valid and binding execution and delivery for all purposes.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date first written above.

NOVELOS THERAPEUTICS, INC.

By: /s/ Harry S. Palmin

Name: Harry S. Palmin
Title: President and CEO

LONGVIEW FUND, LP

By: /s/ S. Michael Rudolph

Name: S. Michael Rudolph
Title: CFO - Investment Advisor

SUNRISE EQUITY PARTNERS, LP

By: /s/ Marilyn S. Adler

Name: Marilyn S. Adler
Title: Manager, Level Counter, LLC the General Partner of Sunrise Equity Partners, LP

LONGVIEW EQUITY FUND, LP

By: /s/ S. Michael Rudolph

Name: S. Michael Rudolph
Title: CFO - Investment Advisor

LONGVIEW INTERNATIONAL EQUITY FUND, LP

By: /s/ S. Michael Rudolph

Name: S. Michael Rudolph
Title: CFO - Investment Advisor

[SIGNATURE PAGE MAY BE EXECUTED IN COUNTERPARTS]

Schedule I

Allocation of Warrants, Allowance and Shares of Series C Preferred Stock

Series A Investors	Address	Warrants	Allowance	Shares of Series C Preferred Stock
Longview Fund, L.P	600 Montgomery Street 44th Floor San Francisco, CA 94111	833,334	$ 26,667.00	170
Longview Equity Fund, L.P.	600 Montgomery Street 44th Floor San Francisco, CA 94111	270,833	8,667.00	55.25
Longview International Equity Fund, L.P.	600 Montgomery Street 44th Floor San Francisco, CA 94111	145,833	4,666.00	29.75
Sunrise Equity Partners, L.P.	641 Lexington Avenue 25th Floor New York, NY 10022	83,333	-	17
Total		1,333,333	$ 40,000.00	272

Exhibit A

Series B Certificate of Designations
[See Exhibit 3.2 to this filing]

Exhibit B

Series C Certificate of Designations
[See Exhibit 3.3 to this filing]

Exhibit C

Form of Warrant
[See Exhibit 4.2 to this filing]

Exhibit 31.1

CERTIFICATION

I, HARRY S. PALMIN, certify that:

1. I have reviewed this quarterly report on Form 10-QSB of Novelos Therapeutics, Inc., a Delaware Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the small business issuer as of, and for, the periods presented in this report;

4. The small business issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the small business issuer and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the small business issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Evaluated the effectiveness of the small business issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (c) Disclosed in this report any change in the small business issuer's internal control over financial reporting that occurred during the small business issuer's most recent fiscal quarter (the small business issuer's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the small business issuer's internal control over financial reporting; and

5. The small business issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the small business issuer's auditors and the audit committee of the small business issuer's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the small business issuer's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the small business issuer's internal control over financial reporting.

Date: May 8, 2007

/s/ Harry S. Palmin

Harry S. Palmin
President, Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, GEORGE R. VAUGHN, certify that:

1. I have reviewed this quarterly report on Form 10-QSB of Novelos Therapeutics, Inc., a Delaware Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the small business issuer as of, and for, the periods presented in this report;

4. The small business issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the small business issuer and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the small business issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Evaluated the effectiveness of the small business issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (c) Disclosed in this report any change in the small business issuer's internal control over financial reporting that occurred during the small business issuer's most recent fiscal quarter (the small business issuer's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the small business issuer's internal control over financial reporting; and

5. The small business issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the small business issuer's auditors and the audit committee of the small business issuer's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the small business issuer's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the small business issuer's internal control over financial reporting.

Date: May 8, 2007

/s/ George R. Vaughn

George R. Vaughn
Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION PURSUANT TO

18 U.S.C. § 1350

AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-QSB of Novelos Therapeutics, Inc., (the "Company") for the quarter ended March 31, 2007, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned chief executive officer of the Company certifies, to his best knowledge and belief, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Harry S. Palmin

Harry S. Palmin
President, Chief Executive Officer

Date: May 8, 2007

EXHIBIT 32.2

CERTIFICATION PURSUANT TO

18 U.S.C. § 1350

AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-QSB of Novelos Therapeutics, Inc., (the "Company") for the quarter ended March 31, 2007, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned chief financial officer of the Company certifies, to his best knowledge and belief, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ George R. Vaughn

George R. Vaughn
Chief Financial Officer

Date: May 8, 2007