

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K/A

Amendment No. 1

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended: December 31, 2008

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_.

Commission File Number 333-119366

**NOVELOS THERAPEUTICS, INC.**

(Exact name of Registrant as specified in its Charter)

**Delaware**

(State or other jurisdiction  
of incorporation or organization)

**04-3321804**

(I.R.S. Employer Identification No.)

**One Gateway Center, Suite 504  
Newton, Massachusetts 02458**

(Address of principal executive offices and zip code)

Issuer's telephone number: (617) 244-1616

Securities registered pursuant to Section 12(b) of the Act:

**Title of Class**  
None

**Name of each exchange on which registered**  
Not Applicable

Securities Registered pursuant to Section 12(g) of the Act:

**None**

Indicate by check mark if the registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes  No

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of June 30, 2008 was \$18,351,337.

As of March 20, 2009 there were 43,975,656 shares of the issuer's common stock outstanding.

## Explanatory Note

Novelos Therapeutics, Inc. (the “Company”) is filing this Amendment No. 1 to its Annual Report on Form 10-K for the year ended December 31, 2008, as filed with the Securities and Exchange Commission on March 30, 2009 (the “Original Filing”), to amend the certifications of the Company’s Chief Executive Officer and Chief Financial Officer pursuant to Rule 13a-14 of the Securities Exchange Act of 1934, as amended (the “Certifications”), to correct an inadvertent omission of a portion of paragraph 4 of the Certifications. The Certifications are included herewith as Exhibits 31.1 and 31.2 and the exhibit index in Item 15 of the Original Filing is being amended to reflect the filing of the amended Certifications.

Except for the filing of the amended Certifications and the amendment to Item 15 as described above, this Form 10-K/A does not modify or update any previously reported financial statements or other disclosures in, or exhibits to, the Original Filing.

### ITEM 15. EXHIBITS

Exhibit No.	Description	Filed with this Form		Incorporated by Reference		Exhibit No.
		10-K/A	Form	Filing Date		
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 E convertible preferred stock		8-K	February 18, 2009		4.1
3.3	Certificate of Designations of Series C cumulative convertible preferred stock		10-QSB	May 8, 2007		3.2
3.4	By-laws		8-K	June 17, 2005		2
10.1 **	Employment agreement with Christopher J. Pazoles dated July 15, 2005		10-QSB	August 15, 2005		10.4
10.2 **	Employment Agreement with Harry S. Palmin dated January 31, 2006		8-K	February 6, 2006		99.1
10.3**	2000 Stock Option and Incentive Plan		SB-2	November 16, 2005		10.2
10.4 **	Form of 2004 non-plan non-qualified stock option		SB-2	November 16, 2005		10.3
10.5 **	Form of non-plan non-qualified stock option used from February to May 2005		SB-2	November 16, 2005		10.4
10.6 **	Form of non-plan non-qualified stock option used after May 2005		SB-2	November 16, 2005		10.5
10.7	Form of common stock purchase warrant issued in March 2005		SB-2	November 16, 2005		10.6

Exhibit No.	Description	Filed with this Form	Incorporated by Reference		Exhibit No.
		10-K/A	Form	Filing Date	
10.8	Form of securities purchase agreement dated May 2005		8-K	June 2, 2005	99.1
10.9	Form of subscription agreement dated September 30, 2005		8-K	October 3, 2005	99.1
10.10	Form of Class A common stock purchase warrant dated September 30, 2005		8-K	October 3, 2005	99.3
10.12	Consideration and new technology agreement dated April 1, 2005 with ZAO BAM		10-QSB	August 15, 2005	10.2
10.13	Letter agreement dated March 31, 2005 with The Oxford Group, Ltd.		10-QSB	August 15, 2005	10.3
10.14	Form of securities purchase agreement dated March 2, 2006		8-K	March 3, 2006	99.2
10.15	Form of common stock purchase warrant dated March 2006		8-K	March 3, 2006	99.3
10.16**	2006 Stock Incentive Plan		10-QSB	November 6, 2006	10.1
10.17	Form of Incentive Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.1
10.18	Form of Non-Statutory Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.2
10.19	Form of Non-Statutory Director Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.3
10.20	Securities Purchase Agreement dated April 12, 2007		10-QSB	May 8, 2007	10.1
10.21	Letter Amendment dated May 2, 2007 to the Securities Purchase Agreement		10-QSB	May 8, 2007	10.2
10.22	Registration Rights Agreement dated May 2, 2007		10-QSB	May 8, 2007	10.3
10.23	Agreement to Exchange and Consent dated May 1, 2007		10-QSB	May 8, 2007	10.5
10.25	Form of Common Stock Purchase Warrant dated May 2, 2007 issued pursuant to the Securities Purchase Agreement dated April 12, 2007		10-QSB	May 8, 2007	4.1
10.26	Form of Common Stock Purchase Warrant dated May 2, 2007 issued pursuant to the Agreement to Exchange and Consent dated May 2, 2007		10-QSB	May 8, 2007	4.2
10.27	Securities Purchase Agreement dated March 26, 2008		8-K	April 14, 2008	10.1



Exhibit No.	Description	Filed with this Form	Incorporated by Reference		Exhibit No.
		10-K/A	Form	Filing Date	
10.28	Amendment to Securities Purchase Agreement dated April 9, 2008		8-K	April 14, 2008	10.2
10.29	Registration Rights Agreement dated April 11, 2008		8-K	April 14, 2008	10.3
10.30	Form of Common Stock Purchase Warrant dated April 11, 2008 issued pursuant to the Securities Purchase Agreement dated March 26, 2008		8-K	April 14, 2008	4.3
10.31	Warrant Amendment Agreement dated April 11, 2008		8-K	April 14, 2008	10.5
10.32	Amendment to Registration Rights Agreement dated April 11, 2008		8-K	April 14, 2008	10.4
10.33	Securities Purchase Agreement dated August 14, 2008		8-K	August 18, 2008	10.1
10.34	Securities Purchase Agreement dated February 11, 2009		8-K	February 18, 2009	10.1
10.35	Registration Rights Agreement dated February 11, 2009		8-K	February 18, 2009	10.2
10.36	Series D Preferred Stock Consent and Agreement to Exchange dated February 10, 2009		8-K	February 18, 2009	10.3
10.37	Warrant Amendment Agreements dated February 11, 2009		8-K	February 18, 2009	10.4
10.38	Amendment No. 2 to Registration Rights Agreement dated February 11, 2009		8-K	February 18, 2009	10.5
10.39	Collaboration Agreement dated February 11, 2009 (*)		10-K	March 30, 2009	10.39
31.1	Certification of chief executive officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (as amended)	X			
31.2	Certification of chief financial officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (as amended)	X			
32.1	Certification of chief executive officer and chief financial officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002		10-K	March 30, 2009	32.1

\* Portions of the exhibit have been omitted pursuant to a request for confidential treatment.

\*\* Management contract or compensatory plan.

**SIGNATURES**

In accordance with Section 13 or 15(d) of the Exchange Act, the registrant caused this Annual Report on Form 10-K/A to be signed on its behalf by the undersigned, thereunto duly authorized.

**NOVELOS THERAPEUTICS, INC.**

By: /s/ Harry S. Palmin  
Harry S. Palmin  
Title: President, Chief Executive Officer

Date: April 23, 2009

**CERTIFICATION PURSUANT TO  
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Harry S. Palmin, Chief Executive Officer and President, Novelos Therapeutics, Inc., certify that:

1. I have reviewed this Annual Report on Form 10-K of Novelos Therapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of 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 registrant as of, and for, the periods presented in this report;
4. The registrant'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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant 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 registrant, 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) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed, under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant'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
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant'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 registrant'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 registrant's internal control over financial reporting.

Date: April 23, 2009

/s/ HARRY S. PALMIN  
Harry S. Palmin  
Principal Executive Officer

---

**CERTIFICATION PURSUANT TO  
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Joanne M. Protano, Chief Financial Officer, Novelos Therapeutics, Inc., certify that:

1. I have reviewed this Annual Report on Form 10-K of Novelos Therapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of 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 registrant as of, and for, the periods presented in this report;
4. The registrant'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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant 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 registrant, 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) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed, under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant'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
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant'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 registrant'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 registrant's internal control over financial reporting.

Date: April 23, 2009

/s/ JOANNE M. PROTANO  
Joanne M. Protano  
Principal Financial Officer

---