

**Prospectus Supplement No. 5  
(To Prospectus dated March 28, 2007)**

**NOVELOS THERAPEUTICS, INC.**

**34,285,449 shares of common stock**

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This prospectus supplement supplements the Prospectus dated March 28, 2007, relating to the resale of 34,285,449 shares of our common stock. This prospectus supplement should be read in conjunction with the Prospectus.

**Election of Director**

On August 14, 2007 the Board of Directors of Novelos Therapeutics, Inc. (the "Company") elected James S. Manuso, Ph.D. as a director of the Company, to hold office until the next annual meeting of stockholders and thereafter until his successor is duly elected. Upon his election, Dr. Manuso received an option to purchase 100,000 shares of the Company's common stock at an exercise price of \$0.56 per share, vesting quarterly over two years. Dr. Manuso will also receive quarterly director fees and compensation for meeting attendance consistent with the Company's practice for other independent directors.

The appointment of Dr. Manuso fills the vacancy created by the resignation of Mark Balazovsky in November 2006.

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**Investing in our common stock involves a high degree of risk.  
See Risk Factors beginning on page 7 of the Prospectus.**

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

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The date of this prospectus supplement is August 16, 2007

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