

**Prospectus Supplement No. 4  
(To Prospectus dated May 9, 2013)**

**NOVELOS THERAPEUTICS, INC.  
4,000,000 shares of common stock**

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This prospectus supplement supplements the Prospectus dated May 9, 2013, relating to the resale, from time to time, of up to 4,000,000 shares of our common stock by the stockholders referred to throughout the Prospectus as “selling stockholder.” This prospectus supplement should be read in conjunction with the Prospectus.

**Appointment of President, Chief Executive Officer and Director**

On October 4, 2013, the employment of Harry Palmin, who served as President and Chief Executive Officer of the Company, was terminated without cause in accordance with Mr. Palmin’s employment agreement, as amended. Mr. Palmin also resigned as a Class III Director of the Company on October 4, 2013.

The Company has appointed Dr. Simon Pedder as Acting Chief Executive Officer and has elected Dr. Pedder as a Class III Director replacing Mr. Palmin effective October 4, 2013.

In connection with the appointment of Dr. Pedder as Acting Chief Executive Officer, we entered into a consulting agreement for the period from October 4, 2013 through March 31, 2014 under which the Company will pay Dr. Pedder a consulting fee of \$30,000 per month, granted Dr. Pedder a non-qualified stock option to purchase up to 3,360,000 shares of common stock having an exercise price of \$0.33 per share and vesting equally over four years and granted a non-qualified stock option to purchase up to 1,925,573 shares of common stock having an exercise price of \$0.75 per share and is exercisable as shares of the Company’s common stock are issued following the exercise of outstanding warrants to purchase up to 36,585,895 number of shares, in the ratio of one option share for each 19 shares issued upon warrant exercise. Both non-qualified stock options expire on October 4, 2023 unless earlier exercised or terminated.

We also entered into an employment agreement with Dr. Pedder effective as of April 1, 2014, pursuant to which Dr. Pedder will serve as President and Chief Executive Officer of the Company at a base salary rate of \$350,000 per year beginning April 1, 2014.

We filed the related disclosures with the Securities and Exchange Commission on Form 8-K on October 9, 2013.

**Entry into a Material Definitive Agreement**

On October 9, 2013, we executed a Waiver Agreement with Renova Assets Ltd. (“Renova”) under which Renova has waived all obligations under the Securities Purchase Agreement dated November 1, 2012 between the Company and Renova Industries Ltd. with respect to the use of proceeds received by the Company (the “Proceeds”) in connection with the transactions contemplated under the Securities Purchase Agreement. We have agreed instead to use the Proceeds to fund the development of one of our compounds, LIGHT, and to invite two representatives, designated by Renova and reasonably acceptable by the Company, to act as non-voting board observers through December 31, 2014. We paid \$40,000 to Renova as reimbursement for administrative and other costs in connection with the Waiver Agreement. As reported in the Company’s quarterly report on Form 10-Q for the quarter ended June 30, 2013, approximately \$1,878,232 of the Proceeds remained available for use as of such date.

**Investing in our common stock involves a high degree of risk.  
See Risk Factors beginning on page 6 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 October 9, 2013.

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