

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

NOVELOS THERAPEUTICS, INC.

15,601,703 shares of common stock

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

Completion of Sale of Common Stock and Warrants

As previously reported by us on July 22, 2010, we entered into securities purchase agreements with institutional investors on July 21, 2010. On July 27, 2010, pursuant to the securities purchase agreements, we completed the sale of an aggregate of 21,428,576 shares of our common stock and five-year warrants to purchase up to an aggregate of 16,071,434 shares of our common stock at an exercise price of \$0.07 per share, for gross proceeds of \$1.5 million. After deducting transaction costs, we estimate that the net proceeds will be approximately \$1.25 million.

As previously reported by us on July 22, 2010, we obtained the consent of our preferred stockholders for the transaction pursuant to a consent and waiver dated July 6, 2010, as amended on July 21, 2010. In connection with obtaining this consent, we have agreed to issue five-year warrants to our preferred stockholders for the purchase of up to an aggregate of 16,071,434 shares of common stock at an exercise price of \$0.105 per share.

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

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

The date of this prospectus supplement is July 27, 2010
