Via EDGAR

October 11, 2011

Mr. Jeffrey P. Riedler
Assistant Director
Division of Corporation Finance - Mail Stop 4720
United States Securities and Exchange Commission
Washington, D.C. 20549

Re: Novelos Therapeutics, Inc.
Registration Statement on Form S-1
Initially Filed on July 1, 2011, amended by
Amendment No. 1 to Registration Statement on Form S-1/A
Filed August 15, 2011 and
Amendment No. 2 to Registration Statement on Form S-1/A
Filed September 14, 2011
File Number 333-175284

Dear Mr. Riedler:

This letter constitutes supplemental correspondence on behalf of Novelos Therapeutics, Inc., a Delaware corporation (the "Company"), related to the above-referenced filings (collectively, the "Registration Statement"). The purpose of this letter is to provide certain supplemental information requested by the Staff in comment number two of its letter dated September 28, 2011. The Company's response to comment number one of the September 28th letter will be filed at a later date together with a third amendment to the Registration Statement, which will include an estimated price range. The Company's response to comment number two is set forth below. For your convenience, we have repeated the Staff's comment below in bold face type. Except as otherwise indicated, all statements contained herein concerning factual matters relating to the Company are based on information provided to us by the Company.

Business
Business of Novelos, page 27

2. Your disclosure on page 28 indicates that the IND for LIGHT is held by Dr. Anne Traynor at the University of Wisconsin, who both initiates and conducts the investigation and under whose immediate direction the investigational drug is administered. Please provide us supplemental documentation supporting:

- ***The filing of the IND by Dr. Traynor, and***
- ***Anything received from the FDA regarding the initial filing of the IND and its current status.***

We may have additional comments after we review the documentation you provide us.

The initial filing of the referenced IND (IND #67,287) was made by Dr. Joan Schiller of the University of Wisconsin (UW) in April 2003. She received approval to proceed with clinical investigations in May 2003. Dr. Schiller left UW during 2006, following which the IND was transferred to Dr. George Wilding, for an interim period, and then to Dr. Anne Traynor in November 2007. The Company has supplementally provided to the Staff the FDA correspondence documenting the initial filing by Dr. Schiller, the approval to proceed with clinical investigations, and the subsequent changes in sponsorship of the IND from Dr. Schiller ultimately to Dr. Traynor. Note that in 2005, the radioisotope used in the investigational compound was changed from iodine-131 to iodine-124. The compound currently covered by the IND (^{124}I-NM404) is the same as the compound that the Company refers to as "LIGHT".

From 2003 through present, UW made a series submissions to the FDA under the IND including, among other things, changes to the clinical trial protocol, annual reports and other general correspondence. In October 2008, UW submitted an amendment to the clinical trial protocol in order to increase the dosage of the drug. The FDA responded with a request for additional information to which UW responded. There was then a series of communications between UW and the FDA from late 2008 through late 2010, during which time trial enrollment was suspended pending the resolution of the questions raised by the FDA. In October 2010, the study was put on full clinical hold pending the completion of certain chemistry, manufacturing and controls information and changes to the clinical trial protocol.

In June 2011, UW submitted a response to the outstanding clinical hold questions. At that time, the Company anticipated that enrollment in the clinical trials would commence in the third quarter of 2011. There was then further correspondence and information provided during the subsequent months as some questions were resolved and others required additional information. In July 2011, based on the status of the remaining questions, it was determined that the likely timing of commencement of enrollment would be the fourth quarter of 2011, rather than the third quarter of 2011.

On October 4, 2011, a teleconference was held between the FDA and sponsor during which the remaining outstanding questions were resolved. On October 6, 2011, UW received a letter by electronic mail from the FDA confirming that the trial had been released from clinical hold. The Company has supplementally provided to the Staff a copy of the October 6, 2011 letter. UW currently plans to commence enrollment before the end of 2011.

Should the Staff have any additional comments or questions, please direct such to me at (617) 832-1113 or in my absence to Matthew Eckert at (617) 832-3057.

Very truly yours,

/s/ Paul Bork

Paul Bork

cc: Mr. Harry Palmin (Novelos)