

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

Mail Stop 3030

January 7, 2010

Via U.S. Mail

Mr. Thomas F. Rose Chief Financial Officer RTI Biologics, Inc. 11621 Research Circle Alachua, Florida 32615

Re: RTI Biologics, Inc.

Form 10-K for the Year Ended December 31, 2008

File No. 000-31271

Dear Mr. Rose:

We have completed our review of your Form 10-K and related filings and have no further comments at this time.

Sincerely,

Kevin L. Vaughn Accounting Branch Chief