

Via Facsimile and U.S. Mail
Mail Stop 6010

February 4, 2008

Mr. Donald deBethizy
Chief Executive Officer and President
Targacept, Inc.
200 East First Street, Suite 300
Winston-Salem, NC 27101

Re: Targacept, Inc.
Form 10-K for the Year Ended December 31, 2006
Filed March 22, 2007
Form 10-Q for the Quarterly Period Ended September 30, 2007
Filed November 9, 2007
File No. 000-511739

Dear Mr. deBethizy:

We have completed our review of your Form 10-K for the year ended December 31, 2006 and have no further comment at this time.

Sincerely,

Jim Atkinson
Accounting Branch Chief