

**Targacept, Inc.**  
**100 North Main Street, Suite 1510**  
**Winston-Salem, North Carolina 27101**

July 23, 2015

**VIA EDGAR**

United States Securities and Exchange Commission  
Division of Corporation Finance  
100 F Street, N.E.  
Washington, D.C. 20549  
Attention: Jeffrey P. Riedler, Assistant Director

**RE: Targacept, Inc.**  
**Registration Statement on Form S-4 (File No. 333-204423)**  
**Acceleration Request**

Dear Mr. Riedler:

Pursuant to Rule 461 of Regulation C promulgated under the Securities Act of 1933, as amended, Targacept, Inc. (the "Company") hereby respectfully requests that the above-referenced Registration Statement be made effective at 4:00 p.m. Eastern Time, on Friday, July 24, 2015, or as soon as practicable thereafter.

In connection with the foregoing request, the Company hereby acknowledges that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the Registration Statement effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the Company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

The Company respectfully requests that it be notified of such effectiveness by a telephone call to Megan N. Gates, Esq., at Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. at (617) 348-4443 and that such effectiveness also be confirmed in writing. Any questions regarding this request may be addressed to Ms. Gates.

The cooperation of the staff in meeting the timetable described above is very much appreciated.

Very truly yours,

Targacept, Inc.

/s/ Patrick C. Rock

By: Patrick C. Rock, Esq.

Its: Senior Vice President, General Counsel and Secretary

cc: Securities and Exchange Commission  
Scot Foley, Esq.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.  
Megan N. Gates, Esq.  
Marc Mantell, Esq.

Morrison & Foerster, LLP  
Stephen B. Thau, Esq.  
Alfredo B. D. Silva, Esq.