

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
April 29, 2010**

**ORDER GRANTING CONFIDENTIAL TREATMENT
UNDER THE SECURITIES ACT OF 1933**

Targacept, Inc.

File No. 333-115538 - CF#24900

Targacept, Inc. submitted an application under Rule 406 requesting an extension of a previous grant of confidential treatment for information it excluded from the Exhibits to a Form S-1 filed on May 14, 2004, as amended.

Based on representations by Targacept, Inc. that this information qualifies as confidential commercial or financial information under the Freedom of Information Act, 5 U.S.C. 552(b)(4), the Division of Corporation Finance has determined not to publicly disclose it. Accordingly, excluded information from the following exhibit will not be released to the public for the time period specified:

Exhibit 10.20 through May 14, 2013

For the Commission, by the Division of Corporation Finance, pursuant to delegated authority:

Kathleen Krebs
Special Counsel