UNITED STATES SECURITIES AND EXCHANGE COMMISSION August 19, 2010

ORDER GRANTING CONFIDENTIAL TREATMENT UNDER THE SECURITIES EXCHANGE ACT OF 1934

Targacept, Inc.

File No. 000-51173 - CF# 25522

Targacept, Inc. submitted an application under Rule 24b-2 requesting confidential treatment for information it excluded from the Exhibits to a Form 10-Q filed on August 9, 2010.

Based on representations 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(s) will not be released to the public for the time period(s) specified:

Exhibit 10.1 through August 6, 2020

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

Michael Seaman Special Counsel