UNITED STATES SECURITIES AND EXCHANGE COMMISSION March 22, 2017

ORDER GRANTING CONFIDENTIAL TREATMENT UNDER THE SECURITIES EXCHANGE ACT OF 1934

Acceleron Pharma Inc.

File No. 1-36065 - CF#34763

Acceleron Pharma Inc. submitted an application under Rule 24b-2 requesting confidential treatment for information it excluded from the Exhibits to a Form 10-K filed on March 1, 2017.

Based on representations by Acceleron Pharma 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 10.4.1 through July 3, 2019

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

Brent J. Fields Secretary