UNITED STATES SECURITIES AND EXCHANGE COMMISSION March 17, 2017

ORDER GRANTING CONFIDENTIAL TREATMENT UNDER THE SECURITIES EXCHANGE ACT OF 1934

AcelRx Pharmaceuticals, Inc.

File No. 001-35068 - CF#34400

AcelRx Pharmaceuticals, Inc. submitted an application under Rule 24b-2 requesting an extension of a previous grant of confidential treatment for information it excluded from the Exhibit to a Form 10-Q filed on August 4, 2015, as revised in the Exhibit to a Form 8-K filed on March 10, 2017.

Based on representations by AcelRx Pharmaceuticals, 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 November 10, 2021

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

Brent J. Fields Secretary