UNITED STATES SECURITIES AND EXCHANGE COMMISSION February 14, 2012

ORDER GRANTING CONFIDENTIAL TREATMENT UNDER THE SECURITIES ACT OF 1933

RXi Pharmaceuticals Corporation

File No. 333-177498 - CF#27457

RXi Pharmaceuticals Corporation submitted an application under Rule 406 requesting confidential treatment for information it excluded from the Exhibits to a Form S-1 registration statement filed on October 25, 2011, as amended.

Based on representations by **RXi Pharmaceuticals Corporation** 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 10.3 through October 25, 2016 Exhibit 10.4 through November 19, 2013

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

Jennifer Riegel Special Counsel