UNITED STATES SECURITIES AND EXCHANGE COMMISSION March 20, 2018

ORDER GRANTING CONFIDENTIAL TREATMENT UNDER THE SECURITIES EXCHANGE ACT OF 1934

Aeglea Biotherapeutics, Inc.

File No. 001-37722 - CF#36086

Aeglea Biotherapeutics, 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 13, 2018.

Based on representations by Aeglea Biotherapeutics, 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 10.12 through March 13, 2028

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

Brent J. Fields Secretary