

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
December 6, 2016**

**ORDER GRANTING CONFIDENTIAL TREATMENT  
UNDER THE SECURITIES EXCHANGE ACT OF 1934**

**Aeglea BioTherapeutics, Inc.**

**File No.1-37722 CF#34485**

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Aeglea BioTherapeutics, Inc. submitted an application under Rule 24b-2 requesting confidential treatment for information it excluded from the Exhibit to a Form 10-Q filed on November 9, 2016.

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     10.2     through     August 31, 2017

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

Brent J. Fields  
Secretary