

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

**ORDER GRANTING CONFIDENTIAL TREATMENT
UNDER THE SECURITIES ACT OF 1933**

Aeglea BioTherapeutics, Inc.

File No. 333-205001 - CF#32612

Aeglea BioTherapeutics, Inc. 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 June 16, 2016, as amended on September 14, 2015, November 5, 2015 and March 14, 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 exhibits will not be released to the public for the time periods specified:

Exhibit 10.8	through August 31, 2016
Exhibit 10.9	through December 24, 2016
Exhibit 10.12	through May 7, 2025
Exhibit 10.14	through June 1, 2017

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

Brent J. Fields
Secretary