

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
September 5, 2014**

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

Signal Genetics, Inc.

File No. 333-194668 - CF#31510

Signal Genetics, Inc. submitted an application under Rule 406 requesting an extension of a previous grant of confidential treatment for information it excluded from the Exhibits to a Form S-1 registration statement filed on March 19, 2014, as amended.

Based on representations by Signal Genetics, 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 period specified:

| | |
|--------------|----------------------------|
| Exhibit 10.7 | through September 19, 2014 |
| Exhibit 10.8 | through September 19, 2014 |

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

Kevin M. O'Neill
Deputy Secretary