UNITED STATES SECURITIES AND EXCHANGE COMMISSION May 20, 2015

ORDER GRANTING CONFIDENTIAL TREATMENT UNDER THE SECURITIES EXCHANGE ACT OF 1934

ARCA biopharma, Inc.

File No. 0-22873 - CF#32388

ARCA biopharma, Inc. submitted an application under Rule 24b-2 requesting an extension of a previous grant of confidential treatment for information it excluded from the Exhibits to a Form 10-Q filed on August 10, 2010.

Based on representations by ARCA biopharma, 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 10.1 through April 20, 2020

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

Brent J. Fields Secretary