

**CERTIFICATE OF AMENDMENT
OF
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ACCELERON PHARMA INC.**

Acceleron Pharma Inc. (the "Corporation"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, does hereby certify as follows:

1. This Corporation's original Certificate of Incorporation was filed with the Secretary of State of Delaware on June 13, 2003 under the name "phoenix pharma, Inc."
2. This Corporation's Certificate of Incorporation was amended and restated on February 4, 2004.
3. This Corporation's Amended and Restated Certificate of Incorporation was further amended on July 20, 2004 and December 19, 2005 and amended and restated on July 28, 2006, and further amended and restated on October 23, 2007 and March 10, 2008 and restated on March 24, 2008, and further amended on June 25, 2009 and November 6, 2009, and further amended and restated on December 3, 2009.
4. This Certificate of Amendment has been duly adopted by this Corporation's Board of Directors and stockholders in accordance with the applicable provisions of Sections 228 and 242 of the General Corporation Law of the State of Delaware.
5. The first paragraph of Article FOURTH of the Certificate of Incorporation of the Corporation is hereby amended to read in its entirety as follows:

FOURTH: The total number of shares of all classes of stock which the Corporation has authority to issue is 144,651,161 shares, consisting of 83,941,112 shares of Common Stock, par value \$.001 per share (the "Common Stock"), 26,069,980 shares of Series A Convertible Preferred Stock, par value \$.001 per share (the "Series A Preferred Stock"), 16,944,378 shares of Series B Convertible Preferred Stock, par value \$.001 per share (the "Series B Preferred Stock"), 11,923,077 shares of Series C Convertible Preferred Stock, par value \$.001 per share (the "Series C Stock"), 2,014,652 shares of Series C-1 Convertible Preferred Stock, par value \$.001 per share (the "Series C-1 Stock" and, together with the Series C Stock, the "Series C Preferred Stock"), 955,414 shares of Series D Convertible Preferred Stock, par value \$.001 per share (the "Series D Stock"), 2,802,548 shares of Series D-1 Convertible Preferred Stock, par value \$.001 per share (the "Series D-1 Stock" and, together with the Series D Stock, the "Series

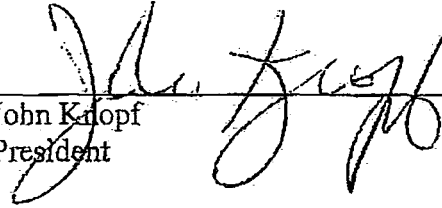
D Preferred Stock"). The Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock and the Series D Preferred Stock are referred to herein as the "Preferred Stock").

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Amendment
as of the 17th day of march, 2010.

By:

John Knopf
President

A handwritten signature in dark ink, appearing to read "John Knopf", written over a horizontal line.