UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of Earliest Event Reported): December 18, 2015

bluebird bio, Inc.

(Exact name of registrant as specified in its charter)

DELAWARE

001-35966

(State or other jurisdiction of incorporation)

(Commission File Number)

13-3680878 (I.R.S. Employer Identification No.)

150 Second Street Cambridge, MA

(Address of principal executive offices)

02141

(Zip Code)

Registrant's telephone number, including area code (339) 499-9300

Not Applicable

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

UWritten communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

□ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

□ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

 \Box Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

On December 18, 2015, Dr. Steve Gillis notified bluebird bio, Inc. (the "Company") of his resignation from the Company's board of directors (the "Board"), effective immediately. Dr. Gillis' resignation was not caused by any disagreement with the Company on any matter relating to the Company's operations, policies or practices. The Company thanks Dr. Gillis for his service on the Board for over four years.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: December 21, 2015

bluebird bio, Inc.

By:/s/ Jason F. Cole Jason F. Cole Senior Vice President, General Counsel