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): January 29, 2015

bluebird bio, Inc.

(Exact name of registrant as specified in its charter)

DELAWARE

(State or other jurisdiction of incorporation)

001-35966

(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:

□ Written 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))

□ 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 January 29, 2015, bluebird bio, Inc. (the "Company"), entered into a Transitional Services and Separation Agreement (the "Agreement") with Dr. Mitchell H. Finer, the Company's Chief Scientific Officer, pursuant to which his employment with the Company will end on July 6, 2015, unless earlier terminated pursuant to Dr. Finer's resignation or termination by the Company for cause (the "Separation Date"). Following the Separation Date, Dr. Finer will serve as a member of the Company's Scientific Advisory Board.

Under the Agreement, Dr. Finer will continue to receive his salary and benefits and will continue to vest in his outstanding equity awards through the Separation Date. In the event of a change in control prior to the Separation Date, all of Dr. Finer's outstanding options will immediately accelerate and become fully exercisable. Dr. Finer will remain eligible for cash incentive compensation for 2014 to be determined by the Company's board of directors, which will be paid when 2014 cash incentive compensation is paid to other Company executives.

Following the Separation Date, Dr. Finer will continue to receive his base salary for a period of six months and will continue to vest in his outstanding stock options for a period of six months. If he elects to continue his group healthcare benefits, to the extent authorized by and consistent with COBRA, the Company will pay the monthly employer contribution until the earlier of (1) six months following the Separation Date or (2) the date Dr. Finer becomes eligible for insurance through another employer or otherwise becomes ineligible for COBRA.

Item 7.01 Regulation FD Disclosure.

On January 29, 2015, the Company issued a press release announcing Dr. Finer's transition. A copy of this press release is furnished as Exhibit 99.1 to this report on Form 8-K.

The information in this Item 7.01 and Exhibit 99.1 attached hereto is intended to be furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as expressly set forth by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit No.</u>	Description
99.1	Press release issued by bluebird bio, Inc. on January 29, 2015, furnished herewith.

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: January 29, 2015

bluebird bio, Inc.

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

EXHIBIT INDEX

Exhibit No.Description99.1Press release issued by bluebird bio, Inc. on January 29, 2015, furnished herewith.

NEWS RELEASE



FOR IMMEDIATE RELEASE

bluebird bio Announces Transition of Chief Scientific Officer

CAMBRIDGE, Mass., January 29, 2015 – bluebird bio, Inc. (Nasdaq: BLUE) a clinical-stage company committed to developing potentially transformative gene therapies for severe genetic and rare diseases, today announced that Mitchell H. Finer, Ph.D., chief scientific officer (CSO), has decided to transition from his current role with bluebird bio over the next six months. At the end of this transition period, he will remain an important scientific voice at bluebird bio by serving on the company's scientific advisory board (SAB) and continuing to share his experience and insights to benefit the company's scientific strategy. The company is now initiating the process of recruiting for a CSO replacement.

"Mitch has made tremendous contributions to bluebird bio, and his knowledge of gene therapy has been instrumental to the successful build-out of our platform capabilities over the last several years," stated Nick Leschly, chief bluebird. "We appreciate all of the insight and experience Mitch has brought to our team during our formative years. We would not be where we are today without his full-time participation, and we look forward to continuing to utilize his expertise and work closely with him as a member of our SAB."

"Transitioning out of a full-time role at bluebird was a difficult decision for me, but on a personal level the timing was right," stated Dr. Finer. "bluebird is in a great position to continue to lead the gene therapy revolution, and I look forward to continuing to work closely with the team as an active member of the SAB. I am extremely proud of the advances we have made over the last five years that have moved the field several big steps closer to realizing the powerful promise that gene therapy holds for patients."

About bluebird bio, Inc.

With its lentiviral-based gene therapy and gene editing capabilities, bluebird bio has built an integrated product platform with broad potential application to severe genetic diseases and T cell-based immunotherapy. bluebird bio's clinical programs include Lenti-D[™], currently in a Phase 2/3 study, the Starbeam Study, for the treatment of childhood cerebral adrenoleukodystrophy, and LentiGlobin®, currently in three clinical studies: a global Phase 1/2 study, the Northstar Study, for the treatment of beta-thalassemia major; a single-center Phase 1/2 study in France (HGB-205) for the treatment of beta-thalassemia major; a single-center Phase 1/2 study in France (HGB-205) for the treatment of beta-thalassemia major and severe sickle cell disease; and, a separate U.S. Phase 1 study for the treatment of sickle cell disease (HGB-206). bluebird bio also has a preclinical CAR T cancer immunotherapy program in collaboration with Celgene Corporation, as well as discovery research programs utilizing megaTALs/homing endonuclease gene editing technologies.

bluebird bio has operations in Cambridge, Massachusetts, Seattle, Washington, and Paris, France. For more information, please visit <u>www.bluebirdbio.com</u>.

Forward-Looking Statements

This release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding the Company's future business plans, including, the Company's plans with respect to Lenti-D, LentiGlobin and its other product candidates and research programs.. Any forward-looking statements are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to, the risk of cessation or delay of any of the ongoing or planned clinical studies and/or our development of our product candidates, the risk of a delay in the enrollment of patients in the Company's clinical studies, the risk that the results of previously conducted studies involving similar product candidates will not be repeated or observed in ongoing or future studies involving current product candidates, the risk that our collaboration with Celgene will not continue or will not be successful, and the risk that any one or more of our product candidates will not be successfully developed and commercialized. For a discussion of other risks and uncertainties, and other important factors, any of which could cause our actual results to differ from those contained in the forward-looking statements, see the section entitled "Risk Factors" in our most recent annual report on Form 10-K, as well as discussions of potential risks, uncertainties, and other important factors in our subsequent filings with the Securities and Exchange Commission. All information in this press release is as of the date of the release, and bluebird bio undertakes no duty to update this information unless required by law.

Availability of other information about bluebird bio

Investors and others should note that we communicate with our investors and the public using our company website (<u>www.bluebirdbio.com</u>), our investor relations website (<u>http://www.bluebirdbio.com/investor-splash.html</u>), including but not limited to investor presentations and FAQs, Securities and Exchange Commission filings, press releases, public conference calls and webcasts. You can also connect with us on Twitter @bluebirdbio.com/or our YouTube channel. The information that we post on these channels and websites could be deemed to be material information. As a result, we encourage investors, the media, and others interested in bluebird bio to review the information that we post on these channels and sets. This list of channels may be updated from time to time on our investor relations website and may include other social media channels than the ones described above. The contents of our website or these channels, or any other website that may be accessed from our website or these channels, shall not be deemed incorporated by reference in any filing under the Securities Act of 1933.

Investor Relations:

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