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): April 18, 2016

bluebird bio, Inc.

(Exact name of registrant as specified in its charter)

DELAWARE	001-35966	13-3680878
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

150 Second Street Cambridge, MA	02141
(Address of principal executive offices)	(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 8.01 Other Events

On April 18, 2016, bluebird bio, Inc. ("bluebird") issued a press release announcing its presentations at the American Society of Gene & Cell Therapy (ASGCT) 19th Annual Meeting taking place May 4-7, 2016 in Washington, D.C. The full text of bluebird's press release regarding the announcement is filed as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press release issued by bluebird bio, Inc. on April 18, 2016.

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.

bluebird bio, Inc.

Date: April 18, 2016

By: /s/ Jason F. Cole
Jason Cole
Chief Legal Officer

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press release issued by bluebird bio, Inc. on April 18, 2016.

Exhibit 99.1

bluebird bio to Present Immuno-Oncology and Gene Therapy Data at the ASGCT 19th Annual Meeting

CAMBRIDGE, Mass. – April 18, 2016 – bluebird bio, Inc. (Nasdaq: BLUE), a clinical-stage company committed to developing potentially transformative gene therapies for severe genetic and rare diseases and T cell-based immunotherapies for cancer, today announced that data from clinical, preclinical, and research and manufacturing programs will be highlighted in ten presentations at the American Society of Gene & Cell Therapy (ASGCT) 19th Annual Meeting, taking place May 4-7, 2016 in Washington, D.C.

Two oral presentations given by bluebird's academic collaborators will highlight previously presented data from bluebird bio's ongoing gene therapy clinical trials. David Williams, M.D., chief of hematology/oncology at Boston Children's Hospital will present interim data from the Starbeam Study of Lenti-D™ in cerebral adrenoleukodystrophy, and Marina Cavazzana, M.D., Ph.D., of Hospital Necker, University Paris Descartes, will present interim data from the HGB-205 study of LentiGlobin® in severe sickle cell disease and transfusion-dependent β-thalassemia.

Eight additional presentations will be featured at the meeting, highlighting progress across the company's preclinical, research and process development activities.

"As bluebird continues to build a differentiated T cell oncology franchise, we are excited to present three oncology abstracts that highlight our work on the next generation of technology for T cell-based immunotherapy – including methods of generating T cells with sustained anti-tumor activity, small-molecule regulated chimeric antigen receptors (CARs) and genome editing to generate improved CAR T cells," said Philip Gregory, D.Phil., chief scientific officer, bluebird bio. "From our hematopoietic stem cell programs, we will also share updates in five presentations covering improvements in scalable manufacturing, transduction efficiency and assay development – critical areas for making gene therapy available to more patients."

The abstracts are now available online on the ASGCT Annual Meeting website.

Details of bluebird bio's oral presentations are as follows:

Title: A Phase 2/3 Study of the Efficacy and Safety of Ex Vivo Gene Therapy With Lenti-D Lentiviral Vector for the Treatment of Cerebral Adrenoleukodystrophy
Abstract Number: 250
Session: Clinical Trials Spotlight Symposium
Date: Thursday, May 5, 2016

Time: 9:00 – 9:20 a.m.
Location: Thurgood Marshall North/East
Note: Data previously presented at the 2016 American Academy of Neurology Annual Meeting

Title: Small Molecule-regulated Antigen Recognition System for Inducible T Cell Targeting of Cancer Cells
Abstract Number: 277
Session: Cancer-Immunotherapy, Cancer Vaccines I
Date: Thursday, May 5, 2016
Time: 5:15 – 5:30 p.m.
Location: Washington 4

Title: Clinical Outcomes of Gene Therapy with BB305 Lentiviral Vector for Sickle Cell Disease and β-Thalassemia
Abstract Number: 279
Session: Hematologic & Immunologic Diseases I
Date: Thursday, May 5, 2016
Time: 4:00 – 4:15 p.m.
Location: Washington 5-6
Note: Data previously presented at the 2015 American Society of Hematology Annual Meeting

Title: Towards the Clinical Application of BCMA CAR T cells: The Importance of Reduced Tonic Signaling and Methods to Enhance Memory T Cells
Abstract Number: 747
Session: Cancer-Immunotherapy, Cancer Vaccines III
Date: Saturday, May 7, 2016
Time: 10:45 – 11:00 a.m.
Location: Thurgood Marshall North

Details of bluebird bio's poster presentations are as follows:

Title: PGE2 Increases Lentiviral Vector Transduction Efficiency of Human HSC
Abstract Number: 229
Session: Hematologic & Immunologic Diseases I
Date: Wednesday, May 4, 2016
Time: 5:30 p.m. – 7:30 p.m.
Location: Exhibit Hall C & B South

Title: Staurosporine Increases Lentiviral Transduction of Human CD34+ Cells
Abstract Number: 221
Session: Hematologic & Immunologic Diseases I
Date: Wednesday, May 4, 2016
Time: 5:30 p.m. – 7:30 p.m.

Location: Exhibit Hall C & B South

Title: Qualification of a p24 ELISA Assay for Quantitation of Total Lentiviral Vector Concentration
Abstract Number: 473
Session: Pharmacology/Toxicology Studies or Assay Development
Date: Thursday, May 5, 2016
Time: 6:00 p.m. – 8:00 p.m.
Location: Exhibit Hall C & B South

Title: Efficient Generation of CART Cells by Homology Directed Transgene Integration into the TCR-Alpha Locus
Abstract Number: 323
Session: Targeted Genome Editing II
Date: Thursday, May 5, 2016
Time: 6:00 p.m. – 8:00 p.m.
Location: Exhibit Hall C & B South

Title: Development of a Stable Producer Cell Line for Scalable Lentiviral Vector Production for Gene Therapy of Hemoglobinopathies
Abstract Number: 458
Session: Vector and Cell Engineering/Manufacturing I
Date: Thursday, May 5, 2016
Time: 6:00 p.m. – 8:00 p.m.
Location: Exhibit Hall C & B South

Title: Characterization of Nanoparticles in Lentiviral Vector Preparations
Abstract Number: 709
Session: Vector and Cell Engineering/Manufacturing II
Date: Friday, May 6, 2016
Time: 6:00 p.m. – 8:00 p.m.
Location: Exhibit Hall C & B South

About bluebird bio, Inc.
With its lentiviral-based gene therapies, T cell immunotherapy expertise and gene editing capabilities, bluebird bio has built an integrated product platform with broad potential application to severe genetic diseases and cancer. bluebird bio's gene therapy clinical programs include its Lenti-D™ product candidate, currently in a Phase 2/3 study, called the Starbeam Study, for the treatment of cerebral adrenoleukodystrophy, and its LentiGlobin® BB305 product candidate, currently in three clinical studies for the treatment of transfusion-dependent ß-thalassemia and severe sickle cell disease. bluebird bio's oncology pipeline is built upon the company's leadership in lentiviral gene delivery and T cell engineering, with a focus on

developing novel T cell-based immunotherapies, including chimeric antigen receptor (CAR T) and T cell receptor (TCR) therapies. bluebird bio's lead oncology program, bb2121, is an anti-BCMA CAR T program partnered with Celgene. bb2121 is currently being studied in a Phase 1 trial for the treatment of relapsed/refractory multiple myeloma. bluebird bio also has discovery research programs utilizing megaTALs/homing endonuclease gene editing technologies with the potential for use across the company's pipeline.

bluebird bio has operations in Cambridge, Massachusetts; Seattle, Washington; and Paris, France.

LentiGlobin and Lenti-D are trademarks of bluebird bio, Inc.

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 existing 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, risks that the preliminary results from our clinical trials will not continue or be repeated in our ongoing clinical trials, the risk that previously conducted studies involving similar product candidates will not be repeated or observed in ongoing or future studies involving current product candidates, 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 our clinical studies, 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, approved or 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 quarterly 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.

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