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): May 6, 2015

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 2.02 Results of Operations and Financial Condition

On May 6, 2015, bluebird bio, Inc. announced its financial results for the three months ended March 31, 2015. A copy of the press release is being furnished as Exhibit 99.1 to this Report on Form 8-K.

The information in this Report on Form 8-K 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

Exhibit No.	Description
99.1	Press release issued by bluebird bio, Inc. on May 6, 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: May 6, 2015

bluebird bio, Inc.

By: /s/ James M. DeTore
James M. DeTore
Chief Financial Officer and Principal Financial Officer

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press release issued by bluebird bio, Inc. on May 6, 2015, furnished herewith.

Exhibit 99.1

NEWS RELEASE

bluebird bio Reports First Quarter 2015 Financial Results and Business Updates

-- Achievement of initial enrollment targets in Starbeam and Northstar studies --

-- Presenting HGB-205 beta-thalassemia/sickle cell disease study update at EHA --

CAMBRIDGE, Mass., May 6, 2015 – 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, today reported business highlights and financial results for the first quarter ended March 31, 2015.

“We are pleased with the strong start to 2015, especially the faster than expected enrollment for our key adrenoleukodystrophy and beta-thalassemia studies,” said Nick Leschly, chief bluebird. “As we move ahead in 2015, we look forward to presenting our first clinical data in sickle cell disease at EHA in June and advancing the HGB-206 study, as well as gaining clarity on our global registration path for LentiGlobin in beta-thalassemia major.”

Recent Highlights

- **STARBEAM ENROLLMENT** -- Earlier than expected achievement of 15 patient enrollment target for the Starbeam Study of Lenti-D in childhood cerebral adrenoleukodystrophy with 18 patients enrolled.
- **NORTHSTAR ENROLLMENT** -- Earlier than expected achievement of 15 patient enrollment target for the Northstar Study of LentiGlobin in patients with beta-thalassemia major; expanding study to include up to three adolescent patients.
- **SICKLE CELL DISEASE (SCD) DATA PRESENTATION AT EHA** -- Data from the HGB-205 study of LentiGlobin to be presented at the 20th Congress of the European Hematology Association (EHA) in Vienna, Austria from June 11-14, 2015, including data on the first SCD patient treated with LentiGlobin.
- **LENTIVIRAL INTELLECTUAL PROPERTY (IP) ESTATE EXPANSION** -- Expanded our foundational IP license agreement with Institut Pasteur to include additional patents and expanded fields of use, including for CAR T cells and TCRs.

First Quarter 2015 Financial Results and Financial Guidance

- **Cash Position:** Cash, cash equivalents and marketable securities as of March 31, 2015 were $469.3 million, compared to $492.0 million as of December 31, 2014, a decrease of $22.7 million.

- **Revenues:** Collaboration revenue was $6.3 million for the first quarters of 2015 and 2014. Collaboration revenue is primarily comprised of the amortization of deferred revenue related to the $75.0 million upfront payment received in 2013 under our collaboration agreement with Celgene.

- **R&D Expenses:** Research and development expenses were $23.7 million for the first quarter of 2015, compared to $11.5 million for the same period in 2014, an increase of $12.2 million. The increase in research and development expenses was primarily attributable to increased clinical and manufacturing costs related to our two clinical stage product candidates, as well as increased spending on our CAR T and gene editing preclinical programs.

- **G&A Expenses:** General and administrative expenses were $7.3 million for the first quarter of 2015, compared to $5.5 million for the same period in 2014, an increase of $1.8 million. The increase in general and administrative expenses was primarily attributable to increased employee and contractor related costs to support our overall growth and increased professional services costs.

- **Net Loss:** Net loss was $24.8 million for the first quarter of 2015, compared to net loss of $10.6 million for the first quarter of 2014.

- **Financial Guidance:** bluebird bio expects that its cash, cash equivalents and marketable securities of $469.3 million as of March 31, 2015 will be sufficient to fund its operations through 2017.

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, called the Starbeam Study, for the treatment of childhood cerebral adrenoleukodystrophy, and LentiGlobin®, currently in three clinical studies: a global Phase 1/2 study, called 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 or 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 immuno-oncology 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 www.bluebirdbio.com.

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 financial condition

and results of operations, the sufficiency of its cash, cash equivalents and marketable securities, as well as the advancement of, and anticipated milestones related to the Company's product candidates and clinical studies, and anticipated milestones for 2015. 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 (www.bluebirdbio.com), our investor relations website (http://www.bluebirdbio.com/investor-splash.html), 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, LinkedIn 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, including our investor relations website, on a regular basis. 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.

bluebird bio, Inc.
Consolidated Statements of Operations Data
(unaudited)
(in thousands, except per share data)

	Three months ended March 31,	
	2015	**2014**
Revenue:		
Collaboration revenue	$ 6,344	$ 6,250
Research and license fees	—	85
Total revenue	6,344	6,335
Operating expenses:		
Research and development	23,719	11,463
General and administrative	7,336	5,540
Change in fair value of contingent consideration	215	—
Total operating expenses	31,270	17,003
Loss from operations	(24,926)	(10,668)
Other income, net	139	59
Net loss	$ (24,787)	$ (10,609)
Net loss per share - basic and diluted:	$ (0.76)	$ (0.44)
Weighted-average number of common shares used in computing net loss per share - basic and diluted:	32,558	24,148

bluebird bio, Inc.
Consolidated Balance Sheets Data
(unaudited)
(in thousands)

	March 31, 2015	December 31, 2014
Cash, cash equivalents and marketable securities	$ 469,314	$ 492,003
Total assets	533,816	556,739
Total liabilities	59,317	65,482
Total stockholders' equity	474,499	491,257

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