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 13, 2014

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 13, 2014, bluebird bio, Inc. announced its financial results for the three months ended March 31, 2014. 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 13, 2014, 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 13, 2014

bluebird bio, Inc.

By: /s/ Jeffrey T. Walsh
Jeffrey T. Walsh
Chief Operating Officer and Principal Financial Officer

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press release issued by bluebird bio, Inc. on May 13, 2014, furnished herewith.

Exhibit 99.1

NEWS RELEASE

bluebird bio Reports Fiscal First Quarter 2014 Financial Results

— Initial clinical data from HGB-205 Study in beta-thalassemia major patients to be presented at the 19 th European Hematology Association Congress in June

— IND active for HGB-206 Study of LentiGlobin product candidate for the treatment of sickle cell disease

CAMBRIDGE, MA, May 13, 2014 – bluebird bio, Inc. (Nasdaq: BLUE), a clinical-stage company committed to developing potentially transformative gene therapies for severe genetic and orphan diseases, today reported financial results and operational highlights for the quarter ended March 31, 2014.

"The first quarter of 2014 has been very productive for bluebird bio," said Nick Leschly, chief bluebird. "We treated the first beta-thalassemia major subject in our U.S. based Northstar Study with LentiGlobin, opened an IND for our sickle cell disease study and we are now presenting preliminary beta-thalassemia major data at the upcoming European Hematology Association Congress. We look forward to sharing these early clinical data and thank all those involved in our LentiGlobin clinical trials for their commitment to finding a potential new treatment for patients with beta-thalassemia."

First Quarter 2014 and Recent Business Highlights:

- Announced that the first patient with beta-thalassemia major had been transplanted in the Northstar Study of our product candidate LentiGlobin
- Filed an investigational new drug application (IND) with the U.S. Food and Drug Administration for the clinical study of our LentiGlobin product candidate for the treatment of subjects with sickle cell disease. The IND for this study, HGB-206, is now active
- Our clinical abstract has been accepted for presentation at the 19 th European Hematology Association Congress to be held in Milan, Italy between June 13 and 16. We plan to present preliminary clinical results from our ongoing, phase 1/2 HGB-205 Study of our LentiGlobin product candidate for the treatment of beta-thalassemia major
- Filed an IND amendment to conduct the ALD-103 Study. The ALD-103 Study is an observational study of subjects with childhood cerebral adrenoleukodystrophy (CCALD) treated by allogeneic hematopoietic stem-cell transplant. This study, along with our phase 2/3 Starbeam Study evaluating our product candidate Lenti-D, is intended to provide us with additional information regarding the current standard of care for CCALD and the potential safety and efficacy advantages of Lenti-D
- Added James Mandell, M.D. to the bluebird bio Board of Directors. Dr. Mandell is the former Chief Executive Officer of Boston Children's Hospital in Boston, Massachusetts.

Anticipated 2014 Milestones:

- Present initial clinical results in beta-thalassemia major from our HGB-205 Study at the 19 th European Hematology Association Congress
- First patient with sickle cell disease will be transplanted with our LentiGlobin product candidate in 2014
- Present additional beta-thalassemia major data from the HGB-205 and Northstar Studies in late 2014.

Financial Results:

Revenue was $6.3 million during the three months ended March 31, 2014, compared to $1.1 million for the three months ended March 31, 2013, with the increase driven by a full quarter of revenue under bluebird bio's collaboration with Celgene Corporation.

Net cash used in operating activities during the three months ended March 31, 2014 was $11.9 million. bluebird bio held $192.5 million in cash and cash equivalents as of March 31, 2014.

Total operating expenses for the three months ended March 31, 2014 were $17.0 million as compared to $7.6 million for the three months ended March 31, 2013.

bluebird bio reported a net loss of $10.6 million, or $0.44 per share, for the three months ended March 31, 2014, as compared to net loss of $6.5 million, or $19.94 per share, for the three months ended March 31, 2013.

About bluebird bio, Inc.

bluebird bio is a clinical-stage company committed to developing potentially transformative gene therapies for severe genetic and orphan diseases. bluebird bio has two clinical-stage programs in development. The most advanced product candidate, Lenti-D, is in a recently-initiated phase 2/3 study, the Starbeam Study, for the treatment of childhood cerebral adrenoleukodystrophy (CCALD), a rare, hereditary neurological disorder affecting young boys. The next most advanced product candidate, LentiGlobin, is currently in two phase 1/2 studies, one in the US (the Northstar Study) and one in France (HGB-205), for the treatment of beta-thalassemia major. The phase 1/2 HGB-205 study also allows enrollment of patient(s) with sickle cell disease, and bluebird bio is planning a separate U.S. sickle cell disease trial (HGB-206).

bluebird bio also has an early-stage chimeric antigen receptor-modified T cell (CAR-T) program for oncology in collaboration with Celgene Corporation.

bluebird bio has operations in Cambridge, Massachusetts 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 and the advancement of, and anticipated milestones related to the Company's product candidates and clinical studies, and anticipated milestones for 2014. 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 or LinkedIn. 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.

Investor Relations:
Richard E. T. Smith, Ph.D.
bluebird bio, Inc
(339) 499-9382

Media Contact:
Dan Budwick
Pure Communications, Inc.
(973) 271-6085

bluebird bio, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(unaudited)
(in thousands, except per share data)

	Three months ended March 31,	
	2014	**2013**
Revenue:		
Collaboration revenue	$ 6,250	$ 1,042
Research and license fees	85	85
Total revenue	6,335	1,127
Operating expenses:		
Research and development	11,463	5,284
General and administrative	5,540	2,324
Total operating expenses	17,003	7,608
Loss from operations	(10,668)	(6,481)
Other income (expense), net	59	(63)
Net loss	$ (10,609)	$ (6,544)
Net loss per share - basic and diluted:	$ (0.44)	$ (19.94)
Weighted-average number of common shares used in net loss per share:	24,148	328
Comprehensive loss	$ (10,609)	$ (6,544)

bluebird bio, Inc.
Condensed Consolidated Balance Sheets
(unaudited)
(in thousands, except per share data)

	March 31, 2014	December 31, 2013
Assets		
Current assets:		
Cash and cash equivalents	$192,499	$ 206,279
Deferred tax assets	693	693
Prepaid expenses and other current assets	2,728	5,015
Total current assets	195,920	211,987
Property and equipment, net	11,984	10,920
Restricted cash and other non-current assets	1,606	1,483
Total assets	$ 209,510	$ 224,390
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 2,601	$ 4,359
Accrued expenses and other current liabilities	5,190	5,175
Deferred revenue, current portion	25,255	25,340
Total current liabilities	33,046	34,874
Deferred rent, net of current portion	7,263	6,740
Deferred revenue, net of current portion	23,958	30,208
Deferred tax liabilities	693	693
Other non-current liabilities	385	208
Total liabilities	65,345	72,723
Stockholders' equity:		
Common stock, $0.01 par value, 125,000 shares authorized; 24,279 and 23,940 shares issued and outstanding at March 31, 2014 and December 31, 2013, respectively	243	239
Additional paid-in capital	253,206	250,103
Accumulated deficit	(109,284)	(98,675)
Total stockholders' equity	144,165	151,667
Total liabilities and stockholders' equity	$ 209,510	$ 224,390