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): March 5, 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 March 5, 2014, bluebird bio, Inc. announced its financial results for the year ended December 31, 2013. 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 March 5, 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: March 5, 2014

bluebird bio, Inc.

By: /s/ Linda C. Bain

Linda C. Bain

Vice President, Finance and Business Operations, Principal Accounting Officer and Treasurer

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press release issued by bluebird bio, Inc. on March 5, 2014, furnished herewith.

Exhibit 99.1

NEWS RELEASE

bluebird bio Reports Fiscal Year End 2013 Financial Results

CAMBRIDGE, MA, March 5, 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 fiscal year ended December 31, 2013. At fiscal year end bluebird bio held $206.3 million in cash and cash equivalents.

Pipeline Update and 2013 Highlights

Lenti-D (Childhood Cerebral Adrenoleukodystrophy)

- **Starbeam Study:** In October 2013, the first patient in the phase 2/3 Starbeam (ALD-102) study was transplanted with bluebird's Lenti-D product candidate. This study is planned to enroll 15 patients with childhood cerebral adrenoleukodystrophy with at least 12 patients being evaluable. The primary endpoint of the study is the percentage of patients that do not develop a major functional disability at 24 months after their transplant. We anticipate completing enrollment in 2015.

LentiGlobin (beta Thalassemia and Sickle Cell Disease)

- **HGB-205 Study:** In November 2013, the first patient in the phase 1/2 HGB-205 study was transplanted with bluebird's LentiGlobin product candidate. The HGB-205 study is planned to enroll 7 patients with beta thalassemia major or sickle cell disease at a single site in Paris, France. We anticipate that the first sickle cell patient will be transplanted in this study in 2014.
- **Northstar Study:** The Northstar (HGB-204) study is a US phase 1/2 study that is planned to enroll 15 patients with thalassemia major. The first patient in this study is expected to be transplanted in early 2014.
- bluebird bio plans to present preliminary data from the HGB-205 and Northstar studies in late 2014.
- **Sickle Cell Disease Study:** bluebird bio anticipates filing an IND in mid-2014 to start a study with LentiGlobin in patients with sickle cell disease.

Financial Results

Total revenues were $20.2 million during the year ended December 31, 2013 compared to $0.3 million for the year ended December 31, 2012 and include amounts allocated to research and development services from bluebird bio's collaboration with Celgene Corporation.

Net cash provided by operating activities during the year ended December 31, 2013 was $43.5 million. bluebird bio held $206.3 million in cash and cash equivalents as of December 31, 2013.

Total operating expenses for the year ended December 31, 2013 were $45.1 million as compared to $24.1 million for the year ended December 31, 2012.

bluebird bio reported a net loss of $25.3 million, or $2.02 per share, for the year ended December 31, 2013, as compared to net loss applicable to common stockholders of $3.6 million, or $13.79 per share, for the year ended December 31, 2012.

2013 Business Highlights:

- In December, bluebird bio joined the NASDAQ Biotechnology Index and in October, joined the Russell 2000 Index
- In December, the Company announced that the first patient had been transplanted in the HGB-205 study for beta thalassemia major and sickle cell disease
- In October, the Company announced that the first patient had been transplanted in the Starbeam (ALD-102) study for childhood cerebral adrenoleukodystrophy
- In August, the Company was selected as a 2014 Technology Pioneer by the World Economic Forum
- In June, the Company completed an initial public offering raising approximately $104.9 million, net of underwriting discounts and commissions and estimated offering expenses
- In May, the Company strengthened its Board of Directors with two additions, Wendy Dixon, Ph.D. and David Schenkein, M.D.
- In March, the Company signed a multi-year collaboration with Celgene Corporation focused on the development of chimeric antigen receptor-modified T cells (CAR-T) for the treatment of cancer.

“bluebird bio has had a tremendous year” stated Nick Leschly, chief bluebird. “In 2013 we transplanted the first patients in our phase 2/3 Starbeam study for CCALD and our phase 1/2 HGB-205 study for beta thalassemia and sickle cell disease. This was a considerable accomplishment for all those involved in these studies. Earlier in the year, we leveraged our lentiviral platform, signing a multi-year collaboration with Celgene in the exciting area of CAR T for oncology, which strengthened our balance sheet and further validated our lentiviral platform. In June, we completed a successful IPO, setting the stage for the next evolution in the bluebird story. We look forward to another productive year in 2014.”

Calendar Year 2014 Anticipated Milestones:

- First patient transplanted in HGB-204 thalassemia major study in early 2014
- File an IND for sickle cell disease study in mid-2014
- Transplant first sickle cell patient(s) in 2014
- Present preliminary thalassemia data from HGB-205 and Northstar studies in late 2014.

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 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 a phase 1/2 study in France for the treatment of beta-thalassemia major and severe sickle cell disease. A second phase 1/2 study with LentiGlobin in the United States has been initiated for the treatment of beta-thalassemia major.

bluebird bio also has an early-stage chimeric antigen receptor-modified T cell (CAR-T) program for oncology in partnership 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 advancement of, timing of data announcement for, and anticipated milestones related to the Company's clinical studies. Any forward-looking statements in this press release 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.

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.
Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except per share data)
Unaudited

	Year ended December 31,	
	2013	**2012**
Revenue:		
Collaboration revenue	$ 19,792	$ —
Research and license fees	389	340
Total revenue	20,181	340
Operating expenses:		
Research and development	31,002	17,210
General and administrative	14,126	6,846
Total operating expenses	45,128	24,056
Loss from operations	(24,947)	(23,716)
Other income (expense), net:		
Interest income	29	5
Foreign currency gains (losses)	37	13
Re-measurement of warrants	(440)	28
Other income (expense), net	(374)	46
Net loss	$(25,321)	$(23,670)
Net loss applicable to common stockholders	$(25,321)	$ (3,613)
Net loss per share applicable to common stockholders - basic and diluted:	$ (2.02)	$ (13.79)
Weighted-average number of common shares used in net loss per share applicable to common stockholders - basic and diluted:	12,555	262
Comprehensive loss	$(25,321)	$(23,671)

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

	December 31, 2013	December 31, 2012
Assets		
Current assets:		
Cash and cash equivalents	$ 206,279	$ 67,011
Deferred tax assets	693	—
Prepaid expenses and other current assets	5,015	773
Total current assets	211,987	67,784
Property and equipment, net	10,920	1,288
Restricted cash and other non-current assets	1,483	250
Total assets	$ 224,390	$ 69,322
Liabilities, convertible preferred stock, and stockholders' equity (deficit)		
Current liabilities:		
Accounts payable	$ 4,359	$ 2,173
Accrued expenses and other current liabilities	5,175	2,115
Deferred revenue, current portion	25,340	340
Total current liabilities	34,874	4,628
Warrant liability	—	215
Deferred rent, net of current portion	6,740	46
Deferred revenue, net of current portion	30,208	340
Deferred tax liabilities	693	—
Other non-current liabilities	208	—
Total liabilities	72,723	5,229
Convertible preferred stock	—	119,840
Total stockholders' equity (deficit)	151,667	(55,747)
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$ 224,390	$ 69,322