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): August 14, 2013

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.)

840 Memorial Drive, 4th Floor Cambridge, MA (Address of principal executive offices)

02139 (Zip Code)

Registrant's telephone number, including area code (617) 491-5601

Not Applicable

(Former name or former address, if changed since last report)

ck 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 isions:
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 August 14, 2013, bluebird bio, Inc. announced its financial results for the quarter ended June 30, 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

Press release issued by bluebird bio, Inc. on August 14, 2013, 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: August 14, 2013 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

Press release issued by bluebird bio, Inc. on August 14, 2013, furnished herewith



NEWS RELEASE

bluebird bio Reports Fiscal Second Quarter 2013 Financial Results

CAMBRIDGE, MA, August 14, 2013 – 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 June 30, 2013.

Financial Results

Revenues were \$6.3 million during the quarter ended June 30, 2013 compared to \$0.1 million for the quarter ended June 30, 2012 and include amounts allocated to research and development services from the Celgene collaboration.

Net cash provided by operating activities during the six months ended June 30, 2013 was \$57.8 million. bluebird bio held \$228.8 million in cash and cash equivalents as of June 30, 2013.

Total operating expenses for the quarter ended June 30, 2013 were \$10.5 million as compared to \$4.7 million for the same period in 2012.

bluebird bio reported a net loss of \$4.6 million, or \$2.13 per share, for the quarter ended June 30, 2013, as compared to a net loss of \$4.6 million, or \$23.21 per share, for the quarter ended June 30, 2012.

Recent Operational Highlights:

- Completed an initial public offering raising approximately \$104.9 million, net of underwriting discounts and commissions and estimated offering
 expenses.
- Initiated the HGB-205 study with LentiGlobin for the treatment of beta thalassemia major and severe sickle cell disease patients.
- Strengthened our Board of Directors with two additions, Wendy Dixon, Ph.D. and David Schenkein, M.D.
- Signed a multi-year collaboration with Celgene Corporation focused on the development of modified chimeric antigen receptor (CAR) T cells for the treatment of cancer.

"bluebird has made substantial progress during the first half of 2013 both operationally and in the clinic," stated Nick Leschly, Chief bluebird. "In June, we completed our initial public offering, strengthening our balance sheet and attracting a number of new shareholders. We are now focused on initiating two additional clinical trials in the second half of 2013, including our phase 2/3 CCALD study with Lenti-D."

Calendar Year 2013 Anticipated Milestones:

- Initiate the HGB-204 study with LentiGlobin for the treatment of beta thalassemia major in mid-2013
- Initiate the ALD-102 study with Lenti-D for the treatment of childhood cerebral adrenoleukodystrophy (CCALD) in late 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 expected to enter a phase 2/3 study in late 2013 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 is expected to initiate in the United States in mid-2013 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, San Francisco, California and Paris, France. For more information, please visit www.bluebirdbio.com.

Investor Relations:

Richard E. T. Smith, Ph.D. bluebird bio, Inc (617) 588-3321

Media Contact:

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

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 our clinical trials. 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 trials and/or our development of our product candidates, 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 quarterly report on Form 10-Q, 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.

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

		Three months ended June 30,		Six months ended June 30,	
	2013	2012	2013	2012	
Revenue:					
Collaboration revenue	\$ 6,249	\$ —	\$ 7,291	\$ —	
Research and license fees	85	85	170	170	
Total revenue	6,334	85	7,461	170	
Operating expenses:					
Research and development	7,247	3,354	12,531	7,212	
General and administrative	3,281	1,331	5,605	2,694	
Total operating expenses	10,528	4,685	18,136	9,906	
Loss from operations		(4,600)	(10,675)	(9,736)	
Other (expense) income, net:					
Interest income	7	1	10	2	
Foreign currency gains (losses)	3	6	(22)	14	
Re-measurement of warrants	(399)	30	(440)	89	
Other (expense) income, net	(389)	37	(452)	105	
Net loss		\$ (4,563)	\$(11,127)	\$ (9,631)	
Reconciliation of net loss to net loss applicable to common stockholders:					
Net loss	\$ (4,583)	\$ (4,563)	\$(11,127)	\$ (9,631)	
Accretion and dividends on convertible preferred stock		(1,285)		(2,570)	
Net loss applicable to common stockholders	\$ (4,583)	\$ (5,848)	\$(11,127)	\$(12,201)	
Net loss per share applicable to common stockholders—basic and diluted	\$ (2.13)	\$ (23.21)	\$ (8.94)	\$ (51.48)	
Weighted-average number of common shares used in net loss per share applicable to common stockholders—basic and diluted	2,151	252	1,244	237	

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

	June 30, 2013	December 31, 2012			
Assets					
Current assets:					
Cash and cash equivalents	\$ 228,847	\$ 67,011			
Prepaid expenses and other current assets	1,679	773			
Total current assets	230,526	67,784			
Property and equipment, net	2,515	1,288			
Restricted cash	1,503	250			
Total assets	\$ 234,544	\$ 69,322			
Liabilities, convertible preferred stock, and stockholders' equity (deficit)					
Current liabilities:					
Accounts payable	\$ 1,609	\$ 2,173			
Accrued expenses and other current liabilities	3,409	2,115			
Deferred revenue, current portion	25,340	340			
Total current liabilities		4,628			
Warrant liability		215			
Deferred rent, net of current portion		46			
Deferred revenue, net of current portion		340			
Total liabilities	73,274	5,229			
Convertible preferred stock	_	119,840			
Stockholders' equity (deficit)	161,270	(55,747)			
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	\$ 234,544	\$ 69,322			