bluebird bio, Inc. Form S-8 February 25, 2015			
As filed with the Securities and Exchange Commission on February 25, 2015			
Registration No. 333-			
UNITED STATES			
SECURITIES AND E	XCHANGE COMMISSION		
WASHINGTON, D.C	. 20549		
FORM S-8			
REGISTRATION STA	ATEMENT		
UNDER			
THE SECURITIES A	CT OF 1933		
bluebird bio, Inc.			
(Exact Name of Regist	trant as Specified in its Charter)		
	Delaware	13-3680878	
	(State or Other Jurisdiction	(I.R.S. Employer Identification No.)	
	of Incorporation or Organization)	)	
bluebird bio, Inc.			
150 Second Street			
Cambridge, MA 0214	1		
(339) 499-9300			

(Address of Principal Executive Offices)		
2013 Stock Option and Incentive Plan		
(Full Title of the Plan)		
Nick Leschly		
President and Chief Executive Officer		
bluebird bio, Inc.		
150 Second Street		
Cambridge, MA 02141		
(339) 499-9300		
(Name and Address of Agent For Service)		
Copy to:		
Michael H. Bison, Esq.		
Goodwin Procter LLP Exchange Place		
53 State Street		
Boston, Massachusetts 02109		
(617) 570-1000		
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.		
Large accelerated filer x	Accelerated filer "	
Non-accelerated filer "	Smaller reporting company "	
(Do not check if a smaller reporting company)		

#### CALCULATION OF REGISTRATION FEE

	Amount	Proposed Maximum	Proposed Maximum	Amount of
Title of Securities	to be	Offering Price	Aggregate	Registration
to be Registered 2013 Stock Option and Incentive Plan	Registered <sup>(1)</sup> 1,293,592 shares	•	Offering Price \$120,207,037.00	Fee <sup>(3)</sup> \$13,969.00

Common Stock, \$0.01 par value per share

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall also cover any additional shares of common stock which become issuable under the above-named plan by reason of any stock dividend, stock split, recapitalization or any other similar transaction effected without the receipt of consideration which results in an increase in the number of our outstanding shares of common stock. Pursuant to Rule 416(c) under the Securities Act, this registration statement shall also cover an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plan described herein.
- (2) The price of \$92.93 per share, which is the average of the high and low sale prices of the common stock of the registrant on the NASDAQ Global Select Market on February 20, 2015, is set forth solely for purposes of calculating the registration fee pursuant to Rules 457(c) and (h) of the Securities Act and has been used as these shares are without a fixed price.

(3) Calculated pursuant to Se	ection 6(b) of the	Securities Act.
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4

This Registration Statement registers additional securities of the same class as other securities for which a registration statement filed on Form S-8 (SEC File No. 333-189560) of the Registrant is effective. The information contained in the Registrant's registration statement on Form S-8 (SEC File No. 333-189560) is hereby incorporated by reference pursuant to General Instruction E.
Part II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT
Item 8. Exhibits.
See the Exhibit Index on the page immediately preceding the exhibits for a list of exhibits filed as part of this registration statement, which Exhibit Index is incorporated herein by reference.

#### **SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, on the 25<sup>th</sup> day of February, 2015.

bluebird bio, Inc.

By:/s/ Nick Leschly
Nick Leschly
President and Chief Executive Officer

#### POWER OF ATTORNEY

We, the undersigned officers and directors of bluebird bio, Inc., hereby severally constitute and appoint Nick Leschly and James DeTore, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them for him and in his name, place and stead, and in any and all capacities, to sign for us and in our names in the capacities indicated below any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities indicated below on the 25<sup>th</sup> day of February, 2015.

Name Title

/s/ Nick Leschly President, Chief Executive Officer and Director

Nick Leschly (Principal Executive Officer)

/s/ James M. DeTore Chief Financial Officer and Treasurer

James M. DeTore (Principal Financial Officer)

/s/ Eric Sullivan Senior Director, Finance Eric Sullivan (Principal Accounting Officer)

/s/ Robert I. Tepper, M.D. Robert I. Tepper, M.D.

Director

/s/ Steven Gillis, Ph.D. Steven Gillis, Ph.D.

Director

/s/ Daniel S. Lynch Daniel S. Lynch

Director

/s/ James Mandell, M.D. James Mandell, M.D.

Director

/s/ John M. Maraganore, Ph.D. Director John M. Maraganore, Ph.D.

Name Title

/s/ Wendy L. Dixon, Ph.D. Director

Wendy L. Dixon, Ph.D.

/s/ David P. Schenkein, M.D. Director

David P. Schenkein, M.D.

/s/ Mark Vachon Director

Mark Vachon

### **EXHIBIT INDEX**

Exhibit No.	Description
5.1	*Opinion of Goodwin Procter LLP.
23.1	*Consent of Goodwin Procter LLP (included in Exhibit 5.1).

\*Consent of Ernst & Young LLP.

24.1 Power of attorney (included on signature page).

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<sup>\*</sup>Filed herewith.