

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

<b>1. Name and Address of Reporting Person *</b> <b>TVM V LIFE SCIENCE VENTURES GMBH &amp; CO KG</b>  (Last) (First) (Middle) <b>C/O TVM CAPITAL GROUP, MAXIMILIANSTRASSE 35C</b>  (Street) <b>MUNICH 2M 80539</b>  (City) (State) (Zip)	<b>2. Issuer Name and Ticker or Trading Symbol</b> <b>bluebird bio, Inc. [BLUE]</b>	<b>5. Relationship of Reporting Person(s) to Issuer</b> (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)
	<b>3. Date of Earliest Transaction</b> (Month/Day/Year) <b>06/24/2013</b>	
	<b>4. If Amendment, Date of Original Filed</b> (Month/Day/Year)	<b>6. Individual or Joint/Group Filing</b> (Check Applicable Line) Form filed by One Reporting Person <input checked="" type="checkbox"/> Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	06/24/2013		C		2,254,357 <sup>(1)</sup>	A	(1)	2,254,357	D <sup>(2)</sup>	

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned  
(e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Series A-1 Convertible Preferred Stock	(3)	06/24/2013		C			6,169,117	(3)	(3)	Common Stock	325,255	\$ 0	0	D (2)	
Series A-2 Convertible Preferred Stock	(3)	06/24/2013		C			11,835,834	(3)	(3)	Common Stock	624,021	\$ 0	0	D (2)	
Series B Convertible Preferred Stock	(3)	06/24/2013		C			17,749,014	(3)	(3)	Common Stock	935,783	\$ 0	0	D (2)	
Series C Convertible Preferred Stock	(3)	06/24/2013		C			3,994,248	(3)	(3)	Common Stock	210,589	\$ 0	0	D (2)	
Series D Convertible Preferred Stock	(3)	06/24/2013		C			3,010,234	(3)	(3)	Common Stock	158,709	\$ 0	0	D (2)	
Series A-1 Warrants	\$ 0.6619	06/24/2013		J (5)			660,982	(4)	11/16/2015	Series A-1 Convertible Preferred Stock	660,982	\$ 0	0	D (2)	
Common Stock Warrants	\$ 12.55	06/24/2013		J (5)		34,849		(4)	11/16/2015	Common Stock	34,849	\$ 0	34,849	D (2)	
Series A-1 Warrants	\$ 0.6619	06/24/2013		J (5)			440,650	(4)	10/26/2016	Series A-1 Convertible Preferred Stock	440,650	\$ 0	0	D (2)	
Common Stock Warrants	\$ 12.55	06/24/2013		J (5)		23,232		(4)	10/26/2016	Common Stock	23,232	\$ 0	23,232	D (2)	
Series A-1 Warrants	\$ 0.6619	06/24/2013		J (5)			1,038,674	(4)	05/03/2017	Series A-1 Convertible Preferred Stock	1,038,674	\$ 0	0	D (2)	
Common Stock Warrants	\$ 12.55	06/24/2013		J (5)		54,760		(4)	05/03/2017	Common Stock	54,760	\$ 0	54,760	D (2)	
Series A-1 Warrants	\$ 0.6619	06/24/2013		J (5)			236,062	(4)	08/28/2018	Series A-1 Convertible Preferred Stock	236,062	\$ 0	0	D (2)	
Common Stock Warrants	\$ 12.55	06/24/2013		J (5)		12,445		(4)	08/28/2018	Common Stock	12,445	\$ 0	12,445	D (2)	
Series A-1 Warrants	\$ 0.6619	06/24/2013		J (5)			236,062	(4)	12/18/2018	Series A-1 Convertible Preferred Stock	236,062	\$ 0	0	D (2)	
Common Stock Warrants	\$ 12.55	06/24/2013		J (5)		12,445		(4)	12/18/2018	Common Stock	12,445	\$ 0	12,445	D (2)	
Series A-1 Warrants	\$ 0.6619	06/24/2013		J (5)			462,681	(4)	04/15/2019	Series A-1 Convertible Preferred Stock	462,681	\$ 0	0	D (2)	
Common Stock Warrants	\$ 12.55	06/24/2013		J (5)		24,393		(4)	04/15/2019	Common Stock	24,393	\$ 0	24,393	D (2)	
Series B Warrants	\$ 0.3262	06/24/2013		J (6)			287,400	(4)	04/15/2019	Series B-1 Convertible Preferred Stock	287,400	\$ 0	0	D (2)	
Common Stock Warrants	\$ 6.19	06/24/2013		J (6)		15,152		(4)	04/15/2019	Common Stock	15,152	\$ 0	15,152	D (2)	

**1. Name and Address of Reporting Person \***

TVM V LIFE SCIENCE VENTURES GMBH & CO KG

(Last) (First) (Middle)  
C/O TVM CAPITAL GROUP, MAXIMILIANSTRASSE 35C

(Street)  
MUNICH 2M 80539

(City)	(State)	(Zip)
<b>1. Name and Address of Reporting Person *</b> TVM Capital GmbH		
(Last)	(First)	(Middle)
C/O TVM CAPITAL GROUP, MAXIMILIANSTRASSE 35C		
(Street)		
MUNICH	2M	80539
(City)	(State)	(Zip)

<b>1. Name and Address of Reporting Person *</b> Polack Axel		
(Last)	(First)	(Middle)
C/O TVM CAPITAL GROUP, MAXIMILIANSTRASSE 35C		
(Street)		
MUNICH	2M	80539
(City)	(State)	(Zip)

<b>1. Name and Address of Reporting Person *</b> SCHUHSLER HELMUT		
(Last)	(First)	(Middle)
C/O TVM CAPITAL GROUP, MAXIMILIANSTRASSE 35C		
(Street)		
MUNICH	2M	80539
(City)	(State)	(Zip)

<b>1. Name and Address of Reporting Person *</b> Goll Alexandra		
(Last)	(First)	(Middle)
C/O TVM CAPITAL GROUP, MAXIMILIANSTRASSE 35C		
(Street)		
MUNICH	2M	80539
(City)	(State)	(Zip)

<b>1. Name and Address of Reporting Person *</b> Birner Hubert		
(Last)	(First)	(Middle)
C/O TVM CAPITAL GROUP, MAXIMILIANSTRASSE 35C		
(Street)		
MUNICH	2M	80539
(City)	(State)	(Zip)

**1. Name and Address of Reporting Person \***

Fischer Stefan

(Last)	(First)	(Middle)
C/O TVM CAPITAL GROUP,	MAXIMILIANSTRASSE	35C

(Street)		
MUNICH	2M	80539

(City)	(State)	(Zip)

**Explanation of Responses:**

1. This transaction represents the total number of shares received upon conversion of bluebird bio, Inc. ("bluebird") Series A-1 Convertible Preferred Stock ("Series A-1 Shares"), Series A-2 Convertible Preferred Stock ("Series A-2 Shares"), Series B Convertible Preferred Stock ("Series B Shares"), Series C Convertible Preferred Stock ("Series C Shares") and Series D Convertible Preferred Stock (the "Series D Shares" and together with the Series A-1 Shares, Series A-2 Shares, Series B Shares and Series C Shares, collectively, the "Preferred Shares").
2. The shares are held directly by TVM V Life Science Ventures GmbH & Co. KG ("TVM V"). TVM V's general partner, TVM Capital GmbH ("TVM"), and its authorized officers, Axel Polack ("Polack"), Helmut Schuehsler ("Schuehsler"), Alexandra Goll ("Goll"), Hubert Birner ("Birner") and Stefan Fischer ("Fischer") may be deemed to share voting and dispositive power over the shares held by TVM V. Each of TVM, Polack, Schuehsler, Goll, Birner and Fischer disclaims beneficial ownership of these shares except to the extent of their pecuniary interest therein, if any.
3. The Preferred Shares automatically converted into bluebird Common Stock on an 18.967-for-one ratio upon the closing of the initial public offering of bluebird without payment of further consideration. The Preferred Shares had no expiration date.
4. The warrants are currently exercisable.
5. This transaction represents a deemed disposition of warrants to purchase shares of Series A-1 Convertible Preferred Stock and a deemed acquisition of warrants to purchase shares of Common Stock on an 18.967-for-one basis, which happened automatically upon the closing of the initial public offering of bluebird without payment of further consideration. The transaction is listed solely for the purpose of reporting the change in the shares underlying the warrants.
6. This transaction represents a deemed disposition of warrants to purchase shares of Series B Convertible Preferred Stock and a deemed acquisition of warrants to purchase shares of Common Stock on an 18.967-for-one basis, which happened automatically upon the closing of the initial public offering of bluebird without payment of further consideration. The transaction is listed solely for the purpose of reporting the change in the shares underlying the warrants.

/s/ Stefan Fischer, Attorney-  
in-Fact for TVM V Life  
Science Ventures GmbH & Co. KG 06/24/2013

/s/ Stefan Fischer, Attorney-  
in-Fact for TVM Capital  
GmbH 06/24/2013

/s/ Stefan Fischer, Attorney-  
in-Fact for Axel Polack 06/24/2013

/s/ Stefan Fischer, Attorney-  
in-Fact for Helmut  
Schuehsler 06/24/2013

/s/ Stefan Fischer, Attorney-  
in-Fact for Alexandra Goll 06/24/2013

/s/ Stefan Fischer, Attorney-  
in-Fact for Hubert Birner 06/24/2013

/s/ Stefan Fischer 06/24/2013

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4(b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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