

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

OMB APPROVAL

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INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

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

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)	2. Date of Event Requiring Statement (Month/Day/Year) 06/18/2013	3. Issuer Name and Ticker or Trading Symbol bluebird bio, Inc. [BLUE]		
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)		5. If Amendment, Date of Original Filed (Month/Day/Year)
		6. Individual or Joint/Group Filing (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 Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)

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

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares ^M			
Series A-1 Convertible Preferred Stock	(1)	(1)	Common Stock	325,255	\$ (1)	D (5)	
Series A-2 Convertible Preferred Stock	(1)	(1)	Common Stock	624,021	\$ (1)	D (5)	
Series B Convertible Preferred Stock	(1)	(1)	Common Stock	935,783	\$ (1)	D (5)	
Series C Convertible Preferred Stock	(1)	(1)	Common Stock	210,589	\$ (1)	D (5)	
Series D Convertible Preferred Stock	(1)	(1)	Common Stock	158,709	\$ (1)	D (5)	
Series A-1 Warrants	(2)	11/16/2015	Series A-1 Convertible Preferred Stock (3)	660,982	\$ 12.55	D (5)	
Series A-1 Warrants	(2)	10/26/2016	Series A-1 Convertible Preferred Stock (3)	440,650	\$ 12.55	D (5)	
Series A-1 Warrants	(2)	05/03/2017	Series A-1 Convertible Preferred Stock (3)	1,038,674	\$ 12.55	D (5)	
Series A-1 Warrants	(2)	08/28/2018	Series A-1 Convertible Preferred Stock (3)	236,062	\$ 12.55	D (5)	
Series A-1 Warrants	(2)	12/18/2018	Series A-1 Convertible Preferred Stock (3)	236,062	\$ 12.55	D (5)	
Series A-1 Warrants	(2)	04/15/2019	Series A-1 Convertible Preferred Stock (3)	462,681	\$ 12.55	D (5)	
Series B Warrants	(2)	04/15/2019	Series B Convertible Preferred Stock (4)	287,400	\$ 6.19	D (5)	

Explanation of Responses:

1. The shares are convertible into bluebird bio, Inc. ("bluebird") Common Stock for the amounts shown and will automatically convert upon the closing of the initial public offering of bluebird without payment of further consideration.
2. This warrant is immediately exercisable.
3. Upon the closing of the initial public offering of bluebird, this warrant to purchase shares of Series A-1 Convertible Preferred Stock will automatically convert on an 18.967-for-one basis into a warrant to purchase shares of Common Stock.
4. Upon the closing of the initial public offering of bluebird, this warrant to purchase shares of Series B Convertible Preferred Stock will automatically convert on an 18.967-for-one basis into a warrant to purchase shares of Common Stock.
5. 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 Schuehler ("Schuehler"), 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, Schuehler, Goll, Birner and Fischer disclaims beneficial ownership of these shares except to the extent of their pecuniary interest therein, if any.

/s/Stefan Fischer, Attorney-
in-Fact for TVM V Life
Science Ventures GmbH & Co. KG 06/18/2013

** Signature of Reporting Person Date

/s/Stefan Fischer, Attorney-
in-Fact for TVM Capital 06/18/2013
GmbH

** Signature of Reporting Date
Person

/s/Stefan Fischer, Attorney-
in-Fact for Axel Polack 06/18/2013

** Signature of Reporting Date
Person

/s/Stefan Fischer, Attorney-
in-Fact for Helmut 06/18/2013
Schuehsler

** Signature of Reporting Date
Person

/s/Stefan Fischer, Attorney-
in-Fact for Alexandra Goll 06/18/2013

** Signature of Reporting Date
Person

/s/Stefan Fischer, Attorney-
in-Fact for Hubert Birner 06/18/2013

** Signature of Reporting Date
Person

/s/Stefan Fischer 06/18/2013

** Signature of Reporting Date
Person

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 5(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.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.

Exhibit 24.

The following Limited Power of Attorney was executed by or on behalf of each of the persons or entities signing this Form, on the date set forth opposite the name below.

LIMITED POWER OF ATTORNEY

The undersigned hereby constitutes and appoints each of Stefan Fischer and Rolf Starck, and each of them individually, and with full power of substitution, the undersigned's true and lawful attorney-in-fact to:

(1) Complete and execute for and on behalf of the undersigned, in the undersigned's capacity as an officer, director and/or ten percent (10%) shareholder of bluebird bio, Inc., a Delaware corporation (the "Company") any and all instruments, certificates and documents required to be executed on behalf of the undersigned as an individual or on behalf of the undersigned's company or partnership, as the case may be, pursuant to Section 13 and Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or the rules and regulations thereunder;

(2) Do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such instruments, certificates or documents required to be filed pursuant to Sections 13 and 16 of the Exchange Act or the rules or regulations thereunder and timely file such forms with the United States Securities and Exchange Commission and any stock exchange or similar authority; and

(3) Take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by any such attorney-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorney-in-fact may approve in such attorney-in-fact's discretion.

The undersigned hereby grants to each such attorney-in-fact, acting singly, full power and authority to do and perform any and every act which is necessary, proper or desirable to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that any such attorney-in-fact, or any such attorney-in-fact's substitute or substitutes, shall lawfully do or cause to be done by virtue of this Power of Attorney and the rights and powers herein granted.

The undersigned acknowledges that each of the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, are not assuming any of the undersigned's responsibilities to comply with Section 13 or Section 16 of the Exchange Act or the rules or regulations thereunder. The undersigned hereby agrees to indemnify each attorney-in-fact from and against any demand, damage, loss, cost or expense arising from any false or misleading information provided by the undersigned to such attorney-in fact.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file any instruments, certificates and documents pursuant to Section 13 and 16 of the Exchange Act or the rules or regulations thereunder with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of the date set forth below.

TVM V Life Science Ventures GmbH & Co. KG
By:/s/Hubert Birner
/s/ Stefan Fischer

June 17, 2013

TVM Capital GmbH

By: /s/ Josef Moosholzer, Director Finance
/s/ Alexandra Goll, General Partner

June 17, 2013

/s/ Axel Polack

June 10, 2013

/s/ Helmut Schuehsler

June 17, 2013

/s/ Alexandra Goll

June 17, 2013

/s/ Hubert Birner

June 17, 2013

/s/ Stefan Fischer

June 17, 2013