FORM 4

Check this box if no longer subjection 16. Form 4 or Form 5 obligations may continue. See

Instruction 1(b)

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

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Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

Name and Address of Reporting Person* Westphal Christoph H						2. Issuer Name and Ticker or Trading Symbol Flex Pharma, Inc. [FLKS]									Check X	all app	p of Reportin blicable) ctor er (give title		X 10% C	
(Last) (First) (Middle) C/O FLEX PHARMA, INC. 800 BOYLSTON STREET						3. Date of Earliest Transaction (Month/Day/Year) 03/11/2016									X Officer (give title Officer (specify below) President and CEO					
(Street) BOSTON (City)	BOSTON MA 02199					4. If Amendment, Date of Original Filed (Month/Day/Year)									i. Indivi ine) X	<i>'</i>				
Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned																				
1. Title of Security (Instr. 3) 2. Transac Date (Month/Date)					Execut Day/Year) if any		Execution if any	A. Deemed kecution Date, any lonth/Day/Year)		Transaction Disposed Code (Instr. 5)		ities Acquired (A) d Of (D) (Instr. 3,			4 and Secui Bene		rities ficially ed Following		Ownership m: Direct or Indirect Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
										v	Amount		A) or D)	Price	Transa		action(s) 3 and 4)			(
Common Stock				03/11/2016		5			P		89,68	0	A	\$7		2,786,944			I	See notes ⁽¹⁾⁽²⁾
Common Stock																3,925,248			D	
		Та	ıble II - I								sed of, onvertib					vned				
1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	Date Execution Date, (Month/Day/Year) if any (Month/Day/Year) ecurity			saction le (Instr. Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Date Exercisable and Expiration Date (Month/Day/Year) Date Expiration Exercisable Date			7. Title and Amount of Securities Underlying Derivative Security (Instr. and 4) Amour or Numbe of Title Shares		ount nber			9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)		10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)	

Explanation of Responses:

- 1. On March 11, 2016, Longwood Fund III, L.P. ("Longwood Fund III") purchased 89,680 shares. Following such purchase, Longwood Fund III owns 89,680 shares of Common Stock of the Issuer (the "Common Shares") and Longwood Fund II, L.P. ("Longwood Fund II") owns 2,697,264 Common Shares.
- 2. Longwood Fund II GP, LLC is the ultimate General Partner of Longwood Fund III and Longwood Fund III GP, LLC is the ultimate General Partner of Longwood Fund III. Christoph Westphal, M.D., Ph.D., Richard Aldrich and Michelle Dipp, M.D., Ph.D. (collectively, the "Managers") are managers of Longwood Fund III GP, LLC and Longwood Fund III GP, LLC, and, as such, may be deemed to have shared voting and dispositive power with respect to the Issuer's securities held by Longwood Fund II and Longwood Fund III (the "Longwood Shares"). Each of the Managers disclaims beneficial ownership of the Longwood Shares, except to the extent of their respective pecuniary interest therein, and the inclusion of these shares in this report shall not be deemed an admission of beneficial ownership of the shares for purposes of Section 16 or for any other purpose.

Remarks:

/s/ Robert Hadfield, Attorneyin-Fact

03/15/2016

** 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.

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.