FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

	OMB APPRO	VAL							
	OMB Number: 3235-028								
l	Estimated average burden								
l	hours per response:	0.5							

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

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

	d Address of al Christo		2. Issuer Name and Ticker or Trading Symbol Flex Pharma, Inc. [FLKS]									k all app Dired	olicable) ctor			Owner			
(Last) (First) (Middle) C/O FLEX PHARMA, INC. 800 BOYLSTON STREET							3. Date of Earliest Transaction (Month/Day/Year) 10/19/2015								X Officer (give title below) Other (specify below) President and CEO				
(Street) BOSTON MA 02199 (City) (State) (Zip)					- 4. If	4. If Amendment, Date of Original Filed (Month/Day/Year)									Individual or Joint/Group Filing (Check Applicable e) X Form filed by One Reporting Person Form filed by More than One Reporting Person				
		Tabl	e I - N	lon-Deriv	ative	Sec	uritie	s Ac	quire	ed, Di	sposed o	f, or E	enefici	ally	Owne	ed			
1. Title of Security (Instr. 3) 2. Transaction Date (Month/Day/Y					Execution Date,		3. Transa Code (Securities Acquired (A) or sposed Of (D) (Instr. 3, 4 and 5			5. Amount of Securities Beneficially Owned Following Reported		6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)		7. Nature of Indirect Beneficial Ownership		
									Code	v	Amount	(A) or (D)	Price		Transac (Instr. 3	tion(s)			(Instr. 4)
Common Stock 10/19/201						15		P ⁽¹⁾		1,018	A	\$10.60	3,917,545		17,545		D		
Common Stock															2,69	97,264		I	By Longwood Fund II. L.P. ⁽²⁾
		Та	ble II							, ,	osed of, convertib			•	wned				
1. Title of Derivative Security (Instr. 3)	rivative Conversion Date curity or Exercise (Month/Day/Year) i		Execui if any			saction e (Instr. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		ative rities ired osed	Expir	ration D th/Day/		Amount of Securities Underlying Derivative Security (Instr. and 4)		De	rivative curity str. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4)	ly	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	Beneficial Ownership t (Instr. 4)

Explanation of Responses:

2. Longwood Fund II GP, LLC is the ultimate General Partner of Longwood Fund II, L.P. Christoph Westphal, M.D., Ph.D., Richard Aldrich and Michelle Dipp, M.D., Ph.D. (collectively, the "Managers") are managers of Longwood Fund II 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, L.P. (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 10/20/2015

** 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.

 $^{1. \} The purchase \ reported in this Form \ 4 \ was \ effected \ pursuant \ to \ a \ Rule \ 10b5-1 \ trading \ plan \ adopted \ on \ February \ 17, \ 2015.$