

Xenon Pharmaceuticals Inc.  
Form SC 13G/A  
February 14, 2018  
**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

**SCHEDULE 13G**

(Rule 13d-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT  
TO RULES 13d-1(b), (c), AND (d) AND AMENDMENTS THERETO FILED  
PURSUANT TO RULE 13d-2(b)

(Amendment No. 5)<sup>1</sup>

Xenon Pharmaceuticals Inc.  
(Name of Issuer)

Common Shares, no par value per share  
(Title of Class of Securities)

98420N105  
(CUSIP Number)

December 31, 2017  
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

<sup>1</sup> The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be “filed” for the purpose of Section 18 of the Securities Exchange Act of 1934 (“Act”) or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see* the *Notes*).

CUSIP NO. 98420N105

1	NAME OF REPORTING PERSON
	Biotechnology Value Fund, L.P.
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP
	(a)
	(b)
3	SEC USE ONLY
4	CITIZENSHIP OR PLACE OF ORGANIZATION
	Delaware
5	NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH
	SOLE VOTING POWER
	0 shares
6	SHARED VOTING POWER
	1,674,468
7	SOLE DISPOSITIVE POWER
	0 shares
8	SHARED DISPOSITIVE POWER
	1,674,468
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
	1,674,468
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW

(9) EXCLUDES  
CERTAIN  
SHARES

11 PERCENT OF CLASS  
REPRESENTED BY  
AMOUNT IN ROW (9)

12 9.3%  
TYPE OF REPORTING  
PERSON

PN

2

CUSIP NO. 98420N105

1	NAME OF REPORTING PERSON
	Biotechnology Value Fund II, L.P.
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP
	(a)
	(b)
3	SEC USE ONLY
4	CITIZENSHIP OR PLACE OF ORGANIZATION
	Delaware
5	NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH
	SOLE VOTING POWER
	0 shares
6	SHARED VOTING POWER
	1,077,694
7	SOLE DISPOSITIVE POWER
	0 shares
8	SHARED DISPOSITIVE POWER
	1,077,694
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN

SHARES

11 PERCENT OF CLASS  
REPRESENTED BY  
AMOUNT IN ROW (9)

12 6.0%  
TYPE OF REPORTING  
PERSON

PN

3

CUSIP NO. 98420N105

1	NAME OF REPORTING PERSON														
	Biotechnology Value Trading Fund OS LP														
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP														
	(a)														
	(b)														
3	SEC USE ONLY														
4	CITIZENSHIP OR PLACE OF ORGANIZATION														
5	Cayman Islands SOLE VOTING POWER														
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	<table border="0" style="width: 100%;"> <tr> <td style="width: 100px;"></td> <td style="text-align: right;">0 shares</td> </tr> <tr> <td style="vertical-align: top;">6</td> <td style="vertical-align: top;">SHARED VOTING POWER</td> </tr> <tr> <td></td> <td style="text-align: right;">297,464</td> </tr> <tr> <td style="vertical-align: top;">7</td> <td style="vertical-align: top;">SOLE DISPOSITIVE POWER</td> </tr> <tr> <td></td> <td style="text-align: right;">0 shares</td> </tr> <tr> <td style="vertical-align: top;">8</td> <td style="vertical-align: top;">SHARED DISPOSITIVE POWER</td> </tr> <tr> <td></td> <td style="text-align: right;">297,464</td> </tr> </table>		0 shares	6	SHARED VOTING POWER		297,464	7	SOLE DISPOSITIVE POWER		0 shares	8	SHARED DISPOSITIVE POWER		297,464
	0 shares														
6	SHARED VOTING POWER														
	297,464														
7	SOLE DISPOSITIVE POWER														
	0 shares														
8	SHARED DISPOSITIVE POWER														
	297,464														
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON														
10	297,464 CHECK BOX IF THE AGGREGATE														

AMOUNT IN ROW  
(9) EXCLUDES  
CERTAIN  
SHARES

11 PERCENT OF CLASS  
REPRESENTED BY  
AMOUNT IN ROW (9)

12 1.7%  
TYPE OF REPORTING  
PERSON

PN



CUSIP NO. 98420N105

1	NAME OF REPORTING PERSON	
	BVF Partners OS Ltd.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP	(a)  (b)
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	Cayman Islands SOLE VOTING POWER  0 shares
6	SHARED VOTING POWER	297,464
7	SOLE DISPOSITIVE POWER	0 shares
8	SHARED DISPOSITIVE POWER	297,464
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW	297,464

(9) EXCLUDES  
CERTAIN  
SHARES

11 PERCENT OF CLASS  
REPRESENTED BY  
AMOUNT IN ROW (9)

12 1.7%  
TYPE OF REPORTING  
PERSON

CO

5

CUSIP NO. 98420N105

1	NAME OF REPORTING PERSON	
	BVF Partners L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP	(a)  (b)
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION	
	Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER  0 shares
	6	SHARED VOTING POWER  3,588,830
	7	SOLE DISPOSITIVE POWER  0 shares
	8	SHARED DISPOSITIVE POWER  3,588,830
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES	

CERTAIN  
SHARES

11 PERCENT OF CLASS  
REPRESENTED BY  
AMOUNT IN ROW (9)

12 19.9%  
TYPE OF REPORTING  
PERSON

PN, IA

6

CUSIP NO. 98420N105

1	NAME OF REPORTING PERSON	
	BVF Inc.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP	(a)  (b)
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION	
	Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER  0 shares  SHARED VOTING POWER  3,588,830  SOLE DISPOSITIVE POWER