INFINITY PHARMACEUTICALS, INC. Form SC 13G/A

December 30, 2016

#### 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. 1)1

Infinity Pharmaceuticals, Inc. (Name of Issuer)

Common Stock, \$0.001 par value (Title of Class of Securities)

45665G 30 3 (CUSIP Number)

December 28, 2016 (Date of Event Which Requires Filing of this Statement)

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

- o Rule 13d-1(b)
- x Rule 13d-1(c)
- o Rule 13d-1(d)

The information required in 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).

<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 the disclosures provided in a prior cover page.

#### CUSIP NO. 45665G 30 3

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1	TO THE OF THE ORTHOGENOON			
2	Biotechnology Value Fund, L.P. CHECK THE APPROPRIATE BOX IF A MEMBER OF A  (a) x			
3	GROUP (b) o SEC USE ONLY			(b) o
4	CITIZENSHIP OR PLACE OF ORGANIZATION			
NUMBER OF SHARES	Delaware	5	SOLE VOTING POWER	
BENEFICIALLY OWNED BY EACH	•	6	0 shares SHARED VOTING POWER	
REPORTING PERSON WITH		7	3,629,958 SOLE DISPOSITIVE POWER	
		8	0 shares SHARED DISPOSITIVE POWE	R
9	AGGREGATE	AMOUNT BEN	3,629,958 EFICIALLY OWNED BY EACH	REPORTING PERSON
10	3,629,958 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES			
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			
12	7.3% TYPE OF REPORTING PERSON			
	PN			
2				

# CUSIP NO. 45665G 30 3

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3

1	White of Reform to Leader				
2	Biotechnology Value Fund II, L.P. CHECK THE APPROPRIATE BOX IF A MEMBER OF A  (a) x				
3	GROUP (b) o SEC USE ONLY				
4	CITIZENSHIP OR PLACE OF ORGANIZATION				
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	Delaware	5	SOLE VOTING POWER		
	•	6	0 shares SHARED VOTING POWER		
		7	2,335,849 SOLE DISPOSITIVE POWER		
		8	0 shares SHARED DISPOSITIVE POWE	R	
9	AGGREGATE	AMOUNT BEN	2,335,849 EFICIALLY OWNED BY EACH	REPORTING PERSON	
10	2,335,849 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES				
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)				
12	4.7% TYPE OF REPORTING PERSON				
	PN				

#### CUSIP NO. 45665G 30 3

1	NAME OF REPORTING PERSON			
2	Biotechnology Value Trading Fund OS LP CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY			
4	CITIZENSHIP OR PLACE OF	ORGANIZATION		
	Cayman Islands			
NUMBER OF	5	SOLE VOTING POWER		
SHARES BENEFICIALLY	•	0 shares		
OWNED BY	6	SHARED VOTING POWER		
EACH REPORTING		698,623		
PERSON WITH	7	SOLE DISPOSITIVE POWER		
	8	0 shares SHARED DISPOSITIVE POWE	R	
9	AGGREGATE AMOUNT BEN	698,623 EFICIALLY OWNED BY EACH	REPORTING PERSON	
10	698,623 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES			
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			
12	1.4% TYPE OF REPORTING PERSON			
	PN			

#### CUSIP NO. 45665G 30 3

5

1	NAME OF REPORTING PERSON			
2	BVF Partners OS Ltd. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY			
4	CITIZENSHIP OR PLACE OF ORGANIZATION			
NUMBER OF SHARES	Cayman Islands 5	SOLE VOTING POWER		
BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	6	0 shares SHARED VOTING POWER		
	7	698,623 SOLE DISPOSITIVE POWER		
	8	0 shares SHARED DISPOSITIVE POWE	R	
9	AGGREGATE AMOUNT BE	698,623 NEFICIALLY OWNED BY EACH	REPORTING PERSON	
10	698,623 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES			
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			
12	1.4% TYPE OF REPORTING PERSON			
	СО			

#### CUSIP NO. 45665G 30 3

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6

2 3 4	BVF Partners L.P. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY  CITIZENSHIP OR PLACE OF ORGANIZATION			
NUMBER OF	Delaware	5	SOLE VOTING POWER	
SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	,	6	0 shares SHARED VOTING POWER	
		7	7,860,808 SOLE DISPOSITIVE POWER	
		8	0 shares SHARED DISPOSITIVE POWE	R.
9	AGGREGATE	AMOUNT BEN	7,860,808 IEFICIALLY OWNED BY EACH	REPORTING PERSON
10	7,860,808 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES			
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			
12	15.8% TYPE OF REPORTING PERSON			
	PN, IA			

#### CUSIP NO. 45665G 30 3

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2 3 4	BVF Inc. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP SEC USE ONLY CITIZENSHIP OR PLACE OF ORGANIZATION			(a) x (b) o
4		OR PLACE OF	ORGANIZATION	
NUMBER OF	Delaware	5	SOLE VOTING POWER	
SHARES BENEFICIALLY OWNED BY	7	6	0 shares SHARED VOTING POWER	
EACH REPORTING PERSON WITH		7	7,860,808 SOLE DISPOSITIVE POWER	
		8	0 shares SHARED DISPOSITIVE POWE	ER
9	AGGREGATE	AMOUNT BEN	7,860,808 EFICIALLY OWNED BY EACH	I REPORTING PERSON
10		IF THE AGGREGERATION SHARI	GATE AMOUNT IN ROW (9) ES	<b></b>
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			
12	15.8% TYPE OF REF	ORTING PERSO	ON	
	CO			
7				

#### CUSIP NO. 45665G 30 3

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1	11/1	TANIL OF REFORTING LEADON			
2	CH	Mark N. Lampert CHECK THE APPROPRIATE BOX IF A MEMBER OF A  (a) x			
3		GROUP (b) o SEC USE ONLY			(6) 0
4	CIT	CITIZENSHIP OR PLACE OF ORGANIZATION			
	Uni	ted States			
NUMBER SHARE	OF	ted States	5	SOLE VOTING POWER	
BENEFICIA				0 shares	
OWNED			6	SHARED VOTING POWER	
EACH				<b>-</b> 0.50,000	
REPORTI				7,860,808	
PERSON V	VIIH		7	SOLE DISPOSITIVE POWER	
				0 shares	
			8	SHARED DISPOSITIVE POWE	R
				- 0.00	
9	A.C.	CDECATE	AMOUNT DENI	7,860,808 EFICIALLY OWNED BY EACH	DEDODTING DEDOON
9	AG	GREGATE	AMOUNT BEIN	EFICIALLY OWNED BY EACH	REPORTING PERSON
	7,86	50,808			
10		*	F THE AGGREC	GATE AMOUNT IN ROW (9)	
	EXCLUDES CERTAIN SHARES				
1.1	DEI				
11	PEI	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			
	15.8	3%			
12			ORTING PERSO	N	
	TAT				
	IN				
8					

CUSIP NO. 45665G 30 3

Item 1(a). Name of Issuer:

Infinity Pharmaceuticals, Inc., a Delaware corporation (the "Issuer").

Item 1(b). Address of Issuer's Principal Executive Offices:

784 Memorial Drive

Cambridge, Massachusetts 02139

Item 2(a). Name of Person Filing

Item 2(b). Address of Principal Business Office or, if None, Residence

Item 2(c). Citizenship

Biotechnology Value Fund, L.P. ("BVF")

1 Sansome Street, 30th Floor

San Francisco, California 94104

Citizenship: Delaware

Biotechnology Value Fund II, L.P. ("BVF2")

1 Sansome Street, 30th Floor

San Francisco, California 94104

Citizenship: Delaware

Biotechnology Value Trading Fund OS LP ("Trading Fund OS")

PO Box 309 Ugland House

Grand Cayman, KY1-1104

Cayman Islands

Citizenship: Cayman Islands

BVF Partners OS Ltd. ("Partners OS")

PO Box 309 Ugland House

Grand Cayman, KY1-1104

Cayman Islands

Citizenship: Cayman Islands

BVF Partners L.P. ("Partners")

1 Sansome Street, 30th Floor

San Francisco, California 94104

Citizenship: Delaware

BVF Inc.

1 Sansome Street, 30th Floor

San Francisco, California 94104

Citizenship: Delaware

Mark N. Lampert ("Mr. Lampert")

1 Sansome Street, 30th Floor

San Francisco, California 94104

Citizenship: United States

Each of the foregoing is referred to as a "Reporting Person" and collectively as the "Reporting Persons."

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CUSIP NO. 45665G 30 3

Item 2(d). Title of Class of Securities:

Common Stock, \$0.001 par value (the "Common Stock")

Item 2(e). CUSIP Number:

45665G 30 3

Item 3. If This Statement is Filed Pursuant to Rule 13d-1(b), or 13d-2(b) or (c), Check Whether the Person Filing is a: