

INFINITY PHARMACEUTICALS, INC.  
Form SC 13G/A  
February 17, 2015

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934  
(Amendment No. 3)\*

INFINITY PHARMACEUTICALS, INC.

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(Name of Issuer)

Common Stock, Par Value \$0.001 Per Share

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(Title of Class of Securities)

45665G303  
(CUSIP Number)

December 31, 2014  
(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)

\*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.

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. 45665G303

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1 NAME OF REPORTING PERSON  
I.R.S. IDENTIFICATION NO. OF  
ABOVE PERSON

Point72 Asset Management, 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	
	6	SHARED VOTING POWER
	0 (see Item 4)	

7 SOLE DISPOSITIVE POWER  
0

8 SHARED DISPOSITIVE POWER

0 (see Item 4)

9 AGGREGATE AMOUNT  
BENEFICIALLY OWNED BY EACH  
REPORTING PERSON

0 (see Item 4)

10 CHECK BOX IF THE AGGREGATE  
AMOUNT IN ROW (9) EXCLUDES  
CERTAIN SHARES

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

0% (see Item 4)

12 TYPE OF REPORTING PERSON\*  
PN

\*SEE INSTRUCTION BEFORE FILLING OUT

CUSIP No. 45665G303

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1 NAME OF REPORTING PERSON  
I.R.S. IDENTIFICATION NO. OF  
ABOVE PERSON

Point72 Capital Advisors, 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	
	6	SHARED VOTING POWER
	0 (see Item 4)	

7 SOLE DISPOSITIVE POWER  
0

8 SHARED DISPOSITIVE POWER

0 (see Item 4)

9

AGGREGATE AMOUNT  
BENEFICIALLY OWNED BY EACH  
REPORTING PERSON

0 (see Item 4)

10

CHECK BOX IF THE AGGREGATE  
AMOUNT IN ROW (9) EXCLUDES  
CERTAIN SHARES

11

PERCENT OF CLASS  
REPRESENTED BY AMOUNT IN  
ROW (9)

0% (see Item 4)

12

TYPE OF REPORTING PERSON\*

CO

\*SEE INSTRUCTION BEFORE FILLING OUT

CUSIP No. 45665G303

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1 NAME OF REPORTING PERSON  
I.R.S. IDENTIFICATION NO. OF  
ABOVE PERSON

Cubist Systematic Strategies, LLC

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	
	6	SHARED VOTING POWER
		52,476 (see Item 4)

7 SOLE DISPOSITIVE POWER  
0

8 SHARED DISPOSITIVE POWER

52,476 (see Item 4)

9

AGGREGATE AMOUNT  
BENEFICIALLY OWNED BY EACH  
REPORTING PERSON

52,476 (see Item 4)

10

CHECK BOX IF THE AGGREGATE  
AMOUNT IN ROW (9) EXCLUDES  
CERTAIN SHARES

11

PERCENT OF CLASS  
REPRESENTED BY AMOUNT IN  
ROW (9)

0.1% (see Item 4)

12

TYPE OF REPORTING PERSON\*

OO

\*SEE INSTRUCTION BEFORE FILLING OUT

CUSIP No. 45665G303

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1 NAME OF REPORTING PERSON  
I.R.S. IDENTIFICATION NO. OF  
ABOVE PERSON

Steven A. Cohen

2 CHECK THE APPROPRIATE BOX  
IF A MEMBER OF A GROUP\*  
(a)  
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF  
ORGANIZATION

United States

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	5	SOLE VOTING POWER
	0	
	6	SHARED VOTING POWER
		52,476 (see Item 4)

7 SOLE DISPOSITIVE POWER  
0



8 SHARED DISPOSITIVE POWER

52,476 (see Item 4)

9

AGGREGATE AMOUNT  
BENEFICIALLY OWNED BY EACH  
REPORTING PERSON

52,476 (see Item 4)

10

CHECK BOX IF THE AGGREGATE  
AMOUNT IN ROW (9) EXCLUDES  
CERTAIN SHARES

11

PERCENT OF CLASS  
REPRESENTED BY AMOUNT IN  
ROW (9)

0.1% (see Item 4)

12

TYPE OF REPORTING PERSON\*  
IN

\*SEE INSTRUCTION BEFORE FILLING OUT

Item  
1(a) Name of Issuer:

Infinity Pharmaceuticals, Inc.

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

780 Memorial Drive, Cambridge, Massachusetts 02139

Item  
2(a) Name of Person Filing:

This statement is filed by: (i) Point72 Asset Management, L.P. ("Point72 Asset Management") with respect to shares of Common Stock, par value \$0.001 per share ("Shares"), of the Issuer held by certain investment funds it manages; (ii) Point72 Capital Advisors, Inc. ("Point72 Capital Advisors Inc.") with respect to Shares held by certain investment funds managed by Point72 Asset Management; (iii) Cubist Systematic Strategies, LLC ("Cubist Systematic Strategies") with respect to Shares held by certain investment funds it manages; and (iv) Steven A. Cohen with respect to Shares beneficially owned by Point72 Asset Management, Point72 Capital Advisors Inc. and Cubist Systematic Strategies.

Point72 Asset Management, Point72 Capital Advisors Inc., Cubist Systematic Strategies and Steven A. Cohen have entered into a Joint Filing Agreement, a copy of which is filed with this Schedule 13G as Exhibit 99.1, pursuant to which they have agreed to file this Schedule 13G jointly in accordance with the provisions of Rule 13d-1(k) of the Act.

Item  
2(b) Address or Principal Business Office:

The address of the principal business office of (i) Point72 Asset Management, Point72 Capital Advisors Inc. and Mr. Cohen is 72 Cummings Point Road, Stamford, CT 06902; and (ii) Cubist Systematic Strategies is 330 Madison Avenue, New York, NY 10173.

Item  
2(c) Citizenship:

Point72 Asset Management is a Delaware limited partnership. Point72 Capital Advisors Inc. is a Delaware corporation. Cubist Systematic Strategies is a Delaware limited liability company. Mr. Cohen is a United States citizen.

Item  
2(d) Title of Class of Securities:

Common Stock, par value \$0.001 per share

Item  
2(e) CUSIP Number:

45665G303

Item  
3 Not Applicable

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Item Ownership:  
4

The percentages used herein are calculated based upon the Shares of common stock issued and outstanding as of November 3, 2014 as reported on the Issuer's quarterly report on Form 10-Q filed with the Securities and Exchange Commission by the Issuer for the quarterly period ended September 30, 2014.

As of the close of business on December 31, 2014:

1. Point72 Asset Management, L.P.

(a) Amount beneficially owned: -0-

(b) Percent of class: 0%

(c)(i) Sole power to vote or direct the vote: -0-

(ii) Shared power to vote or direct the vote: -0-

(iii) Sole power to dispose or direct the disposition: -0-

(iv) Shared power to dispose or direct the disposition: -0-

2. Point72 Capital Advisors, Inc.

(a) Amount beneficially owned: -0-

(b) Percent of class: 0%

(c)(i) Sole power to vote or direct the vote: -0-

(ii) Shared power to vote or direct the vote: -0-

(iii) Sole power to dispose or direct the disposition: -0-

(iv) Shared power to dispose or direct the disposition: -0-

3. Cubist Systematic Strategies, LLC

(a) Amount beneficially owned: 52,476

(b) Percent of class: 0.1%

(c)(i) Sole power to vote or direct the vote: -0-

(ii) Shared power to vote or direct the vote: 52,476

(iii) Sole power to dispose or direct the disposition: -0-

(iv) Shared power to dispose or direct the disposition: 52,476

4. Steven A. Cohen

(a) Amount beneficially owned: 52,476

(b) Percent of class: 0.1%

(c)(i) Sole power to vote or direct the vote: -0-

(ii) Shared power to vote or direct the vote: 52,476

(iii) Sole power to dispose or direct the disposition: -0-

(iv) Shared power to dispose or direct the disposition: 52,476

Point72 Asset Management, Point72 Capital Advisors Inc., Cubist Systematic Strategies and Mr. Cohen own directly no Shares. Pursuant to an investment management agreement, Point72 Asset Management maintains investment and voting power with respect to the securities held by certain investment funds it manages. Point72 Capital Advisors Inc. is the general partner of Point72 Asset Management. Pursuant to an investment management agreement, Cubist Systematic Strategies maintains investment and voting power with respect to the securities held by certain investment funds it manages. Mr. Cohen controls each of Point72 Capital Advisors Inc. and Cubist Systematic Strategies. As of December 31, 2014, by reason of the provisions of Rule 13d-3 of the Securities Exchange Act of 1934, as amended, each of Cubist Systematic Strategies and Mr. Cohen may be deemed to beneficially own 52,476 Shares (constituting approximately 0.1% of the Shares outstanding). Each of Point72 Asset Management, Point72 Capital Advisors Inc., Cubist Systematic Strategies and Mr. Cohen disclaims beneficial ownership of any of the securities covered by this statement.

Item  
5 Ownership of Five Percent or Less of a Class:

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following.

Item  
6 Ownership of More than Five Percent on Behalf of Another Person:

Not Applicable

Item  
7 Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company:

Not Applicable

Item  
8 Identification and Classification of Members of the Group:

Not Applicable

Item  
9 Notice of Dissolution of Group:

Not Applicable

Item  
10 Certification:

By signing below the signatory certifies that, to the best of his knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: February 17, 2015

POINT72 ASSET MANAGEMENT, L.P.

By: /s/ Peter Nussbaum

Name: Peter Nussbaum

Title: Authorized Person

POINT72 CAPITAL ADVISORS, INC.

By: /s/ Peter Nussbaum

Name: Peter Nussbaum

Title: Authorized Person

CUBIST SYSTEMATIC STRATEGIES, LLC

By: /s/ Peter Nussbaum

Name: Peter Nussbaum

Title: Authorized Person

STEVEN A. COHEN

By: /s/ Peter Nussbaum

Name: Peter Nussbaum

Title: Authorized Person

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