INFINITY PHARMACEUTICALS, INC. Form SC 13G April 16, 2013

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

#### SCHEDULE 13G

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

#### INFINITY PHARMACEUTICALS, INC.

(Name of Issuer)

Common Stock, Par Value \$0.001 Per Share

(Title of Class of Securities)

45665G303 (CUSIP Number)

April 15, 2013 (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 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).

Page 1 of 11

CUSIP No. 13G Page 2 of 11 Pages

45665G303

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

S.A.C. Capital Advisors, L.P.

2CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a) o

(b) x

3SEC USE ONLY

4CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

**5SOLE VOTING POWER** 

NUMBER OF

0

SHARES BENEFICIALLY

**6SHARED VOTING POWER** 

OWNED

BY 1,984,400 (see Item 4)

EACH

7SOLE DISPOSITIVE POWER

**REPORTING** 

PERSON .

WITH: 8SHARED DISPOSITIVE POWER

1,984,400 (see Item 4)

9AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,984,400 (see Item 4)

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

0

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

4.1% (see Item 4)

12TYPE OF REPORTING PERSON\*

PN

\*SEE INSTRUCTION BEFORE FILLING OUT

Page 2 of 11

U C S P N 13G Page 3 of 11 Pages Ι o 45665G303 **1NAME OF REPORTING PERSON** I.R.S. IDENTIFICATION NO. OF ABOVE PERSON S.A.C. Capital Advisors, Inc. 2CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a) o (b) x 3SEC USE ONLY 4CITIZENSHIP OR PLACE OF ORGANIZATION Delaware **5SOLE VOTING POWER** NUMBER OF 0 **SHARES 6SHARED VOTING POWER BENEFICIALLY OWNED** 1,984,400 (see Item 4) BY**7SOLE DISPOSITIVE POWER EACH REPORTING PERSON** 8SHARED DISPOSITIVE POWER WITH: 1,984,400 (see Item 4) 9AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,984,400 (see Item 4) 10CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES o 11PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 4.1% (see Item 4) 12TYPE OF REPORTING PERSON\* CO \*SEE INSTRUCTION BEFORE FILLING OUT

Page 3 of 11

U S I P N 13G Page 4 of 11 Pages o 45665G303 **1NAME OF REPORTING PERSON** I.R.S. IDENTIFICATION NO. OF ABOVE PERSON CR Intrinsic Investors, LLC 2CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a) o (b) x 3SEC USE ONLY 4CITIZENSHIP OR PLACE OF ORGANIZATION Delaware **5SOLE VOTING POWER NUMBER OF** 0 **SHARES 6SHARED VOTING POWER BENEFICIALLY OWNED** 120,000 (see Item 4) BY**7SOLE DISPOSITIVE POWER EACH** REPORTING 0 **PERSON** 8SHARED DISPOSITIVE POWER WITH: 120,000 (see Item 4) 9AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 120,000 (see Item 4) 10CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES o 11PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 0.3% (see Item 4) 12TYPE OF REPORTING PERSON\* 00 \*SEE INSTRUCTION BEFORE FILLING OUT

Page 4 of 11

C

C U S Ι P N 13G Page 5 of 11 Pages o 45665G303 **1NAME OF REPORTING PERSON** I.R.S. IDENTIFICATION NO. OF ABOVE PERSON Sigma Capital Management, LLC 2CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a) o (b) x 3SEC USE ONLY 4CITIZENSHIP OR PLACE OF ORGANIZATION Delaware **5SOLE VOTING POWER** NUMBER OF 0 **SHARES 6SHARED VOTING POWER BENEFICIALLY OWNED** 302,821 (see Item 4) BY**7SOLE DISPOSITIVE POWER EACH REPORTING PERSON** 8SHARED DISPOSITIVE POWER WITH: 302,821 (see Item 4) 9AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 302,821 (see Item 4) 10CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES o 11PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 0.6% (see Item 4) 12TYPE OF REPORTING PERSON\* OO \*SEE INSTRUCTION BEFORE FILLING OUT

Page 5 of 11

C U S I P N 13G Page 6 of 11 Pages o 45665G303 **1NAME OF REPORTING PERSON** I.R.S. IDENTIFICATION NO. OF ABOVE PERSON Steven A. Cohen 2CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a) o (b) x 3SEC USE ONLY 4CITIZENSHIP OR PLACE OF ORGANIZATION **United States 5SOLE VOTING POWER** NUMBER OF 0 **SHARES 6SHARED VOTING POWER BENEFICIALLY OWNED** 2,407,221 (see Item 4) BY**7SOLE DISPOSITIVE POWER EACH REPORTING** 0 **PERSON** 8SHARED DISPOSITIVE POWER WITH: 2,407,221 (see Item 4) 9AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,407,221 (see Item 4) 10CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES o 11PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 5.0% (see Item 4) 12TYPE OF REPORTING PERSON\* IN

Page 6 of 11

\*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) S.A.C. Capital Advisors, L.P. ("SAC Capital Advisors LP") with respect to shares of Common Stock, par value \$0.001 per share ("Shares"), of the Issuer beneficially owned by S.A.C. Capital Associates, LLC ("SAC Capital Associates") and S.A.C. MultiQuant Fund, L.P. ("SAC MultiQuant Fund"); (ii) S.A.C. Capital Advisors, Inc. ("SAC Capital Advisors Inc.") with respect to Shares beneficially owned by SAC Capital Advisors LP, SAC Capital Associates and SAC MultiQuant Fund; (iii) CR Intrinsic Investors, LLC ("CR Intrinsic Investors") with respect to Shares beneficially owned by CR Intrinsic Investments, LLC ("CR Intrinsic Investments"); (iv) Sigma Capital Management, LLC ("Sigma Management") with respect to Shares beneficially owned by Sigma Capital Associates, LLC ("Sigma Capital Associates"); and (v) Steven A. Cohen with respect to Shares beneficially owned by SAC Capital Advisors LP, SAC Capital Advisors Inc., SAC Capital Associates, SAC MultiQuant Fund, CR Intrinsic Investors, CR Intrinsic Investments, Sigma Management and Sigma Capital Associates.

SAC Capital Advisors LP, SAC Capital Advisors Inc., CR Intrinsic Investors, Sigma Management 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) SAC Capital Advisors LP, SAC Capital Advisors Inc., CR Intrinsic Investors and Mr. Cohen is 72 Cummings Point Road, Stamford, Connecticut 06902; and (ii) Sigma Management is 510 Madison Avenue, New York, New York 10022.

Item 2(c) Citizenship:

SAC Capital Advisors LP is a Delaware limited partnership. SAC Capital Advisors Inc. is a Delaware corporation. CR Intrinsic Investors and Sigma Management are Delaware limited liability companies. Mr. Cohen is a United States citizen.

Item 2(d) Title of Class of Securities:

Common Stock, par value \$0.001 per share

# Page 7 of 11

Item 2(e) CUSIP Number:

45665G303

Item 3 Not Applicable

Item 4 Ownership:

The percentages used herein are calculated based upon the Shares issued and outstanding as of March 31, 2013, as reported on the Issuer's Prospectus Supplement on Form 424B3 filed with the Securities and Exchange Commission by the Issuer on April 12, 2013.

As of the close of business on April 15, 2013:

- 1. S.A.C. Capital Advisors, L.P.
- (a) Amount beneficially owned: 1,984,400
- (b) Percent of class: 4.1%
- (c)(i) Sole power to vote or direct the vote: -0-
- (ii) Shared power to vote or direct the vote: 1,984,400
- (iii) Sole power to dispose or direct the disposition: -0-
- (iv) Shared power to dispose or direct the disposition: 1,984,400
- 2. S.A.C. Capital Advisors, Inc.
- (a) Amount beneficially owned: 1,984,400
- (b) Percent of class: 4.1%
- (c)(i) Sole power to vote or direct the vote: -0-
- (ii) Shared power to vote or direct the vote: 1,984,400
- (iii) Sole power to dispose or direct the disposition: -0-
- (iv) Shared power to dispose or direct the disposition: 1,984,400
- 3. CR Intrinsic Investors, LLC
- (a) Amount beneficially owned: 120,000
- (b) Percent of class: 0.3%
- (c)(i) Sole power to vote or direct the vote: -0-
- (ii) Shared power to vote or direct the vote: 120,000
- (iii) Sole power to dispose or direct the disposition: -0-
- (iv) Shared power to dispose or direct the disposition: 120,000
- 4. Sigma Capital Management, LLC
- (a) Amount beneficially owned: 302,821
- (b) Percent of class: 0.6%
- (c)(i) Sole power to vote or direct the vote: -0-
- (ii) Shared power to vote or direct the vote: 302,821
- (iii) Sole power to dispose or direct the disposition: -0-
- (iv) Shared power to dispose or direct the disposition: 302,821
- 5. Steven A. Cohen
- (a) Amount beneficially owned: 2,407,221

- (b) Percent of class: 5.0%
- (c)(i) Sole power to vote or direct the vote: -0-

Page 8 of 11

- (ii) Shared power to vote or direct the vote: 2,407,221
- (iii) Sole power to dispose or direct the disposition: -0-
- (iv) Shared power to dispose or direct the disposition: 2,407,221

SAC Capital Advisors LP, SAC Capital Advisors Inc., CR Intrinsic Investors, Sigma Management and Mr. Cohen own directly no Shares. Pursuant to an investment management agreement, SAC Capital Advisors LP maintains investment and voting power with respect to the securities held by SAC Capital Associates and SAC MultiQuant Fund. SAC Capital Advisors Inc. is the general partner of SAC Capital Advisors LP. Pursuant to an investment management agreement, CR Intrinsic Investors maintains investment and voting power with respect to the securities held by CR Intrinsic Investments. Pursuant to an investment management agreement, Sigma Management maintains investment and voting power with respect to the securities held by Sigma Capital Associates. Mr. Cohen controls each of SAC Capital Advisors Inc., CR Intrinsic Investors and Sigma Management. CR Intrinsic Investments is a wholly owned subsidiary of SAC Capital Associates. By reason of the provisions of Rule 13d-3 of the Securities Exchange Act of 1934, as amended, each of (i) SAC Capital Advisors LP, SAC Capital Advisors Inc. and Mr. Cohen may be deemed to beneficially own 1,984,400 Shares (constituting approximately 4.1% of the Shares outstanding); (ii) CR Intrinsic Investors and Mr. Cohen may be deemed to beneficially own 120,000 Shares (constituting approximately 0.3% of the Shares outstanding); and (iii) Sigma Management and Mr. Cohen may be deemed to beneficially own 302,821 Shares (constituting approximately 0.6% of the Shares outstanding). Each of SAC Capital Advisors LP, SAC Capital Advisors Inc., CR Intrinsic Investors, Sigma Management 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. o

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

Page 9 of 11

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.

Page 10 of 11

#### **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: April 16, 2013

S.A.C. CAPITAL ADVISORS, L.P.

By: /s/ Peter Nussbaum Name: Peter Nussbaum Title: Authorized Person

S.A.C. CAPITAL ADVISORS, INC.

By: /s/ Peter Nussbaum Name: Peter Nussbaum Title: Authorized Person

CR INTRINSIC INVESTORS, LLC

By: /s/ Peter Nussbaum Name: Peter Nussbaum Title: Authorized Person

SIGMA CAPITAL MANAGEMENT, LLC

By: /s/ Peter Nussbaum Name: Peter Nussbaum Title: Authorized Person

STEVEN A. COHEN

By: /s/ Peter Nussbaum Name: Peter Nussbaum Title: Authorized Person

Page 11 of 11