

INFINITY PHARMACEUTICALS, INC.  
Form SC 13G  
January 13, 2015

**United States**  
**SECURITIES AND EXCHANGE COMMISSION**  
**WASHINGTON, D.C. 20549**

**SCHEDULE 13G**  
**Under the Securities Exchange Act of 1934**

**INFINITY PHARMACEUTICALS, INC.**

**(Name of Issuer)**

**Common Stock**

**(Title of Class of Securities)**

**45665G303**

**(CUSIP Number)**

**January 8, 2015**

**(Date of Event Which Requires Filing 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 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).

CUSIP No. 45665G303

1. Names of Reporting Persons

BB Biotech AG

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)  (b)

3. SEC Use Only

4. Citizenship or Place of Organization

Switzerland

5. Sole Voting Power

Number of

Shares 0

6. Shared Voting Power

Beneficially

Owned by 2,520,737

7. Sole Dispositive Power

Each

Reporting

Person 0

8. Shared Dispositive Power

with:

2,520,737

9. Aggregate Amount Beneficially Owned by Each Reporting Person

2,520,737

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares

11. Percent of Class Represented by amount in Row (9)

5.2%

12. Type of Reporting Person (See Instructions)

HC,CO

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CUSIP No. 45665G303

1. Names of Reporting Persons

Biotech Target N.V.

I.R.S. Identification Nos. of above persons (entities only):

N/A

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)  (b)

3. SEC Use Only

4. Citizenship or Place of Organization

Curacao

5. Sole Voting Power

Number of

Shares 0

6. Shared Voting Power

Beneficially

Owned by 2,520,737

Each 7. Sole Dispositive Power

Reporting

Person 0

8. Shared Dispositive Power

with:

2,520,737

9. Aggregate Amount Beneficially Owned by Each Reporting Person

2,520,737

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares

11. Percent of Class Represented by amount in Row (9)

5.2%

12. Type of Reporting Person (See Instructions)

CO

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**Item 1**

**1(a) Name of Issuer: Infinity Pharmaceuticals, Inc.**

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

**780 Memorial Drive, Cambridge, MA 02139**

**Item 2**

**2(a) Name of Person Filing: BB Biotech AG ( BB Biotech ) on behalf of its wholly-owned subsidiary, Biotech Target N.V. ( Biotech Target )**

**2(b) Address of Principal Business Office or, if none, Residence:**

**BB Biotech AG: Vordergasse 3, CH-8200 Schaffhausen, Switzerland**

**Biotech Target N.V.: Snipweg 26, Curacao**

**2(c) Citizenship: BB Biotech AG: Switzerland**

**Biotech Target N.V.: Curacao**

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

**2(e) CUSIP Number 45665G303**

**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:**

- a. " Broker or Dealer registered under Section 15 of the Act.**
- b. " Bank as defined in Section 3(a)(6) of the Act.**
- c. " Insurance company as defined in Section 3(a)(19) of the Act.**
- d. " Investment company registered under section 8 of the Investment Company Act of 1940.**
- e. " An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);**

- f. " An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F);**
- g. " A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G);**
- h. " A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);**
- i. " A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940;**
- j. " Group, in accordance with Rule 13d-1(b)(1)(ii)(J).**



**Item 4. Ownership**

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

- (a) Amount beneficially owned: 2,520,737
  
- (b) Percent of class: 5.2%
  
- (c) Number of shares as to which the person has:
  - (i) Sole power to vote or to direct the vote 0
  
  - (ii) Shared power to vote or to direct the vote 2,520,737
  
  - (iii) Sole power to dispose or to direct the disposition of 0
  
  - (iv) Shared power to dispose or to direct the disposition of 2,520,737

**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.**

N/A

**Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person.**

This statement is filed jointly by BB Biotech and Biotech Target, Biotech Target is a wholly-owned subsidiary of BB Biotech.

**Item 8. Identification and Classification of Members of the Group**

N/A

**Item 9. Notice of Dissolution of Group**

N/A



**Item 10. Certification**

By signing below I certify that, to the best of my 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.

**SIGNATURES**

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

**BB Biotech AG**

Date: **January 12, 2015**

By: **/s/ Michael Hutter**  
Signatory Authority

Name: **Michael Hutter**

Title: **Signatory Authority**

Date: **January 12, 2015**

By: **/s/ Ivo Betschart**  
Signatory Authority

Name: **Ivo Betschart**

Title: **Signatory Authority**

**Biotech Target N.V.**

Date: **January 12, 2015**

By: **/s/ Michael Hutter**  
Signatory Authority

Name: **Michael Hutter**

Title: **Signatory Authority**

Date: **January 12, 2015**

By: **/s/ Ivo Betschart**  
Signatory Authority

Name: **Ivo Betschart**

Title: **Signatory Authority**

**Exhibit A**

**Joint Filing Statement**

We, the undersigned, hereby express our agreement that the attached Schedule 13G (including all amendments thereto) is filed on behalf of each of the undersigned.

**BB Biotech AG**

Date: **January 12, 2015**

By: **/s/ Michael Hutter**  
Signatory Authority

Name: **Michael Hutter**

Title: **Signatory Authority**

Date: **January 12, 2015**

By: **/s/ Ivo Betschart**  
Signatory Authority

Name: **Ivo Betschart**

Title: **Signatory Authority**

**Biotech Target N.V.**

Date: **January 12, 2015**

By: **/s/ Michael Hutter**  
Signatory Authority

Name: **Michael Hutter**

Title: **Signatory Authority**

Date: **January 12, 2015**

By: **/s/ Ivo Betschart**  
Signatory Authority

Name: **Ivo Betschart**

Title: **Signatory Authority**