

MEDICINES CO /DE
Form SC 13G/A
March 22, 2005

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. 5)*

The Medicines Company

(Name of Issuer)

Common Stock

(Title of Class of Securities)

584688105

(CUSIP Number)

February 24, 2005

(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. 584688105

1. Name(s) of Reporting Persons: BB Biotech
AG

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) [X]

(b) []

3. SEC Use Only:

4. Citizenship or Place of Organization:
Switzerland

Number of
Shares 5. Sole Voting Power: 0
Beneficially
Owned by

Each 6. Shared Voting Power: 4,584,152
Reporting
Person with

7. Sole Dispositive Power: 0

8. Shared Dispositive Power: 4,584,152

9. Aggregate Amount Beneficially Owned
by Each Reporting Person: 4,584,152

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See
Instructions):
 []

11. Percent of Class Represented by Amount 9.4%
in Row (9):

12. HC,CO

Type of Reporting Person (See
Instructions):

Page 2 of 5

CUSIP No. 584688105

1. Name(s) 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) [X]

(b) []

3. SEC Use Only: _____

4. Citizenship or Place of Organization: Netherlands Antilles

Number of Shares Beneficially Owned by Each Reporting Person with

5. Sole Voting Power: 0

6. Shared Voting Power: 4,584,152

7. Sole Dispositive Power: 0

8. Shared Dispositive Power: 4,584,152

9. Aggregate Amount Beneficially Owned by Each Reporting Person: 4,584,152

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions): []

11. Percent of Class Represented by Amount in Row (9): 9.4%

12. Type of Reporting Person (See Instructions): CO

Note: This amendment is being filed to remove Biotech Growth as a joint filer and to update the beneficial ownership of the group following the cashless exercise of the warrants by Biotech Growth N.V. and the issuance of 447,733 shares of Common Stock in the name of Biotech Target, N.V.

Item 2

2(a) Names 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.:

De Ruyterkade 62, Willemstad, Curacao
Netherlands Antilles

2(c) Citizenship: Switzerland

2(d) Title of Class of Securities Common Stock, \$0.0001 par value

2(e) CUSIP Number 584688105

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: 4,584,152

(b) Percent of class: 9.4%

(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 4,584,152

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

(iv) Shared power to dispose or to direct the disposition of 4,584,152

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 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

/s/ Pascal Schmucki

/s/ Adrian Bruengger

By: Pascal Schmucki
Its: Authorized Signatory
Date: March 15, 2005

By: Adrian Bruengger
Its: Authorized Signatory
Date: March 15, 2005

BIOTECH TARGET N.V.

/s/ Pascal Schmucki

/s/ Adrian Bruengger

By: Pascal Schmucki
Its: Authorized Signatory
Date: March 15, 2005

By: Adrian Bruengger
Its: Authorized Signatory
Date: March 15, 2005