MEDICINES CO /DE Form SC 13G/A February 16, 2010

#### SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13G (Amendment No. 4)

Under the Securities Exchange Act of 1934

The Medicines Company (Name of Issuer)

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

584688105 (CUSIP Number)

December 31, 2009 (Date of Event Which Requires Filing of this Statement)

Check the following box to designate the rule pursuant to which the 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>\*</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. 584688105

1	Names of Reporting Persons I.R.S. Identification Nos. of above persons (entities only) D. E. Shaw Valence Portfolios, L.L.C. 13-4046559		
2	. Check the Appropriate Box (a) o (b) o	x if a Member of a Group (See Instructions)	
3	. SEC Use Only		
4	. Citizenship or Place of Org Delaware	ganization	
Number of Shares Beneficiall Owned by Each Reporting Person Wit	у	Sole Voting Power -0-	
	6.	Shared Voting Power 5,084,121	
	7.	Sole Dispositive Power -0-	
	8.	Shared Dispositive Power 5,084,121	
	Aggregate Amount Beneficially Owned by Each Reporting Person 5,084,121		
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) o		
	Percent of Class Represented by Amount in Row (9) 9.6%		
	Type of Reporting Person (See Instructions) OO		

## CUSIP No. 584688105

1.	Names of Reporting Persons I.R.S. Identification Nos. of above persons (entities only) D. E. Shaw & Co., L.P. 13-3695715		
2.	Check the Appropriate Box if a Member of a Group (See Instructions)		
	(a) (b)	0	
3.	SEC Use Only		
4.	Citizenship or Place of Organ Delaware	nization	
Number of Shares Beneficially Owned by Each Reporting Person With	5.		Sole Voting Power -0-
	6.		Shared Voting Power 5,084,366
	7.		Sole Dispositive Power -0-
	8.		Shared Dispositive Power 5,084,366
9.	Aggregate Amount Beneficially Owned by Each Reporting Person 5,084,366		
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) o		
11.	Percent of Class Represented by Amount in Row (9) 9.6%		
12.	Type of Reporting Person (S IA, PN	ee Instructions)	

#### CUSIP No. 584688105

ΙN

1.

I.R.S. Identification Nos. of above persons (entities only) David E. Shaw 2. Check the Appropriate Box if a Member of a Group (See Instructions) (a) (b) o SEC Use Only 3. Citizenship or Place of Organization 4. **United States** Number of 5. Sole Voting Power Shares -0-Beneficially Owned by Each Reporting Person With 6. **Shared Voting Power** 5,084,366 7. Sole Dispositive Power -0-8. **Shared Dispositive Power** 5,084,366 Aggregate Amount Beneficially Owned by Each Reporting Person 5,084,366 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) o 11. Percent of Class Represented by Amount in Row (9) 9.6% 12. Type of Reporting Person (See Instructions)

Names of Reporting Persons

Item 1. Name of Issuer: (a) The Medicines Company Address of Issuer's Principal Executive Offices: (b) 8 Sylvan Way Parsippany, NJ 07054 Item 2. (a) Name of Person Filing: D. E. Shaw Valence Portfolios, L.L.C. D. E. Shaw & Co., L.P. David E. Shaw Address of Principal Business Office or, if none, Residence: (b) The business address for each reporting person is: 120 W. 45th Street, Tower 45, 39th Floor New York, NY 10036 (c) Citizenship: D. E. Shaw Valence Portfolios, L.L.C. is a limited liability company organized under the laws of the state of Delaware. D. E. Shaw & Co., L.P. is a limited partnership organized under the laws of the state of Delaware. David E. Shaw is a citizen of the United States of America. (d) Title of Class of Securities: Common Stock, \$0.001 par value **CUSIP** Number: (e) 584688105 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: Not Applicable Ownership Item 4. As of December 31, 2009: (a) Amount beneficially owned: D. E. Shaw Valence Portfolios, L.L.C.: 5,084,121 shares

5,084,366 shares

D. E. Shaw Synoptic Portfolios 2, L.L.C.

This is composed of (i) 5,084,121 shares in the name of D. E. Shaw Valence Portfolios, L.L.C. and (ii) 245 shares in the name of

D. E. Shaw & Co., L.P.:

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David E. Shaw: 5,084,366 shares

This is composed of (i) 5,084,121 shares in the name of D. E. Shaw

Valence Portfolios, L.L.C. and (ii) 245 shares in the name of

D. E. Shaw Synoptic Portfolios 2, L.L.C.

(b) Percent of class:

D. E. Shaw Valence Portfolios, L.L.C.: 9.6%
D. E. Shaw & Co., L.P.: 9.6%
David E. Shaw: 9.6%

- (c) Number of shares to which the person has:
- (i) Sole power to vote or to direct the vote:

D. E. Shaw Valence Portfolios, L.L.C.: -0- shares
D. E. Shaw & Co., L.P.: -0- shares
David E. Shaw: -0- shares

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

D. E. Shaw Valence Portfolios, L.L.C.: 5,084,121 shares
D. E. Shaw & Co., L.P.: 5,084,366 shares
David E. Shaw: 5,084,366 shares

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

D. E. Shaw Valence Portfolios, L.L.C.: -0- shares
D. E. Shaw & Co., L.P.: -0- shares
David E. Shaw: -0- shares

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

D. E. Shaw Valence Portfolios, L.L.C.: 5,084,121 shares
D. E. Shaw & Co., L.P.: 5,084,366 shares
David E. Shaw: 5,084,366 shares

David E. Shaw does not own any shares directly. By virtue of David E. Shaw's position as President and sole shareholder of D. E. Shaw & Co., Inc., which is the general partner of D. E. Shaw & Co., L.P., which in turn is the investment adviser and managing member of D. E. Shaw Valence Portfolios, L.L.C. and the investment adviser of D. E. Shaw Synoptic Portfolios 2, L.L.C., and by virtue of David E. Shaw's position as President and sole shareholder of D. E. Shaw & Co., II, Inc., which is the managing member of D. E. Shaw & Co., L.L.C., which in turn is the managing member of D. E. Shaw Synoptic Portfolios 2, L.L.C., David E. Shaw may be deemed to have the shared power to vote or direct the vote of, and the shared power to dispose or direct the disposition of, the 5,084,366 shares as described above constituting 9.6% of the outstanding shares and, therefore, David E. Shaw may be deemed to be the beneficial owner of such shares. David E. Shaw disclaims beneficial ownership of such 5,084,366 shares.

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

Not Applicable

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 or Control Person

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, each of D. E. Shaw Valence Portfolios, L.L.C., D. E. Shaw & Co., L.P., and David E. Shaw certify that, to the best of such reporting person's 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 such purposes or effect.

#### **SIGNATURE**

After reasonable inquiry and to the best of their knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct. A Power of Attorney, dated October 24, 2007, granted by David E. Shaw in favor of Rochelle Elias, is attached hereto.

Dated: February 16, 2010

D. E. Shaw Valence Portfolios, L.L.C.

By: /s/ Rochelle Elias

Rochelle Elias

**Authorized Signatory** 

D. E. Shaw & Co., L.P.

By: /s/ Rochelle Elias

Rochelle Elias

Chief Compliance Officer

David E. Shaw

By: /s/ Rochelle Elias

Rochelle Elias

Attorney-in-Fact for David E. Shaw