MEDICINES CO /DE Form SC 13G/A February 13, 2008

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934 (Amendment No. 4)*

THE MEDICINES COMPANY

(Name of Issuer)

COMMON STOCK

(Title of Class of Securities)

584688105

(CUSIP Number)

DECEMBER 31, 2007

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

x Rule 13d-1(b)

o 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 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	1.	Names of Reporting Persons Sectoral Asset Management Inc.		
2	2.	Check the Appropriate Box if (a) (b)	a Member of a Group (See o o	Instructions)
3	3.	SEC Use Only Citizenship or Place of Organization Canada		
2	4.			
		5.		Sole Voting Power 2,202,033
Number of Shares Beneficially Owned by		6.		Shared Voting Power -0-
Each Reporting Person With	h	7.		Sole Dispositive Power 2,351,736
		8.		Shared Dispositive Power -0-
ç	9.	Aggregate Amount Beneficially Owned by Each Reporting Person 2,351,736		
10. Check if the Aggregate Amount in R		nt in Row (9) Excludes Cer	rtain Shares (See Instructions) O	
1	11.	Percent of Class Represented by Amount in Row (9) 4.5%		
1	12.	Type of Reporting Person (See IA	e Instructions)	

CUSIP No. 584688105

1.	Names of Reporting Persons Jérôme G. Pfund		
2.	Check the Appropriate Box if a (a) (b)	Member of a Group (See I o o	Instructions)
3.	SEC Use Only		
4.	Citizenship or Place of Organiz Swiss	ation	
	5.		Sole Voting Power 2,202,033
Number of Shares Beneficially Owned by	6.		Shared Voting Power -0-
Each Reporting Person With	7.		Sole Dispositive Power 2,351,736
	8.		Shared Dispositive Power -0-
9.	Aggregate Amount Beneficially 2,351,736	y Owned by Each Reportin	g Person
10.	Check if the Aggregate Amoun	t in Row (9) Excludes Cert	ain Shares (See Instructions) O
11.	Percent of Class Represented by 4.5%	y Amount in Row (9)	
12.	Type of Reporting Person (See IN	Instructions)	

CUSIP No. 584688105

1.	Names of Reporting Persons Michael L. Sjöström		
2.	Check the Appropria (a) (b)	ate Box if a Member of a o o	Group (See Instructions)
3.	SEC Use Only		
4.	Citizenship or Place of Organization Swiss		
	5.		Sole Voting Power 2,202,033
Number of Shares Beneficially Owned by	6.		Shared Voting Power -0-
Each Reporting Person With	7.		Sole Dispositive Power 2,351,736
	8.		Shared Dispositive Power -0-
9.	Aggregate Amount E 2,351,736	Beneficially Owned by E	Each Reporting Person
10.	Check if the Aggrega	ate Amount in Row (9) I	Excludes Certain Shares (See Instructions) 0
11.	Percent of Class Rep 4.5%	presented by Amount in l	Row (9)
12.	Type of Reporting Po IN	erson (See Instructions)	

CUSIP No. 584688105

(a)Name of Person Filing Sectoral Asset Management Inc.Jérôme G. Pfund(b)Michael L. Sjöström Address of Principal Business Office or, if none, Residence The principal business address of each person filing is:(c)2120-1000 Sherbrooke St. West Montreal PQ H3A 3G4 Canada Citizenship Sectoral Asset Management Inc. is a Canadian corporation(d)Michael L. Sjöström is a Swiss citizen Title of Class of Securities Common Stock S84688105	Item 1.			
(b) Address of Issuer s Principal Executive Offices 8 Campus Drive, Suite 200, Pursippany, NJ 07054, USA Item 2. (a) Name of Person Filing Sectoral Asset Management Inc. Jérôme G. Pfund Jérôme G. Pfund (b) Michael L. Sjöström Address of Principal Business Office or, if none, Residence The principal Business address of each person filing is: (c) 2120-1000 Sherbrooke St. West Montreal PQ H3A 3G4 Canada (c) Citizenship Sectoral Asset Management Inc. is a Canadian corporation Jérôme G. Pfund is a Swiss citizen (d) (d) Title of Class of Securities Common Stock (e) CUSIP Number S84688105 It this statement is Filed pursuant to \$\$240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a: S84688105 Item 3. If this statement is filed pursuant to \$\$240.13d-1(b) or 240.13d-2(b) or (b), check whether the person filing is a: S84688105 Item 4. If this statement is Gle pursuant to \$\$240.13d-1(b) or 240.13d-2(b) or (b), check whether the person filing is a: S84688105 Item 3. If this statement is Second a second address of the Investment Company act of 1940 (15 U.S.C. 78c). Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c). Insurance company as defined in accordance with \$240.13d-1(b)((i)(i)(F); G) (e) x An investment diviser in accordance with \$240.13d-1(b)(((i)(i)(F); G)		(a)		
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Image: Sectoral Asset Management Inc. Jérôme G. Pfund (b) Michael L. Sjöström Address of Principal Business Office or, if none, Residence The principal Business offece or, if none, Residence (c) 2120-1000 Sherbrooke St. West Montreal PQ H3A 3G4 Canada (c) Citizenship Sectoral Asset Management Inc. is a Canadian corporation Jérôme G. Pfund is a Swiss citizen (d) Title of Class of Securities (e) Common Stock (e) Class of Securities (a) Nichael L. Sjöström is a Swiss citizen (d) Title of Class of Securities (e) Class of Securities (f) Statement is Bitlet pursuant to \$\$240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a: (a) 0 Broker or dealer registered under section 15 of the Act (15 U.S.C. 780). (b) 0 Broker or dealer registered under section 3(a)(6) of the Act (15 U.S.C. 780). (c) 0 U.S.C. 780). (d) 0 Insurance company as defined in section 3(a)(6) of the Act (15 U.S.C. 780). (e) x An investiment company registered under section 3(b)(10) di Act (15 U.S.C. 780). (f)	Item 2.			
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(e) Common Stock CUSIP Number 584688105 Item 3. If this statement is filed pursuant to \$\$240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a: Broker or dealer registered under section 15 of the Act (15 U.S.C. 780). (a) 0 Broker or dealer registered under section 15 of the Act (15 U.S.C. 780). (b) 0 Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c). (c) 0 Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c). (d) 0 Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8). (e) x An investment adviser in accordance with \$240.13d-1(b)(1)(ii)(E); (f) A parent holding company or control person in accordance with \$240.13d-1(b)(1)(ii)(F); (g) x A parent holding company or control person in accordance with \$240.13d-1(b)(1)(ii)(G); A parent holding company or control person in accordance with \$240.13d-1(b)(1)(ii)(G); (h) 0 A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 813); Deposit Insurance Act (12 U.S.C. 80a-3); (i) 0 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 (15 U.S.C. 80a-3);		(d)		
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 (h) o (i) o (i) o (i) A savings association 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 (15 U.S.C. 80a-3); 		(g)	Х	
(i) o Deposit Insurance Act (12 U.S.C. 1813); 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 (15 U.S.C. 80a-3);				§240.13d-1(b)(1)(ii)(G);
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company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);		(i)	0	
1940 (15 U.S.C. 80a-3);		(1)	0	
(j) o Group, in accordance with §240.13d-1(b)(1)(ii)(J).				1940 (15 U.S.C. 80a-3);
		(j)	0	

CUSIP No. 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.

Sectoral Asset Management Inc, in its capacity as an investment adviser, has the sole right to dispose of or vote the number of shares of common stock of the Issuer set forth in this filing. Jérôme G. Pfund and Michael L. Sjöström are the sole shareholders of Sectoral Asset Management Inc. Sectoral Asset Management, Inc. and Messrs. Pfund and Sjöström disclaim beneficial ownership of the Issuer s common stock held by Sectoral Asset Management Inc.

(a)	Amount beneficially owned:	
	Sectoral Asset Management In	c.: 2,351,736 shares
	Jérôme G. Pfund: 2,351,736 shares	
(b)	Michael L. Sjöström: 2,351,73 Percent of class:	36 shares
	Sectoral Asset Management In	c.: 4.5%
	Jérôme G. Pfund: 4.5%	
(c)	Michael L. Sjöström: 4.5% Number of shares as to which the person has:	
	(i)	Sole power to vote or to direct the vote
		Sectoral Asset Management Inc.: 2,202,033 shares
		Jérôme G. Pfund: 2,202,033 shares
	(ii)	Michael L. Sjöström: 2,202,033 shares Shared power to vote or to direct the vote
		Sectoral Asset Management Inc.: -0- shares
		Jérôme G. Pfund: -0- shares
	(iii)	Michael L. Sjöström: -0- shares Sole power to dispose or to direct the disposition of
		Sectoral Asset Management Inc.: 2,351,736 shares
		Jérôme G. Pfund: 2,351,736 shares
	(iv)	Michael L. Sjöström: 2,351,736 shares Shared power to dispose or to direct the disposition of
		Not applicable.

Item 5.

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 X.

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

Various persons, as investment advisory clients of Sectoral Asset Management, Inc., have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the common stock of the Issuer. To the knowledge of Sectoral Asset Management, Inc., no one such person s interest in the common stock of the Issuer is more than five percent of the total outstanding common stock of the Issuer.

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.

CUSIP No. 584688105

Item 10.

Certification

By signing below the undersigned each certifies that, to the best knowledge and belief of the undersigned, the securities referred to above were acquired and are held in the ordinary course of business and 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 knowledge and belief of each of the undersigned, the undersigned certify that the information set forth in this statement is true, complete and correct.

Dated: February 11, 2008SECTORAL ASSET MANAGEMENT INC./s/ Jérôme G. Pfund
By: Jérôme G. Pfund
Its: CEODated: February 11, 2008/s/ Jérôme G. Pfund
Jérôme G. Pfund
Jérôme G. PfundDated: February 11, 2008/s/ Michael L. Sjöström
Michael L. Sjöström

CUSIP No. 584688105

Exhibit A

AGREEMENT

Each of the undersigned, pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, hereby agrees that only one statement containing the information required by Schedule 13G needs be filed with respect to the ownership by each of the undersigned of the shares of common stock of The Medicines Company, and that the Schedule 13G to which this Agreement is appended as <u>Exhibit A</u> is to be filed with the Securities and Exchange Commission on behalf of each of the undersigned on or about the date hereof.

EXECUTED as a sealed instrument this 11th day of February 2008.

SECTORAL ASSET MANAGEMENT INC.

/s/ Jérôme G. Pfund By: Jérôme G. Pfund Its: CEO

/s/ Jérôme G. Pfund Jérôme G. Pfund

/s/ Michael L. Sjöström Michael L. Sjöström