

BlackRock Health Sciences Trust
Form N-Q
March 26, 2008

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

FORM N-Q

**QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED
MANAGEMENT INVESTMENT COMPANY**

Investment Company Act file number 811-21702

Name of Fund: BlackRock Health Sciences Trust (BME)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: Donald C. Burke, Chief Executive Officer, BlackRock Health Sciences Trust, 800 Scudders Mill Road, Plainsboro, NJ, 08536. Mailing address: P.O. Box 9011, Princeton, NJ, 08543-9011

Registrant's telephone number, including area code: (800) 882-0052, Option 4

Date of fiscal year end: 10/31/2008

Date of reporting period: 11/01/2007 01/31/2008

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Item 1 ☐ Schedule of Investments

SCHEDULE OF INVESTMENTS as of January 31, 2008 (unaudited)

BlackRock Health Sciences Trust (BME)
(Percentages shown are based on Net Assets)

Shares	Description	Value
LONG-TERM INVESTMENTS 90.7%		
Common Stocks 90.7%		
Biotechnology 12.1%		
56,000 ^{1,2}	Alexion Pharmaceuticals, Inc.	\$ 3,657,920
101,700 ²	Applera Corp. - Celera Group	1,558,044
20,400 ²	Arqule, Inc.	98,940
20,300 ²	ARYx Therapeutics, Inc.	161,588
20,400 ²	Celgene Corp.	1,144,644
61,400 ²	Charles River Laboratories Intl., Inc.	3,812,940
38,500 ²	Halozyme Therapeutics, Inc.	212,135
92,700 ^{2,3}	Integra LifeSciences Holdings Corp.	3,856,320
90,167 ²	InterMune, Inc.	1,512,100
121,318 ²	Kosan Biosciences, Inc.	327,559
30,100 ²	Millipore Corp.	2,111,515
150,800 ²	Myriad Genetics, Inc.	6,485,908
13,200 ²	Nanosphere, Inc.	158,664
49,637 ²	NicOx S.A.	695,439
	Total Biotechnology	25,793,716
Distribution/Wholesale 1.4%		
24,500 ²	MWI Veterinary Supply, Inc.	936,635
50,700	Owen & Minor, Inc.	2,094,924
	Total Distribution/Wholesale	3,031,559
Electronics 2.0%		
71,700	Applera Corp. - Applied Biosystems Group	2,260,701
20,000 ²	Varian, Inc.	1,085,000
15,066 ²	Waters Corp.	865,542
	Total Electronics	4,211,243
Healthcare Products 33.3%		
29,300	Alcon, Inc.	4,160,600
70,900 ²	Alphatec Holdings, Inc.	362,299
122,700	Baxter Intl., Inc.	7,452,798
147,200 ¹	Becton Dickinson & Co.	12,737,216
17,700	C.R. Bard, Inc.	1,709,289
64,900 ²	Cepheid, Inc.	1,982,046
50,300	China Medical Technologies, Inc. (ADR)	2,397,801
120,400 ²	Cyberonics, Inc.	1,444,800
113,600	Dentsply Intl., Inc.	4,692,816
45,900 ²	Edwards Lifesciences Corp.	2,123,793
86,200	Johnson & Johnson	5,453,012
105,700 ¹	Medtronic, Inc.	4,922,449
17,800 ²	Power Medical Interventions, Inc.	231,400
52,600 ²	SenoRx, Inc.	468,140
86,600 ²	St. Jude Medical, Inc.	3,508,166
160,000	Stryker Corp.	10,715,200
96,300 ²	Varian Medical Systems, Inc.	5,006,637
21,700 ²	Ventana Medical Systems, Inc.	1,932,385

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Total Healthcare Products		71,300,847
Healthcare Services 5.7%		
78,100	Aetna, Inc.	4,159,606
30,300 ²	Covance, Inc.	2,519,748
22,900	Fresenius Medical Care AG & Co. KGaA	1,178,208
46,783 ²	Psychiatric Solutions, Inc.	1,411,443
58,700	UnitedHealth Group, Inc.	2,984,308
Total Healthcare Services		12,253,313
Pharmaceuticals 34.4%		
110,300 ¹	Abbott Laboratories	6,209,890
67,600 ²	Auxilium Pharmaceuticals, Inc.	2,311,920
25,900 ²	BioForm Medical, Inc.	181,300
174,438 ^{2,3}	BioMarin Pharmaceuticals, Inc.	6,464,672
106,100	Bristol-Myers Squibb Co.	2,460,459
13,300 ²	Cephalon, Inc.	872,879
46,800 ²	Dynavax Technologies Corp.	265,356
13,300 ^{2,3}	EPIX Pharmaceuticals, Inc.	38,038
137,000 ²	Gilead Sciences, Inc.	6,259,530
270,900 ¹	Merck & Co., Inc.	12,537,252
21,000	Novartis AG (ADR)	1,062,810
130,900 ²	Onyx Pharmaceuticals, Inc.	6,221,677
141,100 ¹	Pfizer, Inc.	3,300,329
65,700 ²	Pharmion Corp.	4,530,015
66,500 ^{2,3}	Poniard Pharmaceuticals, Inc.	347,130
Shares	Description	Value
Pharmaceuticals (cont d)		
30,500 ²	Rigel Pharmaceuticals, Inc.	\$ 839,665
66,450	Roche Holding AG	12,065,409
71,100	Teva Pharmaceutical Industries Ltd. (ADR)	3,273,444
30,400 ²	Tongjitang Chinese Medicines Co. (ADR)	253,536
39,900 ²	United Therapeutics Corp.	3,350,802
20,022	Wyeth	796,876
Total Pharmaceuticals		73,642,989
Technology 1.6%		
90,300	CVS Caremark Corp.	3,528,021
Software 0.2%		
20,800 ²	MedAssets, Inc.	419,120
Total Common Stocks (cost \$171,985,362)		194,180,808
SHORT-TERM INVESTMENTS 12.3%		
Money Market Funds 7.4%		
10,711,780 ⁴	Fidelity Institutional Money Market Prime Portfolio, 3.96%	10,711,780
5,173,300 ^{4,5,6}	BlackRock Liquidity Series, LLC, Money Market Series, 4.16%	5,173,300
Total Money Market Funds (cost \$15,885,080)		15,885,080

Principal Amount

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(000)

		U.S. Government and Agency Discount Notes 4.9%	
\$	10,400 ⁷	Federal Home Loan Bank Disc. Notes, 2.00% 2/01/08	10,400,000
		Total Short-Term Investments (cost \$26,285,080)	26,285,080

Contracts

		OUTSTANDING CALL OPTION PURCHASED 0.0%	
	300	Merck & Co., Inc., strike price \$55, expires 02/18/08 (cost \$2,115)	2,250
		Total investments before outstanding options written (cost \$198,272,557 ⁸)	220,468,138
		OUTSTANDING OPTIONS WRITTEN (0.7)%	
		OUTSTANDING CALL OPTIONS WRITTEN (0.5)%	
(25,000)		Abbott Laboratories, strike price \$60.15, expires 02/22/08	(7,797)
(15,000)		Aetna, Inc., strike price \$58, expires 02/15/08	(1,143)
(50)		Alcon, Inc., strike price \$150, expires 02/18/08	(6,625)
(400)		Alexion Pharmaceuticals, Inc., strike price \$80, expires 02/18/08	(13,000)
(10,000)		Alphatec Holdings, Inc., strike price \$5.02, expires 02/11/08	(1,953)
(200)		Applera Corp. - Applied Biosystems Group, strike price \$35, expires 02/18/08	(2,500)
(200)		Applera Corp. - Celera Group, strike price \$17.50, expires 03/24/08	(6,000)
(20)		Auxilium Pharmaceuticals, Inc., strike price \$30, expires 03/24/08	(11,600)
(10,000)		Auxilium Pharmaceuticals, Inc., strike price \$30.66, expires 03/20/08	(48,915)
(100)		Baxter Intl., Inc., strike price \$60, expires 02/18/08	(16,750)
(150)		Baxter Intl., Inc., strike price \$62.50, expires 02/18/08	(6,750)
(100)		Baxter Intl., Inc., strike price \$65, expires 05/19/08	(19,000)
(125)		Becton Dickinson & Co., strike price \$85, expires 02/18/08	(32,188)
(100)		Becton Dickinson & Co., strike price \$85, expires 03/24/08	(41,000)

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SCHEDULE OF INVESTMENTS as of January 31, 2008 (unaudited)

BlackRock Health Sciences Trust (BME) (continued)
(Percentages shown are based on Net Assets)

Contracts	Description	Value
OUTSTANDING CALL OPTIONS WRITTEN (cont d)		
(100)	Becton Dickinson & Co., strike price \$95, expires 03/24/08	\$ (4,500)
(25,000)	BioMarin Pharmaceuticals, Inc., strike price \$35, expires 03/20/08	(100,640)
(100)	BioMarin Pharmaceuticals, Inc., strike price \$40, expires 02/18/08	(3,750)
(400)	BioMarin Pharmaceuticals, Inc., strike price \$40, expires 03/24/08	(44,000)
(250)	BioMarin Pharmaceuticals, Inc., strike price \$40, expires 04/21/08	(45,000)
(25)	C.R. Bard, Inc., strike price \$100, expires 03/24/08	(6,875)
(204)	Celgene Corp., strike price \$55, expires 02/18/08	(43,860)
(20)	Cephalon, Inc., strike price \$75, expires 02/18/08	(200)
(100)	Cephid, Inc., strike price \$30, expires 03/24/08	(34,000)
(120)	Charles River Laboratories Intl., Inc., strike price \$65, expires 02/18/08	(9,000)
(82)	China Medical Technologies, Inc. (ADR), strike price \$50, expires 03/22/08	(27,060)
(100)	Covance, Inc., strike price \$90, expires 02/18/08	(2,500)
(10)	Covance, Inc., strike price \$90, expires 05/19/08	(2,550)
(100)	CVS Caremark Corp., strike price \$40, expires 02/18/08	(3,500)
(50)	CVS Caremark Corp., strike price \$40, expires 03/24/08	(5,375)
(200)	Cyberonics, Inc., strike price \$15, expires 04/21/08	(7,500)
(27,000)	Dentsply Intl., Inc., strike price \$47.50, expires 02/22/08	(2,325)
(20)	Edwards Lifesciences Corp., strike price \$55, expires 02/18/08	(200)
(7,300)	Fresenius Medical Care AG & Co. KGaA, strike price 39.83 EUR, expires 04/01/08	(3,255)
(300)	Gilead Sciences, Inc., strike price \$50, expires 02/18/08	(3,000)
(150)	Gilead Sciences, Inc., strike price \$50, expires 05/19/08	(25,875)
(20)	Integra LifeSciences Holdings Corp., strike price \$45, expires 03/24/08	(1,450)
(13,000)	Johnson & Johnson, strike price \$66.50, expires 03/26/08	(6,573)
(250)	Medtronic, Inc., strike price \$52.50, expires 02/18/08	(1,875)
(100)	Medtronic, Inc., strike price \$55, expires 05/19/08	(2,500)
(30,000)	Merck & Co., Inc., strike price \$61.48, expires 02/22/08	(6)
(300)	Myriad Genetics, Inc., strike price \$50, expires 02/18/08	(8,250)
(500)	Myriad Genetics, Inc., strike price \$50, expires 03/24/08	(43,750)
(113)	Myriad Genetics, Inc., strike price \$85, expires 02/16/08	(1,695)
(100)	Novartis AG (ADR), strike price \$60, expires 04/21/08	(1,000)
(250)	Onyx Pharmaceuticals, Inc., strike price \$55, expires 03/24/08	(58,750)
(10,000)	Owen & Minor, Inc., strike price \$43.50, expires 02/22/08	(5,819)
(200)	Pharmion Corp., strike price \$65, expires 03/24/08	(116,000)
(10,000)	Psychiatric Solutions, Inc., strike price \$37, expires 02/22/08	(215)
(260)	Rigel Pharmaceuticals, Inc., strike price \$25, expires 02/18/08	(80,600)

Contracts	Description	Value
OUTSTANDING CALL OPTIONS WRITTEN (cont d)		
(45)	Rigel Pharmaceuticals, Inc., strike price \$30, expires 02/18/08	\$ (3,375)
(250)	Roche Holding AG, strike price 210 CHF, expires 04/18/08	(93,259)
(10,000)	Roche Holding AG, strike price 218.36 CHF, expires 02/20/08	(6,935)
(130)	St. Jude Medical, Inc., strike price \$45, expires 04/21/08	(12,675)
(200)	Stryker Corp., strike price \$75, expires 03/24/08	(7,000)
(100)	Stryker Corp., strike price \$80, expires 03/24/08	(1,000)
(100)	Teva Pharmaceutical Industries Ltd. (ADR), strike price \$47.50, expires 03/24/08	(12,250)
(45)	United Therapeutics Corp., strike price \$120, expires 02/18/08	(900)
(100)	UnitedHealth Group, Inc., strike price \$60, expires 02/18/08	(1,500)
(150)	Varian Medical Systems, Inc., strike price \$55, expires 02/18/08	(3,750)
(20)	Varian Medical Systems, Inc., strike price \$55, expires 03/24/08	(1,950)
(50)	Varian, Inc., strike price \$75, expires 02/18/08	(500)
(40)	Waters Corp., strike price \$75, expires 02/18/08	(9,000)
(60)	Waters Corp., strike price \$80, expires 02/18/08	(4,200)

Total Outstanding Call Options Written
(premium received \$1,697,050)

(1,076,963)

OUTSTANDING PUT OPTIONS WRITTEN (0.2)%

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(250)	Abbott Laboratories, strike price \$55, expires 02/18/08	(20,000)
(420)	Aetna, Inc., strike price \$55, expires 02/18/08	(116,550)
(50)	Charles River Laboratories Intl., Inc., strike price \$60, expires 02/18/08	(4,875)
(38)	China Medical Technologies, Inc. (ADR), strike price \$50, expires 02/18/08	(12,730)
(150)	Dentsply Intl., Inc., strike price \$45, expires 02/18/08	(59,250)
(165)	Genentech, Inc., strike price \$70, expires 02/18/08	(18,562)
(560)	Incyte Corp., strike price \$10, expires 02/16/08	(14,000)
(25)	Millipore Corp., strike price \$65, expires 02/18/08	(2,500)
(100)	United Therapeutics Corp., strike price \$90, expires 02/18/08	(70,000)

Total Outstanding Put Options Written

(premium received \$194,205)

(318,467)

Total Outstanding Options Written

(premium received \$1,891,255)

(1,395,430)

Total investments net of outstanding options

written 102.3%

\$ 219,072,708

Other assets in excess of liabilities (2.3)%

(5,035,120)

Net Assets 100.0%

\$ 214,037,588

1 Security, or a portion thereof, pledged as collateral for outstanding options written.

2 Non-income producing security.

3 Security, or a portion of security, is on loan.

4 Represents current yield as of January 31, 2008.

5 Represents an investment in an affiliate.

6 Security purchased with the cash proceeds from securities loaned.

7 Rate shown is the yield to maturity as of the date of purchase.

SCHEDULE OF INVESTMENTS as of January 31, 2008 (unaudited)

BlackRock Health Sciences Trust (BME) (continued)
(Percentages shown are based on Net Assets)

⁸ Cost for federal income tax purposes is \$198,684,052. The net unrealized appreciation on a tax basis is \$21,784,086, consisting of \$27,889,056 gross unrealized appreciation and \$6,104,970 gross unrealized depreciation.

For Trust compliance purposes, the Trust's sector and industry classifications refer to any one or more of the Standard Industry Codes as defined by the SEC. This definition may not apply for purposes of this report, which may combine sector and industry sub-classifications for reporting ease.

KEY TO ABBREVIATIONS

ADR American Depositary Receipt
CHF Swiss Franc
EUR Euro

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Item 2 ☐ Controls and Procedures

2(a) ☐ The registrant's principal executive and principal financial officers or persons performing similar functions have concluded that the registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the "1940 Act")) are effective as of a date within 90 days of the filing of this report based on the evaluation of these controls and procedures required by Rule 30a-3(b) under the 1940 Act and Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended.

2(b) ☐ There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act) that occurred during the registrant's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the registrant's internal control over financial reporting.

Item 3 ☐ Exhibits

Certifications ☐ Attached hereto

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BlackRock Health Sciences Trust

By: /s/ Donald C. Burke
Donald C. Burke
Chief Executive Officer of
BlackRock Health Sciences Trust

Date: March 24, 2008

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By: /s/ Donald C. Burke
Donald C. Burke
Chief Executive Officer (principal executive officer) of
BlackRock Health Sciences Trust

Date: March 24, 2008

By: /s/ Neal J. Andrews
Neal J. Andrews
Chief Financial Officer (principal financial officer) of
BlackRock Health Sciences Trust

Date: March 24, 2008
