

BlackRock Health Sciences Trust
Form N-Q
September 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: 05/01/2008 07/31/2008

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Item 1 ☐ Schedule of Investments

Schedule of Investments July 31, 2008 (Unaudited)

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

Shares	Common Stocks	Value
Biotechnology 27.1%		
127,400	Alexion Pharmaceuticals, Inc.(a)	\$ 11,943,750
177,900	Amgen, Inc.	11,141,877
20,300	ARYx Therapeutics, Inc.	104,748
119,300	Celera Corp.	1,628,445
89,071	Celgene Corp.(b)	6,723,970
74,600	Charles River Laboratories Intl., Inc.(b)(c)	4,957,916
78,800	Genentech, Inc.(b)	7,505,700
100,300	Genzyme Corp.(b)	7,687,995
38,500	Halozyme Therapeutics, Inc.(b)	308,385
29,700	Incyte Corp. Ltd.(b)	267,300
97,400	Integra LifeSciences Holdings Corp.(b)(c)	4,447,284
467	InterMune, Inc.	8,023
35,600	Millipore Corp.(b)	2,504,460
13,200	Nanosphere, Inc.(b)	130,548
22,300	Sequenom, Inc.(b)	476,328
63,300	Vertex Pharmaceuticals, Inc.(b)	2,183,850
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		62,020,579
Commercial Services 0.6%		
23,600	McKesson Corp.	1,321,364
Healthcare Products 31.1%		
50,100	Alcon, Inc.	8,638,743
70,900	Alphatec Holdings, Inc.(b)	338,902
176,800	Baxter Intl., Inc.(a)	12,130,248
15,300	Beckman Coulter, Inc.	1,106,802
137,500	Becton Dickinson & Co.(a)	11,675,125
29,900	C.R. Bard, Inc.	2,775,916
33,700	Covidien Ltd.	1,659,388
131,100	Cyberonics, Inc.(b)	3,620,982
6,400	Hologic, Inc.(b)	118,208
76,800	Immunocor, Inc.(b)	2,313,984
101,800	Johnson & Johnson	6,970,246
179,500	Medtronic, Inc.(a)	9,482,985
45,600	SenoRx, Inc.(b)	329,232
51,100	St. Jude Medical, Inc.(b)	2,380,238
31,900	Stryker Corp.	2,047,661
64,200	Varian Medical Systems, Inc.(b)(c)	3,852,000
24,400	Zimmer Holdings, Inc.(b)	1,681,404
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		71,122,064
Healthcare Services 3.5%		
68,300	Aetna, Inc.(a)	2,800,983
44,500	DaVita, Inc.(b)	2,485,325
48,200	Fresenius Medical Care AG & Co. KGaA	2,655,153
		<hr/>
		7,941,461
Pharmaceuticals 21.7%		
52,400	Abbott Laboratories(a)	2,952,216
113,200	Auxilium Pharmaceuticals, Inc.(b)(c)	4,199,720
12,800	BioForm Medical, Inc.(b)	64,768

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98,438	BioMarin Pharmaceuticals, Inc.(b)	3,204,157
100,900	Bristol-Myers Squibb Co.	2,131,008
59,000	Eli Lilly & Co.	2,779,490
120,900	Gilead Sciences, Inc.(b)	6,526,182
83,800	Medco Health Solutions, Inc.(a)(b)	4,154,804
132,100	Merck & Co., Inc.(a)	4,346,090
78,000	Novartis AG (ADR)	4,629,300
174,500	Pfizer, Inc.	3,257,915
66,500	Poniard Pharmaceuticals, Inc.(b)(c)	256,025
49,100	Rigel Pharmaceuticals, Inc.(b)	1,249,104
23,950	Roche Holding AG	4,425,046
55,100	Teva Pharmaceutical Industries Ltd. (ADR)	2,470,684
17,900	United Therapeutics Corp. (b)	2,029,681
21,122	Wyeth	855,863
		49,532,053

	Technology 2.3%	
146,400	CVS Caremark Corp.	5,343,600

	Software 0.2%	
22,200	MedAssets, Inc.(b)	335,664

	Total Common Stocks (Cost \$167,376,700) 86.5%	197,616,785
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Shares	Short-Term Securities	Value
	Money Market Funds 9.2%	
10,130,850	BlackRock Liquidity Series, LLC Money Market Series, 2.63%(d)(e)(f)	\$ 10,130,850
10,964,899	Fidelity Institutional Money Market Prime Portfolio, 2.45%(d)	10,964,899
	Total Money Market Funds	21,095,749

Principal Amount		
	U.S. Government and Agency Discount Notes 4.1%	
\$ 9,400,000	Federal Home Loan Bank Discount Notes, 1.82%, 08/01/08(g)	9,400,000
	Total Short-Term Securities (Cost \$30,495,749) 13.3%	30,495,749

Contracts	Options Purchased	
	Outstanding Call Options Purchased 0.1%	
50	Alexion Pharmaceuticals, Inc., strike price \$70, expires 11/24/08	130,500
9,000	Teva Pharmaceutical Industries Ltd. (ADR), strike price \$52.50, expires 11/21/08	3,316
	Total Outstanding Options Purchased (Cost \$55,075) 0.1%	133,816
	Total Investments Before Outstanding Options Written (Cost \$197,927,524*) 99.9%	228,246,350

Options Written

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Outstanding Call Options Written (2.0)%		
(75)	Abbott Laboratories, strike price \$57.50, expires 11/24/08	(19,875)
(75)	Abbott Laboratories, strike price \$60, expires 11/24/08	(12,375)
(100)	Aetna, Inc., strike price \$50, expires 01/19/09	(13,000)
(5,000)	Alcon, Inc., strike price \$155, expires 11/21/08	(107,968)
(50)	Alcon, Inc., strike price \$170, expires 11/24/08	(61,750)
(50)	Alcon, Inc., strike price \$175, expires 11/24/08	(48,000)
(195)	Alexion Pharmaceuticals, Inc., strike price \$100, expires 09/22/08	(88,725)
(60)	Alexion Pharmaceuticals, Inc., strike price \$70, expires 08/18/08	(900)
(200)	Alexion Pharmaceuticals, Inc., strike price \$80, expires 11/24/08	(372,000)
(200)	Alexion Pharmaceuticals, Inc., strike price \$85, expires 11/24/08	(309,000)
(67)	Alexion Pharmaceuticals, Inc., strike price \$90, expires 08/18/08	(40,200)
(65)	Alexion Pharmaceuticals, Inc., strike price \$90, expires 09/22/08	(55,900)
(10,000)	Alphatec Holdings, Inc., strike price \$6.03, expires 11/21/08	(2,939)
(10,000)	Amgen, Inc., strike price \$50.05, expires 11/21/08	(139,467)
(10,000)	Amgen, Inc., strike price \$60, expires 11/07/08	(57,848)
(100)	Auxilium Pharmaceuticals, Inc., strike price \$40, expires 09/22/08	(16,750)
(235)	Auxilium Pharmaceuticals, Inc., strike price \$42.50, expires 11/14/08	(51,700)
(75)	Baxter Intl., Inc., strike price \$62.50, expires 08/18/08	(562)
(200)	Baxter Intl., Inc., strike price \$67.50, expires 11/24/08	(89,000)
(300)	Baxter Intl., Inc., strike price \$70, expires 11/24/08	(93,000)
(50)	Beckman Coulter, Inc., strike price \$75, expires 11/24/08	(15,625)

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(13,000)	St. Jude Medical, Inc., strike price \$45.25, expires 11/21/08	(53,658)
(205)	Stryker Corp., strike price \$72, expires 11/07/08	(16,095)
(200)	Teva Pharmaceutical Industries Ltd. (ADR), strike price \$47.50, expires 09/22/08	(15,000)
(100)	Teva Pharmaceutical Industries Ltd. (ADR), strike price \$47.50, expires 12/22/08	(19,750)
(9,000)	Teva Pharmaceutical Industries Ltd. (ADR), strike price \$53, expires 11/21/08	(2,866)
(100)	United Therapeutics Corp., strike price \$115, expires 11/24/08	(161,500)
(150)	Varian Medical Systems, Inc., strike price \$55, expires 11/24/08	(114,750)
(182)	Varian Medical Systems, Inc., strike price \$60, expires 08/18/08	(24,570)
(50)	Varian Medical Systems, Inc., strike price \$60, expires 11/24/08	(22,250)
(6,000)	Vertex Pharmaceuticals, Inc., strike price \$35, expires 11/21/08	(25,245)
(20)	Wyeth, strike price \$45, expires 08/18/08	(9,700)
(45)	Wyeth, strike price \$50, expires 08/18/08	(225)
(122)	Zimmer Holdings, Inc., strike price \$67, expires 08/22/08	(35,162)
(122)	Zimmer Holdings, Inc., strike price \$67, expires 09/12/08	(44,104)
Total Outstanding Call Options Written		(4,599,284)

Schedule of Investments July 31, 2008 (Unaudited) (continued)

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

Contracts	Options Written	Value
Outstanding Put Options Written (0.0)%		
(80)	Charles River Laboratories Intl., Inc., strike price \$60, expires 08/18/08	\$ (1,600)
(501)	Genzyme Corp., strike price \$75, expires 08/18/08	(52,605)
(48)	Medtronic, Inc., strike price \$45, expires 11/24/08	(2,760)
Total Outstanding Put Options Written		(56,965)
Total Outstanding Options Written (Premium Received \$3,076,444) (2.0)%		(4,656,249)
Total Investments Net of Outstanding Options Written 97.9%		223,590,101
Other Assets in Excess of Liabilities 2.1%		4,883,863
Net Assets 100.0%		\$ 228,473,964

* The cost and unrealized appreciation (depreciation) of investments as of July 31, 2008, as computed for federal income tax purposes, were as follows:

Aggregate cost	\$ 198,339,019
Gross unrealized appreciation	\$ 32,292,873
Gross unrealized depreciation	(2,385,542)
Net unrealized appreciation	\$ 29,907,331

- (a) Security, or a portion thereof, pledged as collateral for outstanding options written.
- (b) Non-income producing security.
- (c) Security, or a portion of security, is on loan.
- (d) Represents current yield as of report date.
- (e) Investments in companies considered to be an affiliate of the Trust, for purposes of Section 2(a)(3) of the Investment Company Act of 1940 were as follows:

Affiliate	Net Activity	Interest Income
BlackRock Liquidity Series, LLC		
Money Market Series	6,955,250	\$56,036

- (f) Security purchased with the cash proceeds from securities loans.

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(g) Rate shown is the yield to maturity as of the date of purchase.

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: September 19, 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: September 19, 2008

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

Date: September 19, 2008
