

BlackRock Health Sciences Trust
Form N-Q
March 29, 2011

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: John M. Perlowski, Chief Executive Officer, BlackRock Health Sciences Trust, 55 East 52nd Street,
New York, NY 10055

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

Date of fiscal year end: 10/31/2011

Date of reporting period: 01/31/2011

Item 1 Schedule of Investments

Schedule of Investments January 31, 2011 (Unaudited)

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

	Shares	Value
Common Stocks		
Biotechnology 13.9%		
3SBio, Inc. - ADR(a)(b)	42,000	\$ 675,780
Alexion Pharmaceuticals, Inc.(a)(b)	24,800	2,078,736
Amgen, Inc.(a)(b)	92,300	5,083,884
Ariad Pharmaceuticals, Inc.(a)	39,300	250,538
Arqule, Inc.(a)	32,100	196,773
Biogen Idec, Inc.(a)(b)	15,500	1,014,785
BioMarin Pharmaceutical, Inc.(a)(b)	91,800	2,333,556
Celera Corp.(a)	34,100	210,909
Celgene Corp.(a)(b)	43,800	2,257,014
Cepheid, Inc.(a)(b)	24,900	591,624
Cubist Pharmaceuticals, Inc.(a)(b)	28,700	629,678
Gilead Sciences, Inc.(a)(b)	136,160	5,225,821
Human Genome Sciences, Inc.(a)(b)	79,700	1,933,522
Ironwood Pharmaceuticals, Inc.(a)	29,300	316,147
Momenta Pharmaceuticals, Inc.(b)	46,200	590,898
Myriad Genetics, Inc.(a)(b)	93,100	1,858,276
United Therapeutics Corp.(a)(b)	39,900	2,712,402
Vertex Pharmaceuticals, Inc.(a)(b)	20,700	805,023
		28,765,366
Health Care Equipment & Supplies 23.0%		
ABIOMED, Inc.(a)	3,400	33,320
Alere, Inc.(a)(b)	30,800	1,206,436
American Medical Systems Holdings, Inc.(a)(b)	90,500	1,766,560
Arthrocare Corp.(a)	7,700	215,523
Baxter International, Inc.(b)	105,300	5,105,997
Becton Dickinson & Co.(b)	62,400	5,176,080
Boston Scientific Corp.(a)(b)	97,600	681,248
China Medical Technologies, Inc. - ADR(a)(b)	29,500	362,260
CONMED Corp.(a)	23,600	616,196
Cooper Cos., Inc. (The)(b)	65,500	3,755,770
Covidien Plc	108,900	5,169,483
CR Bard, Inc.(b)	11,200	1,056,720
Edwards Lifesciences Corp.(a)(b)	17,700	1,491,933
Gen-Probe, Inc.(a)(b)	81,400	5,119,246
Given Imaging Ltd.(a)	4,000	67,080
Haemonetics Corp.(a)(b)	25,100	1,489,434
Hologic, Inc.(a)(b)	234,900	4,679,208
Integra LifeSciences Holdings Corp.(a)(b)	26,600	1,233,708
Masimo Corp.(b)	28,100	842,298
Medtronic, Inc.(b)	82,100	3,146,072
Natus Medical, Inc.(a)	20,700	311,742
St. Jude Medical, Inc.(a)(b)	29,100	1,178,550
Straumann Holding AG	4,300	1,053,806
Sysmex Corp.	7,800	509,901
Varian Medical Systems, Inc.(a)(b)	22,400	1,513,568
		47,782,139
Health Care Providers & Services 28.1%		
Aetna, Inc.(b)	166,800	5,494,392

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AmerisourceBergen Corp.(b)	34,600	1,240,756
Cardinal Health, Inc.(b)	102,300	4,246,473
Community Health Systems, Inc.(a)(b)	15,000	526,800
DaVita, Inc.(a)(b)	78,600	5,804,610
Express Scripts, Inc.(a)(b)	112,360	6,329,239
Fleury SA(b)	46,200	692,882
Fresenius Medical Care AG & Co. KGaA(b)	127,900	7,482,411
Health Management Associates, Inc., Class A(a)(b)	90,000	819,000
Henry Schein, Inc.(a)(b)	69,500	4,563,370
Laboratory Corp. of America Holdings(a)(b)	48,200	4,333,662
McKesson Corp.(b)	16,200	1,217,754
Medco Health Solutions, Inc.(a)(b)	86,810	5,297,146
PSS World Medical, Inc.(a)(b)	36,200	862,646
Sinopharm Group Co. - H Shares	218,300	775,507
Tenet Healthcare Corp.(a)(b)	313,400	2,084,110
UnitedHealth Group, Inc.(b)	159,700	6,555,685

58,326,443

Life Sciences Tools & Services 9.1%

Agilent Technologies, Inc.(a)(b)	70,000	2,928,100
Dionex Corp.(a)	26,300	3,102,874
Life Technologies Corp.(a)(b)	44,100	2,394,189
Lonza Group AG	14,500	1,142,898
Mettler-Toledo International, Inc.(a)(b)	34,600	5,161,974
Pharmaceutical Product Development, Inc.(b)	37,400	1,089,836
ShangPharma Corp. - ADR(a)	27,300	358,176
Tecan Group AG(b)	17,600	1,498,051
Thermo Fisher Scientific, Inc.(a)(b)	21,500	1,231,305

18,907,403

Machinery 1.5%

Danaher Corp.(b)	39,000	1,796,340
Pall Corp.(b)	21,800	1,207,938

3,004,278

Pharmaceuticals 20.7%

Abbott Laboratories(b)	68,200	3,079,912
Allergan, Inc.(b)	57,500	4,060,075
Bayer AG(b)	46,300	3,418,767
Bristol-Myers Squibb Co.(b)	120,900	3,044,262
GlaxoSmithKline Plc(b)	60,900	1,099,629
Glenmark Pharmaceuticals Ltd.(a)	81,300	545,442
Hospira, Inc.(a)(b)	33,500	1,850,205
Impax Laboratories, Inc.(a)(b)	65,600	1,523,232
Johnson & Johnson(b)	86,570	5,174,289
Merck & Co., Inc.(b)	62,300	2,066,491
Mylan, Inc.(a)(b)	198,800	4,604,208
Novartis AG(b)	52,200	2,905,964
Pfizer, Inc.(b)	371,300	6,765,085
Watson Pharmaceuticals, Inc.(a)(b)	51,800	2,824,135

42,961,696

Total Long-Term Investments

(Cost \$178,551,551) 96.3%

199,747,325

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Short-Term Securities

BlackRock Liquidity Funds, TempFund, Institutional Class, 0.17%(c)(d)	10,580,569	10,580,569
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Total Short-Term Securities

(Cost \$10,580,569) 5.1%		10,580,569
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Total Investments Before Outstanding Options Written

(Cost \$189,132,120*) 101.4%		210,327,894
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Contracts

Options Written

Exchange-Traded Call Options Written (0.6)%

3SBio, Inc. - ADR, Strike Price USD 17.50, Expires 3/21/11	30	(975)
Abbott Laboratories, Strike Price USD 49, Expires 2/22/11	375	(750)

JANUARY 31, 2011

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Schedule of Investments (continued)**BlackRock Health Sciences Trust (BME)**
(Percentages shown are based on Net Assets)

	Contracts	Value
Options Written		
Exchange-Traded Call Options Written (continued)		
Aetna, Inc., Strike Price USD 31, Expires 2/22/11	260	\$ (58,110)
Aetna, Inc., Strike Price USD 34, Expires 3/21/11	260	(20,800)
Agilent Technologies, Inc., Strike Price USD 44, Expires 2/22/11	50	(2,275)
Agilent Technologies, Inc., Strike Price USD 41, Expires 2/22/11	40	(7,020)
Agilent Technologies, Inc., Strike Price USD 43, Expires 2/22/11	10	(755)
Agilent Technologies, Inc., Strike Price USD 44, Expires 3/21/11	130	(11,375)
Alere, Inc., Strike Price USD 36, Expires 2/22/11	100	(37,000)
Alexion Pharmaceuticals, Inc., Strike Price USD 85, Expires 2/21/11	35	(8,575)
Alexion Pharmaceuticals, Inc., Strike Price USD 80, Expires 2/22/11	50	(26,750)
Allergan, Inc., Strike Price USD 70, Expires 2/22/11	30	(5,925)
Allergan, Inc., Strike Price USD 72.50, Expires 3/21/11	160	(24,000)
American Medical Systems Holdings, Inc., Strike Price USD 20, Expires 2/22/11	285	(10,688)
AmerisourceBergen Corp., Strike Price USD 34, Expires 2/22/11		