BlackRock Health Sciences Trust Form N-Q November 24, 2015

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: 12/31/2015

Date of reporting period: 09/30/2015

Item 1 Schedule of Investments

Schedule of Investments September 30, 2015 (Unaudited)

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

Common Stocks	Shares	Value
Biotechnology 24.7%		
ACADIA Pharmaceuticals, Inc. (a)(b)	10,000	\$ 330,700
Acceleron Pharma, Inc. (a)(b)	25,500	634,950
Actelion Ltd.	11,300	1,436,185
Alder Biopharmaceuticals, Inc. (a)(b)	14,600	478,296
Alexion Pharmaceuticals, Inc. (a)(b)	40,660	6,358,817
Alkermes PLC (a)(b)	38,700	2,270,529
Alnylam Pharmaceuticals, Inc. (a)(b)	5,118	411,282
Amgen, Inc. (b)	43,322	5,992,299
Anacor Pharmaceuticals, Inc. (a)(b)	34,800	4,096,308
Aquinox Pharmaceuticals, Inc. (a)	14,100	198,387
Axovant Sciences Ltd. (a)	12,200	157,624
Baxalta, Inc. (b)	78,300	2,467,233
Biogen, Inc. (a)(b)	20,595	6,009,827
BioMarin Pharmaceutical, Inc. (a)(b)	13,300	1,400,756
Celgene Corp. (a)(b)	101,786	11,010,192
Cellectis SA ADR (a)	8,600	226,696
Cidara Therapeutics, Inc. (a)	2,540	32,309
Clovis Oncology, Inc. (a)(b)	11,500	1,057,540
Dyax Corp. (a)(b)	66,327	1,266,182
Genomic Health, Inc. (a)	24,100	509,956
Gilead Sciences, Inc. (b)	54,400	5,341,536
Global Blood Therapeutics, Inc. (a)	9,400	396,304
Incyte Corp. (a)(b)	13,800	1,522,554
Infinity Pharmaceuticals, Inc. (a)	49,900	421,655
Inotek Pharmaceuticals Corp. (a)	27,996	263,162
Intercept Pharmaceuticals, Inc. (a)(b)	6,100 26,100	1,011,746
Isis Pharmaceuticals, Inc. (a)(b) Medivation, Inc. (a)	36,100 52,900	1,459,162 2,248,250
Neurocrine Biosciences, Inc. (a)(b)	33,362	1,327,474
Otonomy, Inc. (a)	9,000	1,527,474
Pronai Therapeutics, Inc. (a)	4,100	84,132
ProNAi Therapeutics, Inc. (a) ProNAi Therapeutics, Inc. (Acquired 7/16/15,	4,100	04,152
cost \$272,600) (a)(c)	54,596	1,064,294
PTC Therapeutics, Inc. (a)	18,200	485,940
Regeneron Pharmaceuticals, Inc. (a)(b)	8,158	3,794,612
REGENXBIO, Inc. (Acquired 5/14/15,	0,100	0,791,012
cost \$343,081) (a)(c)	35,850	750,287
Sage Therapeutics, Inc. (a)	5,742	243,001
Sarepta Therapeutics, Inc. (a)(b)	29,200	937,612
Seattle Genetics, Inc. (a)(b)	13,367	515,432
Seres Therapeutics, Inc. (a)(d)	16,300	483,132
Seres Therapeutics, Inc. (Acquired 6/26/15,		
cost \$251,900) (a)(c)	20,710	583,152
Spark Therapeutics, Inc. (a)(b)	7,521	313,851
Ultragenyx Pharmaceutical, Inc. (a)(b)	19,015	1,831,335
Vertex Pharmaceuticals, Inc. (a)(b)	29,405	3,062,237
Zafgen, Inc. (a)(b)	11,000	351,450
		74,998,668
Electronic Equipment, Instruments & Components 0.5%		
FEI Co.	20,200	1,475,408
Common Stocks	Shares	Value
Health Care Equipment & Supplies 18.9%		
Abbott Laboratories (b)	182,600	\$ 7,344,172
AtriCure, Inc. (a)	8,962	196,357
Baxter International, Inc. (b)	10,400	341,640
Becton Dickinson and Co. (b)	38,333	5,085,256
Boston Scientific Corp. (a)(b)	490,200	8,044,182
CONMED Corp.	12,900	615,846
Cooper Cos., Inc. (b)	19,600	2,917,656

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CR Bard, Inc. (b) DexCom, Inc. (a)(b) Edwards Lifesciences Corp. (a) Endologix, Inc. (a) Insulet Corp. (a)(b) Intuitive Surgical, Inc. (a)(b) Masimo Corp. (a) Medtronic PLC (b) St. Jude Medical, Inc. (b) Stryker Corp. (b) Thoratec Corp. (a)				$10,300 \\ 15,300 \\ 20,899 \\ 46,412 \\ 15,900 \\ 3,300 \\ 35,700 \\ 152,413 \\ 79,500 \\ 70,600 \\ 12,500 \\ \end{cases}$	$\begin{array}{c} 1,918,993\\ 1,313,658\\ 2,971,211\\ 569,011\\ 411,969\\ 1,516,614\\ 1,376,592\\ 10,202,526\\ 5,015,655\\ 6,643,460\\ 790,750\end{array}$
					57,275,548
Health Care Providers & Services 18.5%				21.211	2 11 1 70 1
Aetna, Inc. (b)				31,211	3,414,796
Amedisys, Inc. (a)(b)				36,200	1,374,514
AmerisourceBergen Corp. (b) Anthem, Inc. (b)				21,200 48,800	2,013,788 6,832,000
Cardinal Health, Inc. (b)				43,030	3,305,565
Cigna Corp. (b)				37,100	5,009,242
Express Scripts Holding Co. (a)(b)				28,776	2,329,705
HCA Holdings, Inc. (a)(b)				52,494	4,060,936
HealthEquity, Inc. (a)(b)				18,200	537,810
Humana, Inc. (b)				9,800	1,754,200
McKesson Corp. (b)				40,700	7,530,721
Teladoc, Inc. (a)(d)				20,200	450,258
UnitedHealth Group, Inc. (b)				108,302	12,564,115
Universal Health Services, Inc., Class B (b)				34,300	4,280,983
Wellcare Health Plans, Inc. (a)				7,600	654,968
Health Care Technology 0.4%					56,113,601
Cerner Corp. (a)(b)				17,800	1,067,288
Life Sciences Tools & Services 2.6%				4 000	(11 (00
Bio-Rad Laboratories, Inc. (a)(b)				4,800	644,688
Charles River Laboratories International, Inc. (a) Illumina, Inc. (a)(b)				49,000 5,000	3,112,480 879,100
Thermo Fisher Scientific, Inc.				26,700	3,264,876
Thermo Pisher Scientific, inc.				20,700	5,204,870
					7,901,144
Pharmaceuticals 28.3%				97,686	5 215 005
AbbVie, Inc. (b)(e)				,	5,315,095
Allergan PLC (a)(b)				26,125	7,101,036
Portfolio Abbreviations					
	CDF		NO.		
ADR American Depositary Receipt CHF Swiss Franc	GBP	British Pound Hong Kong Dollar	USD	U.S. Dollar	
CHF Swiss Franc EUR Euro	HKD JPY	Hong Kong Dollar Japanese Yen			
EUN EUIU	J1 1	Japanese I en			

SEPTEMBER 30, 2015

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Schedule of Investments (continued)

BlackRock Health Sciences Trust (BME)

Common Stocks	Shares	Value
Pharmaceuticals (continued)		
AstraZeneca PLC	68,800	\$ 4,363,185
Bristol-Myers Squibb Co. (b)	130,030	7,697,776
Cempra, Inc. (a)(b)	24,800	690,432
Chugai Pharmaceutical Co. Ltd.	43,700	1,342,168
Dermira, Inc. (a)	16,600	387,444
Eli Lilly & Co. (b)	125,000	10,461,250
Intra-Cellular Therapies, Inc. (a)(b)	55,081	2,205,443
Jazz Pharmaceuticals PLC (a)(b)	5,000	664,050
Johnson & Johnson (b)	49,370	4,608,690
Mallinckrodt PLC (a)(b)	24,843	1,588,461
Merck & Co., Inc. (b)	93,200	4,603,148
Mylan NV (a)(b)	79,000	3,180,540
Nektar Therapeutics (a)(b)	105,400	1,155,184
Novartis AG	50,000	4,595,594
Novartis AG ADR (b)	17,900	1,645,368
Perrigo Co. PLC (b)	7,402	1,164,113
Pfizer, Inc. (b)	108,000	3,392,280
Phibro Animal Health Corp., Class A	22,600	714,838
Roche Holding AG	11,600	3,079,470
Sanofi ADR (b)	13,700	650,339
Shire PLC ADR (b)	16,000	3,283,680
Teva Pharmaceutical Industries Ltd. ADR (b)	87,100	4,917,666
UCB SA	12,300	963,621
Valeant Pharmaceuticals International, Inc. (a)(b)	25,700	4,584,366
Zoetis, Inc. (b)	37,000	1,523,660
Total Common Stocks 93.9%		85,878,897 284,710,554
Preferred Stocks Biotechnology 1.3%		
Acerta Pharma BV, Series B (Acquired 5/6/15,		
cost \$2,192,004), 0.00% (a)(c)	190,609	2,192,004
Afferent Pharmaceuticals, Inc., Series C (Acquired 6/30/15, cost \$466,520), 0.00% (a)(c)	190,160	466,520
Corvus Pharmaceuticals, Inc. (Acquired 9/11/15,		
cost \$297,937), 0.00% (a)(c)	21,266	297,937
Preferred Stocks	Shares	Value
Biotechnology (continued)		
CytomX Therapeutics, Inc., Series D (Acquired 6/11/15, cost \$262,220), 0.00% (a)(c) Intellia Therapeutics, Inc. (Acquired 8/19/15,	1,767,672	\$ 399,494
cost \$248,566), 0.00% (a)(c)	47,346	248,566
Ovid Therapeutics, Inc. (Acquired 8/7/15, cost \$503,165), 0.00% (a)(c)	80,765	503,165
	00,705	505,105
		4,107,686
Pharmaceuticals 0.2%		
Syndax Pharmaceuticals, Inc. (Acquired 8/19/15, cost \$495,693), 0.00% (a)(c)	44,286	495,693
Total Preferred Stocks 1.5%		4,603,379
Total Long-Term Investments		
(Cost \$210,499,023) 95.4%		289,313,933
Short-Term Securities	10.005.000	
BlackRock Liquidity Funds, TempFund, Institutional Class, 0.10% (f)(g)	12,275,618	12,275,618

Beneficial Interest (000)

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BlackRock Liquidity Series, LLC Money Market Series, 0.26% (f)(g)(h) Total Short-Term Securities	\$ 302	301,918
(Cost \$12,577,536) 4.2% Total Investments Before Options Written		12,577,536
(Cost \$223,076,559*) 99.6%		301,891,469
Options Written (Premiums Received \$2,605,413) (0.3)%		(879,806)
Total Investments Net of Options Written99.3%Other Assets Less Liabilities0.7%		301,011,663 2,203,593
Net Assets 100.0%		\$ 303,215,256

Notes to Schedule of Investments

* As of period end, gross unrealized appreciation and depreciation based on cost for federal income tax purposes were as follows:

Tax cost	\$ 224,543,087
Gross unrealized appreciation Gross unrealized depreciation	\$ 84,093,162 (6,744,780)
Net unrealized appreciation	\$ 77,348,382

(a) Non-income producing security.

(b) All or a portion of security has been pledged and/or segregated as collateral in connection with outstanding exchange-traded options written.

(c) Restricted securities as to resale, excluding 144A securities. As of period end, the Trust held restricted securities with a current value of \$7,001,112 and an original cost of \$5,333,686 which was 2.3% of its net assets.

(d) Security, or a portion of security, is on loan.

(e) All or a portion of security has been pledged as collateral in connection with outstanding OTC derivatives.

(f) Represents the current yield as of report date.

(g) During the period ended September 30, 2015, investments in issuers considered to be affiliates of the Trust for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

Schedule of Investments (continued)

BlackRock Health Sciences Trust (BME)

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	Shares		Bene	Shares/ ficial Interest Held at	
Affiliates	Held at December 31, 2014	Net Activity	Sej	ptember 30, 2015	Income
BlackRock Liquidity Funds, TempFund, Institutional Class	3,271,616	9,004,002		12,275,618	\$ 4,991
BlackRock Liquidity Series, LLC Money Market Series			\$	301,918	\$ 3,1371

¹ Represents securities lending income earned from the reinvestment of cash collateral from loaned securities, net of fees, and collateral investment expenses, and other payments to and from borrowers of securities.

(h) Security was purchased with the cash collateral from loaned securities. The Trust may withdraw up to 25% of its investment daily, although the manager of the BlackRock Liquidity Series LLC, Money Market Series, in its sole discretion, may permit an investor to withdraw more than 25% on any one day.

For Trust compliance purposes, the Trust s industry classifications refer to any one or more of the industry sub-classifications used by one or more widely recognized market indexes or ratings group indexes, and/or as defined by the investment advisor. These definitions may not apply for purposes of this report, which may combine industry sub-classifications for reporting ease.

Derivative Financial Instruments Outstanding as of Period End Exchange-Traded Options Written

		S	trike			
	Put/			Expiration		
Description	Call	1	Price	Date	Contracts	Value
AbbVie, Inc.	Call	USD	64.00	10/02/15	130	\$ (650)
Aetna, Inc.	Call	USD	121.00	10/02/15	27	(351)
Alexion Pharmaceuticals, Inc.	Call	USD	190.00	10/02/15	33	(330)
Allergan PLC	Call	USD	310.00	10/02/15	22	(110)
Amgen, Inc.	Call	USD	162.50	10/02/15	25	(125)
Anthem, Inc.	Call	USD	146.00	10/02/15	75	(1,950)
Biogen, Inc.	Call	USD	322.50	10/02/15	37	(1,850)
Celgene Corp.	Call	USD	136.00	10/02/15	143	(715)
Eli Lilly & Co.	Call	USD	86.50	10/02/15	111	(2,775)
Express Scripts Holding Co.	Call	USD	91.50	10/02/15	18	(90)
Gilead Sciences, Inc.	Call	USD	112.00	10/02/15	45	(292)
Isis Pharmaceuticals, Inc.	Call	USD	54.50	10/02/15	93	(1,860)
Medtronic PLC	Call	USD	77.50	10/02/15	4	(16)
Mylan NV	Call	USD	50.50	10/02/15	135	(945)
Shire PLC ADR	Call	USD	230.00	10/02/15	40	(2,000)
Teva Pharmaceutical Industries Ltd. ADR	Call	USD	70.00	10/02/15	35	(105)
UnitedHealth Group, Inc.	Call	USD	119.00	10/02/15	85	(2,762)
AbbVie, Inc.	Call	USD	64.00	10/09/15	127	(1,270)
Aetna, Inc.	Call	USD	123.00	10/09/15	28	(630)
Amgen, Inc.	Call	USD	157.50	10/09/15	32	(448)
Biogen, Inc.	Call	USD	317.50	10/09/15	32	(3,760)
Bristol-Myers Squibb Co.	Call	USD	60.00	10/09/15	90	(10,980)
Eli Lilly & Co.	Call	USD	82.50	10/09/15	115	(28,922)
HCA Holdings, Inc.	Call	USD	89.00	10/09/15	90	(1,350)
Medtronic PLC	Call	USD	72.00	10/09/15	234	(3,159)
Pfizer, Inc.	Call	USD	34.00	10/09/15	9	(54)
Teva Pharmaceutical Industries Ltd. ADR	Call	USD	64.50	10/09/15	55	(770)
UnitedHealth Group, Inc.	Call	USD	116.00	10/09/15	77	(19,673)
Zoetis, Inc.	Call	USD	47.00	10/09/15	55	(1,375)

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AmerisourceBergen Corp.	Call	USD	108.00	10/12/15	37	(52)
Dyax Corp.	Call	USD	23.33	10/15/15	55	(205)
Abbott Laboratories	Call	USD	45.00	10/16/15	186	(930)
AbbVie, Inc.	Call	USD	62.50	10/16/15	127	(1,270)
ACADIA Pharmaceuticals, Inc.	Call	USD	44.00	10/16/15	35	(1,575)
Alder Biopharmaceuticals, Inc.	Call	USD	45.00	10/16/15	50	(750)
Alexion Pharmaceuticals, Inc.	Call	USD	180.00	10/16/15	73	(3,285)
Alexion Pharmaceuticals, Inc.	Call	USD	190.00	10/16/15	36	(1,620)
Alkermes PLC	Call	USD	80.00	10/16/15	75	(2,250)
Allergan PLC	Call	USD	320.01	10/16/15	46	(787)
Alnylam Pharmaceuticals, Inc.	Call	USD	120.00	10/16/15	27	(1,350)
Amedisys, Inc.	Call	USD	41.00	10/16/15	90	(4,410)
Amedisys, Inc.	Call	USD	45.00	10/16/15	5	(95)
Amedisys, Inc.	Call	USD	47.00	10/16/15	25	(1,050)

SEPTEMBER 30, 2015

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Schedule of Investments (continued)