

BlackRock Health Sciences Trust
Form N-Q
March 31, 2009

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: 10/31/2009

Date of reporting period: 11/01/2008 - 01/31/2009

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Item 1 ☐ Schedule of Investments

Schedule of Investments January 31, 2009 (Unaudited)

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

| Shares | Common Stocks | Value |
|----------------------------------|--|------------|
| Biotechnology 18.3% | | |
| 15,700 | 3SBio, Inc. (ADR) (a) | \$ 83,681 |
| 4,100 | Acorda Therapeutics, Inc. (a) | 100,573 |
| 38,100 | Alexion Pharmaceuticals, Inc. (a) | 1,404,747 |
| 212,100 | Amgen, Inc. (a)(b) | 11,633,685 |
| 20,300 | ARYx Therapeutics, Inc. (a) | 46,690 |
| 5,000 | Biogen Idec, Inc. (a) | 243,250 |
| 160,500 | Celera Corp. (a) | 1,354,620 |
| 126,160 | Genentech, Inc. (a) | 10,249,238 |
| 50,430 | Genzyme Corp. (a) | 3,475,636 |
| 45,200 | Halozyme Therapeutics, Inc. (a) | 260,804 |
| 33,700 | Incyte Corp. Ltd. (a) | 98,741 |
| 15,420 | Integra LifeSciences Holdings Corp. (a)(c) | 427,751 |
| 7,600 | InterMune, Inc. (a) | 86,944 |
| 13,200 | Nanosphere, Inc. (a) | 60,060 |
| 71,190 | Vertex Pharmaceuticals, Inc. (a) | 2,352,829 |
| | | 31,879,249 |
| Commercial Services 1.1% | | |
| 45,110 | McKesson Corp. | 1,993,862 |
| Healthcare Products 22.4% | | |
| 43,200 | Alcon, Inc. | 3,699,648 |
| 66,695 | Alphatec Holdings, Inc. (a) | 144,728 |
| 125,550 | Baxter International, Inc. | 7,363,508 |
| 52,880 | Beckman Coulter, Inc. | 2,629,194 |
| 83,000 | Becton Dickinson & Co. | 6,031,610 |
| 35,060 | Covidien Ltd. | 1,344,200 |
| 66,000 | Cyberonics, Inc. (a) | 1,015,740 |
| 59,600 | DexCom, Inc. (a) | 192,508 |
| 32,200 | DiaSorin S.p.A. | 583,229 |
| 87,200 | Immucor, Inc. (a) | 2,416,312 |
| 58,470 | Johnson & Johnson | 3,373,134 |
| 9,400 | Masimo Corp. (a) | 261,038 |
| 141,290 | Medtronic, Inc. | 4,731,802 |
| 207,100 | Qiagen N.V. (a) | 3,551,765 |
| 120,300 | ResMed, Inc. (a) | 472,324 |
| 37,000 | Smith & Nephew Plc | 268,203 |
| 26,800 | St. Jude Medical, Inc. (a) | 974,716 |
| | | 39,053,659 |
| Healthcare Services 7.2% | | |
| 27,400 | AMERIGROUP Corp. (a) | 766,378 |
| 24,000 | Centene Corp. (a) | 425,520 |
| 6,500 | Community Health Systems, Inc. (a) | 121,160 |
| 11,700 | Coventry Health Care, Inc. (a) | 177,021 |
| 87,280 | DaVita, Inc. (a) | 4,102,160 |
| 60,200 | Fresenius Medical Care AG & Co. KGaA | 2,693,626 |
| 2,900 | Laboratory Corp. of America Holdings (a) | 171,680 |
| 7,900 | Mednax, Inc. (a) | 265,203 |
| 134,000 | UnitedHealth Group, Inc. | 3,796,220 |
| | | 12,518,968 |

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| Pharmaceuticals 36.2% | | |
|------------------------------|------------------------------------|-----------|
| 106,740 | Abbott Laboratories | 5,917,665 |
| 81,990 | AmerisourceBergen Corp. | 2,977,877 |
| 23,800 | AstraZeneca Plc | 917,115 |
| 57,200 | Auxilium Pharmaceuticals, Inc. (a) | 1,748,032 |
| 12,800 | BioForm Medical, Inc. (a) | 14,848 |
| 99,028 | BioMarin Pharmaceutical, Inc. (a) | 1,907,279 |
| 158,300 | Bristol-Myers Squibb Co. | 3,389,203 |
| 26,880 | Express Scripts, Inc. (a) | 1,445,069 |
| 169,660 | Gilead Sciences, Inc. (a) | 8,613,638 |
| 149,110 | Medco Health Solutions, Inc. (a) | 6,699,512 |
| 28,900 | Medivation, Inc. (a)(c) | 541,875 |
| 49,700 | Merck & Co., Inc. | 1,418,935 |
| 27,190 | Novartis AG (ADR) | 1,121,859 |
| 9,100 | Optimer Pharmaceuticals, Inc. (a) | 95,459 |
| 336,800 | Pfizer, Inc. (b) | 4,910,544 |
| 14,800 | Pharmasset, Inc. (a) | 168,720 |
| 61,900 | Poniard Pharmaceuticals, Inc. (a) | 148,560 |
| 59,730 | Rigel Pharmaceuticals, Inc. (a) | 417,513 |
| 48,250 | Roche Holding Ltd. | 6,773,563 |
| 26,200 | Sanofi-Aventis SA | 1,473,567 |

| Shares | Common Stocks | Value |
|---------------------------------|---|-------------------|
| Pharmaceuticals (cont'd) | | |
| 30,150 | Teva Pharmaceutical Industries Ltd. (ADR) | \$ 1,249,717 |
| 23,660 | United Therapeutics Corp. (a) | 1,607,697 |
| 222,032 | Wyeth | 9,540,715 |
| | | <u>63,098,962</u> |

| | | |
|------------------------|--------------------|-----------|
| Technology 2.7% | | |
| 173,500 | CVS Caremark Corp. | 4,663,680 |

| | | |
|----------------------|---------------------|----------------|
| Software 0.4% | | |
| 12,300 | Cerner Corp. (a) | 414,756 |
| 25,240 | MedAssets, Inc. (a) | 367,494 |
| | | <u>782,250</u> |

| | | |
|---|--|-------------|
| Total Long-Term Investments (Cost \$160,006,764) 88.3% | | 153,990,630 |
|---|--|-------------|

Short-Term Securities

| | | |
|-------------------------------|--|------------|
| Money Market Fund 9.4% | | |
| 16,274,834 | BlackRock Liquidity Funds, TempFund, 1.25%(d)(e) (Cost \$16,274,834) | 16,274,834 |

| | | |
|---|--|-------------|
| Total investments before outstanding options written (Cost \$176,281,598*) 97.6% | | 170,265,464 |
|---|--|-------------|

| Contracts | Options Written | |
|--|--|----------|
| Exchange-Traded Call Options Written (0.8)% | | |
| (275) | Abbott Laboratories, strike price \$55, expires 03/23/09 | (69,438) |
| (10) | Acorda Therapeutics, Inc., strike price \$30, expires 03/23/09 | (975) |
| (100) | Alcon, Inc., strike price \$100, expires 02/23/09 | (2,250) |
| (40) | Alcon, Inc., strike price \$90, expires 03/23/09 | (13,200) |

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| | | |
|-------|---|-----------|
| (80) | Alexion Pharmaceuticals, Inc., strike price \$40, expires 02/23/09 | (8,000) |
| (40) | Alexion Pharmaceuticals, Inc., strike price \$42.50, expires 02/23/09 | (1,600) |
| (50) | AMERIGROUP Corp., strike price \$35, expires 03/23/09 | (2,000) |
| (100) | AmerisourceBergen Corp., strike price \$35, expires 02/23/09 | (19,000) |
| (50) | AmerisourceBergen Corp., strike price \$40, expires 03/23/09 | (2,250) |
| (100) | AmerisourceBergen Corp., strike price \$40, expires 05/18/09 | (12,500) |
| (310) | Amgen, Inc., strike price \$55, expires 02/23/09 | (47,895) |
| (250) | Amgen, Inc., strike price \$57.50, expires 03/23/09 | (40,750) |
| (160) | Amgen, Inc., strike price \$60, expires 02/23/09 | (3,520) |
| (200) | Amgen, Inc., strike price \$62.50, expires 02/23/09 | (1,600) |
| (250) | Amgen, Inc., strike price \$65, expires 04/20/09 | (14,875) |
| (150) | Auxilium Pharmaceuticals, Inc., strike price \$35, expires 03/23/09 | (15,750) |
| (500) | Baxter International, Inc., strike price \$57.50, expires 02/23/09 | (107,500) |
| (80) | Beckman Coulter, Inc., strike price \$50, expires 02/23/09 | (14,000) |
| (100) | Beckman Coulter, Inc., strike price \$55, expires 02/23/09 | (3,250) |
| (67) | Becton Dickinson & Co., strike price \$75, expires 02/23/09 | (5,862) |
| (55) | Becton Dickinson & Co., strike price \$75, expires 03/23/09 | (11,000) |
| (100) | Becton Dickinson & Co., strike price \$80, expires 06/22/09 | (20,750) |

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Schedule of Investments (continued)

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

| Contracts | Options Written | Value |
|--|--|------------|
| Exchange-Traded Call Options Written (cont'd) | | |
| (30) | BioMarin Pharmaceutical, Inc., strike price \$22.50, expires 02/23/09 | \$ (750) |
| (22) | BioMarin Pharmaceutical, Inc., strike price \$25, expires 04/20/09 | (825) |
| (620) | Bristol-Myers Squibb Co., strike price \$25, expires 03/23/09 | (11,470) |
| (100) | Celera Corp., strike price \$12.50, expires 02/23/09 | (1,500) |
| (100) | Celera Corp., strike price \$12.50, expires 03/23/09 | (1,500) |
| (80) | Centene Corp., strike price \$20, expires 03/23/09 | (5,800) |
| (20) | Cerner Corp., strike price \$37.50, expires 06/22/09 | (5,000) |
| (20) | Cerner Corp., strike price \$40, expires 06/22/09 | (3,400) |
| (35) | Coventry Health Care, Inc., strike price \$17.50, expires 04/20/09 | (3,062) |
| (100) | Coviden Ltd., strike price \$40, expires 02/23/09 | (5,750) |
| (100) | Coviden Ltd., strike price \$40, expires 03/23/09 | (12,000) |
| (100) | Coviden Ltd., strike price \$40, expires 04/20/09 | (16,500) |
| (1,225) | CVS Caremark Corp., strike price \$27.50, expires 02/23/09 | (101,063) |
| (100) | CVS Caremark Corp., strike price \$35, expires 02/23/09 | (500) |
| (150) | Cyberonics, Inc., strike price \$17.50, expires 04/20/09 | (12,000) |
| (100) | Cyberonics, Inc., strike price \$20, expires 04/20/09 | (2,750) |
| (50) | DaVita, Inc., strike price \$55, expires 04/20/09 | (2,375) |
| (80) | Express Scripts, Inc., strike price \$70, expires 02/23/09 | (400) |
| (200) | Genentech, Inc., strike price \$90, expires 02/23/09 | (5,500) |
| (420) | Genentech, Inc., strike price \$90, expires 03/23/09 | (36,750) |
| (48) | Genentech, Inc., strike price \$95, expires 03/23/09 | (1,320) |
| (200) | Genzyme Corp., strike price \$72.50, expires 02/23/09 | (20,000) |
| (100) | Genzyme Corp., strike price \$75, expires 03/23/09 | (13,500) |
| (100) | Genzyme Corp., strike price \$75, expires 04/20/09 | (22,750) |
| (100) | Gilead Sciences, Inc., strike price \$52.50, expires 02/23/09 | (11,250) |
| (100) | Gilead Sciences, Inc., strike price \$55, expires 02/23/09 | (4,250) |
| (200) | Gilead Sciences, Inc., strike price \$55, expires 03/23/09 | (24,500) |
| (100) | Gilead Sciences, Inc., strike price \$55, expires 05/18/09 | (25,250) |
| (100) | Gilead Sciences, Inc., strike price \$57.50, expires 05/18/09 | (17,250) |
| (100) | Gilead Sciences, Inc., strike price \$60, expires 08/24/09 | (23,500) |
| (150) | Halozyne Therapeutics, Inc., strike price \$7.50, expires 03/23/09 | (4,875) |
| (485) | Immunocor, Inc., strike price \$30, expires 03/23/09 | (43,650) |
| (30) | Integra LifeSciences Holdings Corp., strike price \$30, expires 02/23/09 | (1,875) |
| (124) | Integra LifeSciences Holdings Corp., strike price \$40, expires 03/23/09 | (3,720) |
| (55) | InterMune, Inc., strike price \$22.50, expires 02/23/09 | (8,112) |
| Exchange-Traded Call Options Written (cont'd) | | |
| (60) | Johnson & Johnson, strike price \$60, expires 03/23/09 | \$ (5,100) |
| (50) | Mckesson Corp., strike price \$42.50, expires 02/23/09 | (12,750) |
| (50) | Mckesson Corp., strike price \$45, expires 03/23/09 | (9,750) |
| (50) | Mckesson Corp., strike price \$45, expires 05/18/09 | (17,000) |
| (10) | MedAssets, Inc., strike price \$17.50, expires 02/23/09 | (450) |
| (50) | MedAssets, Inc., strike price \$17.50, expires 03/23/09 | (2,875) |
| (500) | Medco Health Solutions, Inc., strike price \$45, expires 03/23/09 | (145,000) |
| (25) | Medivation, Inc., strike price \$20, expires 03/23/09 | (3,500) |
| (75) | Medivation, Inc., strike price \$22.50, expires 03/23/09 | (4,875) |
| (710) | Medtronic, Inc., strike price \$35, expires 02/23/09 | (44,375) |
| (125) | Merck & Co., Inc., strike price \$30, expires 04/20/09 | (16,563) |
| (150) | Pfizer, Inc., strike price \$16, expires 03/23/09 | (2,925) |
| (320) | Pfizer, Inc., strike price \$19, expires 03/23/09 | (800) |
| (300) | Qiagen NV, strike price \$20, expires 02/23/09 | (6,000) |
| (300) | Qiagen NV, strike price \$20, expires 03/23/09 | (11,250) |
| (20) | Rigel Pharmaceuticals, Inc., strike price \$10, expires 02/23/09 | (300) |
| (60) | Rigel Pharmaceuticals, Inc., strike price \$10, expires 03/23/09 | (3,450) |
| (50) | St. Jude Medical, Inc., strike price \$35, expires 04/20/09 | (17,250) |
| (50) | St. Jude Medical, Inc., strike price \$40, expires 04/20/09 | (6,000) |
| (100) | Teva Pharmaceutical Industries Ltd. (ADR), strike price \$45, expires 02/23/09 | (1,500) |

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| | | |
|-------|--|----------|
| (200) | Teva Pharmaceutical Industries Ltd. (ADR), strike price \$45, expires 03/23/09 | (11,500) |
| (30) | United Therapeutics Corp., strike price \$65, expires 02/23/09 | (13,350) |
| (30) | United Therapeutics Corp., strike price \$70, expires 03/23/09 | (10,350) |
| (150) | UnitedHealth Group, Inc., strike price \$27.50, expires 03/23/09 | (36,750) |
| (100) | UnitedHealth Group, Inc., strike price \$29, expires 02/23/09 | (9,250) |
| (100) | UnitedHealth Group, Inc., strike price \$31, expires 03/23/09 | (8,500) |
| (90) | Vertex Pharmaceuticals, Inc., strike price \$35, expires 02/23/09 | (9,900) |
| (150) | Vertex Pharmaceuticals, Inc., strike price \$40, expires 04/20/09 | (21,000) |
| (100) | Wyeth, strike price \$42.50, expires 03/23/09 | (15,250) |
| (100) | Wyeth, strike price \$42.50, expires 04/20/09 | (20,500) |
| (150) | Wyeth, strike price \$45, expires 02/23/09 | (1,875) |
| (100) | Wyeth, strike price \$45, expires 04/20/09 | (8,750) |

| | |
|---|-------------|
| Total Exchange-Traded Call Options Written | (1,351,350) |
|---|-------------|

Exchange-Traded Put Options Written (0.1)%

| | | |
|------|--|---------|
| (75) | Abbott Laboratories, strike price \$50, expires 02/23/09 | (1,687) |
| (20) | Alcon, Inc., strike price \$80, expires 02/23/09 | (3,500) |

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Schedule of Investments (continued)

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

| Contracts | Options Written | Value |
|---|--|-----------------------|
| Exchange-Traded Put Options Written (cont d) | | |
| (110) | Amedisys, Inc., strike price \$40, expires 02/23/09 | \$ (22,000) |
| (310) | Amgen, Inc., strike price \$50, expires 02/23/09 | (9,455) |
| (400) | Amgen, Inc., strike price \$52.50, expires 02/23/09 | (29,200) |
| (50) | Becton Dickinson & Co., strike price \$60, expires 02/23/09 | (750) |
| (110) | CVS Caremark Corp., strike price \$25, expires 02/23/09 | (5,500) |
| (100) | Genentech, Inc., strike price \$75, expires 02/23/09 | (6,500) |
| (195) | Genzyme Corp., strike price \$62.50, expires 02/23/09 | (11,212) |
| (75) | Laboratory Corp. of America Holdings, strike price \$60, expires 02/23/09 | (18,938) |
| (75) | Medtronic, Inc., strike price \$30, expires 02/23/09 | (2,625) |
| (90) | UnitedHealth Group, Inc., strike price \$27, expires 02/23/09 | (6,975) |
| (150) | Vertex Pharmaceuticals, Inc., strike price \$25, expires 03/23/09 | (8,625) |
| Total Exchange-Traded Put Options Written | | (126,967) |
| Over-the-Counter Call Options Written (0.1)% | | |
| (25,000) | Amgen, Inc., strike price \$62.50, expires 02/20/09, broker Citigroup Global Markets | (1,703) |
| (9,000) | AstraZeneca Plc, strike price 29.74 GBP, expires 03/31/09, broker Morgan Stanley & Co., Inc. | (7,271) |
| (200) | Fresenius Medical Care AG & Co. KGaA, strike price 37 EUR, expires 03/20/09, broker UBS Securities LLC | (12,286) |
| (10,000) | Novartis AG (ADR), strike price \$47.54, expires 03/20/09, broker UBS Securities LLC | (1,248) |
| (50,000) | Pfizer, Inc., strike price \$19.05, expires 02/20/09, broker Deutsche Bank Securities | (414) |
| (150) | Roche Holding Ltd., strike price 175 CHF, expires 02/20/09, broker Morgan Stanley & Co., Inc. | (14,171) |
| (7,000) | Sanofi-Aventis SA, strike price 47 EUR, expires 02/16/09, broker Citigroup Global Markets | (4,800) |
| (12,000) | Smith & Nephew Plc, strike price 5.35 GBP, expires 04/14/09, broker Deutsche Bank Securities | (4,330) |
| (20,000) | Wyeth, strike price \$39.04, expires 02/20/09, broker UBS Securities LLC | (78,600) |
| Total Over-the-Counter Call Options Written | | (124,823) |
| Over-the-Counter Put Options Written (0.0)% | | |
| (75) | Fresenius Medical Care AG & Co. KGaA, strike price 33 EUR, expires 02/20/09, broker Morgan Stanley & Co., Inc. | (2,214) |
| (125) | Roche Holding Ltd., strike price 160 CHF, expires 02/20/09, broker Morgan Stanley & Co., Inc. | (43,540) |
| Total Over-the-Counter Put Options Written | | (45,754) |
| Total Options Written (Premiums Received \$2,363,430) (1.0)% | | (1,648,894) |
| Total investments net of outstanding options written 96.7% | | 168,616,570 |
| Other Assets in Excess of Liabilities 3.3% | | 5,822,804 |
| Net Assets 100.0% | | \$ 174,439,374 |

* The cost and unrealized appreciation (depreciation) of investments as of January 31, 2009, as computed for federal income tax purposes, were as follows:

| | | |
|----------------|----|-------------|
| Aggregate cost | \$ | 177,737,124 |
|----------------|----|-------------|

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| | | |
|-------------------------------|----|--------------|
| Gross unrealized appreciation | \$ | 8,533,416 |
| Gross unrealized depreciation | | (16,005,076) |
| | | (7,471,660) |
| Net unrealized depreciation | \$ | (7,471,660) |

- (a) Non-income producing security.
- (b) Security, or a portion thereof, pledged as collateral for outstanding options written.
- (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 | Income |
|--|---------------|-----------|
| BlackRock Liquidity Funds, TempFund | 16,274,834 | \$ 12,909 |
| BlackRock Liquidity Series, LLC, Money Market Series | (2,226,500)** | \$ 1,199 |

** Represents net sale cost.

Forward foreign exchange contracts as of January 31, 2009 were as follows:

| Currency Purchased | Currency Sold | Settlement Date | Unrealized Appreciation (Depreciation) |
|--------------------|---------------|-----------------|--|
| AUD 297,000 | USD 198,937 | 2/02/09 | \$ (10,223) |
| GBP 78,000 | USD 112,406 | 2/03/09 | 626 |
| USD 6,557 | EUR 5,000 | 2/02/09 | 155 |
| Total | | | \$ (9,442) |

KEY TO ABBREVIATIONS

| | |
|-----|-----------------------------|
| ADR | American Depositary Receipt |
| AUD | Australian Dollar |
| CHF | Swiss Franc |
| EUR | Euro |
| GBP | British Pound |
| USD | U.S. Dollar |

Effective November 1, 2008, the Trust adopted Financial Accounting Standards Board Statement of Financial Accounting Standards No. 157, Fair Value Measurements (FAS 157). FAS 157 clarifies the definition of fair value, establishes a framework for measuring fair values and requires additional disclosures about the use of fair value measurements. Various inputs are used in determining the fair value of investments, which are as follows:

Level 1 - price quotations in active markets/exchanges for identical securities

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

Level 2 - other observable inputs (including, but not limited to: quoted prices for similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the assets or liabilities (such as interest rates, yield curves, volatilities, prepayment speeds, loss severities, credit risks, and default rates) or other market-corroborated inputs)

Level 3 - unobservable inputs based on the best information available in the circumstance, to the extent observable inputs are not available (including the Trust's own assumption used in determining the fair value of investments)

The inputs or methodology used for valuing securities are not necessarily an indication of the risk associated with investing in those securities. For information about the Trust's policy regarding valuation of investments and other significant accounting policies, please refer to the Trust's most recent financial statements as contained in its annual report.

The following table summarizes the inputs used as of January 31, 2009 in determining the fair valuation of the Trust's investments:

| Valuation Inputs | Investments in Securities | | Other Financial Instruments** | |
|---------------------|------------------------------|-------------|-------------------------------|----------------|
| | Assets | | Assets | Liabilities |
| Level 1 | \$ | 157,083,839 | \$ | \$ (1,478,317) |
| Level 2 | | 13,181,625 | 781 | (180,800) |
| Level 3 | | | | |
| Total | \$ | 170,265,464 | \$ 781 | \$ (1,659,117) |

** Other financial instruments are options and forward foreign exchange contracts.

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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 13(a)-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 25, 2009

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 25, 2009

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

Date: March 25, 2009
