

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
SCHEDULE 13G/A

Under the Securities Exchange Act of 1934

Lexicon Genetics Incorporated

(Name of Issuer)

Common

(Title of Class of Securities)

528872 10 4

(CUSIP Number)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1. NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

BCM Technologies, Inc. 76-0112935

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a)
(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF | 5. SOLE VOTING POWER

|
SHARES | 28,940

BENEFICIALLY | 6. SHARED VOTING POWER

|
OWNED BY |

EACH | 7. SOLE DISPOSITIVE POWER

REPORTING | [X]

PERSON | 8. SHARED DISPOSITIVE POWER

WITH |

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

12. TYPE OF REPORTING PERSON*

CO

1. NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Baylor College of Medicine 74-1613878

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a)
(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Texas

NUMBER OF | 5. SOLE VOTING POWER

SHARES | 4,055,960

BENEFICIALLY | 6. SHARED VOTING POWER

OWNED BY |

EACH | 7. SOLE DISPOSITIVE POWER

REPORTING |

PERSON | 8. SHARED DISPOSITIVE POWER

WITH |

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

Baylor College of Medicine 4,027,020 *BCM Technologies 28,940

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

12. TYPE OF REPORTING PERSON*

Internal Revenue Code 501 (c) (3) CO

* BCM Technologies, Inc. is wholly owned by Baylor College of Medicine

Item 1(a) Name of Issuer:

Lexicon Genetics Incorporated

Item 1(b) Address of Issuer's Principal Executive Offices:

4000 Research Forest Drive
The Woodlands, TX 77381

Item 2(a) Name of Person Filing:

Baylor College of Medicine & BCM Technologies, Inc.

Item 2(b) Address of Principal Business Office:

One Baylor Plaza, T-140
Houston, TX 77030-3498

Item 2(c) Citizenship:

USA

Item 2(d) Title of Class of Securities:

Common

Item 2(e) CUSIP Number:

528872 10 4

Item 3. If this statement is filed pursuant to Rules 13d-1(b), or 13d-2(b), check whether the person filing is a:

- (a) Broker or Dealer registered under Section 15 of the Act
- (b) Bank as defined in Section 3(a)(6) of the Act
- (c) Insurance Company as defined in Section 3(a)(19) of the Act
- (d) Investment Company registered under Section 8 of the Investment Company Act
- (e) Investment Adviser registered under Section 203 of the Investment Advisers Act of 1940
- (f) Employee Benefit Plan, Pension Fund which is subject to the provisions of the Employee Retirement Income Security Act of 1974 or Endowment Fund; see (Section 240.13d-1(b)(1)(ii)(F)
- (g) Parent Holding Company, in accordance with Section 240.13d-1(b)(ii)(G)
- (h) Group, in accordance with Section 240.13d-1(b)(1)(ii)(H)

Item 4 Ownership

If the percent of the class owned, as of December 31, of the year covered by the statement, or as of the last day of any month described in Rule 13d-1(b)(2), if applicable, exceeds five percent, provide the following information as of that date and identify those shares which there is a right to acquire.

(a) Amount beneficially owned: Baylor College
4,055,960 of Medicine 4,027,020
BCM Technologies 28,940

(b) Percent of class:
6.4%

(c) Number of shares as to which such person has:

- (i) sole power to vote or to direct the vote:
[XX]
- (ii) shared power to vote or to direct the
vote:
- (iii) sole power to dispose or to direct the
disposition of:
- (iv) shared power to dispose or to direct the
disposition of:

Item 5 Ownership of Five Percent or Less of a Class:

If this statement is being filed to report the fact that as of the date thereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following ().

Item 6 Ownership of More than Five Percent on Behalf of Another Person:

Item 7 Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company:

Item 8 Identification and Classification of Members of the Group:

Item 9 Notice of Dissolution of Group:

Item 10 Certification:

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete, and correct.

Dated: January 6, 2005 Baylor College of Medicine

By: /s/ WILLIAM D. WALKER

William D. Walker

