

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 13D
(RULE 13d-101)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT
TO RULE 13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO
RULE 13d-2(a)

Lexicon Genetics Incorporated

(Name of Issuer)

Common Stock, \$0.001 Par Value Per Share

(Title of Class of Securities)

528872 10 4

(CUSIP Number)

Robert C. McNair
4400 Post Oak Parkway, Suite 1400
Houston, Texas 77027
713-336-7700

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

July 10, 2003

(Date of Event which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box. []

Note. Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7(b) for other parties to whom copies are to be sent.

(Continued on following pages)

(Page 1 of 10 Pages)

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 disclosures provided in a prior cover page.

The information required on 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 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 NAMES OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Robert C. McNair

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

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS *

AF

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT
TO ITEM 2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

USA

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER	5,949,400
	8	SHARED VOTING POWER	0
	9	SOLE DISPOSITIVE POWER	5,949,400
	10	SHARED DISPOSITIVE POWER	0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

5,949,400

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES *

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

11.3%

14 TYPE OF REPORTING PERSON *

IN

* SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAMES OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

RCM Financial Services GP, Inc. (76-0322569)

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

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS *

AF

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT
TO ITEM 2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Texas, USA

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER	4,250,000
	8	SHARED VOTING POWER	0
	9	SOLE DISPOSITIVE POWER	4,250,000
	10	SHARED DISPOSITIVE POWER	0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,250,000

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES *

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

8.1%

14 TYPE OF REPORTING PERSON *

CO

* SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAMES OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

RCM Financial Services L.P. (76-0416914)

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

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS *

WC

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT
TO ITEM 2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware, USA

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER	4,250,000
	8	SHARED VOTING POWER	0
	9	SOLE DISPOSITIVE POWER	4,250,000
	10	SHARED DISPOSITIVE POWER	0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,250,000

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES *

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

8.1%

14 TYPE OF REPORTING PERSON *

PN

* SEE INSTRUCTIONS BEFORE FILLING OUT!

ITEM 1. SECURITY AND ISSUER.

The title of the class of equity securities to which this statement relates is common stock, par value \$0.001 per share, of Lexicon Genetics Incorporated ("Common Stock"). The principal executive offices of Lexicon Genetics Incorporated are located at 4000 Research Forest Drive, The Woodlands, Texas 77381.

ITEM 2. IDENTITY AND BACKGROUND.

This Schedule 13D is filed by RCM Financial Services, L.P., a Delaware limited partnership ("RCMLP"). This Schedule 13D is also being filed by RCM Financial Services GP, Inc., a Texas corporation and sole general partner of RCMLP (the "General Partner"), and Robert C. McNair. Mr. McNair is the sole stockholder, sole director, chairman, president and chief executive officer of the General Partner and the sole limited partner of RCMLP.

The following information relates to the identity and background of the reporting persons:

- | | | |
|----|------------------------------------|---|
| 1. | (a) Name: | Robert C. McNair |
| | (b) Business Address: | 4400 Post Oak Parkway, Suite 1400
Houston, Texas 77027 |
| | (c) Principal Occupation: | Chairman, President and Chief Executive Officer of RCM Financial Services GP, Inc., the sole general partner of RCM Financial Services, L.P.; Chairman of Cogene Biotech Ventures GP, L.L.C., sole general partner of Cogene Biotech Ventures, L.P.; private investor; Chairman, President and majority owner of the Houston Texans NFL Football Team |
| | (d) Criminal Convictions: | None |
| | (e) Civil Proceedings: | None |
| | (f) Citizenship: | USA |
| 2. | (a) Name: | RCM Financial Services GP, Inc. |
| | (b) State of Organization: | Texas |
| | (c) Principal Business: | Sole general partner of RCM Financial Services, L.P. |
| | (d) Address of Principal Business: | 4400 Post Oak Parkway, Suite 1400
Houston, Texas 77027 |
| | (e) Criminal Convictions: | None |
| | (f) Civil Proceedings: | None |
| 3. | (a) Name: | RCM Financial Services, L.P. |
| | (b) State of Organization: | Delaware |
| | (c) Principal Business: | Miscellaneous investments |
| | (d) Address of Principal Business: | 4400 Post Oak Parkway, Suite 1400
Houston, Texas 77027 |
| | (e) Criminal Convictions: | None |
| | (f) Civil Proceedings: | None |

For additional information required by Instruction C to Schedule 13D with respect to the executive officers and directors of the General Partner, reference is made to Schedule I attached hereto and incorporated herein by reference.

ITEM 3. SOURCE AND AMOUNT OF FUNDS OR OTHER CONSIDERATION.

The source of all funds for purchases of shares of Common Stock by RCMLP is the working capital of RCMLP. Each of the General Partner and Robert C. McNair are indirect beneficial owners of shares of Common Stock purchased and held by RCMLP. The source of all funds for purchases of shares of Common Stock by Cogene Biotech Ventures, L.P., a Delaware limited partnership ("Cogene LP"), is the working capital of affiliates of Robert C. McNair or working capital of RCMLP. Robert C. McNair is the indirect beneficial owner of shares of Common Stock purchased and held by Cogene LP. See Item 5 for a further description of the relationship between the reporting persons and the other individuals referred to in this Item 3. The working capital of RCMLP and other affiliates of Robert C. McNair may, at any given time, include margin loans made by brokerage firms in the ordinary course of business. See Item 5(c) for a description of recent purchases of Common Stock by RCMLP and Cogene LP and the amount of funds used in those purchases.

ITEM 4. PURPOSE OF TRANSACTION.

The shares of Common Stock covered by this statement are being held for investment purposes. Depending on market and other conditions, the reporting persons may continue to hold the shares of Common Stock, acquire additional shares of Common Stock, or dispose of all or a portion of the shares of Common Stock they now own or may hereafter acquire. The reporting persons have no plans that relate to or would result in:

- (a) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving Lexicon Genetics Incorporated or any of its subsidiaries;
- (b) a sale or transfer of a material amount of assets of Lexicon Genetics Incorporated or its subsidiaries;
- (c) any change in the present board of directors or management of Lexicon Genetics Incorporated, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (d) any material change in the present capitalization or dividend policy of Lexicon Genetics Incorporated;
- (e) any other material change in Lexicon Genetics Incorporated's business or corporate structure;
- (f) changes in Lexicon Genetics Incorporated's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the issuer by any person;
- (g) causing a class of securities of Lexicon Genetics Incorporated to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;

- (h) a class of equity securities of Lexicon Genetics Incorporated becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act; or
- (i) any action similar to any of those enumerated above.

ITEM 5. INTEREST IN SECURITIES OF THE ISSUER.

- (a) RCMLP beneficially owns, and is the record holder of, an aggregate of 4,250,000 shares of Common Stock representing 8.1% of the Common Stock outstanding as of May 6, 2003. The General Partner, as the sole general partner of RCMLP, is the indirect beneficial owner of these shares of Common Stock. Robert C. McNair, as the sole director and sole stockholder of the General Partner, is also an indirect beneficial owner of the shares of Common Stock held by RCMLP.

Robert C. McNair is the indirect beneficial owner of an additional 1,699,400 shares of Common Stock representing 3.2% of the Common Stock outstanding as of May 6, 2003. Cogene LP is the record holder of 1,679,400 of these shares, and Palmetto Partners, Ltd., a Texas limited partnership ("Palmetto Partners"), is the record holder of 20,000 of these shares. Mr. McNair, therefore, beneficially owns an aggregate of 5,949,400 shares of Common Stock representing 11.3% of the Common Stock outstanding as of May 6, 2003. Mr. McNair is the sole director and sole stockholder of Palmetto Capital Corporation, a Texas corporation ("Palmetto Corp"). Palmetto Corp is the sole general partner of Palmetto Partners, and Mr. McNair is the sole limited partner of Palmetto Partners. Palmetto Partners owns all of the member interests in Cogene Biotech Ventures GP, L.L.C., a Delaware limited liability company ("Cogene GP"). Cogene GP is the sole general partner of Cogene LP, and Palmetto Partners owns a 74% limited partnership interest in Cogene LP.

- (b) RCMLP has the sole power to vote, to direct the vote, to dispose or to direct the disposition of 4,250,000 shares of Common Stock. The General Partner, as the sole general partner of RCMLP, has the sole power to vote, to direct the vote, to dispose or to direct the disposition of 4,250,000 shares of Common Stock. Robert C. McNair has the sole power to vote, to direct the vote, to dispose or to direct the disposition of 5,949,400 shares of Common Stock, and such shares comprise the shares held by RCMLP, Cogene LP and Palmetto Partners.
- (c) On July 10, 2003, RCMLP purchased an aggregate of 4,000,000 shares of Common Stock from the Estate of Gordon A. Cain (the "Estate") and The Gordon and Mary Cain Foundation (the "Foundation") in private placements that were exempt from registration under the Securities Act of 1933, as amended (the "Act"). The shares of Common Stock acquired by RCMLP were purchased for an aggregate consideration of \$19,000,000, or \$4.75 per share. On July 10, 2003, RCMLP paid \$3,800,000 of the aggregate consideration. The balance of the aggregate consideration (\$15,200,000) is due on the fifth business day following the effectiveness of the registration statement to be filed by Lexicon Genetics Incorporated at the request of RCMLP pursuant to certain registration rights assigned to RCMLP by the Estate and the Foundation. See Item 6 for a further description of these registration rights.

On July 10, 2003, Cogene LP purchased an aggregate of 1,000,000 shares of Common Stock from the Estate of Gordon A. Cain and The Gordon and Mary Cain Foundation in private placements that were exempt from registration under the Act. The shares of

Common Stock acquired by Cogene LP were purchased for an aggregate consideration of \$4,750,000, or \$4.75 per share. On July 10, 2003, Cogene LP paid \$950,000 of the aggregate consideration. The balance of the aggregate consideration (\$3,800,000) is due on the fifth business day following the effectiveness of the registration statement to be filed by Lexicon Genetics Incorporated at the request of Cogene LP pursuant to certain registration rights assigned to Cogene LP by the Estate and the Foundation. See Item 6 for a further description of these registration rights.

(d) No other person has the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the shares of Common Stock covered by this Schedule 13D.

(e) Not applicable.

ITEM 6. CONTRACTS, ARRANGEMENTS, UNDERSTANDINGS OR RELATIONSHIPS WITH RESPECT TO SECURITIES OF THE ISSUER.

On July 10, 2003, RCMLP and Cogene LP entered into stock purchase agreements with the Estate and the Foundation to purchase an aggregate of 5,000,000 shares of Common Stock. See Item 5(c) above for a further description of these transactions. The stock purchase agreements provide that if on or before February 1, 2004 a registration statement to be filed by Lexicon Genetics Incorporated at the request of RCMLP and Cogene LP pursuant to certain registration rights assigned to RCMLP and Cogene LP is not declared effective by the Securities and Exchange Commission or if RCMLP or Cogene LP have not paid the remaining \$15,200,000 or \$3,800,000, respectively, of the purchase price for the shares of Common Stock by February 1, 2004, RCMLP and Cogene will transfer to the Estate and the Foundation the shares of Common Stock that RCMLP and Cogene purchased from the Estate and the Foundation in the July 10, 2003 transaction, and the Estate and the Foundation will return to RCMLP and Cogene the \$3,800,000 and \$950,000 paid by RCMLP and Cogene, respectively, on July 10, 2003 for these shares of Common Stock. See Item 5(c) for a further description of the purchase price payment obligations of RCMLP and Cogene LP. The stock purchase agreements and amendments to those agreements are included in this Schedule 13D filing as exhibits.

On May 7, 1998, Lexicon Genetics Incorporated entered into an Amended and Restated Registration Rights Agreement (the "Registration Rights Agreement") with certain holders of its securities, including the Estate and the Foundation. In connection with the July 10, 2003 sale of Common Stock described above, the Estate and the Foundation assigned, pursuant to a letter agreement, all of their respective rights and interests under the Registration Rights Agreement to RCMLP and Cogene LP with respect to the 5,000,000 shares of Common Stock purchased. The Registration Rights Agreement and letter agreement grant RCMLP and Cogene LP certain demand and piggy back registration rights with respect to the 5,000,000 shares of Common Stock purchased by RCMLP and Cogene LP in the July 10, 2003 transaction. The Registration Rights Agreement is filed as Exhibit 4.1 to Lexicon Genetics Incorporated's Registration Statement on Form S-3 (Registration No. 333-67294).

All 4,250,000 shares of Common Stock beneficially owned by RCMLP and the General Partner and 4,270,000 of the shares of Common Stock beneficially owned by Robert C. McNair are subject to pledge agreements (which contain standard default provisions) entered into with certain brokerage firms in connection with margin loans made by those brokerage firms in the ordinary course of business.

ITEM 7. MATERIAL TO BE FILED AS EXHIBITS.

- Exhibit 1 -- Agreement for joint filing pursuant to Rule 13d-1(k)(1) of the Securities Act of 1934, as amended.
- Exhibit 2 -- Stock Purchase Agreement, dated as of July 10, 2003, by and among Estate of Gordon A. Cain, RCMLP and Cogene LP.
- Exhibit 3 -- Stock Purchase Agreement Amendment No. 1, dated as of July 15, 2003, by and among the Estate of Gordon A. Cain, RCMLP and Cogene LP.
- Exhibit 4 -- Stock Purchase Agreement, dated as of July 10, 2003, by and among The Gordon and Mary Cain Foundation, RCMLP and Cogene LP.
- Exhibit 5 -- Stock Purchase Agreement Amendment No. 1, dated as of July 15, 2003, by and among The Gordon and Mary Cain Foundation, RCMLP and Cogene LP.

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.

July 18, 2003

/s/ Robert C. McNair

Robert C. McNair

RCM FINANCIAL SERVICES, L.P.

By: RCM Financial Services GP,
Inc., its General Partner

By: /s/ M. Robert Dussler

Name: M. Robert Dussler
Title: Vice President

RCM FINANCIAL SERVICES GP, INC.

By: /s/ M. Robert Dussler

Name: M. Robert Dussler
Title: Vice President

SCHEDULE I

The following sets forth the names and titles of the executive officers of RCM Financial Services GP, Inc. The business address for each individual identified below is c/o RCM Financial Services GP, Inc., 4400 Post Oak Parkway, Suite 1400, Houston, Texas 77027. Each individual identified below is a citizen of the United States. To the knowledge of the undersigned, during the last five years, no individual identified below has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors), and no such person was a party to a civil proceeding of a judicial or administrative body of competent jurisdiction as a result of which he or she was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities law or finding any violation with respect to such laws.

Philip J. Burguieres	Vice Chairman
M. Robert Dussler	Vice President
Scott Schwinger	Vice President, Chief Financial Officer and Treasurer
Suzie Thomas	Vice President and Secretary
James M. Kendrigan	Vice President
Becky Virtue	Assistant Secretary
Sue Anna O'Hara	Assistant Secretary
Helen Kinnamon	Assistant Secretary

All other information required by Instruction C to Schedule 13D is included in Item 2 through Item 6 of this Schedule 13D.

INDEX TO EXHIBITS

Exhibit No. Description ----- -----
- Exhibit 1 -- Agreement for joint filing pursuant to Rule 13d-1(k) (1) of the Securities Act of 1934, as amended.
Exhibit 2 -- Stock Purchase Agreement, dated as of July 10, 2003, by and among Estate of Gordon A. Cain, RCMLP and Cogene LP.
Exhibit 3 -- Stock Purchase Agreement Amendment No. 1, dated as of July 15, 2003, by and among the Estate of Gordon A. Cain, RCMLP and Cogene LP.
Exhibit 4 -- Stock Purchase Agreement, dated as of July 10, 2003, by and among The Gordon and Mary Cain Foundation, RCMLP and Cogene LP.
Exhibit 5 -- Stock Purchase Agreement Amendment No. 1, dated as of July 15, 2003, by and among The Gordon and Mary Cain Foundation,

RCMLP and
Cogene LP.

AGREEMENT FOR JOINT FILING PURSUANT TO RULE
13d-1(k)(1) UNDER THE SECURITIES ACT OF 1934

Pursuant to Rule 13d-1(k)(1) under the Securities Act of 1934, as amended, the undersigned by their signature affixed hereto, do hereby agree in writing that this Schedule 13D be and is filed on behalf of each of them. The undersigned further recognize that each of them is responsible for the timely filing of this Schedule 13D and any amendments thereto, and for the completeness and accuracy of any information concerning them contained herein.

Dated as of this 18th day of July, 2003.

/s/ Robert C. McNair

Robert C. McNair

RCM FINANCIAL SERVICES, L.P.

By: RCM Financial Services GP, Inc.,
its General Partner

By: /s/ M. Robert Dussler

Name: M. Robert Dussler
Title: Vice President

RCM FINANCIAL SERVICES GP, INC.

By: /s/ M. Robert Dussler

Name: M. Robert Dussler
Title: Vice President

STOCK PURCHASE AGREEMENT

This Stock Purchase Agreement (this "Agreement"), dated as of July 10, 2003, is entered into by and among Estate of Gordon A. Cain (the "Estate"), RCM Financial Services, L.P., a Delaware limited partnership ("Financial Services"), and Cogene Biotech Ventures, L.P., a Delaware limited partnership ("Cogene Biotech" and, together with Financial Services, the "Purchasers").

WITNESSETH:

WHEREAS, the Estate wishes to sell to the Purchasers 4,300,000 shares (the "Shares") of common stock, par value \$.001 per share, of Lexicon Genetics Incorporated, a Delaware corporation ("Lexicon"), that the Estate owns of record;

WHEREAS, the Purchasers wish to purchase the Shares from the Estate in accordance with the terms and conditions of this Agreement;

NOW, THEREFORE, in consideration of the premises and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Estate and the Purchasers hereby covenant and agree as follows:

SECTION 1. PURCHASE AND SALE OF SHARES.

(a) Subject to the terms and conditions set forth herein, the Estate hereby sells to Financial Services, and Financial Services hereby purchases from the Estate, 3,440,000 of the Shares, and, in consideration for such Shares, Financial Services shall pay to the Estate (i) on the date hereof, in immediately available funds by wire transfer to a bank account designated in writing by the Estate, cash in the amount of \$3,268,000 and (ii) on the fifth business day following the effectiveness of the registration statement (the "Demand Registration Statement") to be filed by Lexicon at the request of the Purchasers pursuant to Section 2.1 of the Amended and Restated Registration Rights Agreement dated as of May 7, 1998 (the "Registration Rights Agreement"), among Lexicon and the persons named therein, in immediately available funds by wire transfer to a bank account designated in writing by the Estate, cash in the amount of \$13,072,000.

(b) Subject to the terms and conditions set forth herein, the Estate hereby sells to Cogene Biotech, and Cogene Biotech hereby purchases from the Estate, 860,000 of the Shares, and, in consideration for such Shares, Cogene Biotech shall pay to the Estate (i) on the date hereof, in immediately available funds by wire transfer to a bank account designated in writing by the Estate, cash in the amount of \$817,000 and (ii) on the fifth business day following the effectiveness of the Demand Registration Statement, in immediately available funds by wire transfer to a bank account designated in writing by the Estate, cash in the amount of \$3,268,000.

(c) The closing of the sale and purchase of the Shares hereunder (the "Closing") is being held at the offices of the Purchasers at 4400 Post Oak Parkway, Suite 1400, Houston, Texas 77027.

(d) At the Closing, the Estate shall deliver to Financial Services a stock certificate representing 3,440,000 of the Shares, together with stock powers and signature guarantees in form and substance satisfactory to Financial Services. The Estate shall pay all stamp and other transfer taxes, if any, that may be payable in respect of the sale and delivery of such Shares.

(e) At the Closing, the Estate shall deliver to Cogene Biotech a stock certificate representing 860,000 of the Shares, together with stock powers and signature guarantees in form and substance satisfactory to Cogene Biotech. The Estate shall pay all stamp and other transfer taxes, if any, that may be payable in respect of the sale and delivery of such Shares.

(f) If on or before December 31, 2003 (such date, as it may be extended by written agreement of the Purchasers and the Estate, the "Termination Date") the Demand Registration Statement is not declared effective by the Securities and Exchange Commission, on the third business day occurring after the Termination Date (such day, or such other day as may be agreed upon by the Purchasers and the Estate, the "Subsequent Closing Date"), (i) the Estate shall pay to Financial Services, in immediately available funds by wire transfer to a bank account designated in writing by Financial Services, cash in the amount of \$3,268,000, (ii) Financial Services shall deliver to the Estate a stock certificate representing 3,440,000 of the Shares, together with stock powers and signature guarantees in form and substance satisfactory to the Estate, (iii) Financial Services' payment obligation to the Estate under Section 1(a)(ii) hereof shall terminate, (iv) the Estate shall pay to Cogene Biotech, in immediately available funds by wire transfer to a bank account designated in writing by Cogene Biotech, cash in the amount of \$817,000, (v) Cogene Biotech shall deliver to the Estate a stock certificate representing 860,000 of the Shares, together with stock powers and signature guarantees in the form and substance satisfactory to the Estate, (vi) Cogene Biotech's payment obligation to the Estate under Section 1(b)(ii) hereof shall terminate, (vii) the Purchasers shall assign and transfer to the Estate the rights transferred to them under Section 4(a), (viii) the Estate shall assume the obligations of the Purchasers under the Registration Rights Agreement, and (ix) the Purchasers and the Estate shall comply with the notice and assumption requirements of Section 9 of the Registration Rights Agreement. The Purchasers shall pay all stamp and other transfer taxes, if any, that may be payable in respect of the sale and delivery of such shares to the Estate on the Subsequent Closing Date.

SECTION 2. REPRESENTATIONS AND WARRANTIES OF THE ESTATE. The Estate represents and warrants to the Purchasers as follows:

(a) The Estate and each executor of the Estate (i) have all requisite power to execute, deliver and perform this Agreement and (ii) have taken all necessary action to authorize the execution, delivery and performance of this Agreement.

(b) The execution and delivery of this Agreement do not, and the consummation of the transactions contemplated hereby will not, violate, conflict with or constitute a default under (i) any agreement, indenture or other instrument to which the Estate is a party or by which the Estate or its assets may be bound, (ii) the terms of any trust, plan of distribution or other similar document or agreement relating to the Estate or (iii) any law, regulation, order, arbitration, award, judgment or decree applicable to the Estate.

(c) The Estate has, and will convey to the Purchasers at the Closing, good and valid title to the Shares, free and clear of any liens, claims, security interests, encumbrances or voting agreements except restrictions on transfer arising under applicable securities laws and the Estate's rights under Section 1(f).

(d) There are no actions, suits, proceedings, arbitrations or investigations pending or, to the best knowledge of the Estate and each executor of the Estate, threatened in any court or before any governmental agency or instrumentality or arbitration panel or otherwise against or by the Estate or either executor of the Estate that seek to or could restrain, prohibit, rescind or declare unlawful, or result in substantial damages in respect of, this Agreement or the performance hereof by the Estate or either executor of the Estate (including, without limitation, the delivery of the Shares).

SECTION 3. REPRESENTATIONS AND WARRANTIES OF THE PURCHASERS. Each Purchaser represents and warrants to the Estate as follows:

(a) Such Purchaser (i) is a limited partnership, validly existing and in good standing under the laws of the State of Delaware, (ii) has all requisite power to execute, deliver and perform this Agreement and (iii) has taken all necessary action to authorize the execution, delivery and performance of this Agreement.

(b) The execution and delivery of this Agreement does not, and the consummation of the transactions contemplated hereby will not, violate, conflict with or constitute a default under (i) such Purchaser's organizational documents, (ii) any agreement, indenture or other instrument to which such Purchaser is a party or by which such Purchaser or its assets may be bound or (iii) any law, regulation, order, arbitration, award, judgment or decree applicable to such Purchaser.

(c) There are no actions, suits, proceedings, arbitrations or investigations pending or, to such Purchaser's best knowledge, threatened in any court or before any governmental agency or instrumentality or arbitration panel or otherwise against or by such Purchaser that seek to or could restrain, prohibit, rescind or declare unlawful, or result in substantial damages in respect of, this Agreement or the performance hereof by such Purchaser (including, without limitation, the purchase of the Shares).

(d) Such Purchaser will convey to the Estate on the Subsequent Closing Date (if it occurs) good and valid title to the Shares to be transferred by such Purchaser to the Estate pursuant to Section 1(f), free and clear of any liens, claims, security interests, encumbrances or voting agreements except restrictions on transfer under applicable securities laws.

SECTION 4. OTHER AGREEMENTS.

(a) Contemporaneously with the Closing and in accordance with the provisions of Section 9 of the Registration Rights Agreement, the Estate shall assign and transfer to the Purchasers the Estate's rights to cause Lexicon to register the Shares under the Registration Rights Agreement and shall provide the written notice thereof to Lexicon.

(b) The Purchasers hereby assume the obligations of the Estate under the Registration Rights Agreement as they relate to the Shares. The Purchasers agree to provide to Lexicon, within five business days following the Estate's compliance with Section 4(a) hereof, an assumption in writing of the obligations of the Estate under the Registration Rights Agreement as they relate to the Shares as provided in Section 9 of the Registration Rights Agreement, and a written request that Lexicon effect a registration statement under the Securities Act of 1993, as amended (the "Securities Act"), for the offer and sale of all or a part of the Shares pursuant to Section 2.1 of the Registration Rights Agreement.

SECTION 5. RESTRICTIONS ON DISPOSITION OF THE SHARES.

(a) Each Purchaser acknowledges that such Purchaser is acquiring its portion of the Shares pursuant to this Agreement pursuant to a transaction exempt from registration under the Securities Act. Each Purchaser represents and warrants to the Estate and agrees with the Estate that the Shares acquired by such Purchaser pursuant to this Agreement are being acquired by such Purchaser for investment without any intention of such Purchaser making a distribution thereof, any sale or other disposition thereof that would be in violation of the Securities Act or any applicable state securities law, and that such Purchaser will not dispose of any of the Shares acquired by such Purchaser pursuant to this Agreement, except in compliance with all provisions of the Securities Act and all other applicable laws regulating the sale of securities.

(b) Each Purchaser hereby acknowledges that (i) the Shares acquired by such Purchaser pursuant to this Agreement are "restricted securities" as such term is defined in and interpreted under Rule 144 of the Securities Act ("Rule 144") and (ii) such Purchaser may be acquiring the Shares acquired by such Purchaser pursuant to this Agreement from an "affiliate" of Lexicon, as such term is defined in Rule 144. Further transfers of the Shares may be subject to restrictions pursuant to Rule 144, unless a registration statement with respect to the Shares has been declared effective by the Securities and Exchange Commission or an exemption from registration is available.

SECTION 6. MISCELLANEOUS.

(a) This Agreement may be amended or any provision hereof waived only by written instrument duly executed by the parties hereto.

(b) All representations and warranties made by the parties hereto in this Agreement shall survive the Closing.

(c) The parties hereto hereby acknowledge that in the event of a breach by any of them of any material provision of this Agreement, the aggrieved party may be without an adequate remedy at law. The parties therefore agree that in the event of a breach of any material provision of this Agreement, the aggrieved party may elect to institute and prosecute proceedings in any court of competent jurisdiction to enforce specific performance or to enjoin the continuing breach of such provision, as well as to obtain damages for breach of this Agreement. By seeking or obtaining any such relief, the aggrieved party will not be precluded from seeking or obtaining any other relief to which it may be entitled in equity or at law.

(d) This Agreement and the legal relations between the parties shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the principles of conflicts of law thereof.

(e) All notices, requests, demands or other communications required or permitted by this Agreement shall be in writing and effective when received, and delivery shall be made personally or by registered or certified mail, return receipt requested, postage prepaid, or overnight courier or confirmed facsimile transmission, addressed as follows:

(i) If to Financial Services:

4400 Post Oak Parkway
Suite 1400
Houston, Texas 77027
Attention: M. Robert Dussler
Fax: (713) 336-7828

with a copy to:

Fulbright & Jaworski L.L.P.
1301 McKinney, Suite 5100
Houston, Texas 77010
Attention: Charles L. Strauss, Esq.
Fax: (713) 651-5246

(ii) If to Cogene Biotech:

4400 Post Oak Parkway
Suite 1400
Houston, Texas 77027
Attention: M. Robert Dussler
Fax: (713) 336-7828

with a copy to:

Fulbright & Jaworski L.L.P.
1301 McKinney, Suite 5100
Houston, Texas 77010
Attention: Charles L. Strauss, Esq.
Fax: (713) 651-5246

(iii) If to the Estate of Gordon A. Cain:

Eight Greenway Plaza, Suite 702
Houston, Texas 77046
Attention: James D. Weaver
Fax: (713) 877-8107

with a copy to:

Bracewell & Patterson, LLP
South Tower, Pennzoil Place
711 Louisiana, 26th Floor
Houston, Texas 77001
Attention: John Bland, Esq.
Fax: (713) 221-2163

(f) If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced by any rule of law, or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent possible.

(g) This Agreement constitutes the entire agreement among the parties with respect to the subject matter hereof and supersedes all prior agreements and undertakings, both written and oral, among the parties, or any of them, with respect to the subject matter hereof. Neither party may assign its rights or obligations hereunder without the prior written consent of the other party.

(h) This Agreement shall be binding upon and inure to the benefit of each party hereto. Nothing in this Agreement, express or implied, is intended to or shall confer upon any other person any rights, benefits or remedies of any nature whatsoever under or by reason of this Agreement, except as expressly otherwise provided herein.

(i) The descriptive headings contained in this Agreement are included for convenience of reference only and shall not affect in any way the meaning or interpretation of this Agreement.

(j) This Agreement may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which when executed shall be deemed to be an original but all of which taken together shall constitute one and the same agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first written above by their respective officers thereunto duly authorized.

RCM FINANCIAL SERVICES, L.P.

BY: RCM FINANCIAL SERVICES GP, INC., ITS
GENERAL PARTNER

By: /s/ M. Robert Dussler

Name: M. Robert Dussler

Title: Vice President

COGENE BIOTECH VENTURES, L.P.

BY: COGENE BIOTECH VENTURES GP, LLC, ITS
GENERAL PARTNER

By: /s/ M. Robert Dussler

Name: M. Robert Dussler

Title: Vice President

ESTATE OF GORDON A. CAIN

By: /s/ James D. Weaver

Name: James D. Weaver

Title: Independent Executor

STOCK PURCHASE AGREEMENT AMENDMENT NO. 1

This Stock Purchase Agreement Amendment No. 1 (this "Amendment") dated as of July 15, 2003, is entered into by and among Estate of Gordon A. Cain (the "Estate"), RCM Financial Services, L.P., a Delaware limited partnership ("Financial Services"), and Cogene Biotech Ventures, L.P., a Delaware limited partnership ("Cogene Biotech" and, together with Financial Services, the "Purchasers"). All capitalized terms not defined in this Amendment shall have the meanings set forth in that certain Stock Purchase Agreement dated as of July 10, 2003 by and among the Purchasers and the Estate (the "Purchase Agreement").

Whereas, the Purchase Agreement contemplates that pursuant to Section 6(a) thereof that it may be amended by the written agreement of the Purchasers and the Estate; and

Whereas, the Purchasers and the Estate each desire to provide for amendments to the Purchase Agreement in accordance with the following provisions.

Now, Therefore, in consideration of the premises and other good and valuable consideration, the parties hereto agree as follows:

1. Section 1(f) of the Purchase Agreement is hereby amended and restated so as to read in its entirety as follows:

"If on or before February 1, 2004 (such date, as it may be extended by written agreement of the Purchasers and the Estate, the "Termination Date") the Demand Registration Statement is not declared effective by the Securities and Exchange Commission, or, if on or before the Termination Date, Financial Services has not paid to the Estate the amount described in Section 1(a)(ii), or, if on or before the Termination Date, Cogene has not paid to the Estate the amount described in Section 1(b)(ii), then on the third business day occurring after the Termination Date (such day, or such other day as may be agreed upon by the Purchasers and the Estate, the "Subsequent Closing Date"), (i) the Estate shall pay to Financial Services, in immediately available funds by wire transfer to a bank account designated in writing by Financial Services, cash in the amount of \$3,268,000, (ii) Financial Services shall deliver to the Estate a stock certificate representing 3,440,000 of the Shares, together with stock powers and signature guarantees in form and substance satisfactory to the Estate, (iii) Financial Services' payment obligation to the Estate under Section 1(a)(ii) hereof shall terminate, (iv) the Estate shall pay to Cogene Biotech, in immediately available funds by wire transfer to a bank account designated in writing by Cogene Biotech, cash in the amount of \$817,000, (v) Cogene Biotech shall deliver to the Estate a stock certificate representing 860,000 of the Shares, together with stock powers and signature guarantees in the form and substance satisfactory to the Estate, (vi) Cogene Biotech's payment

obligation to the Estate under Section 1(b)(ii) hereof shall terminate, (vii) the Purchasers shall assign and transfer to the Estate the rights transferred to them under Section 4(a), (viii) the Estate shall assume the obligations of the Purchasers under the Registration Rights Agreement, and (ix) the Purchasers and the Estate shall comply with the notice and assumption requirements of Section 9 of the Registration Rights Agreement. The Purchasers shall pay all stamp and other transfer taxes, if any, that may be payable in respect of the sale and delivery of such shares to the Estate on the Subsequent Closing Date."

2. Each reference to the Purchase Agreement in the Purchase Agreement, this Amendment and all agreements, documents and notices executed in connection with the Purchase Agreement shall, unless the context otherwise requires, mean the Purchase Agreement as amended by this Amendment.

3. The Purchase Agreement, as amended hereby, is in all respects ratified, approved and confirmed.

4. This Amendment may be executed in any number of counterparts, all of which together make and shall constitute one and the same instrument and any of the parties hereto may execute this Amendment by signing any such counterpart.

5. This Amendment and the legal relations between the parties shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the principles of conflicts of law thereof.

[Signatures on following page]

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands as of the day and year first above written.

RCM FINANCIAL SERVICES, L.P.

By: RCM Financial Services GP, Inc.,
its General Partner

By: /s/ M. Robert Dussler

Name: M. Robert Dussler
Title: Vice President

COGENE BIOTECH VENTURES, L.P.

By: Cogene Biotech Ventures GP, LLC,
its General Partner

By: /s/ M. Robert Dussler

Name: M. Robert Dussler
Title: Vice President

ESTATE OF GORDON A. CAIN

By: /s/ James D. Weaver

Name: James D. Weaver
Title: Independent Executor

STOCK PURCHASE AGREEMENT

This Stock Purchase Agreement (this "Agreement"), dated as of July 10, 2003, is entered into by and among The Gordon and Mary Cain Foundation (the "Foundation"), RCM Financial Services, L.P., a Delaware limited partnership ("Financial Services"), and Cogene Biotech Ventures, L.P., a Delaware limited partnership ("Cogene Biotech" and, together with Financial Services, the "Purchasers").

WITNESSETH:

WHEREAS, the Foundation wishes to sell to the Purchasers 700,000 shares (the "Shares") of common stock, par value \$.001 per share, of Lexicon Genetics Incorporated, a Delaware corporation ("Lexicon"), that the Foundation owns of record;

WHEREAS, the Purchasers wish to purchase the Shares from the Foundation in accordance with the terms and conditions of this Agreement;

NOW, THEREFORE, in consideration of the premises and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Foundation and the Purchasers hereby covenant and agree as follows:

SECTION 1. PURCHASE AND SALE OF SHARES.

(a) Subject to the terms and conditions set forth herein, the Foundation hereby sells to Financial Services, and Financial Services hereby purchases from the Foundation, 560,000 of the Shares, and, in consideration for such Shares, Financial Services shall pay to the Foundation (i) on the date hereof, in immediately available funds by wire transfer to a bank account designated in writing by the Foundation, cash in the amount of \$532,000 and (ii) on the fifth business day following the effectiveness of the registration statement (the "Demand Registration Statement") to be filed by Lexicon at the request of the Purchasers pursuant to Section 2.1 of the Amended and Restated Registration Rights Agreement dated as of May 7, 1998 (the "Registration Rights Agreement"), among Lexicon and the persons named therein, in immediately available funds by wire transfer to a bank account designated in writing by the Foundation, cash in the amount of \$2,128,000.

(b) Subject to the terms and conditions set forth herein, the Foundation hereby sells to Cogene Biotech, and Cogene Biotech hereby purchases from the Foundation, 140,000 of the Shares, and, in consideration for such Shares, Cogene Biotech shall pay to the Foundation (i) on the date hereof, in immediately available funds by wire transfer to a bank account designated in writing by the Foundation, cash in the amount of \$133,000 and (ii) on the fifth business day following the effectiveness of the Demand Registration Statement, in immediately available funds by wire transfer to a bank account designated in writing by the Foundation, cash in the amount of \$532,000.

(c) The closing of the sale and purchase of the Shares hereunder (the "Closing") is being held at the offices of the Purchasers at 4400 Post Oak Parkway, Suite 1400, Houston, Texas 77027.

(d) At the Closing, the Foundation shall deliver to Financial Services a stock certificate representing 560,000 of the Shares, together with stock powers and signature guarantees in form and substance satisfactory to Financial Services. The Foundation shall pay all stamp and other transfer taxes, if any, that may be payable in respect of the sale and delivery of such Shares.

(e) At the Closing, the Foundation shall deliver to Cogene Biotech a stock certificate representing 140,000 of the Shares, together with stock powers and signature guarantees in form and substance satisfactory to Cogene Biotech. The Foundation shall pay all stamp and other transfer taxes, if any, that may be payable in respect of the sale and delivery of such Shares.

(f) If on or before December 31, 2003 (such date, as it may be extended by written agreement of the Purchasers and the Foundation, the "Termination Date") the Demand Registration Statement is not declared effective by the Securities and Exchange Commission, on the third business day occurring after the Termination Date (such day, or such other day as may be agreed upon by the Purchasers and the Foundation, the "Subsequent Closing Date"), (i) the Foundation shall pay to Financial Services, in immediately available funds by wire transfer to a bank account designated in writing by Financial Services, cash in the amount of \$532,000, (ii) Financial Services shall deliver to the Foundation a stock certificate representing 560,000 of the Shares, together with stock powers and signature guarantees in form and substance satisfactory to the Foundation, (iii) Financial Services' payment obligation to the Foundation under Section 1(a)(ii) hereof shall terminate, (iv) the Foundation shall pay to Cogene Biotech, in immediately available funds by wire transfer to a bank account designated in writing by Cogene Biotech, cash in the amount of \$133,000, (v) Cogene Biotech shall deliver to the Foundation a stock certificate representing 140,000 of the Shares, together with stock powers and signature guarantees in the form and substance satisfactory to the Foundation, (vi) Cogene Biotech's payment obligation to the Foundation under Section 1(b)(ii) hereof shall terminate, (vii) the Purchasers shall assign and transfer to the Foundation the rights transferred to them under Section 4(a), (viii) the Foundation shall assume the obligations of the Purchasers under the Registration Rights Agreement, and (ix) the Purchasers and the Foundation shall comply with the notice and assumption requirements of Section 9 of the Registration Rights Agreement. The Purchasers shall pay all stamp and other transfer taxes, if any, that may be payable in respect of the sale and delivery of such shares to the Foundation on the Subsequent Closing Date.

SECTION 2. REPRESENTATIONS AND WARRANTIES OF THE FOUNDATION. The Foundation represents and warrants to the Purchasers as follows:

(a) The Foundation is a charitable organization, validly existing and in good standing under the laws of the state of its organization. The Foundation and its officers (i) have all requisite power to execute, deliver and perform this Agreement and (ii) have taken all necessary action to authorize the execution, delivery and performance of this Agreement.

(b) The execution and delivery of this Agreement do not, and the consummation of the transactions contemplated hereby will not, violate, conflict with or constitute a default under (i) any agreement, indenture or other instrument to which the Foundation is a party or by which the Foundation or its assets may be bound, (ii) the terms of any trust, plan of distribution or other

similar document or agreement relating to the Foundation or (iii) any law, regulation, order, arbitration, award, judgment or decree applicable to the Foundation.

(c) The Foundation has, and will convey to the Purchasers at the Closing, good and valid title to the Shares, free and clear of any liens, claims, security interests, encumbrances or voting agreements except restrictions on transfer arising under applicable securities laws and the Foundation's rights under Section 1(f).

(d) There are no actions, suits, proceedings, arbitrations or investigations pending or, to the best knowledge of the Foundation and its officers, threatened in any court or before any governmental agency or instrumentality or arbitration panel or otherwise against or by the Foundation or its officers that seek to or could restrain, prohibit, rescind or declare unlawful, or result in substantial damages in respect of, this Agreement or the performance hereof by the Foundation or its officers (including, without limitation, the delivery of the Shares).

SECTION 3. REPRESENTATIONS AND WARRANTIES OF THE PURCHASERS. Each Purchaser represents and warrants to the Foundation as follows:

(a) Such Purchaser (i) is a limited partnership, validly existing and in good standing under the laws of the State of Delaware, (ii) has all requisite power to execute, deliver and perform this Agreement and (iii) has taken all necessary action to authorize the execution, delivery and performance of this Agreement.

(b) The execution and delivery of this Agreement does not, and the consummation of the transactions contemplated hereby will not, violate, conflict with or constitute a default under (i) such Purchaser's organizational documents, (ii) any agreement, indenture or other instrument to which such Purchaser is a party or by which such Purchaser or its assets may be bound or (iii) any law, regulation, order, arbitration, award, judgment or decree applicable to such Purchaser.

(c) There are no actions, suits, proceedings, arbitrations or investigations pending or, to such Purchaser's best knowledge, threatened in any court or before any governmental agency or instrumentality or arbitration panel or otherwise against or by such Purchaser that seek to or could restrain, prohibit, rescind or declare unlawful, or result in substantial damages in respect of, this Agreement or the performance hereof by such Purchaser (including, without limitation, the purchase of the Shares).

(d) Such Purchaser will convey to the Foundation on the Subsequent Closing Date (if it occurs) good and valid title to the Shares to be transferred by such Purchaser to the Foundation pursuant to Section 1(f), free and clear of any liens, claims, security interests, encumbrances or voting agreements except restrictions on transfer under applicable securities laws.

SECTION 4. OTHER AGREEMENTS.

(a) Contemporaneously with the Closing and in accordance with the provisions of Section 9 of the Registration Rights Agreement, the Foundation shall assign and transfer to the Purchasers the Foundation's rights to cause Lexicon to register the Shares under the Registration Rights Agreement and shall provide the written notice thereof to Lexicon.

(b) The Purchasers hereby assume the obligations of the Foundation under the Registration Rights Agreement as they relate to the Shares. The Purchasers agree to provide to Lexicon, within five business days following the Foundation's compliance with Section 4(a) hereof, an assumption in writing of the obligations of the Foundation under the Registration Rights Agreement as they relate to the Shares as provided in Section 9 of the Registration Rights Agreement, and a written request that Lexicon effect a registration statement under the Securities Act of 1993, as amended (the "Securities Act"), for the offer and sale of all or a part of the Shares pursuant to Section 2.1 of the Registration Rights Agreement.

SECTION 5. RESTRICTIONS ON DISPOSITION OF THE SHARES.

(a) Each Purchaser acknowledges that such Purchaser is acquiring its portion of the Shares pursuant to this Agreement pursuant to a transaction exempt from registration under the Securities Act. Each Purchaser represents and warrants to the Foundation and agrees with the Foundation that the Shares acquired by such Purchaser pursuant to this Agreement are being acquired by such Purchaser for investment without any intention of such Purchaser making a distribution thereof, any sale or other disposition thereof that would be in violation of the Securities Act or any applicable state securities law, and that such Purchaser will not dispose of any of the Shares acquired by such Purchaser pursuant to this Agreement, except in compliance with all provisions of the Securities Act and all other applicable laws regulating the sale of securities.

(b) Each Purchaser hereby acknowledges that (i) the Shares acquired by such Purchaser pursuant to this Agreement are "restricted securities" as such term is defined in and interpreted under Rule 144 of the Securities Act ("Rule 144") and (ii) such Purchaser may be acquiring the Shares acquired by such Purchaser pursuant to this Agreement from an "affiliate" of Lexicon, as such term is defined in Rule 144. Further transfers of the Shares may be subject to restrictions pursuant to Rule 144, unless a registration statement with respect to the Shares has been declared effective by the Securities and Exchange Commission or an exemption from registration is available.

SECTION 6. MISCELLANEOUS.

(a) This Agreement may be amended or any provision hereof waived only by written instrument duly executed by the parties hereto.

(b) All representations and warranties made by the parties hereto in this Agreement shall survive the Closing.

(c) The parties hereto hereby acknowledge that in the event of a breach by any of them of any material provision of this Agreement, the aggrieved party may be without an adequate remedy at law. The parties therefore agree that in the event of a breach of any material provision of this Agreement, the aggrieved party may elect to institute and prosecute proceedings in any court of competent jurisdiction to enforce specific performance or to enjoin the continuing breach of such provision, as well as to obtain damages for breach of this Agreement. By seeking or obtaining any such relief, the aggrieved party will not be precluded from seeking or obtaining any other relief to which it may be entitled in equity or at law.

(d) This Agreement and the legal relations between the parties shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the principles of conflicts of law thereof.

(e) All notices, requests, demands or other communications required or permitted by this Agreement shall be in writing and effective when received, and delivery shall be made personally or by registered or certified mail, return receipt requested, postage prepaid, or overnight courier or confirmed facsimile transmission, addressed as follows:

(i) If to Financial Services:

4400 Post Oak Parkway
Suite 1400
Houston, Texas 77027
Attention: M. Robert Dussler
Fax: (713) 336-7828

with a copy to:

Fulbright & Jaworski L.L.P.
1301 McKinney, Suite 5100
Houston, Texas 77010
Attention: Charles L. Strauss, Esq.
Fax: (713) 651-5246

(ii) If to Cogene Biotech:

4400 Post Oak Parkway
Suite 1400
Houston, Texas 77027
Attention: M. Robert Dussler
Fax: (713) 336-7828

with a copy to:

Fulbright & Jaworski L.L.P.
1301 McKinney, Suite 5100
Houston, Texas 77010
Attention: Charles L. Strauss, Esq.
Fax: (713) 651-5246

(iii) If to the Foundation:

Eight Greenway Plaza, Suite 702
Houston, Texas 77046
Attention: James D. Weaver
Fax: (713) 877-8107

with a copy to:

Bracewell & Patterson, LLP
South Tower, Pennzoil Place
711 Louisiana, 26th Floor
Houston, Texas 77001
Attention: John Bland, Esq.
Fax: (713) 221-2163

(f) If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced by any rule of law, or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent possible.

(g) This Agreement constitutes the entire agreement among the parties with respect to the subject matter hereof and supersedes all prior agreements and undertakings, both written and oral, among the parties, or any of them, with respect to the subject matter hereof. Neither party may assign its rights or obligations hereunder without the prior written consent of the other party.

(h) This Agreement shall be binding upon and inure to the benefit of each party hereto. Nothing in this Agreement, express or implied, is intended to or shall confer upon any other person any rights, benefits or remedies of any nature whatsoever under or by reason of this Agreement, except as expressly otherwise provided herein.

(i) The descriptive headings contained in this Agreement are included for convenience of reference only and shall not affect in any way the meaning or interpretation of this Agreement.

(j) This Agreement may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which when executed shall be deemed to be an original but all of which taken together shall constitute one and the same agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first written above by their respective officers thereunto duly authorized.

RCM FINANCIAL SERVICES, L.P.

By: RCM Financial Services GP, Inc., its
General Partner

By: /s/ M. Robert Dussler

Name: M. Robert Dussler

Title: Vice President

COGENE BIOTECH VENTURES, L.P.

By: Cogene Biotech Ventures GP, LLC, its
General Partner

By: /s/ M. Robert Dussler

Name: M. Robert Dussler

Title: Vice President

THE GORDON AND MARY CAIN FOUNDATION

By: /s/ James D. Weaver

Name: James D. Weaver

Title: President

STOCK PURCHASE AGREEMENT AMENDMENT NO. 1

This Stock Purchase Agreement Amendment No. 1 (this "Amendment") dated as of July 15, 2003, is entered into by and among The Gordon and Mary Cain Foundation (the "Foundation"), RCM Financial Services, L.P., a Delaware limited partnership ("Financial Services"), and Cogene Biotech Ventures, L.P., a Delaware limited partnership ("Cogene Biotech" and, together with Financial Services, the "Purchasers"). All capitalized terms not defined in this Amendment shall have the meanings set forth in that certain Stock Purchase Agreement dated as of July 10, 2003 by and among the Purchasers and the Foundation (the "Purchase Agreement").

Whereas, the Purchase Agreement contemplates that pursuant to Section 6(a) thereof that it may be amended by the written agreement of the Purchasers and the Foundation; and

Whereas, the Purchasers and the Foundation each desire to provide for amendments to the Purchase Agreement in accordance with the following provisions.

Now, Therefore, in consideration of the premises and other good and valuable consideration, the parties hereto agree as follows:

1. Section 1(f) of the Purchase Agreement is hereby amended and restated so as to read in its entirety as follows:

"If on or before February 1, 2004 (such date, as it may be extended by written agreement of the Purchasers and the Foundation, the "Termination Date") the Demand Registration Statement is not declared effective by the Securities and Exchange Commission, or, if on or before the Termination Date, Financial Services has not paid to the Foundation the amount described in Section 1(a)(ii) or, if on or before the Termination Date, Cogene has not paid to the Foundation the amount described in Section 1(b)(ii), then on the third business day occurring after the Termination Date (such day, or such other day as may be agreed upon by the Purchasers and the Foundation, the "Subsequent Closing Date"), (i) the Foundation shall pay to Financial Services, in immediately available funds by wire transfer to a bank account designated in writing by Financial Services, cash in the amount of \$532,000, (ii) Financial Services shall deliver to the Foundation a stock certificate representing 560,000 of the Shares, together with stock powers and signature guarantees in form and substance satisfactory to the Foundation, (iii) Financial Services' payment obligation to the Foundation under Section 1(a)(ii) hereof shall terminate, (iv) the Foundation shall pay to Cogene Biotech, in immediately available funds by wire transfer to a bank account designated in writing by Cogene Biotech, cash in the amount of \$133,000, (v) Cogene Biotech shall deliver to the Foundation a stock certificate representing 140,000 of the Shares, together with

stock powers and signature guarantees in the form and substance satisfactory to the Foundation, (vi) Cogene Biotech's payment obligation to the Foundation under Section 1(b)(ii) hereof shall terminate, (vii) the Purchasers shall assign and transfer to the Foundation the rights transferred to them under Section 4(a), (viii) the Foundation shall assume the obligations of the Purchasers under the Registration Rights Agreement, and (ix) the Purchasers and the Foundation shall comply with the notice and assumption requirements of Section 9 of the Registration Rights Agreement. The Purchasers shall pay all stamp and other transfer taxes, if any, that may be payable in respect of the sale and delivery of such shares to the Foundation on the Subsequent Closing Date."

2. Each reference to the Purchase Agreement in the Purchase Agreement, this Amendment and all agreements, documents and notices executed in connection with the Purchase Agreement shall, unless the context otherwise requires, mean the Purchase Agreement as amended by this Amendment.

3. The Purchase Agreement, as amended hereby, is in all respects ratified, approved and confirmed.

4. This Amendment may be executed in any number of counterparts, all of which together make and shall constitute one and the same instrument and any of the parties hereto may execute this Amendment by signing any such counterpart.

5. This Amendment and the legal relations between the parties shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the principles of conflicts of law thereof.

[Signatures on following page]

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands as of the day and year first above written.

RCM FINANCIAL SERVICES, L.P.

By: RCM Financial Services GP, Inc., its
General Partner

By: /s/ M. Robert Dussler

Name: M. Robert Dussler
Title: Vice President

COGENE BIOTECH VENTURES, L.P.

By: Cogene Biotech Ventures GP, LLC, its
General Partner

By: /s/ M. Robert Dussler

Name: M. Robert Dussler
Title: Vice President

THE GORDON AND MARY CAIN FOUNDATION

By: /s/ James D. Weaver

Name: James D. Weaver
Title: Independent Executor