

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934
(AMENDMENT NO. _____)*

NEUROMETRIX, INC.

(Name of Issuer)

COMMON STOCK, \$.0001 PAR VALUE

(Title of Class of Securities)

641255104

(CUSIP Number)

DECEMBER 31, 2004

(Date of Event Which Requires Filing of this Statement)

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).

Page 1 of 13 pages

CUSIP NO. 641255104 13G PAGE 2 OF 14 PAGES

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

Commonwealth Capital Ventures II L.P.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware Limited Partnership

5 SOLE VOTING POWER

NUMBER OF
SHARES 0 shares

BENEFICIALLY
OWNED BY 6 SHARED VOTING POWER
EACH
REPORTING 718,215 shares

PERSON
WITH -----
7 SOLE DISPOSITIVE POWER
0 shares

8 SHARED DISPOSITIVE POWER
718,215 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
718,215

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE
INSTRUCTIONS) |_

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
6.0%

12 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)
PN

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

CCV II Associates L.P.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)
(a)
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware Limited Partnership

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:
5 SOLE VOTING POWER
0 shares

6 SHARED VOTING POWER
718,215 shares

7 SOLE DISPOSITIVE POWER
0 shares

8 SHARED DISPOSITIVE POWER
718,215 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
718,215 shares

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11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
6.0%

12 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)
PN

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

Commonwealth Venture Partners II L.P.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware Limited Partnership

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5 SOLE VOTING POWER
0 shares

6 SHARED VOTING POWER
718,215 shares

7 SOLE DISPOSITIVE POWER
0 shares

8 SHARED DISPOSITIVE POWER
718,215 shares

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718,215 shares

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11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

6.0%

12 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

PN

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

Michael T. Fitzgerald

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

5 SOLE VOTING POWER

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

0 shares

6 SHARED VOTING POWER

718,215 shares

7 SOLE DISPOSITIVE POWER

0 shares

8 SHARED DISPOSITIVE POWER

718,215 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

718,215 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

6.0%

12 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IN

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

Jeffrey M. Hurst

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

5 SOLE VOTING POWER
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

0 shares

6 SHARED VOTING POWER

718,215 shares

7 SOLE DISPOSITIVE POWER

0 shares

8 SHARED DISPOSITIVE POWER

718,215 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

718,215 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES
(SEE INSTRUCTIONS)

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

6.0%

12 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IN

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

R. Stephen McCormack, Jr.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

5 SOLE VOTING POWER
 NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH 0 shares

6 SHARED VOTING POWER
 718,215 shares

7 SOLE DISPOSITIVE POWER
 0 shares

8 SHARED DISPOSITIVE POWER
 718,215 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

718,215 shares

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6.0%

12 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IN

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

Justin Perreault

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

NUMBER OF 5 SOLE VOTING POWER
SHARES 0 shares

BENEFICIALLY 6 SHARED VOTING POWER
OWNED BY 718,215 shares
EACH
REPORTING
PERSON

WITH 7 SOLE DISPOSITIVE POWER
0 shares

8 SHARED DISPOSITIVE POWER
718,215 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

718,215 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE
INSTRUCTIONS)

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

6.0%

12 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IN

SCHEDULE 13G

Item 1(a). NAME OF ISSUER: Neurometrix, Inc. (the "Issuer").

Item 1(b). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES:

62 Fourth Avenue, Waltham, MA 02451

Item 2(a). NAMES OF PERSONS FILING: Commonwealth Venture Partners II L.P., Commonwealth Capital Ventures II L.P., and CCV II Associates, L.P. (together, the "Entities") and Michael T. Fitzgerald, Jeffrey M. Hurst, R. Stephen McCormack, Jr. and Justin Perreault (together, the "Individuals" and together with the Entities, the "Reporting Persons").

Commonwealth Venture Partners II L.P. is the sole general partner of Commonwealth Capital Ventures II L.P. and CCV II Associates, L.P. The Individuals are the individual general partners of Commonwealth Venture Partners II L.P.

Item 2(b). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE: The address of the principal business office of each of the Reporting Persons is Bay Colony Corporate Center, 950 Winter St., Suite 4100, Waltham, MA 02451.

Item 2(c). CITIZENSHIP: Each Entity a limited partnership organized under the laws of the State of Delaware. Each Individual is a citizen of the United States.

Item 2(d). TITLE OF CLASS OF SECURITIES: Common Stock, \$.0001 par value ("Common Stock").

Item 2(e). CUSIP NUMBER: 641255104

Item 3. IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR 13D-2(B) OR (C), CHECK WHETHER THE PERSON FILING IS A:

Not Applicable.

Item 4. Ownership.

(a) Amount Beneficially Owned:

As of December 31, 2004, Commonwealth Capital Ventures II L.P. is the record owner of 684,382 shares of Common Stock and CCV II Associates, L.P. is the record owner of 33,833 shares of Common Stock (referred to collectively as the "Record Shares"). By virtue of the affiliate relationships among the Reporting Persons, each Reporting Person may be deemed to own beneficially all of the Record Shares. Hence, each Reporting Person may be deemed to own beneficially 718,215 shares of Common Stock.

(b) Percent of Class:

Each Reporting Person may be deemed to own beneficially 6.0% of the 12,025,119 shares of Common Stock outstanding as of November 9, 2004 as reported on the Issuer's Form 10-Q for the quarter ending September 30, 2004.

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

(i) sole power to vote or to direct the vote: See cover sheets.

- (ii) shared power to vote or to direct the vote: See cover sheets.
- (iii) sole power to dispose or to direct the disposition of: See cover sheets.
- (iv) shared power to dispose or to direct the disposition of: See cover sheets.

Each Reporting Person disclaims beneficial ownership of such shares of Common Stock or options to purchase Common Stock except for those shares or options, if any, such Reporting Person holds of record.

Item 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS.

Not Applicable.

Item 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON.

Not Applicable.

Item 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY.

Not Applicable.

Item 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP.

Not Applicable. The reporting persons expressly disclaim membership in a "group" as defined in Rule 13d-5(b).

Item 9. NOTICE OF DISSOLUTION OF GROUP.

Not Applicable.

Item 10. CERTIFICATIONS.

Not Applicable. This statement on Schedule 13G is not filed pursuant to Rule 13d-1(b) or Rule 13d-1(c).

[REMAINDER OF PAGE LEFT BLANK INTENTIONALLY]

[SIGNATURE PAGE FOLLOWS IMMEDIATELY]

SIGNATURES

After reasonable inquiry and to the best of his knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct. Each of the undersigned also hereby agrees to file this statement jointly pursuant to the Agreement listed on EXHIBIT 1 hereto.

Dated: February 1, 2005

CCV II ASSOCIATES L.P.

By: Commonwealth Venture Partners II L.P.

*

Michael T. Fitzgerald

By: *

*

Michael T. Fitzgerald
General Partner

Jeffrey M. Hurst

COMMONWEALTH CAPITAL VENTURES II L.P.

*

By: Commonwealth Venture Partners II L.P.

R. Stephen McCormack, Jr.

By: *

*

Michael T. Fitzgerald
General Partner

Justin Perreault

COMMONWEALTH VENTURE PARTNERS II L.P.

By: *

Michael T. Fitzgerald
General Partner

* The undersigned attorney-in-fact, by signing his name below, does hereby sign this statement on behalf of himself and the other above indicated filers pursuant to Powers of Attorney which are attached hereto as Exhibit 2 and incorporated herein by reference.

/S/ JEFFREY M. HURST

Individually and as Attorney-in-fact

AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, the undersigned hereby agree that only one statement containing the information required by Schedule 13G need be filed with respect to the ownership by each of the undersigned of shares of Common Stock of Neurometrix, Inc.

This agreement may be executed in any number of counterparts, each of which shall be deemed an original.

EXECUTED this 1st day of February, 2005.

CCV II ASSOCIATES L.P.

By: Commonwealth Venture Partners II L.P.

*

Michael T. Fitzgerald

By: *

Michael T. Fitzgerald
General Partner

*

Jeffrey M. Hurst

COMMONWEALTH CAPITAL VENTURES II L.P.

By: Commonwealth Venture Partners II L.P.

*

R. Stephen McCormack, Jr.

By: *

Michael T. Fitzgerald
General Partner

*

Justin Perreault

COMMONWEALTH VENTURE PARTNERS II L.P.

By: *

Michael T. Fitzgerald
General Partner

* The undersigned attorney-in-fact, by signing his name below, does hereby sign this statement on behalf of himself and the other above indicated filers pursuant to Powers of Attorney which are attached hereto as EXHIBIT 2 AND INCORPORATED HEREIN BY REFERENCE.

/S/ JEFFREY M. HURST

Individually and as Attorney-in-fact

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints each and any of Michael T. Fitzgerald, Jeffery M. Hurst, R. Stephen McCormack, Jr. and Justin Perreault his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities (until revoked in writing) to sign any and all instruments, certificates and documents required to be executed on behalf of himself individually or on behalf of each or any of Commonwealth Capital Ventures II L.P., CCV II Associates L.P. and Commonwealth Venture Partners II L.P. pursuant to sections 13 and 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and any and all regulations promulgated thereunder, and to file the same, with all exhibits thereto, and any other documents in connection therewith, with the Securities and Exchange Commission, and with any other entity when and if such is mandated by the Exchange Act or by the By-laws of the National Association of Securities Dealers, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary fully to all intents and purposes as he might or could do in person thereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, this Power of Attorney has been signed as of the 1st day of February, 2005.

/s/ Michael T. Fitzgerald

Michael T. Fitzgerald

/s/ Jeffrey M. Hurst

Jeffrey M. Hurst

/s/ R. Stephen McCormack, jr.

R. Stephen McCormack, Jr.

/s/ Justin Perreault

Justin Perreault