

**UNITED STATES  
SECURITIES AND EXCHANGE  
COMMISSION**

Washington, D.C. 20549

**SCHEDULE 13D**

[RULE 13d-101]

**INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT  
TO §240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT  
TO §240.13d-2a**

**Under the Securities Exchange Act of 1934  
(Amendment No.    )\***

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**CYBERKINETICS NEUROTECHNOLOGY SYSTEMS, INC.**

(Name of Issuer)

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**Common Stock, Par Value \$.001 Per Share**

(Title of Class of Securities)

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**23247T101**

(CUSIP Number)

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**Shai N. Gozani, M.D., Ph.D.  
NeuroMetrix, Inc.  
62 Fourth Avenue  
Waltham, MA 02451  
(781) 890-9989**

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

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**November 13, 2007**

(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 §§240.13d-1(e), 240.13d-1(f) or 240.13d-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 §240.13d-7 for other parties to whom copies are to be sent.

\* 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 ("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).

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1. Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only)  
NeuroMetrix, Inc.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b)

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3. SEC Use Only

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4. Source of Funds (See Instructions)  
OO

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5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

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6. Citizenship or Place of Organization  
Delaware

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7. Sole Voting Power  
8,152,174

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Number of  
Shares  
Beneficially  
Owned by  
Each  
Reporting  
Person With

8. Shared Voting Power  
-0-

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9. Sole Dispositive Power  
8,152,174

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10. Shared Dispositive Power  
-0-

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11. Aggregate Amount Beneficially Owned by Each Reporting Person  
8,152,174

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12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

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13. Percent of Class Represented by Amount in Row (11)  
17.8%

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14. Type of Reporting Person (See Instructions)  
CO

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Item 1. Security and Issuer

The securities to which this statement relates are the common stock, par value \$.001 per share (the "Common Stock"), of Cyberkinetics Neurotechnology Systems, Inc., a Delaware corporation (the "Company"). The principal executive offices of the Company are located at 100 Foxborough Boulevard, Suite 240, Foxborough, Massachusetts 02035.

Item 2. Identity and Background

(a) - (c) NeuroMetrix, Inc., a Delaware corporation (“NeuroMetrix” or the “Reporting Person”), is a medical device company focused on development and marketing of products used to diagnose and treat diseases of the nervous system, neurovascular disorders and pain. NeuroMetrix’s principal business and office address is 62 Fourth Avenue Waltham, Massachusetts 02451.

Shai N. Gozani, M.D., Ph.D. is the Chief Executive Officer and President and a director of NeuroMetrix and his business address is c/o NeuroMetrix, Inc., 62 Fourth Avenue Waltham, Massachusetts 02451.

Allen Hinkle, M.D. is a director of NeuroMetrix and his business address is c/o NeuroMetrix, Inc., 62 Fourth Avenue Waltham, Massachusetts 02451. Dr. Hinkle also is the Chief Medical Officer and Senior Vice President for Tufts Health Plan in Massachusetts, a health insurance provider located at 705 Mt. Auburn Street, Watertown, Massachusetts 02472.

David E. Goodman, M.D. is a director of NeuroMetrix and his business address is c/o NeuroMetrix, Inc., 62 Fourth Avenue Waltham, Massachusetts 02451. Dr. Goodman also is an independent consultant providing product design, regulatory and analytical consulting services to medical device and biopharmaceutical companies.

Charles R. LaMantia is a director of NeuroMetrix and his business address is c/o NeuroMetrix, Inc., 62 Fourth Avenue Waltham, Massachusetts 02451. Mr. LaMantia is currently retired.

W. Mark Lortz is a director of NeuroMetrix and his business address is c/o NeuroMetrix, Inc., 62 Fourth Avenue Waltham, Massachusetts 02451. Mr. Lortz is currently retired.

Gary L. Gregory is the Chief Operating Officer of NeuroMetrix and his business address is c/o NeuroMetrix, Inc., 62 Fourth Avenue Waltham, Massachusetts 02451.

W. Bradford Smith is the Chief Financial Officer of NeuroMetrix and his business address is c/o NeuroMetrix, Inc., 62 Fourth Avenue Waltham, Massachusetts 02451.

Guy Daniello is the Senior Vice President of Information Technology of NeuroMetrix and his business address is c/o NeuroMetrix, Inc., 62 Fourth Avenue Waltham, Massachusetts 02451.

Michael Williams, Ph.D. is the Senior Vice President of Engineering of NeuroMetrix and his business address is c/o NeuroMetrix, Inc., 62 Fourth Avenue Waltham, Massachusetts 02451.

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(d) - (e) During the last five years, neither NeuroMetrix nor, to NeuroMetrix’s knowledge, any of the natural persons identified in this Item 2, has been convicted in any criminal proceeding (excluding traffic violations or similar misdemeanors). During the last five years, neither NeuroMetrix nor, to NeuroMetrix’s knowledge, any of the natural persons identified in this Item 2, was a party to a civil proceeding of a judicial or administrative body of competent jurisdiction as result of which it 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 laws or finding any violation with respect to such laws.

(f) Each natural person identified in this Item 2 is a citizen of the United States of America.

Item 3. Source and Amount of Funds or Other Consideration

On November 13, 2007, NeuroMetrix and the Company entered into a Joint Venture and Strategic Investment Agreement (the “Investment Agreement”), a copy of which is attached hereto as Exhibit 7.3 and incorporated herein by reference, a Registration Rights Agreement (the “Registration Rights Agreement”), a copy of which is attached hereto as Exhibit 7.1 and incorporated herein by reference, and a Common Stock Purchase Warrant (the “Warrant”), a copy of which is attached hereto as Exhibit 7.2 and incorporated herein by reference (collectively, the “Agreements”).

The aggregate purchase price of the 5,434,783 shares of Common Stock (the “Shares”) owned by NeuroMetrix was \$2,495,000 and the aggregate purchase price of the Warrant was \$5,000. Under the Warrant, NeuroMetrix has the right to purchase up to 2,717,391 shares of Common Stock from the Company for an exercise price of \$0.46 per share at any time before the expiration of the Warrant on November 13, 2012.

NeuroMetrix used its available cash to purchase the Common Stock and the Warrant. Also, NeuroMetrix has not specifically reserved any funds to be used to exercise the Common Stock reserved under the Warrant.

Item 4. Purpose of Transaction

NeuroMetrix purchased the Shares and the Warrant from the Company in connection with the Investment Agreement, pursuant to which NeuroMetrix and the Company agreed to negotiate a joint venture to develop and commercialize a therapeutic product for peripheral nerve injury based on certain technology of the Company. As consideration for their equity interests in the joint venture that is to be negotiated, the Company is to contribute exclusive rights to the intellectual property related to the Company’s Oscillating Field Stimulator device for the treatment of peripheral nerve injury and

disease and NeuroMetrix is to contribute up to \$2 million over a two-year period in cash and/or personnel, resources or other value to the initial development efforts of the joint venture. Any additional capital and other resources required by the joint venture will be contributed equally by the Company and NeuroMetrix. In addition, the joint venture shall be responsible for satisfying any royalty obligations of the Company to any third party arising out of the activities of the joint venture. Pursuant to the Investment Agreement, NeuroMetrix also received certain rights, including a right of first negotiation for the acquisition of the Company, or any other change of control transaction, and a right of first negotiation for the commercialization of certain of the Company's technology. These rights remain in effect through December 31, 2008. NeuroMetrix also received a participation right from the Company pursuant to

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which the Company must offer NeuroMetrix the right to participate in any future issuances of securities by the Company in an amount sufficient to enable NeuroMetrix to maintain its proportionate equity interest in the Company, subject to exceptions for securities issued in consideration for an acquisition, in an underwritten public offering, pursuant to an approved equity compensation plan, in an offering of up to \$15 million in debt securities entered into by February 12, 2008 or upon conversion or exercise of any other securities of the Company. Pursuant to the terms of the Investment Agreement, the Company appointed Dr. Gozani to its Board of Directors, as the NeuroMetrix designee, and agreed to nominate and recommend that its stockholders elect, and otherwise use reasonable efforts to insure the election of, a representative designated by NeuroMetrix to the Board of Directors of the Company. These rights relating to the nomination of a representative designated by NeuroMetrix expire on the date on which NeuroMetrix ceases to own at least five percent of the then issued and outstanding shares of Common Stock. NeuroMetrix also agreed not to sell any shares of Common Stock until November 13, 2008.

Pursuant to the Registration Rights Agreement, any time after December 31, 2008, NeuroMetrix may make two written demands for registration under the Securities Act of 1933, as amended, of all or part of the Shares, shares acquired upon exercise of the Warrant or any additional shares issued or distributed to NeuroMetrix by way of a dividend, stock split, conversion or other similar distribution (collectively, the "Registrable Securities"). If at any time after December 31, 2008, the Company registers any securities for public sale, NeuroMetrix shall have the right to include the Registrable Securities in the registration statement, subject to customary exceptions. The Company shall pay all registration expenses, other than underwriting fees, discounts and commissions and the out-of-pocket expenses of NeuroMetrix, related to any demand or piggyback registration. The Registration Rights Agreement contains customary cross-indemnification provisions, under which the Company is obligated to indemnify NeuroMetrix in the event of material misstatements or omissions in the registration statement attributable to the Company and NeuroMetrix is obligated to indemnify the Company for material misstatements or omissions in the registration statement attributable to NeuroMetrix.

As may be appropriate from time to time, NeuroMetrix will consider the feasibility and advisability of various alternative courses of actions with respect to its investment in the Company, including without limitation: (a) the acquisition or disposition of additional Common Stock; (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Company or any of its subsidiaries; (c) a sale or transfer of a material amount of assets of the Company or any of its subsidiaries; (d) changes in the present board of directors or management of the Company; (e) a material change in the present capitalization or dividend policy of the Company; (f) other material changes in the Company's business or corporate structure; (g) changes in the Company's certificate of incorporation or bylaws or other actions that may impede the acquisition of control of the Company by any person; (h) causing any class of the Company's securities 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; (i) causing a class of equity securities of the Company to become eligible for termination of registration pursuant to Section 12(g)(4) of the Act; or (j) any action similar to those enumerated above. Except as discussed above, NeuroMetrix does not currently have any plans or proposals that relate to or would result in any of the actions specified in clauses (a) through (j) of this Item 4 of Schedule 13D.

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Item 5. Interest in Securities of the Issuer

(a) and (b) Prior to November 13, 2007, NeuroMetrix was not the beneficial owner (as defined in Rule 13d-3 promulgated under the Act) of any shares of Common Stock. Upon execution of the Agreements, NeuroMetrix acquired sole voting power and sole dispositive power with respect to, and beneficial ownership of, 8,132,174 shares of Common Stock, including 2,717,391 shares of Common Stock subject to the Warrant and exercisable within 60 days of November 13, 2007, constituting approximately 17.8% of the total issued and outstanding Common Stock of the Company.

(c) The information set forth in Item 4 above is incorporated herein by reference.

(d) Not applicable.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

The information set forth under Items 3, 4 and 5 above and the Exhibits attached hereto are incorporated herein by reference.

The following documents are filed as Exhibits to this statement.

<b>EXHIBIT NO.</b>	<b>DESCRIPTION</b>
7.1	Registration Rights Agreement, dated as of November 13, 2007 by and between NeuroMetrix, Inc. and Cyberkinetics Neurotechnology Systems, Inc. (filed as Exhibit 4.2 to Cyberkinetics Neurotechnology Systems, Inc.'s Quarterly Report on Form 10-QSB for the quarter ended September 30, 2007 and incorporated herein by reference)
7.2	Common Stock Purchase Warrant, dated as of November 13, 2007 by and between NeuroMetrix, Inc. and Cyberkinetics Neurotechnology Systems, Inc. (filed as Exhibit 4.1 to Cyberkinetics Neurotechnology Systems, Inc.'s Quarterly Report on Form 10-QSB for the quarter ended September 30, 2007 and incorporated herein by reference)
7.3	Joint Venture and Strategic Investment Agreement, dated as of November 13, 2007 by and between NeuroMetrix, Inc. and Cyberkinetics Neurotechnology Systems, Inc. (filed as Exhibit 10.1 to Cyberkinetics Neurotechnology Systems, Inc.'s Quarterly Report on Form 10-QSB for the quarter ended September 30, 2007 and incorporated herein by reference)

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**SIGNATURE**

After reasonable inquiry and to the best of its knowledge and belief, the undersigned hereby certifies that the information set forth in this statement is true, complete and correct.

**NEUROMETRIX, INC.**

Date: November 21, 2007

By: /s/ Shai N. Gozani, M.D., Ph.D.  
Name: Shai N. Gozani, M.D., Ph.D.  
Title: Chief Executive Officer and President