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

FORM S-8
REGISTRATION STATEMENT
under the
SECURITIES ACT OF 1933

NEUROMETRIX, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

04-3308180

(I.R.S. Employer Identification No.)

62 Fourth Avenue Waltham, Massachusetts 02451 (781) 890-9989

(Address, Including Zip Code, of Principal Executive Offices)

NEUROMETRIX, INC. AMENDED AND RESTATED 2010 EMPLOYEE STOCK PURCHASE PLAN

(Full Title of the Plan)

Shai N. Gozani, M.D., Ph.D.
President and Chief Executive Officer
NEUROMETRIX, INC.
62 Fourth Avenue
Waltham, Massachusetts 02451
(781) 890-9989

(Name, Address and Telephone Number, Including Area Code, of Agent For Service)

Copies to:

Megan N. Gates, Esq.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. One Financial Center Boston, MA 02111 Telephone: (617) 542-6000

Fax: (617) 542-2241

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

 $Large \ accelerated \ filer \ \square$ Non-accelerated filer \ \ \ \ (do not check if a smaller reporting company)

\$0.001 par value

Accelerated filer \square Smaller reporting company \boxtimes

(3)

None

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered ⁽¹⁾	Proposed Maximum Offering Price Per Share ⁽²⁾	Proposed Maximum Aggregate Offering Price ⁽²⁾	Amount of Registration Fee
Common Stock, \$0.0001 par value	16,667 shares	\$ 2.39	\$ 39,834	\$ 5.44
Rights to purchase Series A Junior				
Participating Cumulative Preferred Stock,				

⁽¹⁾ The maximum number of shares which may be sold pursuant to the NeuroMetrix, Inc. Amended and Restated 2010 Employee Stock Purchase Plan (the "2010 ESPP") is subject to adjustment in accordance with certain anti-dilution and other provisions of the 2010 ESPP. Accordingly, pursuant to Rule 416(c) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement covers, in addition to the number of shares stated above, an indeterminate number of shares which may be issuable after the operation of any such anti-dilution or other provisions of the 2010 ESPP.

(3)

(3)

(2)	This calculation is made solely for the purpose of determining the registration fee pursuant to the provisions of Rule 457(c) and (h) under the Securities Act on the basis of the average of the high and low sale prices per share of the Common Stock on the NASDAQ as of a date (February 20, 2013) within five business days prior to filing this Registration Statement.
(3)	Pursuant to the Shareholder Rights Agreement, dated as of March 7, 2007, between NeuroMetrix, Inc. and American Stock Transfer & Trust Company, as amended, each share of Common Stock has an attached right to purchase thirty-six ten-thousandths of a share of Series A Junior Participating Cumulative Preferred Stock, par value \$0.001 per share, of the Company (the "Rights"), which Rights are not currently exercisable, on the terms set forth in the Rights Agreement. No separate consideration will be received for the Rights.

EXPLANATORY NOTE

In accordance with the instructional Note to Part I of Form S-8 as promulgated by the Securities and Exchange Commission, the information specified by Part I of Form S-8 has been omitted from this Registration Statement on Form S-8 for offers of common stock, par value \$0.0001 per share (the "Common Stock"), pursuant to the 2010 ESPP.

This Registration Statement on Form S-8 hereby registers 16,667 additional shares of Common Stock for issuance under the 2010 ESPP. An aggregate of 36,562 shares of Common Stock issued or to be issued under the 2010 ESPP were previously registered on May 28, 2010 (File No. 333-167180) (6,944 shares), April 28, 2011 (File No. 333-173769) (6,444 shares), and August 3, 2012 (File No. 333-183071) (23,174 shares). The information contained in the Registrant's previous registration statements on Form S-8 listed above is hereby incorporated by reference pursuant to General Instruction E.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

The exhibits listed in the accompanying Exhibit Index are filed or incorporated by reference as part of this registration statement.

SIGNATURES

The Registrant. Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Waltham, Massachusetts on this 25th day of February, 2013.

NEUROMETRIX, INC.

By: /s/ SHAI N. GOZANI, M.D., PH.D.

Shai N. Gozani, M.D., Ph.D.
President and Chief Executive Officer

Each person whose signature appears below constitutes and appoints Shai N. Gozani, M.D., Ph.D. and Thomas T. Higgins, and each of them singly, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them singly, for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8 of NeuroMetrix, Inc., and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting to the attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in or about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that the attorneys-in-fact and agents or any of each of them or their substitute may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ SHAI N. GOZANI, M.D., PH.D. Shai N. Gozani, M.D., Ph.D.	President, Chief Executive Officer and Director	February 25, 2013
/s/ THOMAS T. HIGGINS Thomas T. Higgins	Senior Vice President, Chief Financial Officer and Treasurer	February 25, 2013
/s/ DAVID E. GOODMAN, M.D. David E. Goodman, M.D.	Director	February 25, 2013
/s/ ALLEN J. HINKLE, M.D. Allen J. Hinkle, M.D.	Director	February 25, 2013
/s/ NANCY E. KATZ Nancy E. Katz	Director	February 25, 2013
/s/ TIMOTHY R. SURGENOR Timothy R. Surgenor	Director	February 25, 2013
	2	

NEUROMETRIX, INC.

INDEX TO EXHIBITS FILED WITH FORM S-8 REGISTRATION STATEMENT

Exhibit Number	Description
5.1	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. as to the legality of shares and rights being registered.
23.1	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in opinion of counsel filed as Exhibit 5.1).
23.2	Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm.
24	Powers of Attorney (included in the signature page to this Registration Statement).
	3



One Financial Center Boston, MA 02111 617-542-6000 617-542-2241 fax www.mintz.com

February 25, 2013

NeuroMetrix, Inc. 62 Fourth Avenue Waltham, Massachusetts 02451

Ladies and Gentlemen:

We have acted as legal counsel to NeuroMetrix, Inc., a Delaware corporation (the "Company"), in connection with the preparation and filing with the Securities and Exchange Commission (the "Commission") of a Registration Statement on Form S-8 (the "Registration Statement"), pursuant to which the Company is registering the issuance under the Securities Act of 1933, as amended (the "Securities Act"), of a total of 16,667 shares (the "Shares") of its common stock, \$0.0001 par value per share (the "Common Stock"), pursuant to the Company's Amended and Restated 2010 Employee Stock Purchase Plan (the "2010 ESPP"), and the associated rights to purchase Preferred Stock (the "Rights") issuable pursuant to the Shareholder Rights Agreement, dated as of March 7, 2007, as amended, between the Company and American Stock Transfer & Trust Company (the "Rights Agreement"). Each Share has an attached Right to purchase one ten-thousandth of a share of Series A Junior Participating Cumulative Preferred Stock, par value \$0.001 per share, which Rights are not currently exercisable, on the terms set forth in the Rights Agreement. This opinion is being rendered in connection with the filing of the Registration Statement with the Commission. All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the Registration Statement.

In connection with this opinion, we have examined the Company's Restated Certificate of Incorporation, as amended, the Rights Agreement and Amended and Restated Bylaws, each as currently in effect; such other records of the corporate proceedings of the Company and certificates of the Company's officers as we have deemed relevant; and the Registration Statement and the exhibits thereto.

In our examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies and the authenticity of the originals of such copies. In addition, we have assumed that the Company will receive any required consideration in accordance with the terms of the 2010 ESPP.

With respect to our opinion regarding the nature of the Rights as binding obligations of the Company, we (i) express no opinion as to the determination that a court of competent jurisdiction may make regarding whether the Company's Board of Directors would be required to redeem or terminate, or take other action with respect to the Rights at some future time based on the facts and circumstances existing at that time; (ii) have assumed that the members of the Company's Board of Directors have acted in a manner consistent with their fiduciary duties as required under applicable law in adopting the Rights Agreement; and (iii) have addressed the Rights and the Rights Agreement in their entirety, and it is not settled whether the invalidity of any particular provision of the Rights Agreement or the Rights issued thereunder would result in invalidating the Rights in their entirety.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

Boston | Washington | New York | Stamford | Los Angeles | Palo Alto | San Diego | London

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.

NeuroMetrix, Inc. February 25, 2013 Page 2

Our opinion is limited to the General Corporation Law of the State of Delaware and we express no opinion with respect to the laws of any other jurisdiction. No opinion is expressed herein with respect to the qualification of the Shares or the Rights under the securities or blue sky laws of any state or any foreign jurisdiction.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

Based upon the foregoing, we are of the opinion that (i) the Shares, when issued and delivered in accordance with the terms of the 2010 ESPP, will be validly issued, fully paid and non-assessable and (ii) the Rights, when the Shares are issued and delivered in accordance with the terms of the 2010 ESPP, will constitute binding obligations of the Company.

We understand that you wish to file this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Securities Act, and we hereby consent thereto. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated February 25, 2013 relating to the financial statements and financial statement schedule, which appears in NeuroMetrix, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2012.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts February 25, 2013