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**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**                      **04-3308180**  
*(State or Other Jurisdiction*      *(I.R.S. Employer*  
*of Incorporation or Organization)*      *Identification No.)*

**1000 Winter Street  
Waltham, Massachusetts 02451  
(781) 890-9989**  
*(Address, Including Zip Code, of Principal Executive Offices)*

**NEUROMETRIX, INC. NINTH AMENDED AND RESTATED 2004 STOCK OPTION AND INCENTIVE PLAN  
NEUROMETRIX, INC. THIRD 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.  
1000 Winter Street  
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  
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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

Non-accelerated filer  (do not check if a smaller reporting company)

Accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

**CALCULATION OF REGISTRATION FEE**

| Title of Securities to be Registered  | Amount to be Registered <sup>(1)</sup> | Proposed Maximum Offering Price Per Share <sup>(2)</sup> | Proposed Maximum Aggregate Offering Price <sup>(2)</sup> | Amount of Registration Fee |
|---|--|--|--|----------------------------|
| Common Stock, \$.0001 par value   | 600,521 shares                         | \$3.345  | \$2,008,742.75   | \$232.81                   |
| Rights to purchase Series A Junior Participating Cumulative Preferred Stock, \$.001 par value | (3)                                    | (3)  | (3)  | None                       |

- (1) The number of shares of common stock, par value \$.0001 per share (“Common Stock”), stated above consists of: (i) 600,000 shares available for issuance under the NeuroMetrix, Inc. Ninth Amended and Restated 2004 Stock Option and Incentive Plan (together with previous versions of such plan, the “Ninth Amended and Restated Stock Plan”) plus such indeterminate number of additional shares of Common Stock as may be required pursuant to the Ninth Amended and Restated Stock Plan in the event of a stock dividend, stock split, recapitalization, or other similar event and (ii) 521 shares which may be sold upon the exercise of options which may hereafter be granted under the NeuroMetrix, Inc. Third Amended and Restated 2010 Employee Stock Purchase Plan (the “2010 ESPP” and together with the Ninth Amended and Restated Stock Plan, the “Plans”). The maximum number of shares which may be sold pursuant to 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 also covers an indeterminate number of shares which may be issuable pursuant to the Plan described herein.
- (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 (May 30, 2017) 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 a fraction of a share of Series A Junior Participating Cumulative Preferred Stock, par value \$.0001 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 pursuant to the Plan. The numbers in this Registration Statement reflect two 1-for-6 reverse splits of our Common Stock completed on September 1, 2011 and February 15, 2013, a 1-for-4 reverse split of our Common Stock completed on December 1, 2015 and a 1-for-8 reverse split of our Common Stock completed on May 11, 2017.

### ***Ninth Amended and Restated Stock Plan***

This Registration Statement on Form S-8 hereby registers 600,000 additional shares of Common Stock for issuance under the Ninth Amended and Restated Stock Plan. An aggregate of 128,945 shares of Common Stock to be issued under the Ninth Amended and Restated Stock Plan were previously registered on August 9, 2004 (File No. 333-118059) (716 shares), June 22, 2006 (File No. 333-135242) (973 shares), May 27, 2008 (File No. 333-151195) (868 shares), June 3, 2009 (File No. 333-159713) (868 shares), August 3, 2012 (File No. 333-183071) (5,208 shares), June 17, 2013 (File No. 333-189393) (9,375 shares), July 14, 2014 (File No. 333-197407) (21,875 shares), July 23, 2015 (File No. 333-205827) (26,562 shares), and May 13, 2016 (File No. 333-211379) (62,500 shares) the “Previous Stock Plan Registration Statements”).

### ***2010 ESPP***

This Registration Statement on Form S-8 hereby registers 521 additional shares of Common Stock for issuance under the 2010 ESPP. An aggregate of 18,851 shares of Common Stock to be issued under the 2010 ESPP were previously registered on May 28, 2010 (File No. 333-167180) (217 shares), April 28, 2011 (File No. 333-173769) (201 shares), August 3, 2012 (File No. 333-183701) (724 shares), February 25, 2013 (File No. 333-186827) (521 shares), July 14, 2014 (File No. 333-197407) (3,646 shares), July 23, 2015 (File No. 333-205827) (521 shares) and May 13, 2016 (File No. 333-205827) (13,021 shares) (the “Previous ESPP Registration Statements”).

The contents of the Previous Stock Plan Registration Statements are incorporated by reference into this Registration Statement pursuant to General Instruction E of Form S-8.

## 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 1st day of June, 2017.

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.

| <u>Signature</u>  | <u>Title</u>   | <u>Date</u>  |
|---|--|--------------|
| <u>/s/ SHAI N. GOZANI, M.D., PH.D.</u><br>Shai N. Gozani, M.D., Ph.D. | President, Chief Executive<br>Officer and Director (principal<br>executive officer)                                | June 1, 2017 |
| <u>/s/ THOMAS T. HIGGINS</u><br>Thomas T. Higgins                     | Senior Vice President,<br>Chief Financial Officer and<br>Treasurer (principal financial<br>and accounting officer) | June 1, 2017 |
| <u>/s/ DAVID E. GOODMAN, M.D.</u><br>David E. Goodman, M.D.           | Director   | June 1, 2017 |
| <u>/s/ NANCY E. KATZ</u><br>Nancy E. Katz                             | Director   | June 1, 2017 |
| <u>/s/ TIMOTHY R. SURGENOR</u><br>Timothy R. Surgenor                 | Director   | June 1, 2017 |
| <u>/s/ DAVID VAN AVERMAETE</u><br>David Van Avermaete                 | Director   | June 1, 2017 |

**INDEX TO EXHIBITS FILED WITH  
FORM S-8 REGISTRATION STATEMENT**

| <u>Exhibit<br/>Number</u> | <u>Description</u>  |
|---------------------------|---|
| 4.1                       | Third Amended and Restated Certificate of Incorporation of the Registrant (filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-8 filed on August 9, 2004, File No. 333-118059, and incorporated in this document by reference).   |
| 4.2.1                     | Certificate of Designations for Series A Junior Participating Cumulative Preferred Stock (filed as Exhibit 3.1 to the Registration Statement on Form 8-A filed on March 8, 2007, File No. 001-33351, and incorporated in this document by reference).   |
| 4.2.2                     | Certificate of Designations for Series B Convertible Preferred Stock (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on May 29, 2015, File No. 001-33351, and incorporated in this document by reference).   |
| 4.2.3                     | Certificate of Designations for Series D Convertible Preferred Stock (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on June 3, 2016, File No. 001-33351, and incorporated in this document by reference).   |
| 4.2.4                     | Certificate of Designations for Series E Convertible Preferred Stock (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on December 29, 2016, File No. 001-33351, and incorporated in this document by reference).  |
| 4.3                       | Certificate of Amendment to Third Amended and Restated Certificate of Incorporation of NeuroMetrix, Inc., dated September 1, 2011 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on September 1, 2011, File No. 001-33351, and incorporated in this document by reference). |
| 4.4                       | Certificate of Amendment to Third Amended and Restated Certificate of Incorporation of NeuroMetrix, Inc., dated February 15, 2013 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on February 15, 2013, File No. 001-33351, and incorporated in this document by reference). |
| 4.5                       | Certificate of Amendment to Third Amended and Restated Certificate of Incorporation of NeuroMetrix, Inc., dated December 1, 2015 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on December 1, 2015, File No. 001-33351, and incorporated in this document by reference).   |
| 4.6                       | Certificate of Amendment to Third Amended and Restated Certificate of Incorporation of NeuroMetrix, Inc., dated May 11, 2017 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on May 12, 2017, File No. 001-33351, and incorporated in this document by reference).           |

- 4.7 Shareholder Rights Agreement, dated as of March 7, 2007, between NeuroMetrix, Inc. and American Stock Transfer & Trust Company, as Rights Agent (filed as Exhibit 4.1 to the Registration Statement on Form 8-A filed on March 8, 2007, File No. 001-33351, and incorporated in this document by reference).
- 4.8 Amendment to Shareholder Rights Agreement, dated September 8, 2009, between NeuroMetrix, Inc. and American Stock Transfer & Trust Company, as Rights Agent (filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on September 14, 2009, File No. 001-33351, and incorporated in this document by reference).
- 4.9 Amendment No. 2 to Shareholder Rights Agreement, dated June 5, 2013, between NeuroMetrix, Inc. and American Stock Transfer & Trust Company, as Rights Agent (filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on June 6, 2013, File No. 001-33351, and incorporated in this document by reference).
- 4.10 Amendment No. 3 to Shareholder Rights Agreement, dated June 25, 2014, between NeuroMetrix, Inc. and American Stock Transfer & Trust Company, as Rights Agent (filed as Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on June 25, 2014, File No. 001-33351, and incorporated in this document by reference).
- 4.11 Amendment No. 4 to Shareholder Rights Agreement, dated May 28, 2015, between NeuroMetrix, Inc. and American Stock Transfer & Trust Company, as Rights Agent.
- 4.12 Amendment No. 5 to Shareholder Rights Agreement, dated December 29, 2015, between NeuroMetrix, Inc. and American Stock Transfer & Trust Company, as Rights Agent.
- 4.13 Amendment No. 6 to Shareholder Rights Agreement, dated June 3, 2016, between NeuroMetrix, Inc. and American Stock Transfer & Trust Company, as Rights Agent.
- 4.14 Amendment No. 7 to Shareholder Rights Agreement, dated December 28, 2016, between NeuroMetrix, Inc. and American Stock Transfer & Trust Company, as Rights Agent.
- 4.15 Amendment No. 8 to Shareholder Rights Agreement, dated February 8, 2017, between NeuroMetrix, Inc. and American Stock Transfer & Trust Company, as Rights Agent.
- 4.16 Specimen certificate for shares of Common Stock (filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 filed on May 13, 2004, as amended, File No. 333-115440, and incorporated in this document by reference).
- 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.
- 24 Powers of Attorney (included in the signature page to this Registration Statement).
- 99.1 NeuroMetrix, Inc. Ninth Amended and Restated 2004 Stock Option and Incentive Plan (filed as Appendix A to the Registrant's Proxy Statement for its 2017 Annual Meeting of S

tockholders, filed on March 29, 2017, File No. 001-33351, and incorporated in this document by reference).

- 99.2. NeuroMetrix, Inc. Third Amended and Restated 2010 Employee Stock Purchase Plan (filed as Appendix B to the Registrant's Proxy Statement for its 2016 Annual Meeting of Stockholders, filed on March 17, 2016, File No. 001-33351, and incorporated in this document by reference).

June 1, 2017

NeuroMetrix, Inc.  
1000 Winter Street  
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 an aggregate of 600,000 shares (the "Plan Shares") of the Company's common stock, \$0.0001 par value per share (the "Common Stock") that may be issued pursuant to the Company's Ninth Amended and Restated 2004 Stock Option and Incentive Plan (the "Plan") and 521 shares (the "ESPP Shares" and together with the Plan Shares, the "Shares") of Common Stock that may be issued pursuant to the Company's Third Amended and Restated 2010 Employee Stock Purchase Plan (the "2010 ESPP" and together with the Plan, the "Plans"), 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 a fraction of a share of Series A Junior Participating Cumulative Preferred Stock, par value \$.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 Plans.

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.

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.

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

BOSTON | LONDON | LOS ANGELES | NEW YORK | SAN DIEGO | SAN FRANCISCO | STAMFORD | WASHINGTON

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 Plans, 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 Plans, 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.

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

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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 9, 2017 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, 2016.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts