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

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FORM S-3  
REGISTRATION STATEMENT  
*UNDER*  
*THE SECURITIES ACT OF 1933*

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NEUROMETRIX, INC.  
(Exact name of registrant as specified in its charter)

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Delaware  
(State or other jurisdiction of  
incorporation or organization)

04-3308180  
(I.R.S. Employer  
Identification Number)

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

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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*With a copy to:*  
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**Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective.**

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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 the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer   
 Non-accelerated filer  (Do not check if a smaller reporting company) Smaller reporting company

#### CALCULATION OF REGISTRATION FEE

| Title of each Class of Securities to be Registered  | Amount to be Registered (1) | Proposed Maximum Offering Price Per Share | Proposed Maximum Aggregate Offering Price | Amount of Registration Fee |
|---|-----------------------------|---|---|----------------------------|
| Common Stock, \$0.0001 par value per share  | 3,300,979(3)                | \$ 1.66(4)                                | \$ 5,479,625.14                           | \$ 636.74                  |
| Rights to purchase Series A Junior Participating Cumulative Preferred Stock, \$0.001 par value(2) | (2)                         | (2)                                       | (2)                                       | (2)                        |

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of common stock which become issuable by reason of any stock dividend, stock split or other similar transaction that results in an increase in the number of the outstanding shares of common stock of the Registrant.
- (2) Pursuant to a shareholder rights agreement, dated as of March 7, 2007, between the Company and American Stock Transfer & Trust Company, as amended, each share of common stock has an attached right to purchase our Series A Junior Cumulative Preferred Stock, which rights are not currently exercisable.
- (3) The number of shares of common stock includes 3,300,979 shares of common stock issuable upon exercise of the Company's five year warrants (the "Warrants").
- (4) In accordance with Rule 457(c) under the Securities Act, the aggregate offering price of the common stock is estimated solely for the calculation of the registration fees due for this filing. This estimate was based on the average of the high and low sales price of our stock reported by The NASDAQ Capital Market on October 10, 2014.

**The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.**

**THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. WE MAY NOT SELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES, AND WE ARE NOT SOLICITING OFFERS TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.**

**Subject to Completion, Dated October 15, 2014**

**PROSPECTUS**

## **NEUROMETRIX, INC.**

**3,300,979 Shares of Common Stock**

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This prospectus relates to the resale of up to 3,300,979 shares of our common stock issuable upon exercise of outstanding Warrants.

These shares will be resold from time to time by the entities listed in the section titled “Selling Security holders” beginning on page 18, which we refer to as the selling security holders. The shares of common stock offered under this prospectus by the selling security holders are issuable upon exercise of securities issued pursuant to the Securities Purchase Agreement by and among NeuroMetrix, Inc. and the selling security holders, dated as of June 24, 2014 (the “Purchase Agreement”). We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of securities by the selling security holders.

The selling security holders may sell the shares of common stock described in this prospectus in a number of different ways and at varying prices. We provide more information about how a selling security holder may sell its shares of common stock in the section titled “Plan of Distribution” on page 20. We will pay the expenses incurred in registering the securities covered by the prospectus, including legal and accounting fees.

Our common stock is quoted on The NASDAQ Capital Market, or NASDAQ, under the symbol “NURO.” On October 10, 2014, the last reported sale price of our common stock was \$1.68 per share.

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**Investing in our securities involves risks. See “Risk Factors” beginning on page 6 of this prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.**

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**THE DATE OF THIS PROSPECTUS IS           , 2014.**

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### INFORMATION CONTAINED IN THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference into this prospectus. We have not, and the selling security holders have not, authorized anyone to provide you with additional or different information. These securities are not being offered in any jurisdiction where the offer is not permitted. You should assume that the information in this prospectus is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the documents incorporated by reference, regardless of the time of delivery of this prospectus or of any sale of our common stock. Unless the context otherwise requires, references to “we,” “our,” “us,” or the “Company” in this prospectus mean NeuroMetrix, Inc.

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## PROSPECTUS SUMMARY

*The following is only a summary. We urge you to read the entire prospectus, including the more detailed financial statements, notes to the financial statements and other information included herein or incorporated by reference from our other filings with the U.S. Securities and Exchange Commission (SEC). Investing in our securities involves risks. Therefore, please carefully consider the information provided under the heading "Risk Factors" beginning on page 6.*

### **Our Business and Opportunity**

NeuroMetrix is an innovative health-care company that develops wearable medical technology and point-of-care tests that help patients and physicians manage chronic pain, nerve disease, and sleep disorders. We were founded in 1996 and have been publicly traded on NASDAQ since 2004. Our technology foundation, which was built at Harvard Medical School and the Massachusetts Institute of Technology, has been and continues to be employed in numerous FDA-cleared products that have been used by physicians in over 6 million diagnostic tests of nerve function. We have an intellectual property base that encompasses 62 issued and pending patents and extensive, difficult to replicate know-how in our practice area. We have an experienced management team and Board of Directors, and we are strategically located in the greater Boston area.

One of our primary markets is the management and treatment of the neurological complications of diabetes. People with diabetes do not effectively regulate their blood glucose, or sugar, levels leading to chronically high levels of glucose in the blood, called hyperglycemia, and occasionally bouts of low glucose in the blood, called hypoglycemia. The primary reason that glucose levels are not effectively regulated in people with diabetes is that those with the disease do not produce insulin (Type I diabetes) or are resistant to the normal physiological action of insulin (Type II diabetes). Many Type II diabetics eventually require insulin because production of the hormone by their pancreas decreases with time. Type I diabetes usually affects children and teenagers whereas Type II diabetes has typically been a disease of adults over the age of 50. However, over the past decade, Type II diabetes is occurring in younger adults, which may be attributable to higher levels of obesity in this age group.

Diabetes is a worldwide epidemic. Recent studies estimate the worldwide prevalence of diabetes to be over 350 million people, of which approximately 90% have the Type II variety. Within the United States, there are over 25 million people with diabetes and another 80 million people with pre-diabetes, which represents a constellation of conditions such as obesity and high triglyceride levels that are likely to progress to diabetes. In the United States, the annual cost of treating diabetes is over \$100 billion. Although there are dangerous acute manifestations of diabetes, the primary burden of the disease is in the long-term complications of chronic hyperglycemia. These complications include, among other things, cardiovascular disease, nerve disease and resulting pathological conditions such as foot ulcers and amputation, eye disease leading to blindness, and kidney failure.

The most common long-term complication of diabetes, which affects over 50% of the diabetic population, is nerve disease or diabetic peripheral neuropathy (DPN). DPN is a systemic nerve disease that is worse in the feet and lower legs. It may lead to loss of sensation in the feet, severe pain in the feet and legs, and increased risk of falling. DPN is the primary trigger for diabetic foot ulcers, which may progress to the point where amputation is required. People with diabetes have a 15% to 25% lifetime risk of developing a foot ulcer and approximately 15% of foot ulcers lead to amputation. Foot ulcers are among the most expensive complications of diabetes, with a typical cost of \$5,000 to \$50,000 per episode. In addition, between 16% and 26% of people with diabetes suffer from pain of the feet and lower legs due to painful diabetic neuropathy, or PDN, which is a condition caused by DPN. In addition to causing pain that is often severe, PDN may interfere with sleep and is also associated with anxiety and depression. Loss of sleep is particularly concerning because sleep deprivation is associated with insulin resistance and worse glycemic control, and thereby exacerbates diabetes severity.

Most people with diabetes receive health care attention in primary care settings where physicians have limited access to sophisticated diagnostic tools to detect diabetic neuropathy early and monitor its progress and response to treatment. As a result, these physicians rely primarily on clinical examination of patients which, although it is an important part of the evaluation of a patient with diabetes, has limited sensitivity and specificity and can usually only detect later stage disease where treatment options and efficacy are compromised.

Early detection of DPN is particularly important because there are no treatment options once the nerves have degenerated. At the present time, the most widely used and recommended diagnostic method for DPN is the 5.07/10-g monofilament test. This test assesses the patient's ability to detect focal pressure application in the foot. The inability to detect a monofilament indicates that the patient lacks adequate sensation to protect their feet from mechanical insults that can lead to foot ulcers; a condition known as loss of protection sensation, or LOPS. Although the monofilament is an important clinical test, it is insensitive to early DPN where interventions may slow or even halt further nerve damage. Nerve conduction studies, or NCS, are objective electrical tests of nerve function. They are considered the gold standard diagnostic method for DPN and can detect mild nerve damage before it is expressed as clinical symptoms. NCS have typically been provided by specialists using expensive equipment and therefore access has been limited, particularly for common conditions such as DPN.

Currently, there are limited treatment options for diabetic neuropathies. There are no approved disease-modifying treatments for DPN in the United States, although a few pharmacological candidates are in clinical trials. One such drug is Ranirestat, an aldose reductase inhibitor being developed in the United States by Eisai Co., Ltd., which has recently completed a large scale Phase III clinical trial. If Ranirestat becomes commercially available, it may expand the demand for early detection and monitoring of DPN. In the absence of targeted therapies, several large studies have shown that reducing hyperglycemia lowers the risk of developing DPN and decreases its severity. There is also observational data that suggests that a reduction in triglyceride levels slows the progression of DPN. Outside the United States, an aldose reductase inhibitor, Kinedak, has been approved by regulatory authorities in Japan and is marketed by Ono Pharmaceutical Company, Ltd for treatment of DPN, including symptoms such as numbness, pain and cramps in the hands and feet.

Several drugs, such as duloxetine and pregabalin, have been approved to provide pain relief in patients with PDN. Unfortunately, these drugs, which are also anti-depressants or anti-seizure medications, have systemic effects and are therefore often associated with side effects. In the case of PDN and/or DPN, it is essential to intervene before extensive nerve degeneration has occurred.

## **Our Strategy**

We believe that there are large and important unmet needs in the treatment of diabetic neuropathies and adjacent forms of chronic pain such as fibromyalgia, post herpetic neuropathy (shingles), and conditions involving both chronic pain and disturbed sleep such as restless leg syndrome. As a medical device company with both unique and substantial experience in devices to measure and alter peripheral nerve function, we believe we are in the unique position to address these unmet needs through the development of novel proprietary medical devices. Accordingly, we have a major focus on developing and marketing medical devices for diabetic neuropathies. We believe that we are the only medical device company with a strategic focus on the diabetic neuropathy market and our goal is to be the dominant player in this field.

Our key business strategies for 2014 by which we intend to advance our objectives in the diabetic neuropathy market include:

***Driving Commercial Adoption of Our Proprietary Products for Diabetic Neuropathy in the United States.*** Our two primary products that target the diabetic neuropathy market are the following:

- **SENSUS**, our therapeutic device for treating chronic pain, was launched in early January 2013. During the first half of 2014 we shipped approximately 3,200 SENSUS devices and recorded SENSUS revenues of approximately \$451,000 during the first half of 2014 and \$65,000 during 2013. SENSUS is a convenient and wearable non-invasive device that offers a non-narcotic pain relief option as a complement to medications. The device is lightweight and can be worn during the day while remaining active, or at night while sleeping. We believe SENSUS is the only wearable transcutaneous electrical nerve stimulator designed specifically for people with diabetes that suffer from chronic pain. We market SENSUS to physicians managing patients with PDN, as well as other chronic pain syndromes. We believe that PDN impacts 3 to 5 million people in the United States alone. We estimate the wholesale market for SENSUS is characterized by the 50% of patients with either severe pain or sleep interference due to PDN. This represents an annual revenue potential in excess of \$300 million. We also believe that there are international market opportunities, particularly in Europe and Japan. We are building distribution in several distinct channels: independent durable medical equipment, or DME, suppliers that employ sales representatives who detail physicians, large direct sale customers such as orthotic and prosthetic clinics and chronic pain treatment centers, and national diabetes mail order DMEs. We believe there are future opportunities to expand our SENSUS revenue and gross margin potential with an over-the-counter version of SENSUS.
- **NC-stat DPNCheck**, our point-of-care neuropathy test for peripheral neuropathies such as DPN was launched in late 2011 and achieved revenues of approximately \$638,000 during the first half of 2014 and \$444,000 in 2013. DPNCheck revenue during 2013 was approximately \$1.3 million. Our marketing focus in the United States is Medicare Advantage providers who assume financial responsibility and the associated risks for the health care costs of their patients. In this market, we believe that NC-stat DPNCheck presents an attractive clinical case where early detection of diabetic neuropathy allows earlier clinical intervention to help mitigate the effects of diabetic neuropathy on both patient quality of life and cost of care. Also, the diagnosis and documentation of diabetic neuropathy provided by NC-stat DPNCheck helps clarify the patient health profile which, in turn, may have a direct, positive effect on the Medicare Advantage premium received by the provider. Outside of the United States, we are working with Omron Healthcare Company, Ltd. on regulatory and distribution matters in Japan, and we launched NC-stat DPNCheck in that market during the third quarter of 2014. Other attractive international market opportunities include China where we are also working with Omron Healthcare and the Middle East and Mexico which we are addressing with local distributors.

***Continuing the Productivity of Our Research and Development Pipeline.*** In three years we have established a new presence in diabetic neuropathy with the launch of NC-stat DPNCheck in late 2011 followed by SENSUS in early 2013. The potential market penetration by SENSUS was enhanced later in 2013 with the addition of unique functionality related to its use during nighttime sleep. Half of the patients with PDN report pain interfering with sleep. Sleep impairment is associated with insulin resistance, worsening of glycemic control, and exacerbation of the severity of diabetes. In the first quarter of 2014, we launched a second-generation version of SENSUS with a lower profile and features to enhance patient use. Early in the third quarter of 2014 we reported that we had received regulatory clearance from the FDA for an over-the-counter device for chronic pain based on the SENSUS technology. We believe there is a substantial market opportunity for over-the-counter wearable technology for the treatment of chronic pain and we have a development program well underway.

***Commercializing NC-stat DPNCheck in Select International Markets Using a Distribution Network.*** We are targeting select international markets where we believe that the combination of a high prevalence of diabetes plus support from the local payer system will support sales of NC-stat DPNCheck and, eventually, SENSUS. This includes countries in Asia, the Middle East, Mexico, and potentially Western Europe where we have both CE marking for NC-stat DPNCheck and established distribution. We have partnered with Omron Healthcare Company, Ltd. in Asia and have entered agreements with Omron for both Japan and China to collaborate on the regulatory process followed by exclusive distribution of NC-stat DPNCheck. The Japan partnership is well advanced, as we received regulatory approval in Japan during the second quarter of 2014, and commenced shipment of NC-stat DPNCheck in that market during the third quarter of 2014. Our China initiative is underway and we filed for regulatory approval in the country during the second quarter of 2014. We have entered into agreements with master distributors for the Middle East and Mexico. Our resources committed to this effort are modest; however, we believe that sales in international markets could contribute meaningful revenue in 2014 and subsequent years.

**Leveraging an Efficient Operating Structure with Future Revenue Growth.** Our operating structure is designed to support high-value opportunities for SENSUS and NC-stat DPNCheck that can be pursued via independent distribution. This structure is characterized by low headcount, low fixed operating expenses, the flexibility to add variable spending from time to time when opportunities present themselves, and the ability to handle increased sales volume without the cost of adding sales representatives and field clinical support. Our operating expenses during 2013 totaled \$10.4 million, and in 2014 should be at this approximate level for core operating spending. During 2014 and 2015 we will likely add targeted, variable R&D and marketing spending to advance our over-the-counter technology program for chronic pain. We believe we can maintain and leverage our operating structure over the next several years as we grow our diabetes business.

**Managing Our Legacy Neurodiagnostics Business to Optimize Cash Flow.** Our historical neurodiagnostics business is managed for its cash contribution and not growth. There are few practical alternatives in the current healthcare funding environment. The neurodiagnostics business generated revenues of \$3.8 million and \$6.1 million in 2013 and 2012, respectively, with gross margins in excess of 50% and limited direct operating costs. We expect revenue from the legacy business will continue to decline in the future. See “–Legacy Neurodiagnostics Business.”

## **Our Business Model**

Our diagnostic and therapeutic systems consist of a medical device plus biosensors or electrodes that are integral to their use. Other accessories are also offered to our customers. Our goal for these systems is to build an installed base of active customer accounts and distributors that regularly reorder consumables to meet their needs. We successfully implemented this model when we started our business with the NC-stat system, applied it to subsequent product generations and, more recently, to the ADVANCE NCS/EMG System. Our newer products, including SENSUS and NC-stat DPNCheck, and others in our product pipeline, are based on the device plus consumables business model.

## **Marketed Products**

### SENSUS Pain Management System

The SENSUS pain therapy device is a transcutaneous electrical nerve stimulator, or TENS, designed for relief of chronic, intractable pain, such as PDN. SENSUS is a convenient and wearable non-invasive device that offers physicians and their patients a non-narcotic pain relief option as a complement to medications. It provides on-demand pain relief at the push of a single button and can also be operated in continuous mode where it delivers an hour of pain therapy during alternating hours. The device is lightweight and can be worn during the day while remaining active, or at night while sleeping. We believe it is the only transcutaneous electrical nerve stimulator designed specifically for people with diabetes that suffer from chronic pain. We market SENSUS to physicians managing patients with PDN and other forms of chronic pain such as fibromyalgia, post herpetic neuropathy (shingles), and conditions involving both chronic pain and disturbed sleep such as restless leg syndrome. We have used our unique expertise in peripheral nerve stimulation in the development of SENSUS which incorporates several proprietary features for ease of patient use and physician reporting. SENSUS is comprised of: (1) an electronic device with a strap that is worn on the upper calf and (2) an electrode which attaches to the device. We provide prescribing physicians with PC-based software that links to the device via a USB connection, thereby allowing them to download a record of the patient’s use of the device.

### NC-stat DPNCheck

NC-stat DPNCheck is a fast, accurate, and quantitative nerve conduction test that is used to evaluate systemic neuropathies such as DPN. It is designed to be used by primary care physicians, endocrinologists, podiatrists and other clinicians at the point-of-care to objectively detect, stage, and monitor DPN. The device measures nerve conduction velocity and response amplitude of the sural nerve, a nerve in the lower leg and ankle. These parameters are widely recognized as sensitive and specific biomarkers of DPN. NC-stat DPNCheck is comprised of: (1) an electronic hand-held device and (2) a single patient use biosensor. In addition, we provide users with PC-based software that links to the device via a USB connection. This PC software allows physicians to generate reports and manage their sural nerve conduction data.

### ADVANCE System

The ADVANCE NCS/EMG System, or the ADVANCE System, is a comprehensive platform for the performance of traditional nerve conduction studies and invasive electromyography procedures. The ADVANCE System is comprised of: (1) various types of electrodes and needles, (2) the ADVANCE device and related modules, and (3) a communication hub that enables the physician's office to network their device to their personal computers and our servers for data archiving, report generation, and other network services. The ADVANCE System is most commonly used with proprietary nerve specific electrode arrays. These electrode arrays combine multiple individual electrodes and embedded microelectronic components into a single patient-use disposable unit. We currently market seven different nerve specific electrode arrays. Historically, the ADVANCE System has been marketed to a broad range of physician specialties including neurologists, orthopedic surgeons, primary care physicians, and endocrinologists, and utilized for a variety of different clinical indications including assessment of carpal tunnel syndrome, or CTS, low back and leg pain, and DPN. It is most commonly used in the assessment of CTS. Numerous papers have been published on the use of this technology in this clinical application.

The following chart summarizes our previously marketed products and currently marketed products.

| <b>Product</b>   | <b>Time on Market</b> | <b>Technology</b>                                 | <b>Primary Clinical Indications</b>   | <b>No. Patients Tested/Treated</b> |
|------------------|-----------------------|---|---|------------------------------------|
| NC-stat*         | Q2 1999 – Q3 2010     | Nerve Conduction                                  | Diagnosis and evaluation of CTS, low back pain, peripheral neuropathies (including DPN) | ~ 1,800,000                        |
| ADVANCE          | Q2 2008 – present     | Nerve Conduction<br>Invasive Needle<br>EMG        | Diagnosis and evaluation of CTS, low back pain, peripheral neuropathies (including DPN) |                                    |
| NC-stat DPNCheck | Q3 2011 – present     | Nerve Conduction                                  | Diagnosis and evaluation of peripheral neuropathies, such as DPN                        | ~250,000                           |
| SENSUS           | Q1 2013– present      | Transcutaneous<br>Electrical Nerve<br>Stimulation | Relief for chronic, intractable pain, such as PDN                                       | >4,000                             |

\* Support was discontinued in the first quarter of 2012

### Legacy Neurodiagnostics Business

We were founded in 1996 as a science-based health care company. Our focus had been the development of innovative products for the detection, diagnosis, and monitoring of peripheral nerve and spinal cord disorders, such as those associated with carpal tunnel syndrome, lumbosacral disc disease and spinal stenosis, and diabetes. Our NC-stat System for the performance of nerve conduction studies at the point-of-care was commercially launched in 1999. The second generation NC-stat was released in 2002. In 2008, we brought to market the more sophisticated ADVANCE System for nerve conduction testing and performance of invasive needle electromyography. These systems were general purpose with broad application in evaluating and diagnosing nerve disorders. Numerous studies demonstrating the clinical accuracy and utility of these devices have been conducted and published in high quality peer-reviewed journals. Furthermore, these devices have been used in FDA sanctioned clinical trials for pharmacological agents and large scale epidemiological studies sponsored by the NIH, Center for Disease Control, or CDC, and other governmental agencies. The products have been cleared by the FDA, field tested for over a decade and highly regarded for their ease of use, accuracy and reproducibility of results.

Following launch of NC-stat in 1999, we experienced rapid revenue growth, which led to our initial public offering in 2004. The health market, particularly the physician office segment, embraced the opportunity to perform nerve conduction tests which previously had always required referral to specialists. Point-of-care nerve testing was seen to provide a combination of improved patient care and patient convenience. The success of point-of-care nerve testing, a market which we created, was met with resistance in some sectors of the medical community, particularly by neurologists and physical medicine and rehabilitation physicians, both of which had traditionally provided nerve testing services. As a consequence of successful lobbying by these specialists, physicians using our technology experienced increased denials of coverage by third party payers resulting in their discontinuing usage and our difficulty in accruing new customer accounts. In late 2009, CMS included in the Physician Fee Schedule a new Category I CPT Code, CPT 95905, for nerve conduction studies performed using preconfigured electrodes such as those employed with our products. During 2010 most Medicare fiscal intermediaries assumed coverage for CPT 95905 for at least some clinical indications; however, the health care environment has been such that we have been unable to secure broad coverage among private payers, which is essential to the success of our ADVANCE system product. This experience was reflected in our revenues which peaked in 2006 at \$55.3 million. We reported revenue for our legacy Neurodiagnostics business of \$3.8 million in 2013, \$6.1 million in 2012, and \$10.3 million in 2011.

As we managed our general purpose neurodiagnostic business to improve reimbursement and minimize customer erosion, we increasingly became aware of the unmet medical need for improved diagnostic tools and therapies in the specific area of diabetic neuropathy, or nerve damage caused by diabetes. Diabetes care is one of the faster growing sectors of health care as discussed above. We believe that our tools and therapies for addressing diabetic neuropathy represent a significant market opportunity. Consequently, in 2011 we shifted to diabetes care as our major business focus. We also restructured our neurodiagnostics business to consolidate functions and to eliminate our direct sales force while maintaining support for our neurodiagnostic products and installed base of physician accounts. Our objective for our legacy neurodiagnostics business is to maintain a high standard of product support while managing the business to optimize cash flow.



## Risks Affecting Us

Our business is subject to numerous risks, as discussed more fully in the section entitled “Risk Factors” immediately following this prospectus summary. At June 30, 2014 we had an accumulated deficit of \$150.0 million and held cash and cash equivalents of \$13.7 million. During June 2014 we completed an equity offering which raised gross proceeds totaling \$8.0 million. We believe that these resources and the cash to be generated from expected product sales will be sufficient to meet our projected operating requirements for at least the next twelve months. We continue to face significant challenges and uncertainties and, as a result, our available capital resources may be consumed more rapidly than currently expected. Accordingly, we will need to raise additional funds to support our operating and capital needs beyond the next twelve months. However, we may not be able to secure such financing in a timely manner or on favorable terms, if at all. Without additional funds, we may be forced to delay, scale back or eliminate some of our sales and marketing efforts, research and development activities, or other operations and potentially delay product development in an effort to provide sufficient funds to continue our operations.

## Our Corporate Information

Our President and Chief Executive Officer, Shai N. Gozani, M.D., Ph.D. founded NeuroMetrix in June 1996. We are incorporated in Delaware. Our common stock is listed on the NASDAQ Capital Market under the ticker symbol “NURO.” Our principal offices are located at 62 Fourth Avenue, Waltham, Massachusetts 02451 and our telephone number is (781) 890-9989. Our web site is [www.neurometrix.com](http://www.neurometrix.com). We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this document. Our web site address is included in this document as an inactive textual reference only. The NeuroMetrix name and logo and the names of products and services offered by NeuroMetrix are trademarks, registered trademarks, service marks or registered service marks of NeuroMetrix.

## Offering of Preferred Shares and Warrants

On June 26, 2014, we completed an offering of securities resulting in approximately \$8.0 million in gross proceeds, before deducting offering expenses, in connection with the issuance of (i) 664,600 shares of common stock at a price of \$2.04 per share, (ii) 2,621,859 shares of Series A-3 convertible preferred stock (the “Series A-3 Preferred Stock”) at a price of \$1,000 per share, (iii) 4,022,357 shares of Series A-4 Convertible Preferred Stock (the “Series A-4 Preferred Stock,” and together with the Series A-3 Preferred Stock, the “Preferred Stock”) at a price of \$1,000 per share, and (iv) five year warrants (the “Warrants”) to purchase up to 3,921,569 shares of common stock at an exercise price of \$2.04 per share. As of July 8, 2014, all of the Series A-3 Preferred Stock had been converted into shares of common stock.

Each share of Preferred Stock has a stated value of \$1,000 and is convertible, at any time at the option of the holder thereof, into a number of shares of common stock determined by dividing the stated value by the initial conversion price of \$2.04, subject to the 9.99% ownership limitation described below. The Preferred Stock has no dividend rights, liquidation preference or other preferences over common stock and has no voting rights except as provided in the Certificates of Designation of Preferences, Rights and Limitations for the Convertible Preferred Stock, as filed with the Secretary of State of the State of Delaware, or as otherwise required by law.

The Warrants to purchase 3,921,569 shares of common stock are exercisable immediately after issuance, have a five-year term, and a per share exercise price of \$2.04. Shares of common stock underlying 3,300,979 of these Warrants are being registered for resale by the selling security holders pursuant to the Registration Statement of which this prospectus forms a part.

The Preferred Stock and the Warrants contain limitations that prevent the holder of any Preferred Stock or Warrants from acquiring shares upon conversion of the Preferred Stock, or exercise of a Warrant, that would result in the number of shares beneficially owned by it and its affiliates exceeding 9.99% of the total number of shares of our common stock then issued and outstanding. In addition, upon certain changes in control of NeuroMetrix, the holder of shares of Preferred Stock or Warrants can elect to receive, subject to certain limitations and assumptions, securities in a successor entity equal to the value of the Preferred Stock or Warrants or if holders of common stock are given a choice of cash or property, then cash or property equal to the value of the outstanding Preferred Stock or Warrants.

The shares of common stock and Series A-3 Preferred Stock described above were offered pursuant to a shelf registration statement (File No. 333-186855), which was declared effective by the SEC on March 15, 2013.

The shares of Series A-4 Preferred Stock and Warrants described above were issued pursuant to the exemption from the registration requirements of the Securities Act provided by Section 4(2) of the Act. The shares of common stock issuable upon conversion of the Series A-4 Preferred Stock and 620,590 shares of common stock issuable upon exercise of the Warrants have been registered pursuant to a resale registration statement (File No. 333-197405), which was declared effective by the SEC on August 6, 2014. This Registration Statement registers the resale of the remaining 3,300,979 shares of common stock issuable upon exercise of the Warrants.

## RISK FACTORS

*Investing in our securities involves a high degree of risk. You should carefully review and consider the following risk factors and in the section entitled “Risk Factors” contained in our most recent annual report on Form 10-K, which has been filed with the SEC and is incorporated by reference in this prospectus, as well as any updates thereto contained in subsequent filings with the SEC or in any free writing prospectus and all other information contained in this prospectus and incorporated by reference into the prospectus before purchasing our securities. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties that we are unaware of, or that we currently deem immaterial, also may become important factors that affect us. If any of the following risks occur, our business, financial condition or results of operations could be materially and adversely affected. In that case, the trading price of our common stock could decline, and you may lose some or all of your investment.*

### Risks Related to Our Business

#### **We have incurred significant operating losses since inception and cannot assure you that we will again achieve profitability.**

We have incurred significant cumulative net losses since our inception. Our net losses for the six month period ended June 30, 2014 and for the years ended December 31, 2013, 2012, and 2011 were approximately \$3.4 million, \$8.0 million, \$10.0 million, and \$10.0 million, respectively. At June 30, 2014, we had an accumulated deficit of approximately \$150 million. The extent of our future operating income or losses is highly uncertain, and we cannot assure you that we will be able to achieve or maintain profitability.

#### **We will be required to raise additional funds to finance our operations and remain a going concern beyond the next twelve months; we may not be able to do so when necessary, and/or the terms of any financings may not be advantageous to us.**

We held cash and cash equivalents of \$13.7 million as of June 30, 2014. During June 2014 we completed an equity offering which raised gross proceeds totaling \$8.0 million. We believe that these resources and the cash to be generated from expected product sales will be sufficient to meet our projected operating requirements for at least the next twelve months. We continue to face significant challenges and uncertainties and, as a result, our available capital resources may be consumed more rapidly than currently expected due to (a) decreases in sales of our products and the uncertainty of future revenues from new products; (b) changes we may make to the business that affect ongoing operating expenses; (c) changes we may make in our business strategy; (d) regulatory developments affecting our existing products and delays in the FDA approval process for products under development; (e) changes in our research and development spending plans; and (f) other items affecting our forecasted level of expenditures and use of cash resources. Accordingly, we will need to raise additional funds to support our operating and capital needs beyond the next twelve months. We may attempt to obtain additional funding through public or private financing, collaborative arrangements with strategic partners, or through additional credit lines or other debt financing sources to increase the funds available to fund operations. However, we may not be able to secure such financing in a timely manner or on favorable terms, if at all. Furthermore, if we issue equity or debt securities to raise additional funds, our existing stockholders may experience dilution, and the new equity or debt securities may have rights, preferences and privileges senior to those of our existing stockholders. If we raise additional funds through collaboration, licensing or other similar arrangements, it may be necessary to relinquish valuable rights to our potential products or proprietary technologies, or grant licenses on terms that are not favorable to us. Without additional funds, we may be forced to delay, scale back or eliminate some of our sales and marketing efforts, research and development activities, or other operations and potentially delay product development in an effort to provide sufficient funds to continue our operations. If any of these events occurs, our ability to achieve our development and commercialization goals would be adversely affected.

#### **Our major focus is on the treatment of the neurological complications of diabetes. We cannot assure you that we will be successful in this field or that our current commercial products for diabetes care, NC-stat DPNCheck and SENSUS, or the product candidates in our development pipeline, will be successful.**

We are focused on the treatment of the neurological complications of diabetes. Our initial diabetes care product, NC-stat DPNCheck, which was launched in late 2011, is a fast, accurate, and quantitative nerve conduction test for systemic neuropathies, such as DPN. In January 2013, we launched SENSUS, our pain management therapeutic device for relief of chronic, intractable pain including pain associated with diabetic neuropathy. We also have other product candidates addressing diabetes care in our development pipeline. Our future prospects are closely tied to our success with our NC-stat DPNCheck and SENSUS devices which, in turn, depends upon market acceptance and growth in future revenues. We cannot assure you that our diabetes care strategy, including the sales and marketing of our current products and the commercialization of other product candidates in our development pipeline, will be successful. If our diabetes care strategy is not successful, it could materially affect our revenues and results of operations.

Our future success could be adversely affected by a number of factors, including:

- inability to secure broad, national distribution for SENSUS among DME suppliers;
- inability to increase adoption of NC-stat DPNCheck within the Medicare Advantage market;
- decreased rates of patient visits to physicians;

- unfavorable changes to current Medicare and commercial payer payment policies;
- implementation of the Patient Protection and Affordable Care Act and consequent changes to payor policies;
- unfavorable experiences by patients and physicians using SENSUS and our other commercially available products; and
- physicians' reluctance to alter their existing practices and adopt the use of our devices.

If we are unable to expand exposure and penetrate the market for NC-stat DPNCheck and SENSUS, our ability to increase our revenues will be limited and our business prospects will be adversely affected.

**We currently rely on sales of the products that comprise the ADVANCE System to generate a substantial portion of our revenues. Any factors that negatively impact our sales of these products could significantly reduce our ability to generate revenues.**

We launched the ADVANCE System, our sophisticated nerve conduction testing system, in June 2008. For the six months ended June 30, 2014 and years ended December 31, 2013 and 2012, 59%, 72% and 81%, respectively, of our total revenue was attributed to the ADVANCE System. For the quarter ended June 30, 2014, \$728,000 of our \$1.3 million in total revenue was attributed to the ADVANCE System. We continue to derive a substantial portion of our revenues from sales of the products that comprise this system, particularly from electrodes. We expect that sales of ADVANCE System products will constitute about half of our sales during 2014. Accordingly, our ability to generate revenues in the short-term is dependent on our ability to market and sell the products that comprise the ADVANCE System, particularly electrodes. Our sales of these products may be negatively impacted by many factors, including:

- changes in reimbursement rates or policies relating to our products by third-party payers;
- manufacturing problems;
- claims that our products infringe on patent rights or other intellectual property rights owned by other parties;
- adverse regulatory or legal actions relating to our products; and
- clinical trial results relating to our products or our competitors' products.

If any of these events occurs, our ability to generate revenues from the ADVANCE System could be significantly reduced.

**If health care providers are unable to obtain sufficient reimbursement or adjustment to capitated premium payments from third-party health care payers related to the use of our products, the adoption of our products and our future product sales will be materially adversely affected.**

Widespread adoption of our products by the medical community is unlikely to occur without a financial incentive from third-party payers for the use of these products. If health care providers are unable to obtain adequate reimbursement for procedures performed using our products, if managed care organizations do not receive improved capitated payments due to more accurate patient risk assessment using our products, and if DME suppliers are not adequately reimbursed for supplying our therapeutic products, we may be unable to sell our products at levels that are sufficient to allow us to achieve and maintain profitability, and our business would suffer significantly. Additionally, even if these products and procedures are adequately reimbursed by third-party payers today, adverse changes in payers future policies toward payment would harm our ability to market and sell our products. Third-party payers include those governmental programs such as Medicare and Medicaid, private health insurers, workers' compensation programs and other organizations.

Future regulatory action by CMS or other governmental agencies or negative clinical results may diminish reimbursement payments to physicians for performing procedures using our products. Medicaid reimbursement differs from state to state, and some state Medicaid programs may not cover the procedures performed with our products or pay physicians an adequate amount for performing those procedures, if at all. Additionally, some private payers do not follow the Medicare guidelines and may reimburse for only a portion of these procedures or not at all. We are unable to predict what changes will be made in the reimbursement methods used by private or governmental third-party payers. Importantly, we cannot predict the effects that implementation of the Patient Protection and Affordable Care Act will have on CMS, commercial insurers, health care providers, and ultimately on our business.

**Healthcare reform legislation could adversely affect our future revenues.**

Our future revenues will be impacted by the CMS Durable Medical Equipment, Prosthetics, Orthotics and Supplies (DMEPOS) Competitive Bidding Program. Under this program, Medicare will no longer reimburse suppliers for certain products and services, including transcutaneous electrical nerve stimulation (TENS), based on the Medicare fee schedule amount. Instead CMS will provide reimbursement for those products and services based on a competitive bidding process. Our SENSUS pain management system is presently classified within TENS. The DMEPOS Competitive Bidding Program will likely require us to sell SENSUS devices and related consumables subject to Medicare reimbursement at significantly lower prices which would have a material adverse effect on SENSUS profitability. In those regions of the country where DMEPOS Competitive Bidding was implemented in January 2014, low Medicare pricing is restricting our ability to sell SENSUS. As the DMEPOS program is expanded to other regions, a similar effect will likely be seen. The unique product features of SENSUS may provide an opportunity, which we intend to pursue, to segregate SENSUS from the generic TENS category. If successful, this could lessen the negative impact of DMEPOS competitive bidding on SENSUS Medicare reimbursement.

**We are subject to extensive regulation by the FDA which could restrict the sales and marketing of the NC-stat DPNCheck and SENSUS devices and the ADVANCE System as well as other products for which we may seek FDA clearance or approval, and could cause us to incur significant costs.**

We sell medical devices that are subject to extensive regulation in the United States by the FDA with regard to manufacturing, labeling, sale, promotion, distribution, shipping and ongoing monitoring and follow-up. Before a new medical device, or a new use of or claim for an existing product, can be marketed in the United States, it must first be cleared or approved by the FDA. Medical devices may be marketed only for the indications for which they are approved or cleared. The regulatory review process can be expensive and lengthy. The FDA's process for granting 510(k) clearance typically takes approximately three to six months, but it can be significantly longer. The process for obtaining a pre-market approval, or PMA, is much more costly and onerous. By law, the time period designated for the FDA's review of a PMA is 180 days; however, this time is often extended and it is not uncommon for the PMA review process to take three years or longer from the time the application is filed with the FDA.

The FDA may remove our devices from the market or enjoin them from commercial distribution if safety or effectiveness problems develop. Further, we may not be able to obtain additional 510(k) clearances or pre-market approvals for new products or for modifications to, or additional indications for, our existing products in a timely fashion, or at all. Delays in obtaining future clearances or approvals would adversely affect our ability to introduce new or enhanced products in a timely manner, which in turn would harm our revenue and future profitability. We have made modifications to our devices in the past and may make additional modifications in the future that we believe do not or will not require additional clearances or approvals. If the FDA disagrees, and requires new clearances or approvals for the modifications, we may be required to recall and to stop marketing the modified devices. If any of these events occurs or if the FDA takes other enforcement actions, we may not be able to provide our customers with the products they require on a timely basis, our reputation could be harmed, and we could lose customers and suffer reduced revenues and increased costs.

We also are subject to numerous post-marketing regulatory requirements, including the FDA's quality system regulations, which relate to the design, manufacture, packaging, labeling, storage, installation and servicing of our products, labeling regulations, medical device reporting regulations and correction and removal reporting regulations. Our failure or the failure by any manufacturer of our products to comply with applicable regulatory requirements could result in enforcement action by the FDA. FDA enforcement actions relating to post-marketing regulatory requirements or other issues, including any issues arising from the not substantially equivalent letter described above, may include any of the following:

- warning letters, untitled letters, fines, injunctions, product seizures, consent decrees and civil penalties;
- requiring repair, replacement, refunds, customer notifications or recall of our products;
- imposing operating restrictions, suspension or shutdown of production;
- refusing our requests for 510(k) clearance or PMA approval of new products, new intended uses, or modifications to existing products;
- requesting voluntary rescission of 510(k) clearances or withdrawing PMA approvals that have already been granted; and
- criminal prosecution.

If any of these events were to occur, they could harm our reputation, our ability to generate revenues and our profitability.

Also, from time to time, legislation is introduced into Congress that could significantly change the statutory provisions governing the approval, manufacturing and marketing of medical devices. FDA regulations and guidance are often revised or reinterpreted by the agency in ways that may significantly affect our business and our products. It is impossible to predict whether legislative changes will be enacted, or FDA regulations, guidance or interpretations changed, and what the impact of such changes, if any, may be. The FDA has publicly stated that it is reevaluating its longstanding 510(k) review program. It is not clear when the program will be modified and what effect the modified review process will have on our ability to bring our product candidates to market.

**We depend on several single source manufacturers to produce our products. Any material adverse changes in our relationships with these manufacturers could prevent us from delivering products to our customers in a timely manner and may adversely impact our future revenues or costs.**

We rely on third-party manufacturers to manufacture components of our NC-stat DPNCheck and SENSUS systems, and to fully manufacture the ADVANCE system. In the event that our manufacturers cease to manufacture sufficient quantities of our products or components in a timely manner and on terms acceptable to us, we would be forced to locate alternate manufacturers. Additionally, if our manufacturers experience a failure in their production process, are unable to obtain sufficient quantities of the components necessary to manufacture our products or otherwise fail to meet our quality requirements, we may be forced to delay the manufacture and sale of our products or locate an alternative manufacturer. We may be unable to locate suitable alternative manufacturers for our products or components for which the manufacturing process is relatively specialized, on terms acceptable to us, or at all. We have a manufacturing and supply agreement with Parlex Polymer Flexible Circuits, Inc. for the manufacture of the biosensors for nerve conduction testing for our domestic market. Katecho, Inc. manufactures biosensors for use with our NC-stat DPNCheck devices and manufactures electrodes for SENSUS, and Sunburst EMS, Inc. manufactures electronic boards and other components of our NC-stat DPNCheck and SENSUS products, which we assemble at our corporate headquarters facility to produce completed devices. Sunburst EMS, Inc. also manufactures our ADVANCE System monitors, docking stations, and communication hubs.

We have experienced transient inventory shortages on new products during the initial production ramp-up phase. If any materially adverse changes in our relationships with these manufacturers occur, our ability to supply our customers will be severely limited until we are able to engage an alternate manufacturer or, if applicable, resolve any quality issues with our existing manufacturer. This situation could prevent us from delivering products to our customers in a timely manner, lead to decreased sales or increased costs, or harm our reputation with our customers.

**If our manufacturers are unable to supply us with an adequate supply of products as we expand our markets, we could lose customers, our potential future growth could be limited and our business could be harmed.**

In order for us to successfully expand our business within the United States and internationally, our contract manufacturers must be able to provide us with substantial quantities of our products in compliance with regulatory requirements, in accordance with agreed upon specifications, at acceptable cost and on a timely basis. Our potential future growth could strain the ability of our manufacturers to deliver products and obtain materials and components in sufficient quantities. Manufacturers often experience difficulties in scaling up production, including problems with production yields and quality control and assurance. If we are unable to obtain sufficient quantities of high quality products to meet customer demand on a timely basis, we could lose customers, our growth may be limited and our business could be harmed.

**If we or the manufacturers of our products fail to comply with the FDA's quality system regulation, the manufacturing and distribution of our products could be interrupted, and our product sales and operating results could suffer.**

We and our contract manufacturers are required to comply with the FDA's quality system regulation, or QSR, which is a complex regulation that governs the procedures and documentation of the design, testing, production, control, quality assurance, labeling, packaging, sterilization, storage and shipping of our devices. The FDA enforces the QSR through periodic inspections. We cannot assure you that our facilities or the facilities of the manufacturers of our products would pass any future inspection. If our facilities or any of the facilities of the manufacturers of our products fail an inspection, the manufacturing or distribution of our products could be interrupted and our operations disrupted. Failure to take adequate and timely corrective action in response to an adverse inspection could result in a suspension or shutdown of our packaging and labeling operations and the operations of the manufacturers of our products or a recall of our products, or other administrative or judicial sanctions. If any of these events occurs, we may not be able to provide our customers with the quantity of products they require on a timely basis, our reputation could be harmed, and we could lose customers and suffer reduced revenues and increased costs.

**Our products may be subject to recalls, even after receiving FDA clearance or approval, which would harm our reputation, business and financial results.**

We are subject to the medical device reporting regulations, which require us to report to the FDA if our products may have caused or contributed to a death or serious injury, or have malfunctioned in a way that would likely cause or contribute to a death or serious injury if the malfunction were to occur. We are also subject to the correction and removal reporting regulations, which require us to report to the FDA any field corrections and device recalls or removals that we undertake to reduce a risk to health posed by the device or to remedy a violation of the Federal Food, Drug and Cosmetic Act, or FDCA, caused by the device which may present a risk to health. In addition, the FDA and similar governmental agencies in other countries have the authority to require the recall of our products if there is a reasonable probability that the products would cause serious adverse health consequences or death. A government-mandated or voluntary recall by us could occur as a result of manufacturing defects, labeling deficiencies, packaging defects or other failures to comply with applicable regulations. Any recall would divert management attention and financial resources and harm our reputation with customers and could have a material adverse effect on our financial condition and results of operations.

**The success of our business depends upon our ability to advance our pipeline products to commercialization.**

In 2011 we shifted our strategy to focus on diabetes care, specifically unmet medical needs related to DPN which is the most common complication of diabetes. Since then, we have advanced SENSUS and NC-stat DPNCheck through our product development pipeline to the market and we plan to introduce improvements to SENSUS in future periods. We expect that advancing our pipeline products will require significant time and resources. We may not be successful in our commercialization efforts for any of the product candidates currently in our pipeline and we may not be successful in developing, acquiring, or in-licensing additional product candidates, to the extent we decide to do so. If we are not successful advancing new products through our development pipeline, the regulatory process and commercial launch, our business, financial condition, and results of operations will be adversely affected.

**The patent rights we rely upon to protect the intellectual property underlying our products may not be adequate, which could enable third parties to use our technology and would harm our ability to compete in the market.**

Our success will depend in part on our ability to develop or acquire commercially valuable patent rights and to protect these rights adequately. The risks and uncertainties that we face with respect to our patents and other related rights include the following:

- the pending patent applications we have filed or to which we have exclusive rights may not result in issued patents or may take longer than we expect to result in issued patents;
- the claims of any patents that are issued may not provide meaningful protection;
- we may not be able to develop additional proprietary technologies that are patentable;
- other parties may challenge patents, patent claims or patent applications licensed or issued to us; and
- other companies may design around technologies we have patented, licensed or developed.

We also may not be able to protect our patent rights effectively in some foreign countries. For a variety of reasons, we may decide not to file for patent protection in the United States or in particular foreign countries. Our patent rights underlying our products may not be adequate, and our competitors or customers may design around our proprietary technologies or independently develop similar or alternative technologies or products that are equal or superior to our technology and products without infringing on any of our patent rights. In addition, the patents licensed or issued to us may not provide a competitive advantage. If any of these events were to occur, our ability to compete in the market would be harmed.

**Other rights and measures we have taken to protect our intellectual property may not be adequate, which would harm our ability to compete in the market.**

In addition to patents, we rely on a combination of trade secrets, copyright and trademark laws, confidentiality, nondisclosure and assignment of invention agreements and other contractual provisions and technical measures to protect our intellectual property rights. We rely on trade secrets to protect the technology and algorithms we use in our customer data processing and warehousing information system. While we currently require employees, consultants and other third parties to enter into confidentiality, non-disclosure or assignment of invention agreements or a combination thereof where appropriate, any of the following could still occur:

- the agreements may be breached or not enforced in a particular jurisdiction;
- we may have inadequate remedies for any breach;
- trade secrets and other proprietary information could be disclosed to our competitors; or
- others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose such technologies.

If, for any of the above reasons, our intellectual property is disclosed or misappropriated, it would harm our ability to protect our rights and our competitive position.

**We may need to initiate lawsuits to protect or enforce our patents and other intellectual property rights, which could be expensive and, if we lose, could cause us to lose some of our intellectual property rights, which would harm our ability to compete in the market.**

We rely on patents to protect a portion of our intellectual property and our competitive position. Patent law relating to the scope of claims in the technology fields in which we operate is still evolving and, consequently, patent positions in the medical device industry are generally uncertain. In order to protect or enforce our patent rights, we may initiate patent litigation against third parties, such as infringement suits or interference proceedings. Litigation may be necessary to:

- assert claims of infringement;
- enforce our patents;
- protect our trade secrets or know-how; or

determine the enforceability, scope and validity of the proprietary rights of others.

Any lawsuits that we initiate could be expensive, take significant time and divert management's attention from other business concerns. Litigation also puts our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing. Additionally, we may provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially valuable. The occurrence of any of these events could harm our business, our ability to compete in the market or our reputation.

**Claims that our products infringe on the proprietary rights of others could adversely affect our ability to sell our products and increase our costs.**

Substantial litigation over intellectual property rights exists in the medical device industry. We expect that our products could be increasingly subject to third-party infringement claims as the number of competitors grows and the functionality of products and technology in different industry segments overlap. Third parties may currently have, or may eventually be issued, patents on which our products or technologies may infringe. Any of these third parties might make a claim of infringement against us. Any litigation regardless of its impact would likely result in the expenditure of significant financial resources and the diversion of management's time and resources. In addition, litigation in which we are accused of infringement may cause negative publicity, adversely impact prospective customers, cause product shipment delays or require us to develop non-infringing technology, make substantial payments to third parties, or enter into royalty or license agreements, which may not be available on acceptable terms, or at all. If a successful claim of infringement were made against us and we could not develop non-infringing technology or license the infringed or similar technology on a timely and cost-effective basis, our revenues may decrease substantially and we could be exposed to significant liability.

**We are subject to federal and state laws prohibiting "kickbacks" and false or fraudulent claims, which, if violated, could subject us to substantial penalties. Additionally, any challenge to or investigation into our practices under these laws could cause adverse publicity and be costly to respond to, and thus could harm our business.**

A federal law commonly known as the federal anti-kickback law, and several similar state laws, prohibit the payment of any remuneration that is intended to induce physicians or others either to refer patients or to acquire or arrange for or recommend the acquisition of health care products or services. These laws constrain a medical device company's sales, marketing and other promotional activities by limiting the kinds of business relationships and financial arrangements, including sales programs we may have with hospitals, physicians or other potential purchasers of medical devices. Other federal and state laws generally prohibit individuals or entities from knowingly presenting, or causing to be presented, claims for payment to Medicare, Medicaid or other third-party payers that are false or fraudulent, or for items or services that were not provided as claimed. From time to time, we may provide coding and billing information as product support to purchasers of our products. Anti-kickback and false claims laws prescribe civil and criminal penalties for noncompliance, which can be quite substantial including exclusion from participation in federal health care programs. A number of states have enacted laws that require pharmaceutical and medical device companies to monitor and report payments, gifts and other remuneration made to physicians and other health care professionals and health care organizations. Some state statutes, such as the one in Massachusetts, impose an outright ban on gifts to physicians. These laws are often referred to as "gift ban" or "aggregate spend" laws and carry substantial fines if they are violated. Similar legislation, known as the Physician Payments Sunshine Act, has been introduced in Congress each year for the past several years but has not yet been enacted. In the event that we are found to have violated these laws or determine to settle a claim that we have done so, our business may be materially adversely affected as a result of any payments required to be made, restrictions on our future operations or actions required to be taken, damage to our business reputation or adverse publicity in connection with such a finding or settlement or other adverse effects relating thereto. Additionally, even an unsuccessful challenge or investigation into our practices could cause adverse publicity, and be costly to respond to, and thus could harm our business and results of operations.

**If we are found to have violated laws protecting the confidentiality of patient health information, we could be subject to civil or criminal penalties, which could increase our liabilities, damage our reputation and harm our business.**

There are a number of federal and state laws protecting the confidentiality of individually identifiable patient health information, including patient records, and restricting the use and disclosure of that protected information. In particular, the U.S. Department of Health and Human Services promulgated patient privacy rules under the Health Insurance Portability and Accountability Act of 1996, or HIPAA. These privacy rules protect medical records and other personal health information by limiting their use and disclosure, giving individuals the right to access, amend and seek accounting of their own health information and limiting most use and disclosures of health information to the minimum amount reasonably necessary to accomplish the intended purpose. Although we do not believe that we are subject to the HIPAA rules, the exact scope of these rules has not been clearly established. If we are found to be in violation of the privacy rules under HIPAA, we could be subject to civil or criminal penalties, which could increase our liabilities and harm our reputation or our business.

**The use of our products could result in product liability claims that could be expensive, damage our reputation and harm our business.**

Our business exposes us to an inherent risk of potential product liability claims related to the manufacturing, marketing and sale of medical devices. The medical device industry historically has been litigious, and we face financial exposure to product liability claims if the use of our products were to cause or contribute to injury or death. Our NC-stat and ADVANCE systems, NC-stat DPNCheck, and SENSUS products may be susceptible to claims of injury because their use involves the electric stimulation of a patient's nerves. Although we maintain product liability insurance for our products and other commercial insurance, the coverage limits of these policies may not be adequate to cover future claims. As sales and use of our products increase, we may be unable to maintain sufficient product liability or other commercial insurance on acceptable terms or at reasonable costs, and this insurance may not provide us with adequate coverage against potential liabilities. A successful claim brought against us in excess of, or outside of, our insurance coverage could have a material adverse effect on our financial condition and results of operations. A product liability claim, regardless of its merit or eventual outcome, could result in substantial costs to us, a substantial diversion of management attention and adverse publicity. A product liability claim could also harm our reputation and result in a decline in revenues and an increase in expenses.

**Our products are complex in design, and defects may not be discovered prior to shipment to customers, which could result in warranty obligations or product liability or other claims, reducing our revenues and increasing our costs and liabilities.**

We depend upon third parties for the manufacture of our products or components. Our products, particularly our electrodes, require a significant degree of technical expertise to produce. If these manufacturers fail to produce our products to specification, or if the manufacturers use defective materials or workmanship in the manufacturing process, the reliability and performance of our products will be compromised.

If our products contain defects that cannot be repaired quickly, easily and inexpensively, we may experience:

- loss of customer orders and delay in order fulfillment;
- damage to our brand reputation;
- increased cost of our warranty program due to product repair or replacement;
- inability to attract new customers;
- diversion of resources from our manufacturing and research and development departments into our service department; and
- legal action.

The occurrence of any one or more of the foregoing could harm our reputation and materially reduce our revenues and increase our costs and liabilities.

**If we lose any of our officers or key employees, our management and technical expertise could be weakened significantly.**

Our success largely depends on the skills, experience, and efforts of our officers, including Shai N. Gozani, M.D., Ph.D., our founder, Chairman, President and Chief Executive Officer; and Thomas T. Higgins, our Senior Vice President and Chief Financial Officer. We do not maintain key person life insurance policies covering any of our employees. The loss of any of our officers could weaken our management and technical expertise significantly and harm our business.

**If we are unable to recruit, hire and retain skilled and experienced personnel, our ability to manage and expand our business will be harmed, which would impair our future revenues and profitability.**

We are a small company with 29 employees as of June 30, 2014, and our ability to retain our skilled labor force and our success in attracting and hiring new skilled employees will be a critical factor in determining our future performance. We may not be able to meet our future hiring needs or retain existing personnel, particularly given the challenges our business has recently faced. We will face challenges and risks in hiring, training, managing and retaining engineering and sales and marketing employees. Failure to attract and retain personnel, particularly technical and sales and marketing personnel would materially harm our ability to compete effectively and grow our business.

**Failure to develop or enter into relationships to sell products other than our existing products or enhance our existing products could have an adverse effect on our business prospects.**

Our future business and financial success will depend, in part, on our ability to effectively market our new products, such as SENSUS and NC-stat DPNCheck, and enhance these products in response to customer demand. Developing new products and upgrades to existing and future products imposes burdens on our research and development department and our management. This process is costly, and we cannot assure you that we will be able to successfully develop new products or enhance our current products. We also may not be able to enter into relationships with other companies to sell additional products. In addition, as we develop the market for our products, future competitors may develop desirable product features earlier than we do which could make our competitors' products less expensive or more effective than our products and could render our products obsolete or unmarketable. If our product development efforts are unsuccessful, we will have incurred significant costs without recognizing the expected benefits and our business prospects may suffer.

**We currently compete, and may in the future need to compete, against other medical device companies with greater resources, more established distribution channels and other competitive advantages, and the success of these competitors may harm our ability to generate revenues.**



We currently do, and in the future may need to, compete directly and indirectly with a number of other companies that may have competitive advantages over us. We compete with companies that sell traditional nerve conduction study and electromyography equipment including Cadwell Laboratories, Inc. and Natus Medical Incorporated. These companies enjoy significant competitive advantages, including:

- greater resources for product development, sales and marketing;
- more established distribution networks;
- greater name recognition;
- more established relationships with health care professionals, customers and third-party payers; and
- additional lines of products and the ability to offer rebates or bundle products to offer discounts or incentives.

As we develop the market for diagnosis and treatment of diabetic neuropathy, we may be faced with competition from these companies or others that decide and are able to enter this market. Some or all of our future competitors in the diabetes care market may enjoy competitive advantages such as those described above. If we are unable to compete effectively against existing and future competitors, our sales will decline and our business will be harmed.

**Security breaches and other disruptions could compromise our information and expose us to liability, which could cause our business and reputation to suffer.**

In the ordinary course of our business, we collect and store sensitive data in our data centers, on our networks, including intellectual property, our proprietary business information, and that of our customers, suppliers and business partners, and personally identifiable information of our employees. The secure processing, maintenance and transmission of this information is critical to our operations. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, disrupt our operations, damage our reputation, and cause a loss of confidence in our products and services, which could have a material adverse effect on our business, financial condition, results of operations or cash flows.

**If future clinical studies or other articles are published, or physician associations or other organizations announce positions that are unfavorable to our products, our sales efforts and revenues may be negatively affected.**

Future clinical studies or other articles regarding our existing products or any competing products may be published that either support a claim, or are perceived to support a claim, that a competitor's product is more accurate or effective than our products or that our products are not as accurate or effective as we claim or previous clinical studies have concluded. Additionally, physician associations or other organizations that may be viewed as authoritative or have an economic interest in nerve conduction studies and in related electrodiagnostic procedures or other procedures that may be performed using our products could endorse products or methods that compete with our products or otherwise announce positions that are unfavorable to our products. We have experienced this with the professional societies representing the neurology community. Any of these events may negatively affect our sales efforts and result in decreased revenues.

**As we expand into foreign markets, we will be affected by new business risks that may adversely impact our financial condition or results of operations.**

Foreign markets represented approximately 12% for the six months ended June 30, 2014 compared to 16% of our revenues in 2013 and 7% of our revenues in 2012. We are working to expand market penetration, particularly in Europe and Asia. Any such expansion will subject us to the possibility of new business risks, including:

- failure to fulfill foreign regulatory requirements, if applicable, to market our products;
- availability of, and changes in, reimbursement within prevailing foreign health care payment systems;
- adapting to the differing business practices and laws in foreign countries;
- difficulties in managing foreign relationships and operations, including any relationships that we establish with foreign distributors or sales or marketing agents;
- limited protection for intellectual property rights in some countries;
- difficulty in collecting accounts receivable and longer collection periods;
- costs of enforcing contractual obligations in foreign jurisdictions;

- recessions in economies outside of the United States;
- political instability and unexpected changes in diplomatic and trade relationships;
- currency exchange rate fluctuations; and
- potentially adverse tax consequences.

If we are successful in introducing our products into foreign markets, we will be affected by these additional business risks, which may adversely impact our financial condition or results of operations. In addition, expansion into foreign markets imposes additional burdens on our executive and administrative personnel, research and sales departments, and general managerial resources. Our efforts to introduce our products into foreign markets may not be successful, in which case we may have expended significant resources without realizing the expected benefit.

**Our loan and security agreement with a bank, which we refer to as our credit facility, contains financial and operating restrictions that may limit our access to credit. If we fail to comply with covenants in the credit facility, we may be required to repay any indebtedness thereunder, which may have an adverse effect on our liquidity.**

Although we have not borrowed any funds under the credit facility, provisions in the credit facility impose restrictions on our ability to, among other things:

- incur additional indebtedness;
- create liens;
- replace certain of our executive officers;
- enter into transactions with affiliates;
- transfer assets;
- pay dividends or make distributions on, or repurchase, our capital stock; and
- merge or consolidate.

In addition, we are required to meet certain financial covenants customary with this type of credit facility, including maintaining a minimum specified tangible net worth. The credit facility also contains other customary covenants, which we may not be able to comply with in the future. Our failure to comply with these covenants may result in the declaration of an event of default and could cause us to be unable to borrow under the credit facility. In addition to preventing additional borrowings under the credit facility, an event of default, if not cured or waived, may result in the acceleration of the maturity of indebtedness outstanding under the credit facility at the time of the default, which would require us to pay all amounts outstanding. If an event of default occurs, we may not be able to cure it within any applicable cure period, if at all. If the maturity of our indebtedness is accelerated, we may not have sufficient funds available for repayment or we may not have the ability to borrow or obtain sufficient funds to replace the accelerated indebtedness on terms acceptable to us, or at all.

**If we choose to acquire or invest in new businesses, products or technologies, instead of developing them ourselves, these acquisitions or investments could disrupt our business and could result in the use of significant amounts of equity, cash or a combination of both.**

From time to time we may seek to acquire or invest in businesses, products or technologies, instead of developing them ourselves. Acquisitions and investments involve numerous risks, including:

- the inability to complete the acquisition or investment;
- disruption of our ongoing businesses and diversion of management attention;
- difficulties in integrating the acquired entities, products or technologies;
- difficulties in operating the acquired business profitably;
- the inability to achieve anticipated synergies, cost savings or growth;
- potential loss of key employees, particularly those of the acquired business;
- difficulties in transitioning and maintaining key customer, distributor and supplier relationships;

- risks associated with entering markets in which we have no or limited prior experience; and
- unanticipated costs.

In addition, any future acquisitions or investments may result in one or more of the following:

- issuances of dilutive equity securities, which may be sold at a discount to market price;
- the use of significant amounts of cash;
- the incurrence of debt;
- the assumption of significant liabilities;
- increased operating costs or reduced earnings;
- financing obtained on unfavorable terms;
- large one-time expenses; and
- the creation of certain intangible assets, including goodwill, the write-down of which may result in significant charges to earnings.

Any of these factors could materially harm our stock price, our business, or our operating results.

### **Risks Relating to Owning Our Common Stock**

#### **If we sell additional shares, our stock price may decline as a result of the dilution which will occur to existing stockholders.**

Until we are profitable, we will need significant additional funds to develop our business and sustain our operations. We sold shares of our stock and warrants in February 2012, June 2013, and June 2014. Any additional sales of shares of our common stock or other securities exercisable into our common stock are likely to have a dilutive effect on some or all of our then existing stockholders. Resales of newly issued shares in the open market could also have the effect of lowering our stock price, thereby increasing the number of shares we may need to issue in the future to raise the same dollar amount and consequently further diluting our outstanding shares.

The perceived risk associated with the possible sale of a large number of shares could cause some of our stockholders to sell their stock, thus causing the price of our stock to decline. In addition, actual or anticipated downward pressure on our stock price due to actual or anticipated issuances or sales of stock could cause some institutions or individuals to engage in short sales of our common stock, which may itself cause the price of our stock to decline.

If our stock price declines, we may be unable to raise additional capital. A sustained inability to raise capital could force us to go out of business. Significant declines in the price of our common stock could also impair our ability to attract and retain qualified employees, reduce the liquidity of our common stock and result in the delisting of our common stock from The NASDAQ Stock Market LLC, or NASDAQ.

#### **The trading price of our common stock has been volatile and is likely to be volatile in the future.**

The trading price of our common stock has been highly volatile. For the five year period ended September 30, 2014, our stock price has fluctuated from a low of \$1.47 to a high of \$122.04. The market price for our common stock will be affected by a number of factors, including:

- the denial or delay of regulatory clearances or approvals for our products under development or receipt of regulatory approval of competing products;
- our ability to accomplish clinical, regulatory and other product development and commercialization milestones and to do so in accordance with our timing estimates;
- changes in policies affecting third-party coverage and reimbursement in the United States and other countries;
- changes in government regulations and standards affecting the medical device industry and our products;
- ability of our products to achieve market success;
- the performance of third-party contract manufacturers and component suppliers;
- actual or anticipated variations in our results of operations or those of our competitors;

- announcements of new products, technological innovations or product advancements by us or our competitors;
- developments with respect to patents and other intellectual property rights;
- sales of common stock or other securities by us or our stockholders in the future;
- additions or departures of key scientific or management personnel;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- trading volume of our common stock;
- changes in earnings estimates or recommendations by securities analysts, failure to obtain or maintain analyst coverage of our common stock or our failure to achieve analyst earnings estimates;
- public statements by analysts or clinicians regarding their perceptions of our clinical results or the effectiveness of our products;
- decreases in market valuations of medical device companies; and
- general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors.

The stock prices of many companies in the medical device industry have experienced wide fluctuations that have often been unrelated to the operating performance of these companies. Periods of volatility in the market price of a company's securities can result in securities class action litigation against a company. If class action litigation is initiated against us, we may incur substantial costs and our management's attention may be diverted from our operations, which could significantly harm our business.

**There have been instances in the past when we failed to satisfy certain continued listing requirements on NASDAQ and we could fail to satisfy those requirements again in the future which could affect the market price of our common stock and liquidity and reduce our ability to raise capital.**

Currently, our common stock trades on the NASDAQ Capital Market. During 2012 and 2010 we received notifications from NASDAQ informing us of certain listing deficiencies related to the minimum bid price listing requirements. Although we have since cured these deficiencies, it is possible that we could fall out of compliance again in the future. If we fail to maintain compliance with any NASDAQ listing requirements, we could be delisted and our stock would be considered a penny stock under regulations of the Securities and Exchange Commission, or SEC, and would therefore be subject to rules that impose additional sales practice requirements on broker-dealers who sell our securities. The additional burdens imposed upon broker-dealers by these requirements could discourage broker-dealers from effecting transactions in our common stock, which could severely limit the market liquidity of our common stock and your ability to sell our securities in the secondary market.

**The low trading volume of our common stock may adversely affect the price of our shares.**

Although our common stock is listed on the NASDAQ Capital Market, our common stock has experienced low trading volume. The 50 day average trading volume through September 30, 2014 as reported by NASDAQ was approximately 112,000 shares. Limited trading volume may subject our common stock to greater price volatility and may make it difficult for investors to sell shares at a price that is attractive to them.

**Anti-takeover provisions in our organizational documents and Delaware law, and our shareholder rights plan, may discourage or prevent a change of control, even if an acquisition would be beneficial to our stockholders, which could affect our stock price adversely and prevent attempts by our stockholders to replace or remove our current management.**

Our certificate of incorporation and bylaws contain provisions that could delay or prevent a change of control of our company or changes in our Board of Directors that our stockholders might consider favorable. Some of these provisions:

- authorize the issuance of preferred stock which can be created and issued by the Board of Directors without prior stockholder approval, with rights senior to those of our common stock;
- provide for a classified Board of Directors, with each director serving a staggered three-year term;
- prohibit our stockholders from filling board vacancies, calling special stockholder meetings, or taking action by written consent;
- provide for the removal of a director only with cause and by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of our directors; and

require advance written notice of stockholder proposals and director nominations.

We have also adopted a shareholder rights plan that could make it more difficult for a third party to acquire, or could discourage a third party from acquiring, us or a large block of our common stock. A third party that acquires 15% or more of our common stock could suffer substantial dilution of its ownership interest under the terms of the shareholder rights plan through the issuance of common stock to all stockholders other than the acquiring person.

In addition, we are subject to the provisions of Section 203 of the Delaware General Corporation Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. These and other provisions in our certificate of incorporation, bylaws and Delaware law could make it more difficult for stockholders or potential acquirers to obtain control of our Board of Directors or initiate actions that are opposed by our then-current Board of Directors, including a merger, tender offer, or proxy contest involving our company. Any delay or prevention of a change of control transaction or changes in our Board of Directors could cause the market price of our common stock to decline.

#### **We do not intend to pay cash dividends.**

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings for use in the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. In addition, the terms of our credit facility precludes us from paying any dividends. As a result, capital appreciation, if any, of our common stock will be our stockholders' sole source of potential gain for the foreseeable future.

#### **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, including, without limitation, statements regarding our or our management's expectations, hopes, beliefs, intentions or strategies regarding the future, such as our estimates regarding anticipated operating losses, future revenues and projected expenses; our liquidity and our expectations regarding our needs for and ability to raise additional capital; our ability to manage our expenses effectively and raise the funds needed to continue our business; our belief that there are unmet needs in the diagnosis and treatment of diabetic neuropathy and our expectations surrounding NC-stat DPNCheck and SENSUS; our plans to develop and commercialize our products; the success and timing of our studies; our ability to obtain and maintain regulatory approval of our existing products and any future products we may develop; regulatory and legislative developments in the United States and foreign countries; the performance of our third-party manufacturers; our ability to obtain and maintain intellectual property protection for our products; the successful development of our sales and marketing capabilities; the size and growth of the potential markets, including the Medicare Advantage Market for NC-stat DPNCheck and the painful diabetic neuropathy market for SENSUS; our ability to serve the NC-stat DPNCheck and SENSUS markets and earn potential revenues; our commercialization efforts in select international markets; the rate and degree of market acceptance of any future products; our reliance on key scientific management or personnel; and the payment and reimbursement methods used by private or governmental third-party payers; and other factors discussed elsewhere in this prospectus or any document incorporated by reference herein or therein. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," "plan" and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. The forward-looking statements contained in this prospectus are based on our current expectations and beliefs concerning future developments and their potential effects on us. There can be no assurance that future developments affecting us will be those that we have anticipated. These forward-looking statements involve a number of risks, uncertainties (some of which are beyond our control) or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, those factors described in the section titled "Risk Factors." Should one or more of these risks or uncertainties materialize, or should any of our assumptions prove incorrect, actual results may vary from those projected in these forward-looking statements. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws. Unless the context otherwise requires, all references to "we", "us", the "Company", or "NeuroMetrix" in this prospectus refer to NeuroMetrix, Inc.

#### **USE OF PROCEEDS**

We will not receive any of the proceeds from the sale of securities by the selling security holders pursuant to this prospectus. We may receive up to approximately \$6,734,000 in aggregate gross proceeds from the exercise of the warrants, for cash, based on the per share exercise price of the warrants. Any proceeds we receive from the exercise of the warrants will be used for working capital and general corporate purposes.

## SELLING SECURITY HOLDERS

The shares of common stock being offered by the selling security holders are a portion of those issuable upon exercise of the Warrants. For additional information regarding the issuance of these securities, see “Offering of Preferred Shares and Warrants” above. We are registering the shares of common stock in order to permit the selling security holders to offer the shares for resale from time to time. Except for the ownership of the Preferred Stock and the Warrants and the transactions contemplated pursuant to the Purchase Agreement, the selling security holders have not had any material relationship with us within the past three years.

The table below lists the selling security holders and other information regarding the beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder) of the shares of common stock held by each of the selling security holders. The second column lists the percentage of shares of common stock beneficially owned by the selling security holders, based on their respective ownership of shares of common stock, as of October 10, 2014, assuming conversion of the Preferred Stock and exercise of the Warrants held by each such selling security holder on that date but taking account of any limitations on exercise set forth therein. The percentage of shares beneficially owned prior to the offering is based on 7,944,257 shares of our common stock outstanding as of October 10, 2014. The number of shares in the column “Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus” represents all of the shares that the selling security holder may offer under this prospectus and does not take into account any limitations on exercise of the warrants set forth therein.

This prospectus covers the resale of 3,300,979 shares of common stock issuable upon the exercise of the Warrants. The Warrants are exercisable immediately after issuance, have a five-year term and a per share exercise price of \$2.04. See “Prospectus Summary —Offering of Preferred Shares and Warrants” above for a complete description of the warrants.

Under the terms of the warrants, a selling security holder may not exercise the warrants to the extent (but only to the extent) such selling security holder or any of its affiliates would beneficially own a number of shares of our common stock which would exceed 9.99%. The number of shares in the second column reflects these limitations. The selling security holders may sell all, some or none of their shares in this offering. See “Plan of Distribution.”<sup>1</sup>

| <u>Name of Selling Securityholder</u>                    | <u>Number of Shares of Common Stock Beneficially Owned Prior to Offering</u> | <u>% of Shares of Common Stock Beneficially Owned Prior to Offering</u> | <u>Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus</u> | <u>Number of Shares of Common Stock Owned After Offering</u> | <u>% of Shares of Common Stock Owned After Offering</u> |
|--|--|---|--|--|---|
| <b>Sabby Healthcare Volatility Master Fund, Ltd. (1)</b> | 3,535,987(2)   | 9.99%(3)  | 2,042,646(4)   | 1,493,341(6)   | 9.99%(6)  |
| <b>Sabby Volatility Warrant Master Fund, Ltd. (1)</b>    | 2,357,326(2)   | 9.99%(3)  | 1,258,333(5)   | 1,098,993(6)   | 9.99%(6)  |

- (1) This shareholder has indicated that Hal Mintz has voting and investment power over the shares held by it. This shareholder has indicated that Sabby Management, LLC serves as its investment manager, that Hal Mintz is the manager of Sabby Management, LLC, and that each of Sabby Management, LLC and Hal Mintz disclaim beneficial ownership over these shares except to the extent of any pecuniary interest therein.
- (2) The number of shares shown in this column reflects the aggregate number of shares of common stock beneficially owned (through the ownership of Series A-4 Preferred Stock that is convertible into common stock and warrants to purchase common stock) by Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Master Fund, Ltd. prior to the offering. The aggregate beneficial ownership of Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Master Fund, Ltd. is subject to a 9.99% ownership blocker.
- (3) Represents the aggregate combined percentage of shares beneficially owned by Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. The conversion of the Preferred Stock and exercise of the warrants are subject to a 9.99% ownership blocker.
- (4) This Registration Statement registers the resale by Sabby Healthcare Volatility Master Fund, Ltd. of 2,042,646 shares of common stock issuable upon exercise of the Warrants, as issued to Sabby Healthcare Volatility Master Fund, Ltd. in the offering, without regard for any limitations on exercise set forth in the Warrants. Sabby Healthcare Volatility Master Fund, Ltd. also holds Series A-4 Preferred Stock that is convertible into common stock and warrants to purchase common stock that were previously registered pursuant to a registration statement declared effective on August 6, 2014 (File No. 333-197405). See Footnote 2.<sup>[2]</sup>
- (5) This Registration Statement registers the resale by Sabby Volatility Warrant Master Fund, Ltd. of 1,258,333 shares of common stock issuable upon exercise of the Warrants, as issued to Sabby Volatility Warrant Master Fund, Ltd. in the offering, without regard for any limitations on exercise set forth in the Warrants. Sabby Volatility Warrant Master Fund, Ltd. also holds Series A-4 Preferred Stock that is convertible into common stock and warrants to purchase common stock that were previously registered pursuant to a registration statement declared effective on August 6, 2014 (File No. 333-197405). See Footnote 2.
- (6) The number of shares shown in this column reflects the aggregate number of shares of common stock beneficially owned (through the ownership of warrants to purchase common stock) by Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Master Fund, Ltd. after the offering, assuming that all shares registered for resale by this Registration Statement are sold in the offering. The aggregate beneficial ownership of Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Master Fund, Ltd. is subject to a 9.99% ownership blocker.

## PLAN OF DISTRIBUTION

Each Selling Stockholder of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the Nasdaq Stock Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. A Selling Stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the Selling Stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell securities under Rule 144 under the Securities Act of 1933, as amended (the “Securities Act”), if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of the securities or interests therein, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The Selling Stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities. In no event shall any broker-dealer receive fees, commissions and markups which, in the aggregate, would exceed eight percent (8%).

We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. We have agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Because Selling Stockholders may be deemed to be “underwriters” within the meaning of the Securities Act, they will be subject to the prospectus delivery requirements of the Securities Act including Rule 172 thereunder. In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus. The Selling Stockholders have advised us that there is no underwriter or coordinating broker acting in connection with the proposed sale of the resale securities by the Selling Stockholders.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the Selling Stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for us to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

#### **LEGAL MATTERS**

The validity of the securities we are offering will be passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts.

#### **EXPERTS**

The financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2013 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

#### **WHERE YOU CAN FIND MORE INFORMATION**

We are a public company and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's Public Reference Room at Station Place, 100 F Street, N.E., Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. Our SEC filings are also available to the public at the SEC's web site at <http://www.sec.gov>, and on our web site at <http://www.neurometrix.com>. The information contained on our web site is not included or incorporated by reference into this prospectus. In addition, our common stock is listed for trading on The NASDAQ Capital Market under the symbol "NURO." You can read and copy reports and other information concerning us at the offices of the Financial Industry Reporting Authority located at 1735 K Street, N.W., Washington, D.C. 20006.

This prospectus is only part of a Registration Statement on Form S-3 that we have filed with the SEC under the Securities Act, and therefore omits certain information contained in the Registration Statement. We have also filed exhibits and schedules with the Registration Statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may:

- inspect a copy of the Registration Statement, including the exhibits and schedules, without charge at the Public Reference Room,
- obtain a copy from the SEC upon payment of the fees prescribed by the SEC, or
- obtain a copy from the SEC's web site or our web site.

#### **INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE**

The SEC allows us to "incorporate by reference" much of the information we file with them, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. You should refer to the registration statement, including the exhibits, for further information about us and the securities we may offer pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. This prospectus incorporates by reference the documents listed below (in each case, other than those documents or the portions of those documents not deemed to be filed) until the offering of the securities under the registration statement is terminated or completed:

- Annual Report on Form 10-K for the year ended December 31, 2013, filed with the SEC on February 24, 2014;



- the portions of our Definitive Proxy Statement on Schedule 14A that are deemed "filed" with the SEC under the Securities Exchange Act of 1934, as amended, filed on April 7, 2014;
- Quarterly Reports on Form 10-Q filed with the SEC on April 24, 2014 and July 24, 2014;
- Current Reports on Form 8-K filed with the SEC on May 7, 2014, June 26, 2014 and June 27, 2014;
- Description of our common stock contained in our Registration Statement on Form 8-A filed pursuant to Section 12(g) of the Exchange Act, filed with SEC on July 19, 2004; and
- Description of our preferred share purchase rights contained in our Registration Statement on Form 8-A filed pursuant to Section 12(b) of the Exchange Act, filed with the SEC on March 8, 2007 (File No. 000-50856).

Except as set forth above, the SEC file number for each of the documents listed above is 001-33351.

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You should rely only on information contained in, or incorporated by reference into, this prospectus and any prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus or incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation

You may request a copy of the filings listed above, at no cost, by writing or telephoning us at the following address:

NeuroMetrix, Inc.  
62 Fourth Avenue  
Waltham, Massachusetts 02451  
(781) 890-9989  
Attn: Investor Relations

## PART II

### INFORMATION NOT REQUIRED IN PROSPECTUS

#### Item 14. Other Expenses of Issuance and Distribution

The following table sets forth the Company's estimates (other than the SEC registration fee) of the expenses in connection with the issuance and distribution of the securities being registered.

| Item                            | Amount           |
|---------------------------------|------------------|
| SEC registration fee            | \$ 637           |
| Legal fees and expenses         | 10,000           |
| Accounting fees and expenses    | 5,000            |
| Printing fees                   | 2,500            |
| Miscellaneous fees and expenses | 2,500            |
| Total                           | <u>\$ 20,637</u> |

#### Item 15. Indemnification of Directors and Officers

Our restated certificate provides that we shall indemnify, to the fullest extent authorized by the Delaware General Corporation Law, each person who is involved in any litigation or other proceeding because such person is or was our director or officer or is or was serving as an officer or director of another entity at our request, against all expense, loss or liability reasonably incurred or suffered in connection therewith. Our restated certificate provides that the right to indemnification includes the right to be paid expenses incurred in defending any proceeding in advance of its final disposition, provided, however, that such advance payment will only be made upon delivery to us of an undertaking, by or on behalf of the director or officer, to repay all amounts so advanced if it is ultimately determined that such director is not entitled to indemnification. If we do not pay a proper claim for indemnification in full within 10 days after we receive a written claim for such indemnification, our restated certificate and our restated by-laws authorize the claimant to bring an action against us and prescribe what constitutes a defense to such action.

Section 145 of the Delaware General Corporation Law permits a corporation to indemnify any director or officer of the corporation against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with any action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in right of the corporation) brought by reason of the fact that such person is or was a director or officer of the corporation, if such person acted in good faith and in a manner that he reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, if he or she had no reason to believe his or her conduct was unlawful. In a derivative action, (i.e., one brought by or on behalf of the corporation), indemnification may be provided only for expenses actually and reasonably incurred by any director or officer in connection with the defense or settlement of such an action or suit if such person acted in good faith and in a manner that he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification shall be provided if such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the court in which the action or suit was brought shall determine that the defendant is fairly and reasonably entitled to indemnity for such expenses despite such adjudication of liability.

Pursuant to Section 102(b)(7) of the Delaware General Corporation Law, Article Seventh of our restated certificate eliminates the liability of a director to us or our stockholders for monetary damages for such a breach of fiduciary duty as a director, except for liabilities arising:

- from any breach of the director's duty of loyalty to us or our stockholders;
- from acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law; and
- from any transaction from which the director derived an improper personal benefit.

As permitted by Section 145 of the Delaware General Corporation Law, we carry insurance policies insuring our directors and officers against certain liabilities that they may incur in their capacity as directors and officers.

Any underwriting agreements that we may enter into will likely provide for the indemnification of us, our controlling persons, our directors and certain of our officers by the underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended.

#### Item 16. Exhibits

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

## Item 17. Undertakings

(a) The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
  - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
  - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
  - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the registration statement is on Form S-3 (§239.13 of this chapter) or Form F-3 (§239.33 of this chapter) and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) (§230.424(b) of this chapter) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
  - (i) If the registrant is relying on Rule 430B (§230.430B of this chapter):
    - (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) (§230.424(b)(3) of this chapter) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
    - (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) (§230.424(b)(2), (b)(5), or (b)(7) of this chapter) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) (§230.415(a)(1)(i), (vii), or (x) of this chapter) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or
  - (ii) If the registrant is subject to Rule 430C (§230.430C of this chapter), each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A (§230.430A of this chapter), shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

- (5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424 (§230.424 of this chapter);
  - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
  - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
  - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Waltham, Massachusetts on October 15, 2014.

### NeuroMetrix, Inc.

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

Name: Shai N. Gozani, M.D., Ph.D.

Title: Chairman, President and Chief Executive Officer

We, the undersigned officers and directors of NeuroMetrix, Inc. hereby severally constitute and appoint Shai N. Gozani, M.D., Ph.D. and Thomas T. Higgins, and each of them singly, our true and lawful attorneys with full power to any of them, and to each of them singly, to sign for us and in our names in the capacities indicated below the Registration Statement on Form S-3 filed herewith and any and all amendments to said Registration Statement and generally to do all such things in our name and behalf in our capacities as officers and directors to enable NeuroMetrix, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said Registration Statement and any and all amendments thereto.

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

|     | <b>Signature</b>   | <b>Title</b>   | <b>Date</b>      |
|-----|--|--|------------------|
| By: | /s/ SHAI N. GOZANI, M.D., PH.D.<br>Shai N. Gozani, M.D., Ph.D. | Chairman, President and Chief Executive Officer<br>(principal executive officer)                             | October 15, 2014 |
| By: | /s/ THOMAS T. HIGGINS<br>Thomas T. Higgins                     | Senior Vice President, Chief Financial Officer and<br>Treasurer (principal financial and accounting officer) | October 15, 2014 |
| By: | /s/ DAVID E. GOODMAN<br>David E. Goodman, M.D.                 | Director   | October 15, 2014 |
| By: | /s/ ALLEN J. HINKLE<br>Allen J. Hinkle M.D.                    | Director   | October 15, 2014 |
| By: | /s/ NANCY E. KATZ<br>Nancy E. Katz                             | Director   | October 15, 2014 |
| By: | /s/ TIMOTHY R. SURGENOR<br>Timothy R. Surgenor                 | Director   | October 15, 2014 |
| By: | /s/ DAVID VAN AVERMAETE<br>David Van Avermaete                 | Director   | October 15, 2014 |

## Exhibit Index

| <b>Exhibit Number</b> | <b>Description</b>   |
|-----------------------|--|
| 3.1                   | Certificate of Preferences, Rights and Limitations of Series A-3 Convertible Preferred Stock.*   |
| 3.2                   | Certificate of Preferences, Rights and Limitations of Series A-4 Convertible Preferred Stock.*   |
| 4.1                   | Form of Common Stock Purchase Warrant.*  |
| 4.2                   | Amendment No. 3 to Shareholder Rights Agreement.*  |
| 5.1                   | Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.   |
| 10.1                  | Form of Securities Purchase Agreement dated as of June 24, 2014, by and among NeuroMetrix, Inc. and the purchasers named therein, as amended.* |
| 10.2                  | Form of Registration Rights Agreement dated as of June 24, 2014, by and among NeuroMetrix, Inc. and the purchasers named therein.*             |
| 23.1                  | Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm.   |
| 23.2                  | Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in Exhibit 5.1).  |
| 24.1                  | Power of Attorney (included in the signature pages to the Registration Statement).   |

\*Previously filed with the Current Report on Form 8-K filed on June 26, 2014 (File No. 001-33351).

October 15, 2014

NeuroMetrix, Inc.  
62 Fourth Avenue  
Waltham, Massachusetts 02451

Ladies and Gentlemen:

We have acted as counsel for NeuroMetrix, Inc., a Delaware corporation (the "Company"), in connection with the preparation of the Registration Statement on Form S-3 (the "Registration Statement"), filed with the Securities and Exchange Commission (the "Commission") on October 15, 2014 under the Securities Act of 1933, as amended, covering the offering for resale, on a delayed or continuous basis, of 3,300,979 shares of the Company's common stock, par value \$0.0001 per share (the "Common Stock"), issuable upon exercise of the Company's five year warrants (the "Warrant Shares"), by the selling security holders named therein (the "Selling Security holders"). The Warrant Shares have been issued or are issuable pursuant to the Securities Purchase Agreement, dated June 24, 2014, as amended, by and among the Company and the Selling Security holders. The Warrant Shares also include share purchase rights (the "Share Purchase Rights") under the Company's Shareholder Rights Agreement dated March 7, 2007, as amended, between the Company and American Stock Transfer & Trust Company, as Rights Agent (the "Shareholder Rights Agreement") that may be issued at a future date in accordance with the terms of the Shareholder Rights Agreement.

In connection with this opinion, we have examined the Company's Restated Certificate of Incorporation, as amended, and Amended and Restated Bylaws, both as currently in effect; the Shareholder Rights Agreement; the minutes of all pertinent meetings of the directors of the Company relating to the Registration Statement and the exhibits thereto and the Securities Purchase Agreement and the transactions contemplated thereby; and such other records of the corporate proceedings of the Company and certificates of the Company's officers as we have deemed relevant.

In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity with the originals of all documents submitted to us as copies. Upon the basis of such examination, and subject to the limitations set forth below, we advise you that in our opinion:

- a. the Warrant Shares have been duly authorized and reserved for issuance, and, when issued upon exercise of the Warrants in accordance with the terms thereof, will be legally issued, fully paid and non-assessable; and

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

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

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October 15, 2014

Page 2

b. the Share Purchase Rights will be duly and validly issued.

In rendering our opinion regarding the Share Purchase Rights, we have assumed that the Board of Directors of the Company has acted and will act in accordance with its fiduciary duties with respect to the administration of the Shareholder Rights Agreement and the issuance of the Share Purchase Rights thereunder. In connection with the foregoing, our opinion does not address the determination a court of competent jurisdiction may make regarding whether the Board of Directors of the Company would be required to redeem or terminate, or take other action with respect to, the Share Purchase Rights at some future time. Further, our opinion addresses the Shareholder Rights Agreement and the Share Purchase Rights in their entirety and not any particular provision of them, and it is not settled whether the invalidity of any particular provision would invalidate the Share Purchase Rights in their entirety.

Our opinion is limited to the General Corporation Law of the State of Delaware (including the applicable provisions of the Delaware Constitution and the reported judicial decisions interpreting such laws) and the United States Federal Laws, 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 under the securities or blue sky laws of any state or any foreign jurisdiction. To the extent that any applicable document is stated to be governed by the laws of another jurisdiction, we have assumed for purposes of this opinion that the laws of such jurisdiction are identical to the state laws of the State of Delaware.

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 statutes, rules, regulations and judicial decisions existing on the date hereof, and we disclaim any obligation to advise you of any change in any of these sources of law or legal or factual developments after the date hereof which might affect any matters or opinions set forth herein.

We consent to the filing of this opinion as an exhibit to the Registration Statement and to the references to this firm under the caption "Legal Matters" in the Prospectus which is a part of the Registration Statement.

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-3 of our report dated February 24, 2014 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, 2013. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts  
October 15, 2014

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