NeuroMetrix, Inc.
Form S-1/A
December 14, 2016

As filed with the Securities and Exchange Commission on December 13, 2016

Registration No. 333-207566

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

AMENDMENT NO. 5 TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

NEUROMETRIX, INC.

(Exact name of registrant as specified in its charter)

Delaware	3841	04-3308180
(State or other jurisdiction of incorporation or organization)	**(Primary Standard Industrial Classification Code Number)**	**(I.R.S. Employer Identification No.)**

1000 Winter Street
Waltham, Massachusetts 02451
(781) 890-9989

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

Shai N. Gozani, M.D., Ph.D.
Chief Executive Officer
NeuroMetrix, Inc.
1000 Winter Street
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(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

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 check the following box: x

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. o

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

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

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. (Check one):

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

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.

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The information in this preliminary 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 declared effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, Dated December 13, 2016
PRELIMINARY PROSPECTUS

Up to 3,398,058 Class A Units consisting of Common Stock and Warrants and 26,500 Class B Units consisting of Series E Convertible Preferred Stock and Warrants
(25,728,156 shares of Common Stock underlying the Series E Convertible Preferred Stock)

We are offering up to 3,398,058 of Class A Units (consisting of one share of our common stock and a warrant to purchase one share of our common stock at an exercise price per share of common stock equal to 100% of the public offering price of the Class A Units (each, a 2016 warrant)). Each 2016 warrant will be immediately exercisable and will expire five years from the date on which such 2016 warrants become exercisable. The shares of common stock and 2016 warrants that form part of a Class A Unit are immediately separable and will be issued separately in this offering.

We are also offering to those purchasers, if any, whose purchase of Class A Units in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% of our outstanding common stock immediately following the consummation of this offering, the opportunity, in lieu of purchasing Class A Units, to purchase 26,500 Class B Units. Each Class B Unit will consist of one share of our Series E convertible preferred stock, with a stated value of $1,000 per share and convertible into shares of our common stock at the public offering price of the Class A Units, together with the equivalent number of 2016 warrants as would have been issued to such purchaser if they had purchased Class A Units based on the public offering price. The shares of Series E convertible preferred stock do not generally have any voting rights but are convertible into shares of common stock. The shares of Series E convertible preferred stock and 2016 warrants are immediately separable and will be issued separately in this offering. We are also offering the shares of common stock that are issuable from time to time upon conversion of the Series E convertible preferred stock and upon the exercise of the 2016 warrants being offered by this prospectus.

We refer to the Series E convertible preferred stock issued hereunder, the 2016 warrants and the shares of common stock issued hereunder and issuable upon conversion of the Series E convertible preferred stock and upon exercise of the 2016 warrants, collectively, as the securities. For a more detailed description of our common stock, 2016 Warrants and Series E convertible preferred stock, see the section entitled Description of Capital Stock and Description of Securities We Are Offering.

Investors purchasing $250,000 or more of the securities offered hereby will execute a securities purchase agreement with us, providing such investors with certain representations, warranties and covenants from us, which representations, warranties and covenants will not be available to investors of lesser amounts of our securities.

Assuming we sell all 3,398,058 Class A Units being offered in this offering at an assumed public offering price of $1.03, the reported closing price of our common stock on The NASDAQ Capital Market on December 12, 2016, and all 26,500 Class B Units being offered in this offering at $1,000 per unit, we would issue in this offering an aggregate of 3,398,058 shares of our common stock, 26,500 shares of Series E convertible preferred stock (convertible, subject to certain limitations, into an aggregate of 25,728,156 shares of our common stock, assuming a conversion price of $1.03, the reported closing price of our common stock on The NASDAQ Capital Market on December 12, 2016), and an aggregate of 2016 warrants to purchase 29,126,214 shares of our common stock underlying all of the Class A Units and Class B Units.

Our common stock is listed on The NASDAQ Capital Market under the symbol NURO. The reported closing price of our common stock on The NASDAQ Capital Market on December 13, 2016 was $1.07 per share. We do not intend to list the Series E convertible preferred stock to be sold in this offering on The NASDAQ Capital Market or any other national securities exchange or any other nationally recognized trading system. However, if permitted by the rules and regulations of The NASDAQ Stock Market, we intend to use our best efforts to list the 2016 warrants on The NASDAQ Capital Market following the completion of this offering. There can be no assurances that the 2016 warrants will be approved for listing by The NASDAQ Stock Market.

Investing in our securities involves a high degree of risk. See Risk Factors beginning on page 14.

	Per Class A Unit	Per Class B Unit	Total
Public offering price	$	$	$
Placement agent s fees(1)	$	$	$
Proceeds to NeuroMetrix, before expenses	$	$	$

(1) We have agreed to reimburse the placement agent for certain of its expenses and to issue common stock purchase warrants to the placement agent. See Plan of Distribution on page 65 of this prospectus for a description of the compensation payable to the placement agent.

We have engaged H.C. Wainwright & Co., LLC (Wainwright or the Placement Agent) to act as our exclusive placement agent in connection with this offering. Wainwright is not purchasing or selling the securities offered by us, and is not required to sell any specific number or dollar amount of securities, but will use its reasonable best efforts to arrange for the sale of the securities offered. We have agreed to pay Wainwright a cash commission fee equal to 7.5% of the aggregate gross proceeds (excluding any proceeds used to repurchase shares from existing holders) to us from the sale of the securities in the offering, plus additional compensation as set forth under Plan of Distribution . Wainwright may engage one or more sub-agents or selected dealers in connection with this offering. We estimate total expenses of this offering, excluding the Placement Agent s fees, will be approximately $500,000. Because there is no minimum offering amount required as a condition to closing this offering, the actual public offering amount, Placement Agent s fees, and proceeds to us, if any, are not presently determinable and may be substantially less than the total maximum offering amounts set forth above.

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.

Delivery of the securities will take place on or about , 2016.

Rodman & Renshaw
a unit of H.C. Wainwright & Co.

The date of this prospectus is , 2016.

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You should rely only on the information contained or incorporated by reference in this prospectus and any free-writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone to provide you with additional or different information. We are offering to sell, and are seeking offers to buy these securities only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our securities. Our business, financial status, results of operations, and prospects may have changed since that date.

No action is being taken in any jurisdiction outside the United States to permit a public offering of our securities or possession or distribution of this prospectus in that jurisdiction. Persons who come into possession of this prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus applicable to that jurisdiction.

Registered Trademarks and Trademark Applications: NEUROMETRIX , NC-STAT , SENSUS , DPNCheck OptiTherapy and Quell are the subject of either a trademark registration or application for registration in the United States. Other brands, names and trademarks contained in this prospectus are the property of their respective owners. Solely for convenience, the trademarks, service marks and trade names referred to in this prospectus are without the ® and ™ symbols, but such references are not intended to indicate, in any way, that the owner thereof will not assert, to the fullest extent under applicable law, such owner s rights to these trademarks, service marks and trade names. This prospectus contains additional trade names, trademarks and service marks of other companies, which, to our knowledge, are the property of their respective owners.

We obtained industry and market data used throughout and incorporated by reference into this prospectus through our research, surveys and studies conducted by third parties and industry and general publications. We have not independently verified market and industry data from third-party sources.

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PROSPECTUS SUMMARY

This summary highlights selected information contained in greater detail elsewhere in this prospectus or incorporated by reference into this prospectus. This summary may not contain all of the information that you should consider before investing in the securities. You should carefully read the entire prospectus, including Risk Factors beginning on page 14 and the financial statements and related notes and other documents incorporated by reference into this prospectus, before making an investment decision. As used in this prospectus, references to we, our, Company, us and NeuroMetrix refer to NeuroMetrix, Inc. unless the context requires otherwise.

Our Business An Overview

NeuroMetrix is a commercial stage, innovation driven healthcare company combining bioelectrical and digital medicine to address chronic health conditions including chronic pain, sleep disorders, and diabetes. Our business is fully integrated with in-house capabilities spanning product development, manufacturing, regulatory affairs and compliance, sales and marketing, and customer support. We derive revenues from the sale of medical devices and after-market consumable products and accessories. Our products are sold in the United States and selected overseas markets, and are cleared by the U.S. Food and Drug Administration, or FDA, and regulators in foreign jurisdictions where appropriate. We have two principal product lines:

Wearable neuro-stimulation therapeutic devices
Point-of-care neuropathy diagnostic tests

Our core expertise in biomedical engineering has been refined over nearly two decades of designing, building and marketing medical devices that stimulate nerves and analyze nerve response for diagnostic and therapeutic purposes. We created the market for point-of-care nerve testing and were first to market with sophisticated, wearable technology for management of chronic pain. We also have an experienced management team and Board of Directors.

Chronic pain is a significant public health problem. It is defined by the National Institutes of Health as any pain lasting more than 12 weeks in contrast to acute pain which is a normal bodily response to injury or trauma. Chronic pain conditions include painful diabetic neuropathy, or PDN, arthritis, fibromyalgia, sciatica, musculoskeletal pain, cancer pain and many others. Chronic pain may be triggered by an injury or there may be an ongoing cause such as disease or illness. There may also be no clear cause. Pain signals continue to be transmitted in the nervous system over extended periods of time often leading to other health problems. These can include fatigue, sleep disturbance, decreased appetite, and mood changes which cause difficulty in carrying out important activities and contributing to disability and despair. In general, chronic pain cannot be cured. Treatment of chronic pain is focused on reducing pain and improving function. The goal is effective pain management.

Chronic pain is widespread. It affects over 100 million adults in the United States and more than 1.5 billion people worldwide. The global market for pain management drugs and devices alone was valued at $35 billion in 2012. The estimated incremental impact of chronic pain on health care costs in the United States is over $250 billion per year and lost productivity is estimated to exceed $300 billion per year. Estimated out-of-pocket spending in the United States on chronic pain is $20 billion per year.

The most common approach to chronic pain is pain medication. This includes over-the-counter drugs (such as Advil and Motrin), and prescription drugs including anti-convulsants (such as Lyrica and Neurontin) and anti-depressants (such as Cymbalta and Elavil). Topical creams may also be used (such as Zostrix and Bengay). With severe pain, narcotic pain medications may be prescribed (such as codeine, fentanyl, morphine, and oxycodone). The approach to

treatment is individualized, drug combinations may be employed, and the results are often hit or miss. Side effects and the potential for addiction are real and the risks are substantial.

Reflecting the difficulty in treating chronic pain, we believe that inadequate relief leads 25% to 50% of pain sufferers to turn to the over-the-counter market for supplements or alternatives to prescription pain medications. These include non-prescription medications, topical creams, lotions, electrical stimulators, dietary products, braces, sleeves, pads and other items. In total they account for over $4 billion in annual spending in the United States on pain relief products.

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High frequency nerve stimulation is an established treatment for chronic pain supported by numerous clinical studies demonstrating efficacy. In simplified outline, the mechanism of action involves intensive nerve stimulation to activate the body s central pain inhibition system resulting in widespread analgesia, or pain relief. The nerve stimulation activates brainstem pain centers leading to the release of endogenous opioids that act primarily through the delta opioid receptor to reduce pain signal transmission through the central nervous system. This therapeutic approach is available through deep brain stimulation and through implantable spinal cord stimulation, both of which require surgery and have attendant risks. Non-invasive approaches to neuro-stimulation (transcutaneous electrical nerve stimulation, or TENS) have achieved limited efficacy in practice due to device limitations, ineffective dosing and low patient compliance.

Our Strategy

There are large and important unmet medical needs in chronic pain treatment. Prescription pain medications and over-the-counter therapies are often inadequate and can lead to other health issues. We believe that controlled, personalized, neuro-stimulation to suppress pain provides an important complement to pain medications. As a medical device company with unique experience in designing devices to manage and alter peripheral nerve function, we believe we are well positioned to make neuro-stimulation widely available to chronic pain sufferers. We have direct experience with neuro-stimulation through our prescription SENSUS wearable pain management device which has been on the market for the past three and a half years and Quell, our over-the-counter, or OTC, wearable device for pain relief which was launched in the second quarter of 2015 and builds upon the core SENSUS neuro-stimulation technology.

Our primary objective is revenue growth. We expect this to be led by the successful market adoption of Quell. We also expect an important contribution to revenue from DPNCheck, our rapid, accurate diagnostic test for diabetic peripheral neuropathy.

Our key business strategies include:

Driving Commercial Adoption of Key Proprietary Products.

Quell, our OTC wearable device for pain relief, was made commercially available in the United States during the second quarter of 2015. Following commercial launch through the end of the third quarter of 2016, approximately 45,000 Quell devices plus electrodes and accessories were shipped to customers. Quell revenues for the year ended December 31, 2015 and for the nine months ended September 30, 2016 were approximately $2.1 million and $4.9 million, respectively. Quell utilizes OptiTherapy, our proprietary non-invasive neuro-stimulation technology to provide relief from chronic intractable pain, such as nerve pain due to diabetes, fibromyalgia, arthritic pain, and lower back and leg pain. This advanced wearable device is lightweight and can be worn during the day while active, and at night while sleeping. It has been cleared by the FDA for treatment of chronic intractable pain without a doctor s prescription. Users of the device have the option of using their smartphones to control pain therapy and to track sleep and therapy parameters. Quell is distributed in North America via e-commerce, including the Company s website (www.quellrelief.com) and Amazon, via direct response television including QVC, via retail merchandisers including Target, CVS and Walgreens, and via health care professionals such as pain management physician practices and podiatry practices. Distribution is supported by television promotion to expand product awareness. We believe there are significant opportunities to market Quell outside of the United States, particularly in Western Europe, Japan and China. In June 2016, we filed with the European Medicines Agency for regulatory approval to market Quell in the European Union and, assuming we receive such approval, we plan to initiate marketing during 2017.

DPNCheck, our diagnostic test for peripheral neuropathies, was made commercially available in the fourth quarter of 2011. DPNCheck revenues for the years ended December 31, 2015 and 2014 were approximately $2.3 million and $1.8 million, respectively. DPNCheck revenues for the nine months ended September 30, 2016 were approximately $1.7 million. Our US sales efforts focus on Medicare Advantage providers who assume financial responsibility and the associated risks for the health care costs of their patients. We believe that DPNCheck presents an attractive clinical case with early detection of neuropathy allowing for earlier clinical intervention to help mitigate the effects of neuropathy on both patient quality of life and cost of care. Also, the diagnosis and documentation of

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neuropathy provided by 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. We believe that attractive growth opportunities exist outside the United States, including Japan where we launched DPNCheck with our distribution partner Omron Healthcare in 2014; in China where we have received regulatory approval and are working with Omron Healthcare toward commercial launch in late 2016; and in Mexico where our distributor Scienta Farma received regulatory approval and initiated sales in the fourth quarter of 2015.

Maintaining a High Level of Research and Development Productivity. Our research and development, or R&D, team successfully delivered Quell, an FDA cleared, technologically sophisticated, smart phone integrated product with electrodes and other accessories. We believe that there are no comparable products on the market. Our R&D team is now charged with maintaining and expanding this Quell competitive technological advantage, addressing opportunities to reduce Quell cost of goods sold, and enhancing our intellectual property position, through continuing innovation. We expect innovation to take the form of device and software enhancements to improve the user experience, expanded smart phone applications, and new electrode features to optimize therapy. Technological innovation will continue to be one of our top priorities.

Our Business Model

Our products consist of a medical device used in conjunction with a consumable electrode or biosensor. Other accessories and consumables are also available to customers. Our goal for these devices is to build an installed base of active customer accounts and distributors that regularly order aftermarket products to meet their needs. We successfully implemented this model when we started our business with the NC-stat system and applied it to subsequent product generations including the ADVANCE system. Our recently developed products, Quell, SENSUS and DPNCheck, conform to this model.

Marketed Products

Quell

Quell is a wearable device for relief of chronic intractable pain, such as nerve pain due to diabetes and lower back problems. It incorporates our OptiTherapy technology, a collection of proprietary approaches designed to optimize the clinical efficacy of nerve stimulation. These include high power electrical stimulation hardware with precise control, algorithms that automatically determine therapeutic stimulation intensity and compensate for nerve desensitization, and automated detection of user sleep and appropriate adjustment of stimulation level. Quell is comprised of (1) an electronic device carried in a neoprene band that is worn on the upper calf and (2) an electrode that attaches to the device and is the interface between the device and the skin. The device is lightweight and can be worn during the day while active, and at night while sleeping. It has been cleared by the FDA for treatment of chronic intractable pain and is available OTC. Users of the device have the option of using their smartphones to control pain therapy and to track sleep and therapy parameters. The device was made commercially available in June 2015. In an independent post-market clinical study of Quell initiated by NeuroMetrix, 81% of subjects reported an improvement in management of their chronic pain and health, and 67% reported a reduction in their use of pain medications. To encourage persons with chronic pain to try Quell, we offer a 60-day trial period during which the product can be returned for a full refund. To date, product returns have averaged 28%. We estimate, over time, we will see product returns in the range of 20% to 25%, as indicated by the results of the post-market clinical study. The addressable market opportunity for Quell in the United States is estimated to be 19 million chronic pain sufferers. Quell is available via e-commerce on our product website (quellrelief.com) and on Amazon, via direct response television including QVC, via retail merchandisers including Target, CVS and Walgreens, and via select health care professionals. Distribution is supported by television promotion designed to expand product awareness. Following

commercial launch through the third quarter of 2016 approximately 45,000 devices and accessories were shipped to customers with a total invoiced value of $10.2 million prior to the impact of product returns.

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SENSUS

The SENSUS pain therapy device, the technological predecessor to Quell, is a prescription neuro-stimulation device based on TENS for relief of chronic, intractable pain. SENSUS, which was commercially launched in the first quarter of 2013, is a convenient and wearable device that offers physicians and their patients a non-narcotic pain relief option as a complement to medications. 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. The SENSUS device and electrodes were cleared by the FDA for commercial distribution. When medically indicated and supported by proper documentation, TENS devices are generally reimbursed by Medicare and many commercial insurance companies under the DME benefit. SENSUS customers have purchased approximately 10,300 devices through September 30, 2016. We believe that the launch of Quell and contraction of the DME distribution channel due to Medicare competitive bidding will significantly reduce future opportunities for SENSUS sales. Accordingly, we believe SENSUS will have a limited impact on future revenues.

DPNCheck

DPNCheck is a fast, accurate, and quantitative nerve conduction test that is used to evaluate systemic neuropathies such as diabetic peripheral neuropathy, or 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. 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.

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DPNCheck is a modified version of our previously marketed NC-stat nerve testing device that has the same clinical indications with respect to DPN. The modified device which costs less than the original device, has the same functionality with respect to sural nerve testing. More than 2.4 million patient studies have been performed using our NC-stat technology and there have been approximately 7.0 million nerve tests. It has been the subject of many published studies, including several studies specifically addressing the accuracy and clinical utility of the device in assessment of DPN. DPNCheck shipments commenced in late 2011 and approximately 3,200 devices had been placed with customers through September 30, 2016.

ADVANCE System

Our legacy neurodiagnostics business is based on the ADVANCE NCS/EMG System, or the ADVANCE System, which is a comprehensive platform for the performance of traditional nerve conduction studies. The ADVANCE System is comprised of: (1) the ADVANCE device and related modules, (2) various types of electrodes and needles, 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 but do not actively market the ADVANCE device.

Historically, the ADVANCE System was 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. More than 2.4 million patient studies have been performed using our NC stat technology and there have been approximately 7.0 million nerve tests, including 1.3 million sural nerve tests. As of September 30, 2016, we had an installed base of approximately 400 active customers using our ADVANCE System.

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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 electrode such as those employed with our products. During 2010 most Medicare fiscal intermediaries assumed coverage for CPT 95905 for some clinical indications; however, the health care environment was such that we were 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 for the legacy Neurodiagnostics business, which peaked in 2006 at $55.3 million. We reported revenue for our legacy Neurodiagnostics business of $2.3 million, $2.8 million and $3.8 million in 2015, 2014 and 2013, respectively. Revenues for our legacy Neurodiagnostics business for the nine months ended September 30, 2016 were approximately $1.6 million. We currently manage this 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 September 30, 2016 we had an accumulated deficit of $175.7 million and held cash and cash equivalents of $7.6 million. We believe that these resources, the cash to be generated from expected product sales and, assuming we sell the securities registered under this registration statement, the net proceeds from this offering will be sufficient to meet our projected operating

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requirements through the third quarter of 2017. However, the amount of our future product sales is difficult to predict, especially in light of the limited nature of the recent commercialization of Quell, and actual sales may not be in line with our forecasts. 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 along with the securities registered under this registration statement to support our operating and capital needs for the fourth quarter of 2017 and beyond. 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 now located at 1000 Winter Street, Waltham, Massachusetts 02451. Our telephone number is (781) 890-9989. Our web site is *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.

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The Offering

The following summary contains basic information about the offering and the securities we are offering and is not intended to be complete. It does not contain all the information that is important to you. For a more complete understanding of the common stock, Series E convertible preferred stock and the 2016 Warrants, please refer to the sections titled Description of Capital Stock and Description of Securities We Are Offering

Class A Units offered by us

We are offering up to 3,398,058 of Class A Units. Each Class A Unit will consist of one share of our common stock and a warrant to purchase one share of our common stock at an exercise price per share of common stock equal to 100% of the public offering price of the Class A Units (each, a 2016 warrant). The Class A Units will not be certificated and the share of common stock and warrants part of such unit are immediately separable and will be issued separately in this offering.

This prospectus also relates to the offering of shares of our common stock issuable upon the exercise of the 2016 warrants that are part of the Class A Units.

Assuming we sell all 3,398,058 Class A Units being offered in this offering at an assumed public offering price of $1.03, the reported closing price of our common stock on The NASDAQ Capital Market on December 12, 2016, we would issue in this offering Class A Units consisting of an aggregate of 3,398,058 shares of our common stock and 2016 warrants to purchase 3,398,058 shares of our common stock underlying the Class A Units.

Class B Units offered by us

We are also offering to those purchasers, if any, whose purchase of Class A Units in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% of our outstanding common stock immediately following the consummation of this offering, the opportunity, in lieu of purchasing Class A Units, to purchase Class B Units. Each Class B Unit will consist of one share of our Series E convertible preferred stock, with a stated value of $1,000 and convertible into shares of our common stock at the public offering price of the Class A Units, together with the equivalent number of 2016 warrants as would have been issued to such purchaser if they had purchased Class A Units based on the public offering price.

Ownership of the Class B Units alone will not increase the purchaser s beneficial ownership percentage of common stock unless and until a portion or all of such Series E convertible preferred stock has been converted. In addition, holders of Series E convertible preferred stock will be prohibited from converting Series E convertible preferred stock if, as a result of such conversion, the holder, together with its affiliates and certain related parties, and any persons acting as a group together with such holder or any such affiliate, would beneficially own more than 4.99% of the total number of shares of our outstanding common stock.

However, any holder may decrease or increase such ownership percentage to any other percentage, provided that any increase in such percentage shall not be effective until 61 days after such

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notice to us. Exceeding 4.99% ownership in shares of our outstanding common stock will trigger certain SEC filing requirements by such holder, including the submission of a Schedule 13G or Schedule 13D, as applicable, while such ownership percentage remains above 4.99%, and Forms 3 and 4, while such ownership percentage remains above 9.99%.

Shares of Series E convertible preferred stock do not generally have any voting rights but are convertible into shares of common stock. The Class B Units will not be certificated and the shares of Series E convertible preferred stock and 2016 warrants that are part of such unit are immediately separable and will be issued separately in this offering.

This prospectus also relates to the offering of shares of our common stock issuable upon conversion of the Series E convertible preferred stock and the 2016 warrants part of the Class B Units.