

## 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. The company's lead product is Quell, an over-the-counter wearable therapeutic device for chronic pain. Quell is integrated into a digital health platform that helps patients optimize their therapy and decrease the impact of chronic pain on their quality of life. The company also markets DPNCheck®, a rapid point-of-care test for diabetic neuropathy, which is the most common long-term complication of Type 2 diabetes. The company is located in Waltham, Massachusetts and was founded as a spinoff from the Harvard-MIT Division of Health Sciences and Technology in 1996.

## MARKETS

Chronic pain is a \$35 Billion market<sup>1</sup>, impacting 100 million Americans and 1.5 billion people worldwide<sup>2</sup>. Despite over 200 million opioid prescriptions in 2013<sup>3</sup>, treatment is inadequate, with 51% of patients reporting little or no control over their pain. In the same study, 86% were unable to sleep well, 77% were depressed and 59% reporting pain having impact on their life<sup>4</sup>.

## BUSINESSES AND PRODUCTS

**Quell** is a 100% drug free technology designed for millions of people suffering from chronic pain. The 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 pain without a prescription. In a recent study, 81% of Quell users reported an improvement in their chronic pain. Quell users can personalize and manage therapy discreetly via the Quell Relief app. Quell also offers advanced health tracking relevant to chronic pain sufferers including pain, sleep, activity, and gait. Quell was the winner of the 2016 SXSW (South by Southwest) Innovation Award for Best Wearable Technology. Quell is available at select healthcare professionals and retailers.



**DPNCheck®** is a fast, accurate, and quantitative nerve conduction test that is used to evaluate systemic neuropathies such as diabetic peripheral neuropathy (DPN). It is designed to be used by 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.



## RESEARCH AND DEVELOPMENT

NeuroMetrix maintains an active research effort in the application of neuromodulation to detect and treat chronic disease, focusing on chronic pain, degenerative nerve disease and restless leg syndrome. The company has active research programs with Scripps Translational Science Institute, Harvard Medical School and the University of Rochester.

## **MANAGEMENT**

### **SHAI N. GOZANI, M.D., PH.D.**

President, Chief Executive Officer and Director

Dr. Gozani founded NeuroMetrix, Inc. in 1996 as a spin-off from the Massachusetts Institute of Technology. He currently serves as Chairman of the board of directors and as our President and Chief Executive Officer. Dr. Gozani has led the Company from a venture capital backed start-up, through an initial public offering on NASDAQ, through development of a successful diagnostics business, and presently into the wearable technology sector. Over 2.5 million patients have benefited from the Company's technology over the past 15 years.

Dr. Gozani has published over 30 peer-reviewed scientific articles and has been awarded 25 US and international patents. Dr. Gozani holds a B.A. degree in Computer Science, a M.S. degree in Electrical Engineering & Computer Science (Biomedical Engineering Focus) and a Ph.D. in Neurobiology, from the University of California, Berkeley. He also received an M.D. from Harvard Medical School and the Harvard-MIT Division of Health Sciences and Technology at M.I.T.



### **THOMAS T. HIGGINS**

Senior Vice President and Chief Financial Officer

Mr. Higgins brings to NeuroMetrix a broad set of financial management and operations skills from his experience with publicly traded companies in life sciences, specialty chemicals and financial services. He has extensive international experience with a particular emphasis on Japan, Southeast Asia and the Middle East.

Prior to joining NeuroMetrix, Mr. Higgins was Executive Vice President and Chief Financial Officer at Caliper Life Sciences, Inc, a provider of technology and services for life sciences research. Before Caliper, Mr. Higgins was Executive Vice President, Operations and Chief Financial Officer at V.I. Technologies, Inc. ("Vitex"), a biotechnology company addressing blood safety. Before Vitex, Mr. Higgins served at Cabot Corporation in various senior finance and operations roles. His last position at Cabot was President of Distrigas of Massachusetts Corporation, a subsidiary involved in the liquefied natural gas business, and prior to that he was responsible for Cabot's Asia Pacific carbon black operations. Before joining Cabot, Mr. Higgins was with PricewaterhouseCoopers where he started his career.



Mr. Higgins holds a B.B.A. with honors from Boston University.

## **FRANK MCGILLIN**

Senior Vice President and General Manager, Consumer

Mr. McGillin brings to NeuroMetrix over 20 years experience building successful, high-growth consumer brands most recently at Philips Oral Healthcare and at Johnson & Johnson.

At Philips Mr. McGillin was responsible for building the global oral care business of Sonicare to become the #1 brand in the nearly \$1 billion dollar US power toothbrush market. During his career, he has launched over 50 new products and product upgrades and managed businesses across markets including diagnostic imaging, healthcare informatics, medical devices, dental and consumer technology.

Mr. McGillin holds an MBA degree from Fordham University and a BS degree from Northeastern University.



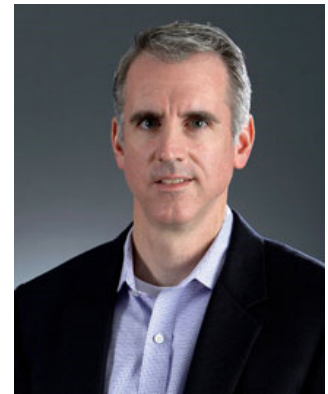
## **MICHAEL J. MACDONALD**

Senior Vice President of Commercial Operations

Mr. MacDonald joined NeuroMetrix in September 2000 and has held several marketing and sales positions including Vice President of Marketing, Vice President of Healthcare Economics, Director of Marketing and Region Sales Manager.

Prior to joining NeuroMetrix, Mr. MacDonald held various marketing positions at Smith & Nephew Endoscopy, a world leader in minimally invasive surgical devices. These roles were focused on leading the company's efforts to diversify into additional minimally invasive markets with the development of innovative surgical techniques and devices. Prior to Smith & Nephew, he served in multiple product management roles at Deknatel, Inc., a company specializing in the development of products for cardiovascular and other specialty surgery markets.

Mr. MacDonald holds a B.S. degree in Business Administration from Northeastern University.



## **XUAN KONG, PH.D.**

Senior Vice President of Research and Intellectual Property

Dr. Kong joined the company in 1999. In his role of SVP Research and Intellectual Property, he provides leadership for the Company's internal and external basic research functions. He manages the Company's intellectual property portfolio and is responsible for evaluation and licensing of outside intellectual property for the development of diabetic neuropathy related products.

Prior to joining the company, Dr. Kong was a tenured associate professor in the Department of Electrical Engineering at Northern Illinois University (DeKalb, IL). As a principal investigator, he successfully led many federally and industrially funded projects in



signal processing research and bio-electric signal analysis applications. He has published numerous papers in leading signal processing, biomedical engineering, and clinical neurophysiology journals.

Dr. Kong received his Ph.D. from The Johns Hopkins University and MBA from Boston University. He is certified as professional risk manager by PRMIA. He is a senior member of IEEE and a member of Eta Kappa Nu and Beta Gamma Sigma.

Note 1. Global market for pain management drugs and devices was valued at \$35.4 billion in 2012. BCC Research LLC. Note 2. Gaskin et al. 2012..Note 3. National Institute of Drug Abuse. Note 4. 2006 Voices of Chronic Pain Survey (American Pain Foundation).