

High-definition, minimally invasive platform electrode technology  
for recording & treatment of neurological disorders such as epilepsy,  
Parkinson's Disease and Failed Back Surgery Syndrome



NeuroOne™ Medical Technologies Corporation

**Company Overview**

# FORWARD LOOKING STATEMENTS

---

This presentation includes 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. Except for statements of historical fact, any information contained in this presentation may be a forward looking statement that reflects the Company's current views about future events and are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. In some cases, you can identify forward looking statements by the words "may," "might," "will," "could," "would," "should," "expect," "intend," "plan," "objective," "anticipate," "believe," "estimate," "predict," "project," "potential," "target," "seek," "contemplate," "continue" and "ongoing," or the negative of these terms, or other comparable terminology intended to identify statements about the future. Forward looking statements may include statements regarding the Company's business strategy, the Company's estimated revenues and revenue growth, the potential uplisting of the Company's stock to an exchange, existing or future market size, market demand, potential growth opportunities, the continuation of existing partnerships, the existence and strength of competition for the Company's technology, additional applications of the Company's technology, capital requirements, the potential receipt of DARPA or NIH grants, costs and risks related to the technology, anticipated advantages of the technology, the strength and growth of the Company's intellectual property portfolio, anticipated outcome of ongoing litigation, the timing of product development, the timing and results of clinical trials, the timing of regulatory submissions, the length of review of the Company's 510(k) submissions, the timing or occurrence of regulatory clearance or approvals, and the timing and success of commercialization of the Company's products. Although the Company believes that we have a reasonable basis for each forward-looking statement, we caution you that these statements are based on a combination of facts and factors currently known by us and our expectations of the future, about which we cannot be certain. These forward looking statements are subject to a number of risks, uncertainties and assumptions, including those described under the heading "Risk Factors" in our filings with the SEC. These forward looking statements speak only as of the date of this presentation and the Company undertakes no obligation to revise or update any forward looking statements for any reason, even if new information becomes available in the future.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market share and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates.

The trademarks included herein are the property of the owners thereof and are used for reference purposes only. Such use should not be construed as an endorsement of such products.

Caution: Federal law restricts this device to sale by or on the order of a physician

# COMPANY OVERVIEW

---

- Next generation electrode technology company specializing in development and commercialization of hi-definition thin film electrodes for the diagnosis and treatment of various neurological conditions such as epilepsy, Parkinson's Disease and chronic pain due to failed back surgery syndrome
  - First FDA 510(k) clearance for cortical electrode product family December 2019
  - Ability to perform recording, ablation and stimulation with the same electrode
- Minimally invasive flexible patented technology leverages printed circuit technology
  - We expect our technology could reduce manufacturing costs, procedural costs and improve patient outcomes
  - Mayo Clinic assisted in the development process, successfully used devices in humans as part of a research protocol and currently maintains an ownership position in the Company
  - Well positioned electrode technology has strong potential for future use in spinal cord stimulation and artificial intelligence applications, which may play an important future role in treating patients with more complex neurological issues
- Experienced Management Team, Board of Directors and two Advisory Boards with highly acclaimed physicians from prestigious institutions
- Strong and growing patent portfolio

# PRODUCT SUMMARY



Evo™ Cortical Electrode	Status
A portfolio of hi-definition strip and grid thin film electrodes for recording brain activity - includes disposable cable assembly	510(k) received



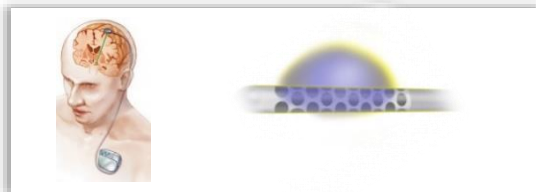
Evo™ sEEG Depth Electrode	Status
A portfolio of hi-definition depth thin film electrodes used for recording brain activity - includes disposable cable assembly	In late development



Ablation Electrode	Status
A system which is comprised of an sEEG electrode (developed by the Company), commercially available fiber optic temperature probe and RF generator. The potential benefits of RF ablation include: more precise lesions, same electrode used for recording and ablation, reduction in number of patient procedures.	In development; Performed feasibility testing



Spinal Cord Stimulation	Status
The potential to place paddle electrodes minimally invasively versus the current invasive method of a surgical incision and include additional contacts than currently commercially available to provide greater precision. The paddle electrodes will connect to a commercially available spinal cord stimulator.	In development; Concept phase



Deep Brain Stimulation	Status
A deep brain electrode that may allow “directional” stimulation, increasing the precision of the stimulation target. The electrode would connect to a permanently implanted commercially available deep brain stimulator.	Concept phase



# DIRE NEED FOR IMPROVED ELECTRODE TECHNOLOGY

- Despite large advances in therapeutics and surgical options over the last few decades, one area that has not seen significant improvement is electrode technology for neurological disorders.
- These disorders include epilepsy, Parkinson's disease, essential tremors, dystonia, chronic back pain and more.
- Most companies with current technologies are focused on software and hardware and have neglected electrode improvements.
- Current US commercially approved electrode technologies are limited in resolution, making it more challenging to assess problematic tissue, present the inability to place minimally invasively, require multiple surgeries, utilize technology from the 1960's, rely on manual labor, are associated with high manufacturing costs and frequent backorders. No US commercially approved electrodes have the scalability for artificial intelligence medical applications.

# What physicians want in new electrode technology



## Less Invasive Surgeries

- Reduced number of surgeries for diagnosis and treatment
- Minimally invasive procedures
- Reduced brain inflammation

## Improve surgical outcomes

- Decreased procedure time
- Ability to be more precise in targeting tissue for ablation and stimulation
- Customized electrodes based upon patient need
- Short lead times to receive products

## Better Mapping Technology

- Potential for lower impedance recordings
- Capable of high definition recordings
- High confidence in identifying seizure focus

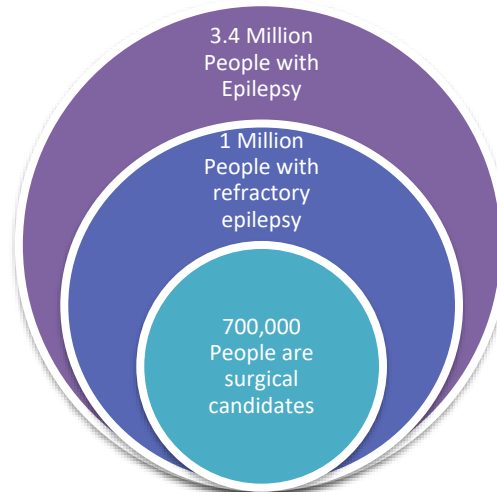
# BRAIN ELECTRODE MARKET OVERVIEW

## Quick Facts:

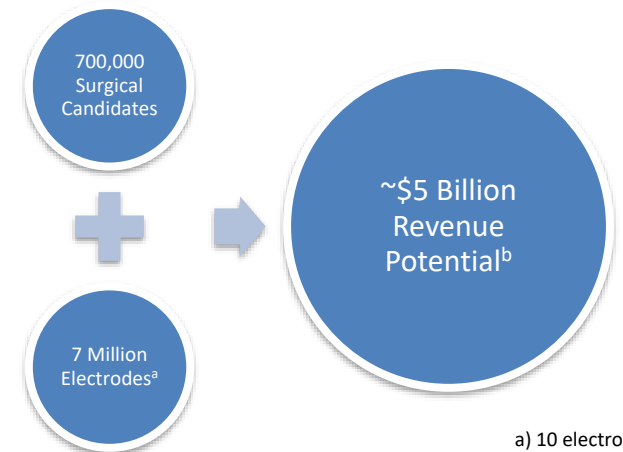
Current Value for the  
Brain Electrode Market  
\$140M<sup>2</sup>

CAGR = 4.5%<sup>2</sup>  
(2016 – 2025)

## Epilepsy Market Prevalence<sup>1</sup>

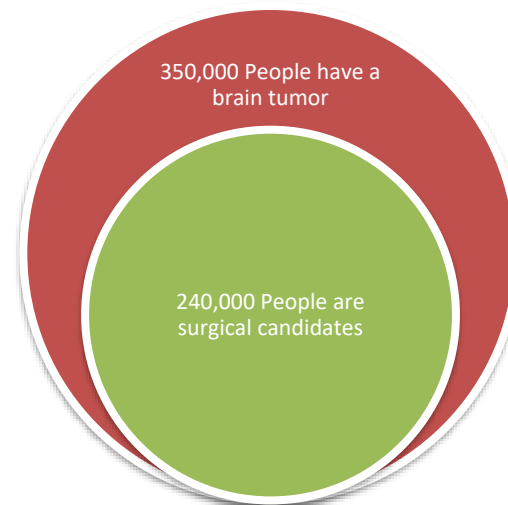


## Epilepsy Surgery Market Potential<sup>1</sup>

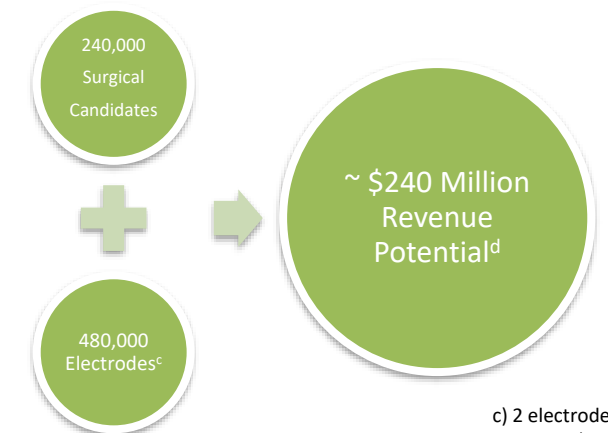


a) 10 electrodes per surgery  
b) ASP of \$750

## Brain Tumor IOM Market Prevalence<sup>1</sup>



## Brain Tumor IOM Market Potential (cortical only)<sup>1</sup>

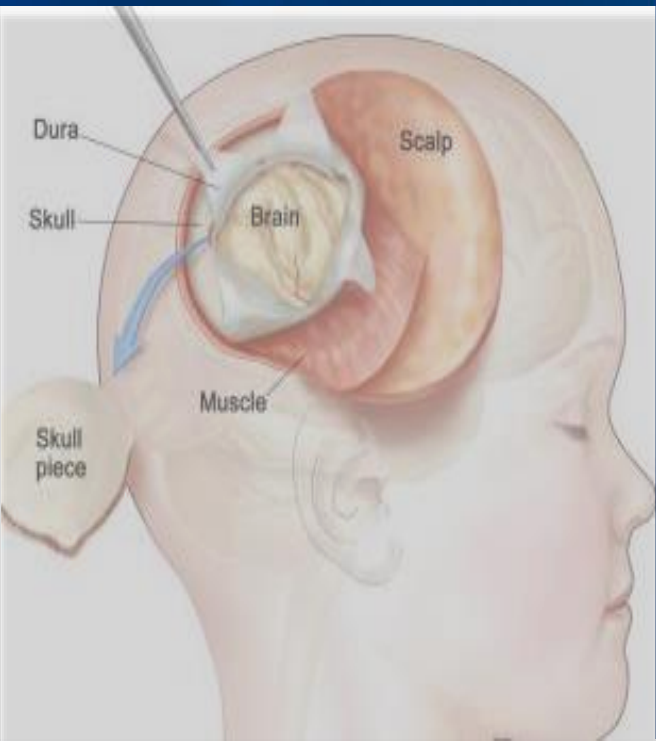


c) 2 electrodes per surgery  
d) ASP of \$500

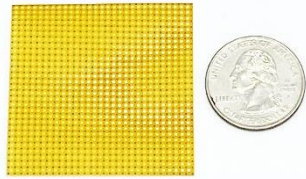
1. Noaeill, L.. (2020). NeuroOne Market Research. Unpublished data on file.  
2. Brandessence Market Research. (2019). Subdural Electrode Market. Unpublished data on file.

Applications:  
Epilepsy surgery and  
intraoperative mapping

Competitors:  
Ad-Tech, PMT, Integra, Cortec



# EVO™ CORTICAL ELECTRODE



Greater Precision

## More Control

Able to customize contact size and shape on electrodes per neurosurgeon's request.

The single substrate allows for lower impedance to improve signal quality.



Thin Film Design

## Less Bulk

The thin film, flexible design provides new options for surgical placement.

Single thin tail has less bulk while tunneling through the scalp and less incisions for possible infections.

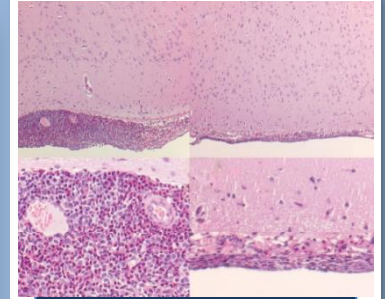


Disposable Cables

## Less Management

Eliminates the need to sterilize cables saves the surgical staff time, allowing them to focus on other important tasks.

Disposable cables saves the hospital resources by not having staff manage the sterilization of electrode cables.



Clinical Evidence

## Less Inflammation

Study conducted by the Mayo Clinic found our electrodes created less tissue inflammation on the brain after being implanted for 7 days.<sup>1</sup>

1. Bower R, et al. December 2017. Development of Polyimide electrodes for high-resolution intracranial EEG recordings. (Abst. 1.060) American Epilepsy Society. Washington, D.C.

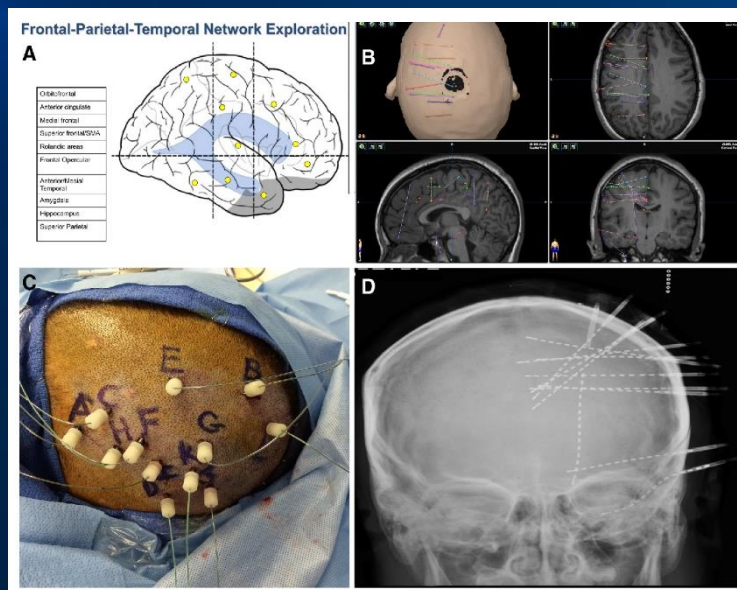
**Applications:**  
Epilepsy surgery and awake  
brain mapping procedures

**Competitors:**  
Ad-Tech, PMT, Integra, DIXI

# THIN-FILM DEPTH ELECTRODE

## NeuroOne Advantages:

- ⦿ Increase signal clarity / reduced noise
- ⦿ Better tactile feedback during insertion into brain tissue
- ⦿ MR Safe
- ⦿ Faster order fulfillment due to manufacturing process



# COMBINATION DIAGNOSTIC + ABLATION DEPTH ELECTRODE FOR EPILEPSY

**Applications:**  
Remove brain tumors and  
lesions causing seizures

**Competitors:**  
Medtronic and Monterris  
Medical

NeuroOne Advantages vs Current Laser Technology:

- One procedure for diagnostic and therapeutic expected to save time, money and potentially improved patient outcomes
- May provide bedside treatment capability saving significant time and cost
- Uses well established RF energy to ablate tissue
- Overcomes inherent laser drawbacks such as heat dissipation
- Relationship with Dr. Jorge Gonzalez, a pioneer in epilepsy surgery



NeuroOne sEEG Electrode



Fiber Optic  
Temperature Probe  
(offered by 3<sup>rd</sup> party vendors)

+



+

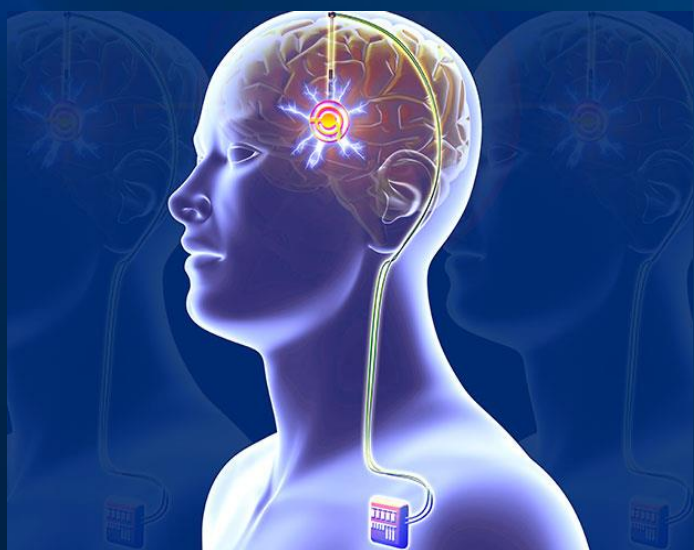
RF Generator  
(offered by 3<sup>rd</sup> party vendors)



Applications:  
Parkinson's Disease, epilepsy,  
essential tremors

Competitors:  
NeuroPace, Medtronic,  
Boston Scientific, Abbot/SJM

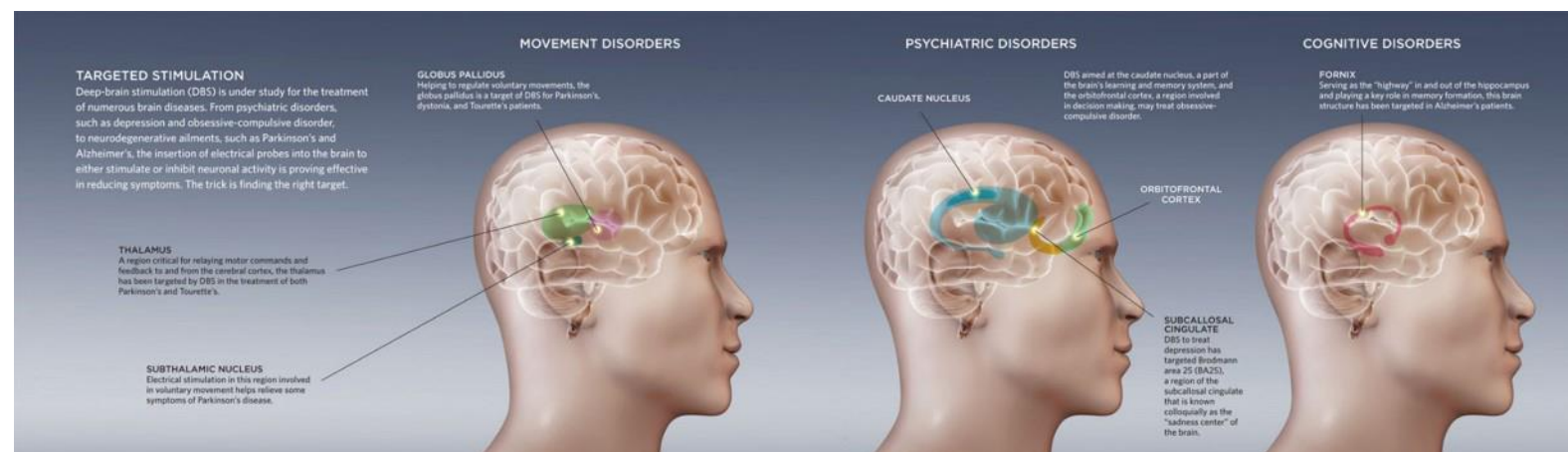
Currently a \$500M market  
with potential of \$6B



# DEEP BRAIN STIMULATION SYSTEM

## NeuroOne Advantages:

- Utilizes sEEG depth electrode design
- Our high definition electrodes have been shown to detect micro seizures<sup>1</sup> which may improve responsive stimulation algorithms
- Additional technology applications may be suitable for drug delivery



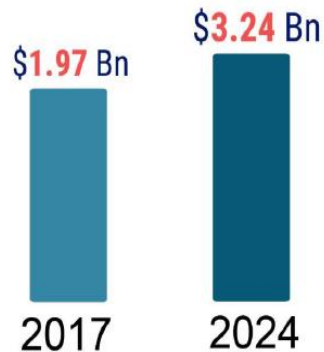
1. Bower R, et al. December 2017. Development of Polyimide electrodes for high-resolution intracranial EEG recordings. (Abst. 1.060) American Epilepsy Society. Washington, D.C.

# SPINAL CORD STIMULATION MARKET OVERVIEW

## Global Market Growth

CAGR **7.5%** (2018-2024)

### Market Revenue

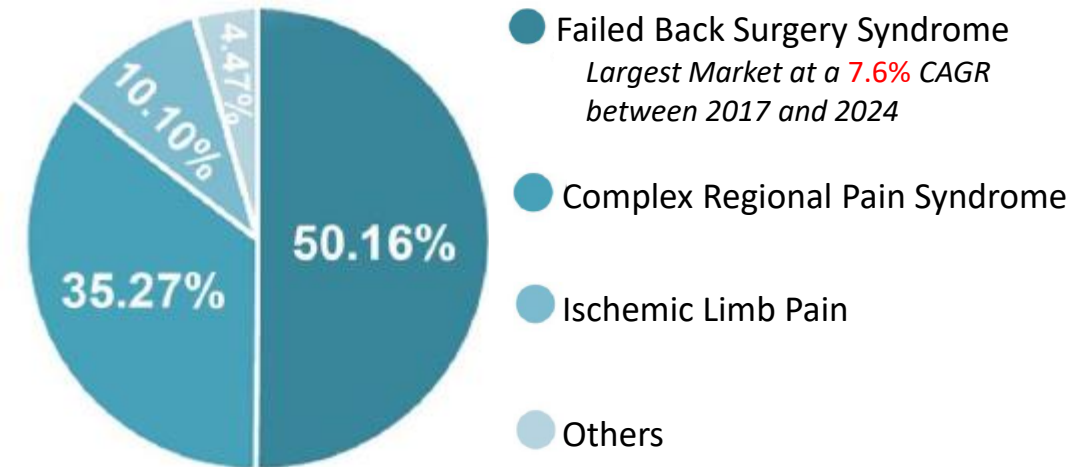


## Regions Analysis

Market Size 2017



## Market breakdown by diagnosis



## Implant Procedure Locations

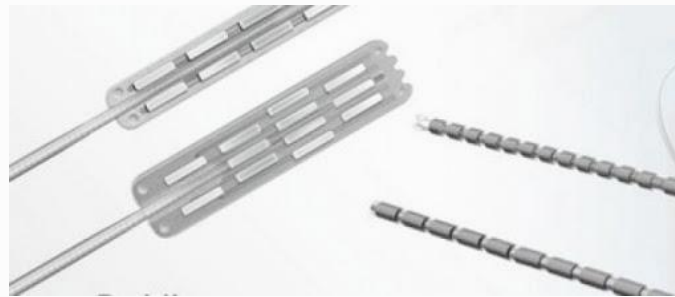


Infinium Global Research. (2018). Spinal Cord Stimulation Market. Unpublished data on file.

# SPINAL CORD STIMULATION SYSTEM

## NeuroOne Advantages:

- Ability to place permanent electrodes percutaneously
- Expandable midsection allows electrode to extend without displacement
- “Scalability” of electrodes offer greater precision of targeted stimulation area
- Design allows for use for trial period and permanent placement thereby reducing two procedures to one



Competitive solutions include paddle and cylinder electrodes which are placed via two different procedures.

Major vendors in this market include:  
Medtronic, Boston Scientific, Abbott

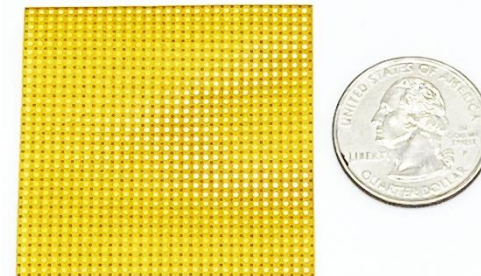


NeuroOne's solution includes a paddle implanted like a cylinder electrode so only one procedure is needed to implant the electrode.

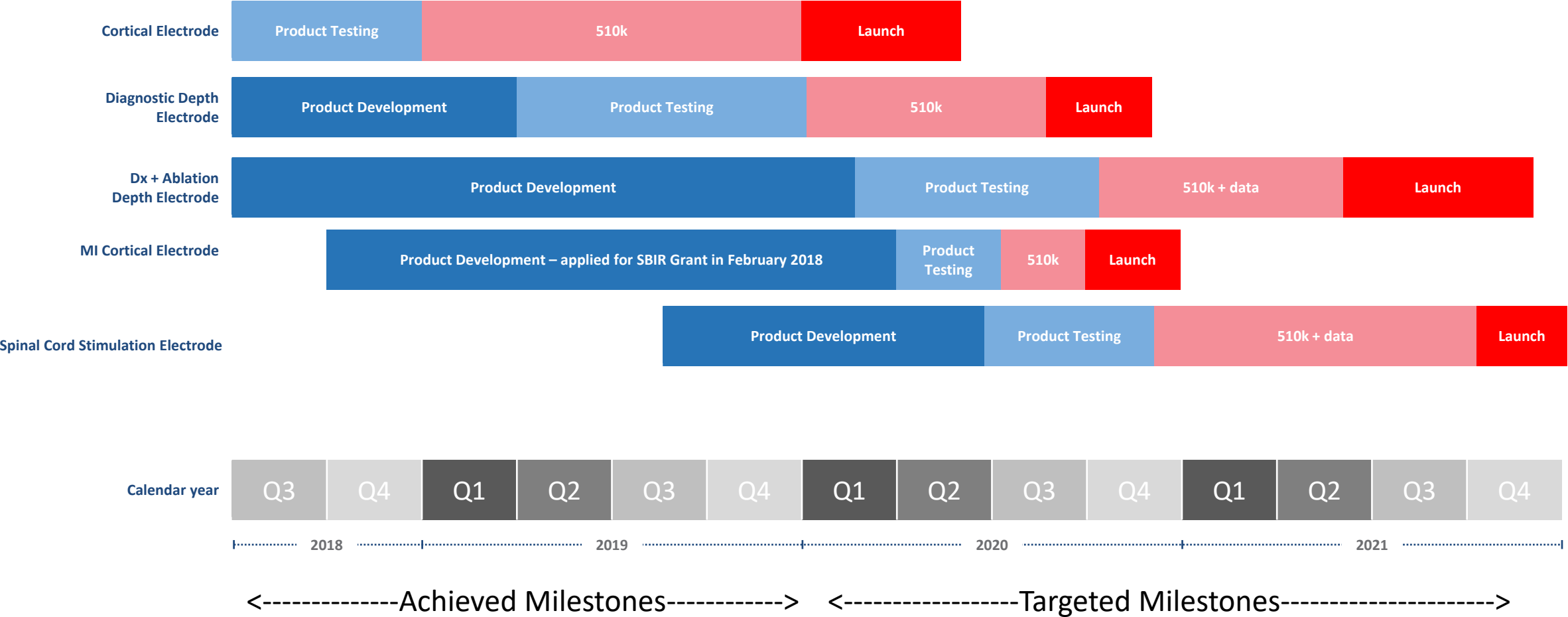
# BRIDGING THE GAP – ARTIFICIAL INTELLIGENCE (A.I.)



- Damaged neurons can cause a break in neuron to neuron connectivity: etiology for many neurological disorders
- Successful treatments achieved by implanting small wires to record and reintroduce the natural signal back
- Elon Musk and others have started companies to try to implant millions of wires in the brain
- NeuroOne's high-definition thin film platform could allow for recording and stimulation of the neurons to bridge these gaps more effectively
- NeuroOne technology is scalable allowing thousands of contacts to be implanted
- NeuroOne Advisory Board of 7 leading A.I. thought leaders established



# TARGET PRODUCT DEVELOPMENT TIMELINE<sup>1</sup>



<sup>1</sup>These targets are subject to a number of risks, uncertainties and assumptions, described further in “Forward Looking Statements” on page 2 of this presentation.

# INTELLECTUAL PROPERTY TO DATE

Freedom to Operate (FTO) Opinion Completed August 2018 – cleared to commercialize

## In-Licensed Patents From WARF At UW-Madison

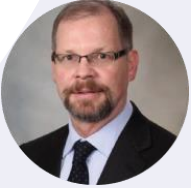
Patent No.	Issue Date	Title	Abstract Summary	Other Information to discuss
US 8,483,794	July 2013	Method for implanting an electrode that unfurls in response to a predetermined stimulus	Method of placing diagnostic film used for long-term stimulation and recording via a minimally invasive approach	Company and its patent counsel are planning new filings to update these cases. Per university patent filing protocol, foreign filings were not made on a timely basis, prior to NMTC obtaining these patent rights.
US 8,386,007	Feb 2013	Thin-film micro electrode array and method	Method and design for a long-term flexible electrode array for recording and stimulating on the cortex utilizing a minimally invasive approach	Company and its patent counsel are planning new filings to update these cases. Per university patent filing protocol, foreign filings were not made on a timely basis, prior to NMTC obtaining these patent rights.
US 7,774,053	Aug 2010	Neural probe array	Design and spacing of an array of electrodes for subdural implantation capable of drug delivery through the apertures	Company and its patent counsel are planning new filings to update these cases. Per university patent filing protocol, foreign filings were not made on a timely basis, prior to NMTC obtaining these patent rights.

## US Provisional Applications

Filing Date	Title	Abstract Summary	Other Information
Mar 2017	Improved Neural Probe Systems, Methods and Devices	Intentionally not disclosed	US & International patent application filed 4/2/2018; Patent published 10/11/18
Oct 2017	Improved Neural Probe Systems, Methods and Devices	Intentionally not disclosed	US & International patent filed 4/2/2018; Patent published 10/11/18
Mar-19	Agent Delivering Neural Probe Devices and Related Methods	Intentionally not disclosed	
Jul-19	Minimally Invasive Electrode and Delivery Device and Methods	Intentionally not disclosed	
Aug-19	Spinal Cord Stimulation Systems, Method and Delivery	Intentionally not disclosed	

# SCIENTIFIC ADVISORY BOARD

---



## Greg Worrell MD, PhD, Chairman of the Scientific Advisory Board

World renowned neurologist at Mayo Clinic. Recognized by the American Epilepsy Society (AES), the American Academy of Neurology (AAN), the American Neurological Association (ANA), and the Citizens United in Research for Epilepsy (CURE) Foundation for his contributions to the field of epilepsy research. Dr. Worrell is a frequent keynote speaker at neurology conferences and has published 90 papers.



## Jamie Van Gompel, MD

Neurosurgeon practicing at Mayo Clinic, specializing in epilepsy surgery utilizing minimally invasive techniques. Since 2008, Dr. Van Gompel has authored or co-authored 87 papers on clinical outcome projects centered on neurological conditions. Dr. Van Gompel works collaboratively with colleagues from Mayo Clinic's Epilepsy and Neurophysiology lab, engaging in clinical work relative to brain stimulation as a viable restorative therapy for epilepsy over current treatment methodologies.



## Jorge Gonzalez, MD, PhD

Neurosurgeon practicing at The University of Pittsburgh, specializing in minimally invasive surgical techniques to treat epilepsy. Dr. Gonzalez has authored or contributed to almost 200 publications. Dr. Gonzalez holds broad experience in the treatment and services of epilepsy surgery in multiple patient populations and clinical trials involving neurosurgery.



## Greg Esper, MD, MBA

Associate Professor, Vice-President of Clinical Affairs, and Director of New Care Models in the Neurology Department at Emory University. Vice Chair of the Medical Economics and Management Committee for the American Academy of Neurology (AAN). Dr. Esper was Chair of the Navigating Health Reform Task Force for the AAN in 2012.



## Justin Williams, PhD

Department Chair and Vilas Distinguished Achievement Professor at University of Wisconsin. Dr. Williams is credited with multiple publications, patents, and research in the field of thin-film electrodes for neurological recording, ablation, and stimulation.

Additional physicians from Boston Children's, UCLA, Stanford and Emory have also joined the advisory board.

# COMPANY MANAGEMENT

---



## Dave Rosa, President and Chief Executive Officer

An entrepreneur with three decades of experience in the medical device industry spanning a variety of technologies and products. In addition to CEO roles with early stage medical device companies, Mr. Rosa's background also includes senior roles with C.R. Bard Inc., Boston Scientific Inc., and St. Jude Medical, where his responsibilities included marketing, product development and business development. He has been named as an inventor on multiple medical device patents, has served on seven corporate boards, and has raised \$200M in the capital markets. Mr. Rosa holds an MBA from Duquesne University, and a BS in Commerce and Engineering from Drexel University.



## Steve Mertens, Chief Technology Officer

Prior to joining NeuroOne, Mr. Mertens was Sr. Vice President of R&D and Operations at Nuvaira, a privately held lung denervation company developing minimally invasive products for obstructive lung diseases. Before that, he was a Senior Vice President of Research and Development for Boston Scientific, where he guided a wide range of technologies through product development for the cardiology, electrophysiology, and peripheral vascular markets. Mr. Mertens holds a Bachelor of Science degree in Chemical Engineering from the University of Minnesota and a master's degree in Business Administration from the University of St. Thomas.



## Mark Christianson, Vice President of Business Development

In excess of 15 years of executive sales, sales management, marketing, and project management experience with development stage companies. Prior to NeuroOne, Mr. Christianson held the positions of North American Sales Manager for Cortec Corporation, a manufacturer of specialty chemical products, and Regional Sales Manager for PMT Corporation, a leading manufacturer of products for neurosurgery, orthopedics and plastic surgery. He holds an accounting degree from Augsburg College.



## Leah Noaeill, Senior Director of Marketing

Mrs. Noaeill comes to NeuroOne with fifteen years in medical device marketing in a connected healthcare environment. Most recently, she worked at Smiths Medical leading the Infusion Software marketing and application support teams. Prior to Smiths Medical, Mrs. Noaeill worked at Hill-Rom, managing their Respiratory Care device portfolio. She led the development and launch of the company's first mobile airway clearance vest, encompassing product definition, key opinion leader engagement, clinical claims, sales initiatives, and marketing. Prior to Hill-Rom, Mrs. Noaeill worked at Medtronic where she led marketing efforts for their Connected Care portfolio and implantable cardiac devices.

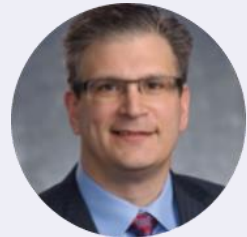
# BOARD OF DIRECTORS

---



## Paul Buckman, Chairman of the Board

Mr. Buckman is currently the President of North America of LivaNova PLC, a London-based medical device manufacturer, publicly trading on the Nasdaq. The Company develops devices used for cardiac surgery, neuromodulation, and cardiac rhythm management. LivaNova was formed by a 2015 \$2.7 billion merger between Houston, Texas-based Cyberonics, Inc., and Milan, Italy-based Sorin S.p.a. Mr. Buckman has been a co-founder, president, or CEO of several medical device companies. He has led many of these companies to successful exits. He is currently on the board of several public and private medical device firms. Mr. Buckman received a Master's degree in Business Administration and Finance and a BA degree in Business Administration from Western Michigan University.



## Dave Rosa, President and Chief Executive Officer

An entrepreneur with three decades of experience in the medical device industry spanning a variety of technologies and products. In addition to CEO roles with early stage medical device companies, Mr. Rosa's background also includes senior roles with C.R. Bard Inc., Boston Scientific Inc., and St. Jude Medical, where his responsibilities included marketing, product development and business development. He has been named as an inventor on multiple medical device patents, has served on seven corporate boards, and has raised \$200M in the capital markets. Mr. Rosa holds an MBA from Duquesne University, and a BS in Commerce and Engineering from Drexel University.



## Jeffrey Mathiesen

Mr. Mathiesen is currently the Chief Financial Officer of Gemphire Therapeutics Inc., a publicly-held clinical-stage biopharmaceutical company. He has held executive positions with publicly-traded and privately-held companies dating back to 1993, including vice president and chief financial officer positions. Mr. Mathiesen also serves as a Director, Audit Committee Chairman and Nominating and Governance Committee Member of Sun BioPharma, Inc., a publicly-traded clinical-stage biopharmaceutical company. He received a B.S. in Accounting from the University of South Dakota and is a Certified Public Accountant.



## Edward Andrie

Mr. Andrie most recently served as the General Manager of the Neuromodulation franchise at LivaNova PLC. Prior to LivaNova, Mr. Andrie served as Sorin's Vice-President of Strategy & Business Development. He also has previously held executive positions with Boston Scientific and Baxter, leading large product portfolios in both neuromodulation and cardiac devices. Mr. Andrie has been a co-founder and CEO for several early stage medical device companies in both the neuromodulation and cardiovascular industries. In addition, he has also served on the board of many privately held medical device companies. Mr. Andrie received his MBA from Stanford Graduate School of Business and his B.S. in Chemical Engineering from the University of Notre Dame.

## SELECT FINANCIAL INFORMATION

Listed on OTCQB: NMTC	Financial Data <sup>1</sup>
Price:	\$2.33
90-Day Price Range:	\$1.83 - \$3.73
Daily Volume – Last 30 Day Average:	9,737
Market Capitalization:	\$32.3 Million
Shares Outstanding:	13.9 Million
Shares in Float	~ 6.3 Million
Convertible Notes – Due May 1, 2020:	\$3.2 Million

<sup>1</sup> As of February 11, 2020

## 2020 CORPORATE GOALS

---

- Expected FDA 510(k) submission for 2<sup>nd</sup> product
- First commercial sale for human use
- Uplist to exchange
- Conclusion of PMT litigation
- Secure at least one DARPA or NIH grant for new technologies

# INVESTMENT HIGHLIGHTS

---

- Substantial market opportunity
- Disruptive, patented technologies
  - Address a significant and unmet need
  - Expectation – substantially improved outcomes
  - Meet the need to lower costs
  - Established reimbursement
- Majority of NeuroOne's products expect U.S. FDA 510(k) process
- Platform technology potential for multiple applications:
  - Diagnostic and therapeutic capabilities
  - Brain related disorders, spinal cord stimulation, AI
- Mayo and Cleveland Clinic have successfully used devices in humans or animals
- Experienced management team, Advisory Boards, and Board of Directors
- First FDA product clearance Q4 2019 with second 510(k) submission anticipated in 2020
- Growing patent portfolio



## CONTACT

---

Dave Rosa  
President and Chief Executive Officer

Email: [daver@N1MTC.com](mailto:daver@N1MTC.com)