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Medtronic to showcase real-world application of exclusive BrainSense™ technology and groundbreaking DBS research at the 2024 International Congress of Parkinson's Disease and Movement Disorders®

Medtronic plc, a global leader in healthcare technology, will spotlight the latest innovations in deep brain stimulation (DBS) at the International Congress of Parkinson's Disease and Movement Disorders® (MDS Congress) in Philadelphia, Pennsylvania, September 27 to October 1, 2024.

Medtronic will host a special interactive session to demonstrate real-world application of its exclusive BrainSense™ technology. The symposium features Medtronic DBS patient, Brandan Mehaffie; his neurologist, Dr. Sol De Jesus, Chief of the Movement Disorders Division, Penn State Health; and implanting neurosurgeon, Dr. James McInerney, Professor of the Department of Neurosurgery, Penn State Health who will demonstrate how Brandan's Percept™ PC neurostimulator with BrainSense™ works to manage his Parkinson's symptoms.

In addition, Medtronic Brain Modulation research and clinical experts will join neurologist, Dr. Todd Herrington, Director of the Deep Brain Stimulation Program, Mass General Hospital to present key lessons learned from the Adaptive DBS Algorithm for Personalized Therapy in Parkinson's Disease (ADAPT-PD) trial. The ADAPT-PD trial is a global, multi-center, prospective, single-blind, and randomized crossover study developed to evaluate the safety and effectiveness of chronic dual and single threshold adaptive deep brain stimulation† (aDBS) modes (as compared to continuous DBS) across all PD patients eligible for DBS. *Adaptive DBS (aDBS) is investigational and is not approved by the Food and Drug Administration (FDA) for commercialization in the United States (US). In the US, the safety and effectiveness of aDBS has not been established. aDBS is investigational and not available for commercial distribution in Europe. The Medtronic Adaptive DBS feature is only approved in Japan.*

"We are excited to showcase our latest groundbreaking research and innovation at the 2024 Movement Disorder Society Congress," said Rob Raike, PhD, director of Medtronic Neuromodulation Research and Technology, which is part of the Neuroscience Portfolio at Medtronic. "This Congress is an important forum for scientific exchange and underscores the criticality of academic and industry partnership. For more than 30 years, Medtronic has been

committed to advancing the clinical and scientific discipline of movement and other neurological disorders and we remain deeply invested in the advancement of DBS therapy."

Medtronic will have key Neuromodulation executives on-site including Amaza Reitmeier, vice president and general manager, Brain Modulation; Paolo Di Vincenzo, president, Neuromodulation; Robert Raike, PhD, director, Neuromodulation Research and Technology; Dara Polnerow, senior director, training and education; Kimberly Thomas-Pollei, PhD, Neuromodulation; and Jason Fiepel, senior product development director, Brain Modulation.

Attendees can explore the future of DBS at the Medtronic Innovation Tech Suite, which is behind the Medtronic exhibit booth #813. Additional details about Medtronic at the MDS Congress are listed below:

Medtronic Sponsored Symposium

"Real-world application of DBS BrainSense™ technology – The clinical journey" – innovation showcase symposium featuring live patient demonstration

- **Date:** Monday, September 30, 2024
- **Time:** 10:00-10:30 a.m. Eastern Time (ET)
- **Location:** MDS Pavilion – Exhibit Hall A (2nd level of the PA Convention Center)

Medtronic Abstracts & Oral Presentations

The following scientific abstracts and oral presentations represent the work of Medtronic employees and independent investigators using Medtronic technology in their research.

- **Programming adaptive deep brain stimulation in the clinic: lessons from the ADAPT-PD trial.** *Todd Herrington, Martijn Beudel, Jill Ostrem, Simon Little, Leonardo Almeida, Adolfo Ramirez-Zamora, Alfonso Fasano, Travis Hassell, Kyle Mitchell, Elena Moro, Michal Gostkowski, Nagaraja Sarangmat, Scott Stanslaski, Lisa Tonder, Ye Tan, Rebekah Summers, Tim Goble, Robert Raike, Helen Bronte-Stewart*
    - **Featured on Saturday, September 28 at 1:30 – 2:30 p.m. ET via Oral Platform Presentation Group 1: Clinical Trials**
- **Monopolar sensing improves the efficiency of DBS programming in Parkinson's disease.** *John Thompson, Erin Radcliffe, Steven Ojemann, Daniel Kramer, Michelle Case, Caleb Zarns, Abbey Holt-Becker, Robert Raike, Alexander Baumgartner, Drew Kern*
- **Correlation of neural sensing with the volume of neural activation within the desired patient-specific anatomical target in deep brain stimulation for Parkinson's disease.** *Michelle Case, Caleb Zarns, Abbey Holt-Becker, Robert Raike, Erin Radcliffe, John Thompson, Drew Kern*
- **Comparison of monopolar and bipolar sensing of beta frequency in Parkinson's disease of the subthalamic nucleus for deep brain stimulation**. *Drew Kern, Erin Radcliffe, Steven Ojemann, Daniel Kramer, Michelle Case, Caleb Zarns, Abbey Holt-Becker, Robert Raike, Alexander Baumgartner, John Thompson*
- **Comparing ring and directional globus pallidus stimulation effects on Parkinson's gain.** *Anjanibhargavi Ragothaman, Zachary Nhem, Graham Harker, Patricia Carlson-Kuhta, Lee Neilson, Caleb Zarns, Michelle Case, Abbey Becker, Robert Raike, Kim Burchiel, Martina Mancini, Delaram Safarpour*
- **Case studies of real-world brain sensing showing patient-specific trends to inform therapy management in Parkinson's disease.** *Amin Nourmohammadi, Elizabeth Fehrmann, Abbey Holt-Becker,*

Robert Raike

- **Real-world Programming and Sensing from Adaptive Deep Brain Stimulation for Parkinson's Disease in Japan.** *Genko Oyama, Katsuo Kimura, Haruhiko Kishima, Nagako Murase, Yoshio Tsuboi, Takashi Tsuboi, Tatsuya Takezaki, Yoshinori Higuchi, Takao Hashimoto, Yasushi Shimo, Thomas C. Brionne, Isabelle Buffin, Kazuhiro Hidaka, Filippo Coletti, Roy Amit, Nathan Morelli, Hideo Mure and Hideki Oshima*

The globally recognized MDS Congress is held during a year of significant advancements from Medtronic Brain Modulation, including the U.S. Food & Drug Administration (FDA) and CE (Conformité Européenne) Mark approvals of the Medtronic Percept™ RC neurostimulator as well as FDA approval of Asleep DBS for people with Parkinson's disease or essential tremor and expanded MRI labeling - both exclusive to Medtronic DBS. Medtronic also recently announced the publication of its ADAPT-PD clinical trial methods manuscript.

Since 1987, Medtronic has served more than 185 thousand patients with movement disorders and other indications in more than 70 countries with its life-changing DBS therapy[1].

About Medtronic

Bold thinking. Bolder actions. We are Medtronic. Medtronic plc, headquartered in Galway, Ireland, is the leading global healthcare technology company that boldly attacks the most challenging health problems facing humanity by searching out and finding solutions. Our Mission — to alleviate pain, restore health, and extend life — unites a global team of 95,000+ passionate people across more than 150 countries. Our technologies and therapies treat 70 health conditions and include cardiac devices, surgical robotics, insulin pumps, surgical tools, patient monitoring systems, and more. Powered by our diverse knowledge, insatiable curiosity, and desire to help all those who need it, we deliver innovative technologies that transform the lives of two people every second, every hour, every day. Expect more from us as we empower insight-driven care, experiences that put people first, and better outcomes for our world. In everything we do, we are engineering the extraordinary. For more information on Medtronic, visit www.Medtronic.com and follow on LinkedIn.

Any forward-looking statements are subject to risks and uncertainties such as those described in Medtronic's periodic reports on file with the Securities and Exchange Commission. Actual results may differ materially from anticipated results.

Medtronic DBS therapy is approved for five indications: Parkinson's disease, essential tremor, dystonia, obsessive-compulsive disorder (OCD), and epilepsy. Indications vary by product. Refer to product labeling for details. **Humanitarian device:** The effectiveness of these devices for the treatment of dystonia or obsessive-compulsive disorder has not been demonstrated.

References

1. Medtronic data on file.

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https://news.medtronic.com/Medtronic-to-showcase-real-world-application-of-exclusive-BrainSense-TM-technology-and-groundbreaking-DBS-research-at-the-2024-International-Congress-of-Parkinsons-Disease-and-Movement-Disorders-R