Neuromodulation: Technology at Neural Interface  Editorial Board Members Conflict of Interest Disclosures

**Thomas Abell, MD**  
Consultant/Advisory Board: Nuvaira, Enterra Medical, Vanda  
Speaker: Enterra Medical  
Main Funding: NIH, GpCRC, Gastric Dysrhythmias  
Investigator: Vanda, Neurogastrx, Processa, CinDome (none currently active)

**Alaa Abd-Elsayed, MD**  
Consultant/Advisory Board: Medtronic and Avanos

**Magdalena Anitescu, MD, PhD**  
Consultant/Advisory Board: Boston Scientific, Medtronic  
Speaker Programs: Boston Scientific  
Leadership Roles: NANS-director at large, board member, INS-director at large, board member, WIN-past chair, ASRA-resident committee liaison, ASRA Cancer Sig-Chair, ASA PBLD committee chair

**Giancarlo Barolat, MD**  
Speaker Programs: Boston Scientific, Nevro  
Company Employee: Microleads, DeFuse  
Consultant/Advisory Board Income: Galvani Bioelectronics, Medtronic, Microleads, DeFuse  
Stock Options: Microleads, DeFuse

**Jocelyne Bloch, MD**  
Speaker Programs: GTX  
Consultant/Advisory Board: GTX  
Company Employee: GTX  
Intellectual Property: GTX  
Education/Research Grants: GTX  
Stockholder: GTX

**Stana Bojanic, BSc, MBBS:** *Nothing to Disclose*

**Helen Bronte-Stewart, MD MSE**  
Speaker Program: Medtronic  
Consultant/Advisory Board: Medtronic

**Eric Buchser, MD, DEAA**  
Consultant/Advisory Board Income: Medtronic

**Alexios Carayannopoulos, DO, MPH**  
CEO and Founder of Pain Spine and Rehabilitation Consulting Inc, Boston MA

**Jiande Chen, PhD:** *Nothing to Disclose*

**William Omar Contreras López, MD, PhD:**  
Speaker Program and Travel Support: Boston Scientific

**Fabián Cremaschi, MD, MSc:** *Nothing to Disclose*
Arthur Cukiert, MD, PhD: Nothing to Disclose

Paresh K. Doshi, MS, MCh: Nothing to Disclose

Ryan S. D’Souza, MD: Nothing to Disclose

Alessandro Dario, MD: Nothing to Disclose

Dirk De Ridder, MD
Speaker Program: Abbott
Consultant/Advisory Board: Abbott
Intellectual Property / Licensing: Burst stimulation IP is licensed to Abbott
Education/Research Grants: Abbott

Catherine DeAngelis, MD, MPH: Nothing to Disclose

Timothy Deer, MD
Consultant/Advisory Board: Abbott, Axonics, Boston Scientific, Medtronic, Nalu, Nevro, Saluda Medical, Vertiflex, Vertos, Flowonix, SpineThera, Cornerloc, Ethos, SPR Therapeutics, Stimigenics, SI Bone, PainTeq
Intellectual Property: Abbott
Education/Research Income: Abbott, Mainstay, Saluda, Vertiflex, Vertos, SPR Therapeutics, Boston Scientific
Stockholder: Ethos
Stock Options Value: Axonics, Bioness, Nalu, Vertos, Vertiflex, Saluda, Spinethera

Laura Demartini, MD
Speaker Programs: Abbott, Boston Scientific,
Consultant/Advisory Board: Boston Scientific

Mike JL DeJongste MD, PhD, FESC: Nothing to Disclose

Stefan De Wachter, MD, PhD
Shareholder: Amber Therapeutics, Minzehealth
Consultant/Advisory Board: Medtronic

Sam Eldabe, MBBS
Consultant / Advisory Board: Abbott, Mainstay, Medtronic, Saluda Medical
Education/Research Grants: Boston Scientific, Medtronic
Stockholder: Electrocore

James J. Fitzgerald, MA, BM, BCh, PhD
Consultant / Advisory Board: Abbott, Medtronic
Education/Research Grants: Abbott

Robert Foreman, PhD: Nothing to Disclose
Tiago da Silva Freitas, MD, PhD: Nothing to Disclose

Christopher Gilligan, MD, MBA
Consultant / Advisory Board: Mainstay Medical, Persica Pharmaceuticals, Iliad Lifesciences, Saluda, Expert Witness
Stock Options: Mainstay Medical
Ownership Interest: Iliad Lifesciences

Peter Goadsby, MD, PhD, DSc
Consultant/Advisory Income: Aeon Biopharma, Alder Biopharmaceuticals, Amgen, Allergan, Biohaven Pharmaceuticals, Clexio, Eli Lilly, Teva Pharmaceuticals, Electrocore, eNeura, GlaxoSmithKline, MundiPharma, Novartis, Pfizer, Santara Therapeutics, WL Gore, Gerson Lehrman Group, Guidepoint, Impel Neuropharma, Epalex
Stock Options: Trigemina, Inc.
Educational/Research: Amgen, Celgene, Eli Lilly (all paid to University)
Intellectual Property: eNeura- Magnetic Stim for HA (assigned to eNeura; no fees)

Lisa Goudman, PhD, MS: Nothing to Disclose

Jay Grider, DO, PhD, MBA: Nothing to Disclose

Warren Grill, PhD
Consultant / Advisory Board: Axonics, Boston Scientific, Cala Health, Galvani Bioelectronics, SPR Therapeutics, Hatteras Ventures, Broadview Ventures, Dignify Therapeutics
Company Employee: NDI Healthcare Fund, SPR Therapeutics, CheckPoint Surgical, Deep Brain Innovations
Intellectual Property: Galvani Bioelectronics, Deep Brain Innovations
Education / Research: Boston Scientific, LivaNova/Cyneronics, Medtronic, Dignify Therapeutics, EPIC Medical / Platinum Group Coatings
Stock Options: Cala Health, Blackfyn, NDI Health Care Fund, SPR Therapeutics, Deep Brain Innovations

Yun Guan PhD, MD
Speaker Programs: Medtronic
Consultant / Advisory Board: Medtronic
Education/Research Income: Medtronic, TissueTech, Inc.

Ashish Gulve, MD
Speaker Programs: Medtronic, Boston Scientific, Nevro, Mainstay Medical
Consultant: Medtronic
Data Safety Monitoring Board or Advisory Board: Medtronic
Receipt of Equipment, Materials, Drugs, Medical Writing or Gifts: Medtronic and Abbott paid to the Institution

Jon Hagedorn, MD: Nothing to Disclose

Salim Hayek, MD, PhD: Nothing to Disclose

Frank Huygen, MD, PhD
Director of neuromodulation academy: Sponsored by Abbott
Consultant/Advisory Board: Abbott, Boston Scientific, Saluda, Spinal Modulation
Educational Programs: Saluda, Grunenthal

**George M Ibrahim, MD PhD**
Speaker Program Income: Medtronic, LivaNova, Synergia
Consultant/Advisory Board Income: Medtronic, LivaNova, Synergia
Advisory Board: Medtronic, LivaNova, Synergia

**Bert (E.A.) Joosten PhD**
Speaker Programs: Medtronic and Saluda Medical
Consultant/Advisory Board: Medtronic and Saluda Medical
Education/Research Grants: Medtronic, Abbott and Boston Scientific

**Leonardo Kapural, MD, PhD**
Speaker Program Income: Medtronic, Nevro, Abbott, Nalu, Biotronik, Stimgenics
Consultant/Advisory Board Income: Medtronic, Nevro, Abbott, Nalu, Biotronik, Stimgenics
Medico/Legal: Medtronic, Nevro, Abbott, Nalu, Biotronik, Stimgenics
Education/Research Income: Biotronik, Nevro, Saluda Medical, Gimer
Stockholder Stock Value: Nalu
Stock Options Value: Nalu

**Zelma Kiss, MD, PhD: Nothing to Disclose**

**Charles Knowles, BChir, MA, PhD**
• Speaker Program Income: Medtronic, Saluda Medical
• Consultant/Advisory Board Income: Medtronic
• Education/Research Income: Medtronic, Saluda Medical

**Shivanand P. Lad, MD, PhD**
Consultant/Advisory Board Income: Medtronic, Abbott, Boston Scientific, Mainstay Medical, Nevro, Higgs Boson Health, Minnetronix Medical, Presidio Medical
Education/Research Income: Abbott, Boston Scientific, Mainstay Medical, Medtronic, Nevro
Stock Options: Higgs Boson Health, Minnetronix Medical, Presidio Medical

**Scott Lempka, PhD:**
Consultant/Advisory Board Income: Abbott Neuromodulation, CereGate, and Presidio Medical, Inc.
Stock or Stock Options: CereGate, Hologram Consultants, LLC, Neuronoff, Inc., and Presidio Medical, Inc.

**Robert Levy, MD, PhD**
Consultant/Advisory Board Income: Saluda Medical, Nalu, Mainstay Medical (last compensation received <3 years prior)
Stock Options: Nalu, Saluda Medical

**Bengt Linderoth, MD, PhD**
Speaker Program Income: Boston Scientific, Medtronic, Abbott, Elekta AB Stockholm (Stereotactics)
Consultant/Advisory Board Income: Boston Scientific, Elekta AB, Medtronic
John Loeser, MD: Nothing to Disclose

Guoming Luan, MD, PhD: Nothing to Disclose

Andre Machado, MD, PhD
• Consultant/Advisory Board Income: Abbott, Spinal Modulation:DSMB
• Education/Research Income: Medtronic (fellowship support)
• Stockholder Stock Value: Autonomic Technologies, Cardionomics, Enspire
• Stockholder Stock Value >5%: My wife and I are inventors and our IP is part of the intellectual property base for these companies.
• Intellectual Property / Licensing: Autonomic Technologies, Cardionomics, Enspire

Sean Mackey MD, PhD: Nothing to Disclose

Georgios Matis, MSc, PhD:
Speaker Programs: Boston Scientific
Consultant/Advisory Board: Boston Scientific
Education/Research Grants: Boston Scientific

Cameron McIntyre, PhD
Speaker Programs: Boston Scientific
Consultant/Advisory Board Income: Boston Scientific, Surgical Information Sciences, CereGate
Intellectual Property: Boston Scientific, Hologram Consultants, Neuros, Qr8 Health
Stockholder Stock Value: Hologram Consultants, Surgical Information Sciences, CereGate

Nagy Mekhail, MD, PhD
Consultant/Advisory Board Income: Abbott, Boston Scientific, Relievant Medsystems, Vivex therapeutics and Solis therapeutics

Maarten Moens, MD, PhD
Speaker Programs: Medtronic, Nevro
Consultant/Advisory Board Income: Medtronic
Education/Research Income: Medtronic, Nevro

Alon Mogilner, MD, PhD
• Consultant/Advisory Board Income: Medtronic, Abbott, Alpha Omega
• Education/Research Income: Boston Scientific, Medtronic

Richard North, MD
Consultant/Advisory Board Income: The charitable nonprofit Neuromodulation Foundation, of which Dr. North is an unpaid officer, has received grant support and income from industry, including Abbott, Boston Scientific, Medtronic, Nevro, Algostim/Nuvectra, and Stimwave. • Stockholder Stock Value >5%: Stimwave (3-owned by spouse)
Medico-Legal Consulting: Stimwave/Stimrelieve

Turo Nurmikko, MD, PhD
• Consultant/Advisory Board Income: Nexstim

Bart Nuttin, MD, PhD
Speaker Program Income: Medtronic
Intellectual Property: Medtronic
Education/Research Income: Medtronic

**Joseph Pancrazio, PhD:** Nothing to Disclose

**Erika Petersen, MD**
Speaker Programs: Medtronic, Nevro
Consultant/Advisory Board Income: Abbott, Medtronic, Nevro
Education/Research Grants: Medtronic, Nevro, Neurors, ReNeuron
Stock Options: SynerFuse

**Noah Philip, MD**
Grants or Contracts: Device support through VA clinical trial contracts (Wave Neuro), Multisite commercial study, through VA clinical trial contracts. (Neurolief)

**Fabian Piedimonte, MD**
Speaker Programs: Abbott, Medtronic
Consultant/Advisory Board Income: Abbott, Medtronic

**Julie Pilitsis, MD, PhD**
Speaker Programs: Boston Scientific, Medtronic, Abbott
Consultant / Advisory Board: Boston Scientific, Medtronic, Abbott, Karuna Labs, Nevro, Saluda Medical, TerSera; AIM Medical Robotics
Education / Research: Boston Scientific, Abbott, Medtronic, Nevro, TerSera; NIH
Stock Options: Karuna Labs, AIM Medical Robotics

**Heather Pinckard-Dover, MD:** Nothing to Disclose

**Mark Plazier, MD, PhD:**
Consultant / Advisory Board: Boston Scientific, Medtronic, Abbott, Saluda Medical
Payment/Honoraria: Medtronic, Saluda Medical, Abbott, Boston Scientific
Travel Support: Boston Scientific, Abbott, Medtronic,
Expert Testimony: Saluda Medical

**Ela Plow, PhD, PT:** Nothing to Disclose

**Lawrence Poree, MD PhD**
Consultant/Advisory Board Income: Medtronic, Nalu Medical, Saluda Medical
Education/Research Income: Abbott, Saluda Medical
Stock Options: Nalu, Saluda Medical

**Nader Pouratian, MD, PhD**
Speaker Programs: BrainLab
Consultant/Advisory Board Income: Abbott, Boston Scientific
Education/Research Income: Abbott, Boston Scientific, Medtronic

**David Provenzano, MD:**
Consultant/Advisory Board Income: Medtronic, Avanos, Boston Scientific, SI Bone
Education/Research Income: Pain Diagnostics and Interventional Care has received research support from Avanos, Boston Scientific, Medtronic, Nevro, Stimgenics and Abbott

**James Rathmell, MD**: *Nothing to Disclose*

**Ahmed Raslan, MD**: *Nothing to Disclose*

**Richard Rauck, MD**
- Speaker Programs: BDSI
- Consultant / Advisory Board: Boston Scientific, Mainstay, BDSI, Saluda
- Education/Research Income: Boston Scientific, Medtronic, Nevro, Bioness, Biogen, Seikagaku, Mainstay, Saluda, SPR Therapeutics

**Marc Russo, MBBS**: *Nothing to Disclose*

**Oren Sagher, MD**
Stockholder: Digital Surgery Systems

**Siamak Salavatian, MEng, PhD**
Owner of Consulting Firm NeuroCardio, LLC
Receipt of Equipment, Materials or Other Services: Presidio and Cardionomic

**Andrei Sdrulla, MD, PhD**: *Nothing to Disclose*

**Eellan Sivanesan, MD**: *Nothing to Disclose*

**Konstantin Slavin, MD**
Consultant/Advisory Board Income: Boston Scientific, Medtronic, Autonomic Technologies, Bioness, Biotronik, Abbott, Nuvecra, Stimwave
Stock Options: Stimwave
Stockholder: Thermaquil
Education/Research Income: Boston Scientific, Medtronic, Abbott (fellowship support to institution)

**Michael Stanton-Hicks, MBBS, DMED**: *Nothing to Disclose*

**Monique Steegers, MD, PhD**: *Nothing to Disclose*

**Rod Taylor, MSc, PhD**: *Nothing to Disclose*

**Simon Thomson, MBBS**
Speaker Programs: Boston Scientific
Consultant/Advisory Board: Boston Scientific

**Kyrana Tsapkini, PhD**
Grant Support: YBrain, Inc.
Grant and Support for Travel: NIH/NIA (through R01s)
**Ricardo Vallejo, MD, PhD**
Speaker Programs: Avanos, Medtronic
Consultant/Advisory Board: Medtronic
Company Employee: CEO of SGX Medical. No commercial product. Performing clinical research
Intellectual Property: No royalties from any IPs
Education/Research Grants: SGX Medical (I am the CEO) sponsors animal research
Stockholder: SGX medical. I am CEO and shareholder. No commercial product.
Stock Options: SGX medical.

**Jan Vesper, MD, PhD**
Speaker Programs: Abbott, Autonomic Technologies, UniQuire
Consultant/Advisory Board: Abbott, Boston Scientific
Education/Research Grants: Medtronic- Devices for a funded multicenter RCT study

**Kristl Vonck, MD, PhD**
Speaker Programs: LivaNova/Cyberonics
Consultant/Advisory Board: LivaNova/Cyberonics, Synergia Medical

**Eric Wassermann, MD:** Nothing to Disclose

**Christopher J. Winfree, MD:** Nothing to Disclose