# Derron Keith Wilson, MD, FIPP

Goodman Campbell Brain & Spine; 13345 N. Illinois Street • Carmel, IN 46032 Office: 317-396-1131 • Fax: 317-870-2728 • Mobile: 317-476-2464 Email: dwilson@goodmancampbell.com

# **EDUCATION**

January 2004 – December 2004	Pain Management Fellowship Department of Anesthesiology Indiana University School of Medicine Indianapolis, Indiana 46202
July 1998 – July 2001	Anesthesiology Residency Department of Anesthesiology Indiana University School of Medicine Indianapolis, Indiana 46202
July 1996 - September 1997	Obstetrics and Gynecology Residency Department of Obstetrics and Gynecology Indiana University School of Medicine Indianapolis, Indiana 46202
August 1992 – June 1996	Doctor of Medicine Indiana University School of Medicine Indianapolis, Indiana 46202
August 1988 – May 1992	Bachelor of Science Purdue University Major: Biological Sciences West Lafayette, Indiana 47907
PROFESSIONAL EXPERIENCE	
March 2024 – Present	Adjunct Assistant Professor in Weldon School of Biomedical Engineering Purdue University West Lafayette, IN 47907

January 2019 – Present Clinical Assistant Professor for Marian University College of Osteopathic Medicine Indianapolis, IN 46222

December 2004 – Present Director of Interventional Pain Management Goodman Campbell Brain & Spine Indianapolis, IN 46260

January 2010 – September 2019	Assistant Professor of Clinical Neurosurgery Department of Neurological Surgery Indiana University School of Medicine Indianapolis, Indiana 46202
July 2015 – Present	Vice-President Indiana American Society of Interventional Pain Physicians Paducah, KY 42001
July 2001 – December 2003	Director of Anesthesia Witham Medical Services Lebanon, Indiana 46052
January 2002 – December 2002	Vice-Chief of Surgery Witham Medical Services Lebanon, Indiana 46052

# CONSULTING

Abbott Saluda Biotronik Boston Scientific/Vertiflex, Inc. Medical/Legal Consulting and Expert Witness

# **CURRENT FACULTY APPOINTMENTS**

North American Neuromodulation Society (NANS)

- NANS Education Committee
- Co-Chair (Pain) Abstract Committee for the NANS 2025 Annual Meeting
- International Neuromodulation Society (INS)
  - INS Education & CME Committee
  - INS Young Neuromodulators Committee
- American Society of Pain & Neuroscience (ASPN)
  - Board Member

# **SCIENTIFIC ACTIVITIES**

# **Publications**

# **Peer Reviewed Journals**

James J. Yue MD DABPM, Christopher J. Gilligan MD, MBA, Steven Falowski MD, Jessica Jameson MD, Mehul J. Desai MD, MPH, Susan Moeschler MD, Julie Pilitsis MD, PhD, Robert Heros MD, Edward Tavel MD, Sayed Wahezi MD, Robert Funk MD, Patrick Buchanan MD, Anne Christopher MD, Jacqueline Weisbein DO, Denis Patterson DO, Robert Levy MD PhD, Ajay Antony MD, Nathan Miller MD, Keith Scarfo DO, Scott Kreiner MD, **Derron Wilson MD**, Chi Lim MD, Edward Braun MD, David Dickerson MD, Jonathan Duncan MD, Jijun Xu MD, Kenneth Candido MD, Ibrahim Mohab MD, Fishell Michael MD, Bram Blomme PhD, Udoka Okaro PhD, Timothy Deer MD., Surgical treatment of refractory low back pain using implanted BurstDR spinal cord stimulation (SCS) in a cohort of patients without options for corrective surgery: findings and re- sults from the DISTINCT study, a prospective randomized multi-center-controlled trial, *North American Spine Society Journal (NASSJ)* (2024), doi: https://doi.org/10.1016/j.xnsj.2024.100508

Timothy Deer, Christopher Gilligan, Steven Falowski, Mehul Desai, Julie Pilitsis, Jessica Jameson, Susan Moeschler, Robert Heros, Edward Tavel, Anne Christopher, Denis Patterson, Sayed Wahezi, Jacqueline Weisbein, Ajay Antony, Robert Funk, Mohab Ibrahim, Chi Lim, **Derron Wilson**, Michael Fishell, Keith Scarfo, David Dickerson, Edward Braun, Patrick Buchanan, Robert M. Levy, Nathan Miller, Jonathan Duncan, Jijun Xu, Kenneth Candido, Scott Kreiner, Marie E. Fahey, James Yue; Treatment of Refractory Low Back Pain Using Passive Recharge Burst in Patients Without Options for Corrective Surgery: Findings and Results From the DISTINCT Study, a Prospective Randomized Multicenter Controlled Trial, Neuromodulation: Technology at the Neural Interface, 2023, ISSN 1094-7159, <u>https://doi.org/10.1016/j.neurom.2023.07.009</u>.

Patterson, D.G., **Wilson, D**., Fishman, M.A. *et al.* Objective wearable measures correlate with self-reported chronic pain levels in people with spinal cord stimulation systems. *npj Digit. Med.* **6**, 146 (2023). https://doi.org/10.1038/s41746-023-00892-x

Heros, R., Patterson, D., Huygen, F., Skaribas, I., Schultz, D., **Wilson, D.**, Fishman, M., Falowski, S., Moore, G., Kallewaard, J., Dehghan, S., Kyani, A., Mansouri, M., Objective wearable measures and subjective questionnaires for predicting response to neurostimulation in people with chronic pain. *Bioelectronic Medicine* **9**, 13 (2023). https://doi.org/10.1186/s42234-023-00115-4

Deer, T., **Wilson, D**., Schultz, D., Falowski, S., Tavel, E., Moore, G., Heros, R., Patterson, D., Fahey, M., Capobianco, R. and Anitescu, M. (2021), Ultra-Low Energy Cycled Burst Spinal Cord Stimulation Yields Robust Outcomes in Pain, Function, and Affective Domains: A Sub-analysis From Two Prospective, Multicenter, International Clinical Trials. Neuromodulation: Technology at the Neural Interface. doi:<u>10.1111/ner.13507</u>

Deer TR, Russo MA, Grider JS, Pope J, Rigoard P, Hagedorn JM, Naidu R, Patterson DG, **Wilson D**, Lubenow TR, Buvanendran A, Sheth SJ, Abdallah R, Knezevic NN, Schu S, Nijhuis H, Mehta P, Vallejo R, Shah JM, Harned ME, Jassal N, Gonzalez JM, Pittelkow TP, Patel S, Bojanic S, Chapman K, Strand N, Green AL, Pahapill P, Dario A, Piedimonte F, Levy RM. The Neurostimulation Appropriateness Consensus Committee (NACC): Recommendations for Surgical Technique for Spinal Cord Stimulation. Neuromodulation. 2022 Jan;25(1):1-34. doi: 10.1016/j.neurom.2021.10.015. PMID: 35041578. Deer, T. R., Pope, J. E., Lamer, T. J., Grider, J. S., Provenzano, D., Lubenow, T. R., FitzGerald, J. J., Hunter, C., Falowski, S., Sayed, D., Baranidharan, G., Patel, N. K., Davis, T., Green, A., Pajuelo, A., Epstein, L. J., Harned, M., Liem, L., Christo, P. J., Chakravarthy, K., Gilmore, C., Huygen, F., Lee, E., Metha, P., Nijhuis, H., Patterson, D. G., Petersen, E., Pilitsis, J. G., Rowe, J. J., Rupert, M. P., Skaribas, I., Sweet, J., Verrills, P., **Wilson, D**., Levy, R. M. and Mekhail, N. (2018), The Neuromodulation Appropriateness Consensus Committee on Best Practices for Dorsal Root Ganglion Stimulation. Neuromodulation: Technology at the Neural Interface. doi:<u>10.1111/ner.12845</u>

Deer, T., Slavin, K. V., Amirdelfan, K., North, R. B., Burton, A. W., Yearwood, T. L., Tavel, E., Staats, P., Falowski S., Pope, J., Justiz, R., Fabi, A. Y., Taghva, A., Paicius, R., Houden, T. and **Wilson, D**. (2018), Success Using Neuromodulation With BURST (SUNBURST) Study: Results From a Prospective, Randomized Controlled Trial Using a Novel Burst Waveform. Neuromodulation: Technology at the Neural Interface, 21: 56-66. doi:10.1111/ner.12698

Moore DH, **Wilson DK**, Hurteau JA, Look KY, Stehman FB, Sutton GP. Gynecologic Cancers Metastatic to the Breast. Journal American College of Surgeons, 1998 Aug; 187(2):178-81.

#### Peer Reviewed Meeting Publications/Presentations/Abstracts

**Derron Wilson**, Steven Falowski, David Dickerson, Denis Patterson, Joacir Graciolli Cordeiro, Kiran Patel, Angel Boev, Yury Rabitnikov, Ioannis Skaribas, Jacqueline Weisbein, Alexander Benison, Natalie Brill, Timothy Deer. Limb Survival in SCS Patients with Chronic Limb Threatening Ischemia: A US Payer Database Analysis. North American Neuromodulation Society Annual Meeting; Dolphin Hotel Convention Center; Orlando, FL; January 31, 2025

Steven Falowski, **Derron Wilson**, Robert Heros, Eric Cornidez, Jason Pope, Richard Brucker, Bjorn Carsten Schultheis, Denis Patterson, Hemant Kalia, Gregory Moore, Jan Vesper, Pankaj Metha, Thomas May, Juan Mora, Bram Blomme, David Shultz. Longitudianl Evaluation of Passive Recharge Burst Spinal Cord Stimulation in Patients with Chronic Intractable Pain. North American Neuromodulation Society Annual Meeting; Dolphin Hotel Convention Center; Orlando, FL; January 31, 2025

James North, Julio Paez, Aaron Calodney, Eric Loudermilk, Zachary McCormick, Julio Paez, Aaron Calodney, Eric Loudermilk, Zachary McCormick, Drew Trainor, John Noles, Michael Yang, Gregory Phillips, **Derron Wilson**, Steven Rosen, Maged Guirguis, Magdalena Anitescu, John Chatas, Daniel Pak, Joseph Atallah Binit Shah, Tim Leier, Anne Christopher, Daniel Kloster, Jeffrey Peacock, Suneil Jolly, Mitchell Engle, Lilly Chen, and Edward Goldberg. Evaluating SCS and Medical Management for Chronic Pain Without Prior Surgery: SOLIS RCT 24-Month Outcomes. North American Neuromodulation Society Annual Meeting; Dolphin Hotel Convention Center; Orlando, FL; January 31, 2025 James North, Julio Paez, Aaron Calodney, Eric Loudermilk, Zachary McCormick, Drew Trainor, John Noles, Michael Yang, Gregory Phillips, **Derron Wilson**, Steven Rosen, Maged Guirguis, Lilly Chen, ID: 307123 Evaluating SCS and Medical Management for Chronic Pain without Prior Surgery: 1-Year Outcomes (SOLIS RCT), Neuromodulation: Technology at the Neural Interface, Volume 27, Issue 7, Supplement, 2024, Page S172, ISSN 1094-7159, https://doi.org/10.1016/j.neurom.2024.06.316. (https://www.sciencedirect.com/science/article/pii/S1094715924004471)

Magdalena Anitescu, Eric Loudermilk, Drew Trainor, John Noles, Jennifer Lee, Sayed Wahezi, **Derron Wilson**, Ann Pan, ID: 308118 Prospective, Multicenter Outcomes Utilizing an SCS-System Designed to Engage Surround Inhibition Using Fast-Acting Sub-Perception Therapy, Neuromodulation: Technology at the Neural Interface, Volume 27, Issue 7, Supplement, 2024, Page S271, ISSN 1094-7159, https://doi.org/10.1016/j.neurom.2024.06.474.

(https://www.sciencedirect.com/science/article/pii/S1094715924006056)

Timothy Deer, Chris Gillian, Steven Falowski, Jessica Jameson, Mehul Desai, Susan Moeschler, Julie Pilitis, Robert Heros, Sayed Wahezi, Patrick Buchanan, Anne Christopher, Jacqueline Weisbein, Denis Patterson, Ajay Antony, Nathan Miller, Michael Fishell, Keith Scarfo, **Derron Wilson**, Ted Braun, Robert Levy, David Dickerson, Udoka Omari, James Yue. Surgical Treatment of refractory low back pain using implanted BurstDR spinal cord stimulation (SCS) in a cohort of patients without options for corrective surgery: Results 24-months post-implant from the DISTINCT study. North American Neuromodulation Society Annual Meeting; Caesars Palace Convention Center; Las Vegas, NV; January 20, 2024

Rank Faltas, **Derron Wilson**, Anne Christopher, Nathan Miller, Jason Pope, Ajay Antony, Ioannis Skaribas, Vishwanath Sankarasubramanian, Soroush Dehghan, Streetharan Thankathuraipandian, Sakshi, Kulkarni, Bryce Lain, Aamna Ashanti, David Page. Offline Retrospective Assessment of a Change Point Detection Algorithm for Trigger Outreach in Chronic Pain Patients with a Neuromodulation System. North American Neuromodulation Society Annual Meeting; Caesars Palace Convention Center; Las Vegas, NV; January 20, 2024

James North, Julio Paez, Aaron Calodney, Eric Loudermilk, Zachary McCormick, Drew Trainor, John Noles, Michael Yang, Gregory Phillips, **Derron Wilson**, Steven Rosen, Magee Guirguis, Magdalena Anitescu, John Chatas, Daniel Pak, Joseph Atallah, Binit Shah, Tim Leier, Anne Christopher, Daniel Kloster, Jeffrey Peacock, Sunil Jolly, Mitchell Engle, Lilly Chen, Edward Goldberg. Evaluating SCS and Medical Management for Chronic Pain without Prior Surgery: 1 year Outcomes (SOLIS RCT); North American Neuromodulation Society Annual Meeting; Caesars Palace Convention Center; Las Vegas, NV; January 20, 2024 Timothy Deer, Jessica Jameson, Julie Pilitis, Christopher Gilligan, Sayed Wahezi, Denis Patterson, Ajay Antony, Nathan Miller, **Derron Wilson**, Marie Fahey, Steven Falowski. Passive Recharge Burst in CLBP Patients Without Options for Corrective Surgery; 12 Month Results from DISTINCT. Neuromodulation: Technology at the Neural Interface. 26. S92-93. 10.1016/j.neuron.2023.10.157

Magdalena Anitescu, Eric Loudermilk, Drew Trainor, John Noles, Jennifer Lee, Sayed Wahezi, **Derron Wilson**, Lilly Chen, Roshini Jain. Clinical Impact of a Novel Fast-Acting Sub-Perception SCS Therapy Engaging Surround Inhibition (FAST Prospective Study); Neuromodulation: Technology at the Neural Interface. 26. S87-S88. 10.1016/j.neuron.2023.10.150

James North, Julio Paez, Aaron Calodney, Eric Loudermilk, Zachary McCormick, Drew Trainor, John Noles, Michael Yang, Gregory Phillips, **Derron Wilson**, Steven Rosen, Maged Guirguis, Lilly Chen, Edward Goldberg. Comparing SCS and Coventional Medical Management in Patients with no Prior Back Surgery (SOLIS RCT). Neuromodulation: Technology at the Neural Interface. 26. S86. 10.1016/j.neuron.2023.10.148

Bjoern Carsten Schulthesis, David Schultz, Denis Patterson, Udy Okaro, Devyani Nanduri, **Derron Wilson**, Ioannis Skaribas. Spinal Cord Stimulation is Effective in Patients with Neck and Upper Limb Pain; Neuromodulation: Technology at the Neural Interface. 26. S36. 10.1016/j.neuron.2023.10.065.

**Derron Wilson**, Rano Faltas, Anne Christopher, Nathan Miller, Jason Pope, Ajay Antony, Parisa Sarikhani, Katie Frizzi, Anahita Kyani, David Page. Using Remote Monitoring to Track Comprehensive Measures of Patient Progress Throughout the Baseline, Trial and Permanent Implant Process and Beyond. American Society of Pain & Neuroscience Annual Meeting; Fontainebleau; Miami Beach, FL; July 15, 2023

Magdalena Anitescu, Eric Loudermilk, Drew Trainor, John Noles, Jennifer Lee, Sayed Wahezi, **Derron Wilson**, Lilly Chen, Roshini Jain. A Prospective, Muliticenter Evaluation of Novel Fast-Acting Sub-perception-Based Spinal Cord Stimulation for Chronic Pain: FAST Study. American Society of Pain & Neuroscience Annual Meeting; Fontainebleau; Miami Beach, FL; July 15, 2023

**Derron Wilson**, Jonathan Hagedorn, Anne Christopher, Nathan Miller, Jason Pope, Ajay Antony, Paris's Sarikhani, Rohit Nair, Erika Ross, Sashi Kulkarni, Vishwanath Sankarasubramanian, Alexandra Doyle, Anahita Kyani, David Page. Sleep and Physical Activity From Wearable as Alternatives to Pain Scales Throughout the Trial-Through-Implant Journey; Neuromodulation: Technology at the Neural Interface. 26. S26. 10.1016/j.neuron.2023.04.219 Anne Christopher, **Derron Wilson**, Jonathan Hagedorn, Nathan Miller, Jason Pope, Ajay Antony, Katie Frizzi, Erika Ross, Alexandra Doyle, Aamna Ashanti Binesh Balasingh, Steetharan Thankathuraipandian, Anahit Kyani, David Page. Use of Artificial Intelligence and Personalized Messaging to Motivate Patient Engagement During the Nuromodulation Journey; Neuromodulation: Technology at the Neural Interface. 26. S6. 10.1016/j.neuron.2023.04.010

Denis Patterson, Michael Fishman, Gregory Moore, Ioannis Skaribas, Robert Heros, **Derron Wilson**, Soroush Dehghan, Erika Ross. Application of Wearable Data in Predicting Chronic Pain Patient's Response to Spinal Cord Stimulation; Neuromodulation: Technology at the Neural Interface. 26. S46-S47. 10.1016/j.neuron.2023.04.080

Magdalena Anitescu, Eric Loudermilk, Drew Trainor, John Noles, Jennifer Lee, Sayed Wahezi, **Derron Wilson**, Lilly Chen, Roshini Jain. Clinical Impact of a Novel Fast-Acting Sub-perception SCS Therapy Engaging Surround Inhibition (FAST Prospective Study). Neuromodulation: Technology at the Neural Interface. 26. S20. 10.1016/j.neuron.2023.04.033

Magdalena Anitescu, Eric Loudermilk, Drew Trainor, John Noles, Jennifer Lee, Sayed Wahezi, **Derron Wilson**, Lilly Chen, Roshini Jain. Clinical Impact of a Novel Fast-Acting Sub-perception SCS Therapy Engaging Surround Inhibition (FAST Prospective Study). North American Neuromodulation Society Annual Meeting; Caesars Palace Convention Center; Las Vegas, NV; January 13, 2023

James North, Julio Paez, Aaron Calodney, Eric Loudermilk, Zachary McCormick, Drew Trainor, John Noles, Michael Yang, Gregory Phillips, **Derron Wilson,** Steven Rosen, Maged Guirguis, Lilly Chen, Roshini Jain. Comparing SCS and Conventional Medical Management in Patients with No Prior Back Surgery (SOLIS RCT). North American Neuromodulation Society Annual Meeting; Caesars Palace Convention Center; Las Vegas, NV; January 13, 2023

Anne Christopher, **Derron Wilson**, Jonathan Hagedorn, Nathan Miller, Jason Pope, Ajay Anthony, Katie Frizzi, Erika Ross, Alexandra Doyle, Aamna Ahsan, Binesh Balasingh, Streetharan Thankathuraipandian, Anahita Kyani, David Page. Use of Artifical Intelligence and Personalized Messaging to Motivate Patient Engagement During the Neuromodulation Journey. North American Neuromodulation Society Annual Meeting; Caesars Palace Convention Center; Las Vegas, NV; January 13, 2023

Denis Patterson, Michael Fishman, Gregory Moore, Ioannis Skaribas, Robert Heros, **Derron Wilson**, Soroush Dehghan, Erika Ross. Application of Wearable Data in Predicting Chronic Pain Patient's Response to Spinal Cord Stimulation. North American Neuromodulation Society Annual Meeting; Caesars Palace Convention Center; Las Vegas, NV; January 13, 2023 Marie Fahey, Timothy Deer, Christopher Gilligan, Steven Falowski, Jessica Jameson, Mehul Desai, Susan Moeschler, Julie Plitisis, Robert Heros, Sayed Wahezi, Patrick Buchanan, Anne Christopher, Jacqueline Weisbein, Denis Patterson, Ajay Antony, Nathan Miller, Keith-Austin Scarfo, **Derron Wilson**, Ted Braun, David Dickerson, James Yue, Robert Levy. SCS in Patients Without Options for Corrective Surgery; Results from DISTINCT, a prospective RCT Trial. North American Neuromodulation Society Annual Meeting; Caesars Palace Convention Center; Las Vegas, NV; January 13, 2023

Denis G. Patterson, DO; Michael A. Fishman, MD; Gregory Moore, MD; Ioannis Skaribas, MD; Robert Heros, MD; **Derron Wilson, MD**; Soroush Dehghan, MSc; Erika Ross, PhD; Anahita Kyani, PhD. Predicting patient global health impression of change with spinal cord stimulation in chronic pain patients using digital biomarker. American Society of Pain and Neuroscience Annual Meeting; Lowes Hotel; Miami, FL; July 15, 2022

**Derron Wilson**, Björn Carsten Schultheis, Hemant Kalia, Michael Fishell, Bram Blomme, David Schultz. Passive Recharge Burst Cervical SCS is Safe and Effective Regardless of Prior Cervical Spine Surgery. North American Neuromodulation Society 25<sup>th</sup> Annual Meeting; Swan and Dolphin Resort; Orlando, FL; January 14, 2022

Denis Patterson, Michael Fishman, Gregory Moore, Ioannis Skaribas, Robert Heros, **Derron Wilson,** Erika K. Ross, and Anahita Kyani. REALITY Substudy: Developing an Objective Pain Score for Patients With Implanted Spinal Cord Stimulation. North American Neuromodulation Society 25<sup>th</sup> Annual Meeting; Swan and Dolphin Resort; Orlando, FL; January 14, 2022 Slavin K, North R, Deer T, Staats P, Kim C, Tavel E, Amirdelfan K, Yearwood T, McLeod C, Phillips G, Houden T, Fabi A, Justiz R, **Wilson D**, Falowski S, Hutson C, Davis K. Sustained Pain Relief with Burst Stimulation: One-year Outcomes from the SUNBURST Study. American Society of Regional Anesthesia and Pain Medicine; 16<sup>th</sup> Annual Pain Medicine Meeting; November 16-18, 2017; Lake Buena Vista, Florida.

**Wilson D**, McCanna S, Potts E, Bryant K. Inadvertent Intrathecal Dorsal Root Ganglion Lead Placement Results in Temporary Monoplegia. International Neuromodulation Society 13<sup>th</sup> World Congress; May 27 – June 1, 2017; Edinburgh, Scotland, United Kingdom.

Tavel E, Kim C, Amirdelfan K, Yearwood T, Houden T, McLeod C, Fabi A, Justiz R, **Wilson D**, Falowski S, Diaz R, Davis K. Lower Amplitudes for Burst SCS Programming Associated with Improved Outcomes: SUNBURST Sub-Analysis. International Neuromodulation Society 13<sup>th</sup> World Congress; May 27 – June 1, 2017; Edinburgh, Scotland, United Kingdom.

Slavin K, North R, Deer T, Staats P, Kim C, Tavel E, Amirdelfan K, Yearwood T, McLeod C, Phillips G, Houden T, Fabi A, Justiz R, **Wilson D**, Falowski S, Davis K, Diaz R. Burst SCS Provided Sustained Pain Relief through 1 year: Long-term Outcomes from the SUNBURST Study. International Neuromodulation Society 13<sup>th</sup> World Congress; May 27 – June 1, 2017; Edinburgh, Scotland, United Kingdom.

Tavel E, Amirdelfan K, Phillips G, McLeod C, Falowski S, Justiz R, Fabi A, **Wilson D**, Fontenot H, Levy R. Programming Optimization Strategies for Burst May Improve Outcomes. North American Neuromodulation Society 21<sup>st</sup> Annual Meeting; 2017 Jan 13-16; Las Vegas, Nevada.

# **Textbook Contributions**

# How to Treat Low Back Pain - A Guide for Treating Causes of Low Back Pain for Physicians and APPs

Chapter 18: Dorsal column spinal cord stimulation (SCS) Elsevier: ISBN: 978-0-443-15962-6

#### **Current Research Contributions**

A Prospective, Multicenter, Single-arm Study Evaluating the Clinical Utility of Neurophysiological Measurements of ECAP-controlled Closed-loop Spinal Cord Stimulation (SCS) to Guide Treatment of Patients With Chronic Pain of the Trunk and/or Limbs

<u>*ClinicalTrials.gov Identifier:* NCT06229470</u> Study Start Date: April 2024

SCS as an Option for Chronic Low Back and/or Leg Pain Instead of Surgery (SOLIS) ClinicalTrials.gov Identifier: NCT04676022 Study Start Date: March 2021

Paresthesia-Free Fast-Acting Subperception (FAST) Study (FAST) ClinicalTrials.gov Identifier: NCT04618471 Study Start Date: July 2021

Spinal Cord Stimulation vs. Medical Management for Low Back Pain (DISTINCT) ClinicalTrials.gov Identifier: NCT04479787 Study Start Date: May 2021

Long-Term Real-World Outcomes Study on Patients Implanted With a Neurostimulator (REALITY) ClinicalTrials.gov Identifier: NCT03876054 Study Start Date: March 2019

# **Previous Research Contributions**

TARGET: A Post-Approval Study to Evaluate Targeted SCS Spinal Cord Stimulation (SCS) Dorsal Root Ganglion (DRG) Stimulation for the Management of Moderate to Severe Chronic, Intractable, Pain of the Lower Limbs Due to CRPS Types I and II. Study Start Date: July 2016. Carlson J, Buchanan P, Perrizo N, Pope J, Girardi G, Esposito M, Lubenow T, **Wilson D**, Fishell M, Patterson D, Staats P, Hunter C, Lad N, Kapural L, Falowski S, Rowe J, Sharan A, Navalgund Y, Hutcheson K, Rupert M, Kroll P, Kikkeri N, Duarte L.

SUNBURST (Success Using Neuromodulation With BURST). Study Start of enrollment: December 2013 - Study Completion Date: January 2016; Fabi, A., Taghva, A., Burton, A., Edmiston, B., Center, C., Kneeland, C., Mcleod, C., Kim, C., **Wilson, D**., Tavel, E., Grigsby, E., Moore, G., Vella, J., Pilitsis, J., Amirdelfan, K., Smith, P., Justiz, R., Falowski, S., Yearwood.

Restore<sup>™</sup> Claims Characterization Study; Medtronic, Sub-Investigator; 2005

# **Conference Proceedings/Society Invited Lectures**

<u>University of Chicago – 10<sup>th</sup> Annual Chicago Pain Summ</u>	<u>nit</u>
Faculty	
University of Chicago; Chicago, IL; February 22	2025

<u>North American Neuromodulation Society Annual Meeting</u> Co-Chair: Plenary Session IV – The Future is NOW: Late Breaking Science Updates Dolphin Hotel Convention Center; Orlando, FL; February 1, 2025

North American Neuromodulation Society Annual Meeting Pain Cadaver Lab Faculty - DRG Dolphin Hotel Convention Center; Orlando, FL; January 30, 2025

<u>American Society of Pain & Neuroscience (ASPN) Pain, Collaborative Pain Summit</u> Faculty – Fellow's Course Grand Hyatt; Nashville, TN; Oct 12, 2024

<u>Wisconsin Society of Interventional Pain Physicians, 2024 Meeting</u> Panelist – Advances in Peripheral Nerve Stimulation Sonesta Milwaukee; Wauwatosa, WI; Aug 17, 2024

<u>Wisconsin Society of Interventional Pain Physicians, 2024 Meeting</u> Moderator – Management of Painful Diabetic Neuropathy Sonesta Milwaukee; Wauwatosa, WI; Aug 17, 2024

<u>American Society of Pain & Neuroscience (ASPN), 2024 Meeting</u> Panelist – The Next Generation of Vertebral Augmentation Fontainebleau; Miami, FL; July 13, 2024 <u>American Society of Pain & Neuroscience (ASPN), 2024 Meeting</u> Panelist – The Ethical Issues Facing the Care of a Pain Patient Fontainebleau; Miami, FL; July 14, 2024

<u>American Society of Interventional Pain Physicians (ASIPP), 26<sup>th</sup> Annual Meeting</u> Panelist – Spinal Cord Stimulation – Current and Emerging Concepts Hyatt Regency; Dallas, TX; April 4, 2024

<u>American Society of Pain & Neuroscience (ASPN), 2023 Meeting</u> Panelist – Personalized SCS: AI, Closed Loop, Machine Learning, Personalized Waveforms Fontainebleau; Miami, FL; July 15, 2023

<u>American Society of Pain & Neuroscience (ASPN), 2023 Meeting</u> Moderator – How to Choose a Sacroiliac Fusion System: What Role Does Data Play? Fontainebleau; Miami, FL; July 15, 2023

<u>American Society of Pain & Neuroscience (ASPN), 2023 Meeting</u> Faculty - Master's Course (DRG Stimulation) Fontainebleau; Miami, FL; July 14, 2023

Back Pain Without Surgery: Where Can We Use Neuromodulation? North American Neuromodulation Society Annual Meeting Caesars Palace Convention Center; Las Vegas, NV; January 13, 2023

<u>Update on DRG and BURST</u> Midwest Societies of Interventional Pain Physicians Palmer Hotel; Chicago, IL; November 12, 2022

<u>Dorsal Root Ganglion Stimulation – Understanding DRG Targets and Theory</u> North American Neuromodulation Society National Webinar Carmel, IN; July 20, 2022

<u>American Society of Pain & Neuroscience (ASPN), 2022 Meeting</u> Moderator – Regenerative Medicine Abstract Presentation Lowes Hotel; Miami, FL; July 15, 2022

<u>American Society of Pain & Neuroscience (ASPN) Pain, Innovation Summit</u> Faculty - Master's Course Lowes Hotel; Miami, FL; July 15, 2022

<u>SCS and Spinal Cord GABAergic and Adrenergic Tone</u> North American Neuromodulation Society 25<sup>th</sup> Annual Meeting Swan and Dolphin Resort; Orlando, FL; January 14, 2022

<u>American Society of Pain & Neuroscience (ASPN) Pain, Innovation Summit</u> Faculty - Advanced Lab and Master's Course Bellagio Resort; Las Vegas, NV; January 7, 2022 <u>American Society of Pain & Neuroscience (ASPN) Pain, 2021 Meeting</u> Panel Member: Intraoperative Placement of Spinal Cord Stimulators: Paresthesia Mapping, Anatomical and Neuromonitoring Miami, FL: July 24, 2021

<u>American Society of Pain & Neuroscience (ASPN) Pain, 2021 Meeting</u> Panel Member: The Role of Telemedicine in Pain Medicine Miami, FL: July 25, 2021

<u>American Society of Pain & Neuroscience (ASPN)</u> Superbowl of Debates Topic: FAST Therapy and Surround Inhibition: Battle of paresthesia vs. nonparesthesia on the dorsal column, is paresthesia dead? Pro Paresthesia: Derron K. Wilson, MD, FIPP Pro Non-Paresthesia: Michael Verdolin, MD

<u>International Neuromodulation Society – Virtual Journal Club</u> Moderator Carmel, IN; October 20, 2020

<u>Treating Axial Back Pain with Neuromodulation</u> The American Society of Pain and Neuroscience 2020 Annual Meeting

Nashville, TN; September 19, 2020

<u>BURST Spinal Cord Stimulation for the Treatment of Chronic Pain</u> The American Society of Pain and Neuroscience 2020 Annual Meeting Nashville, TN; September 19, 2020

# **DRG Stimulation**

NeuroCon 2020

William K. Nasser, MD, Healthcare Education and Simulation Center Indianapolis, IN; August 21, 2020

#### Principles of Neuromodulation

NeuroCon 2019 William K. Nasser, MD, Healthcare Education and Simulation Center Indianapolis, IN; September 27, 2019

#### The Role of the APP

North American Neuromodulation Society 22<sup>nd</sup> Annual Meeting Advanced Practice Provider Course (PAs, NPs, Nurses): A to Z in Neuromodulation Caesar's Palace, Las Vegas, Nevada; January 17, 2019

Mock Trial

West Virginia Society of Interventional Pain Physicians, Annual Meeting, Fontainebleau, Miami Beach, Florida; May 31–June 3, 2018 <u>Sustained Pain Relief with Burst Stimulation: One-year Outcomes from the</u> <u>SUNBURST Study</u>

American Society of Regional Anesthesia and Pain Medicine; 16<sup>th</sup> Annual Pain Medicine Meeting; November 16-18, 2017; Lake Buena Vista, Florida.

<u>Mock Trial</u>

West Virginia Society of Interventional Pain Physicians, Annual Meeting, Loews Miami Beach Hotel, Miami, Florida; July 2017

<u>Burst SCS Provided Sustained Pain Relief through 1 year: Long-term Outcomes from</u> <u>the SUNBURST Study</u>

International Neuromodulation Society 13<sup>th</sup> World Congress; May 27 – June 1, 2017; Edinburgh, Scotland, United Kingdom.

Inadvertent Intrathecal Dorsal Root Ganglion Lead Placement Results in Temporary Monoplegia

International Neuromodulation Society 13<sup>th</sup> World Congress; May 27 – June 1, 2017; Edinburgh, Scotland, United Kingdom.

<u>Programming Optimization Strategies for Burst May Improve Outcomes</u> North American Neuromodulation Society 21<sup>st</sup> Annual Meeting; 2017 Jan 13-16; Las Vegas, Nevada.

<u>Management of Chronic Pain: New Advances in Neuromodulation</u> National Pain Institute Regional Meeting Citrus Club, Orlando, Florida; August 2016

# **Industry Invited Lectures**

DRG Anchoring Abbott Medical Fellow 301 – DRG Workshop Chicago, IL: February 15, 2025

<u>Saluda Educational Symposium</u> Saluda Medical Columbus, OH: November 21, 2024

<u>Procedural Considerations for Traditional DRG Approach</u> Abbott – Accelerator Program Austin, TX: September 28, 2024

<u>Understanding Chronic Neuropathic Pain & Neuromodulation</u> Abbott – Innovations in Neuromodulation For the APP Indianapolis, IN: September 14, 2024

<u>Principles of Patient Selection – Expanding Indications</u> Abbott – Innovations in Neuromodulation For the APP Indianapolis, IN: September 14, 2024 The Abbott Portfolio

Abbott – Innovations in Neuromodulation For the APP Indianapolis, IN: September 14, 2024

Case Study Workshop

Abbott – Innovations in Neuromodulation For the APP Indianapolis, IN: September 14, 2024

Patient Education Workshop

Abbott – Innovations in Neuromodulation For the APP Indianapolis, IN: September 14, 2024

<u>The BurstDR Stimulation Advantage</u> Abbott – Techniques in Neuromodulation Understanding the Percutaneous SCS Procedure Toronto, Ontario: September 13, 2024

Eterna SCS System: Lasting Results. Less Charging Abbott – Techniques in Neuromodulation Understanding the Percutaneous SCS Procedure Toronto, Ontario: September 13, 2024

<u>Sacral Implant Technique</u> Abbott – Proclaim DRG Neurostimulation System Toronto, Ontario: September 13, 2024

<u>Anchoring for DRG</u> Abbott – Proclaim DRG Neurostimulation System Toronto, Ontario: September 13, 2024

<u>Patients Indicated for DRG</u> Abbott Accelerator Program – Module Two Austin, TX: June 22, 2024

<u>SCS for Diabetic Peripheral Neuropathy</u> Abbott Accelerator Program – Module One Austin, TX: March 2, 2024

<u>SCS for Diabetic Peripheral Neuropathy</u> Abbott Accelerator Program – Module One Austin, TX: February 16, 2024

<u>L4/5 and L5/S1 DRG Procedural Technique</u> Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Rush University; Chicago, IL: February 10, 2024

### <u>Eterna™ SCS System: Lasting Results. Less Charging</u>

North American Neuromodulation Society Annual Meeting Lunch Symposium; Caesar's Palace, Las Vegas, NV: January 19, 2024

#### Eterna<sup>TM</sup> SCS System: Lasting Results. Less Charging

American Society of Pain and Neuroscience Meeting Lunch Symposium; Fontainebleau, Miami, FL: July 15, 2023

# SCS vs DRG

Abbott Fellows DRG New Implanter Training Austin, TX: April 30, 2023

#### Addressing Market Challenges via Therapeutic Innovations Abbott Accelerator Program / Module One Austin, TX: March 5, 2023

Prospective DRG Candidates

New Implanters: Proclaim DRG Neurostimulation System Education Program Pittsburg, PA: September 11, 2022

# Spinal Cord Stimulation (SCS) vs Dorsal Root Ganglion Stimulation (DRG) New Implanters: Proclaim DRG Neurostimulation System Education Program Pittsburg, PA: September 10, 2022

SCS Procedural Overview

Coordinated Care Optimizing Outcomes for the Pain Patient Austin, TX: July 23, 2022

# <u>Innovations in Digital Care – Neurosphere (Abbott)</u> Educational Dinner Pittsburg, PA; June 10, 2022

<u>SCS Procedural Overview</u> Coordinated Care Optimizing Outcomes for the Pain Patient Austin, TX: June 4, 2022

# DRG Patient Selection

Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Austin, TX: March 5, 2022

# SCS Procedural Overview

Fellows Intro to Neuromodulation (Abbott) Austin, TX: November 6, 2021

# <u>Innovations in Digital Care – Neurosphere (Abbott)</u> Educational Dinner Carmel, IN: October 27, 2021

<u>WaveWriter Alpha™ Summit (Boston Scientific)</u> FAST MOA Denver, CO; September 23, 2021

<u>Radiofrequency for Chronic Pain</u> Advancements in Neuromodulation APP Course (Abbott) Austin, TX; September 18, 2021

**DRG Stimulation** 

Advancements in Neuromodulation APP Course (Abbott) Austin, TX; September 18, 2021

<u>Positioning Digital Health in a Neuromodulation Practice</u> Advancements in Neuromodulation APP Course (Abbott) Austin, TX; September 18, 2021

<u>American Society of Pain & Neuroscience (ASPN) Pain, 2021 Meeting</u> Product Theater: Boston Scientific Wavewriter Alpha and FAST Miami, FL: July 24, 2021

<u>American Society of Pain & Neuroscience (ASPN) Pain, 2021 Meeting</u> Educational Dinner: Abbott Neurosphere Miami, FL: July 22, 2021

<u>L4/5 and L5/S1 DRG Procedural Technique</u> Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Detroit, MI; June 12, 2021

<u>Right Patient/Right Therapy: DRG/BurstDR Case Studies</u> Educational Dinner; Eddie Merlot's Bloomfield Hills, MI; June 11, 2021

<u>New Sub-Perception Therapies: ContourTM Field Shaping and FASTTM MOA</u> Boston Scientific Wavewriter Alpha Innovation Summit Miami, FL; May 15, 2021

<u>Boston Scientific Virtual Educational Symposium</u> Success in a Clinical Practice Setting; August 26, 2020

<u>Boston Scientific Virtual Educational Symposium</u> Creating Connections Through Partnership; September 2, 2020

<u>Abbott – Radiofrequency Roundtable Webinar</u> Educational Event; May 27, 2020

Boston Scientific Virtual Summit Series Part 1: Digital Tools to Connect & Drive Office Efficiency; April 28, 2020 Part 2: Part 2: Advanced Neuromodulation Techniques & Case Studies; April 29, 2020 <u>Abbott's Innovations in Neuromodulation Dinner</u> Educational Dinner, The Palm (Caesar's Palace) Las Vegas, NV; January 25, 2019

<u>L4/5 and L5/S1 DRG Procedural Technique</u> Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Cincinnati, OH; December 7, 2019

<u>Introduction to DRG and Science of DRG</u> Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Cincinnati, OH; December 7, 2019

<u>Abbott Proclaim DRG Product Overview</u> Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Cincinnati, OH; December 7, 2019

<u>ACCURATE Study & Clinical Compendium</u> Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Cincinnati, OH; December 7, 2019

<u>Right Patient/Right Therapy: DRG</u> Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Dallas, TX; October 26, 2019

<u>Right Patient/Right Therapy: DRG/BurstDR Case Studies</u> Educational Dinner; Ruth Chris Steakhouse Carmel, IN; October 4, 2019

<u>Right Patient/Right Therapy: DRG/BurstDR Case Studies</u> North American Neuromodulation Society 21<sup>st</sup> Annual Meeting Capital Grille, Las Vegas, Nevada; January 17, 2019

<u>Right Patient/Right Therapy: DRG/BurstDR Case Studies</u> Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Beverly, MA; January 13, 2019

<u>Right Patient/Right Therapy: DRG/BurstDR Case Studies</u> Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Hartford, CT; October 28, 2018

ACCURATE Study

Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Hartford, CT; October 28, 2018

<u>L4, L5 and S1 DRG Technique</u> Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Hartford, CT; October 27, 2018

#### DRG Anatomy and DRG Science

Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Hartford, CT; October 27, 2018

#### L4, L5 and S1 DRG Technique

Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Sterling, VA; September 22, 2018

#### DRG Patient Management: Case Presentation

Axium<sup>™</sup> Neurostimulation System Regional Education Program Dallas, TX; September 9, 2018

Spinal Cord Stimulation for the Management of Chronic Pain Syracuse University Pain Management Fellows Syracuse, NY; August 14, 2018

L4, L5 and S1 DRG Technique Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Maywood, IL; July 28, 2018

# <u>T10 – L3 DRG Technique</u>

Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Maywood, IL; July 28, 2018

#### **Right Therapy, Right Patient**

Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Syracuse, NY; July 28, 2018

#### ACCURATE Study

Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Syracuse, NY; July 28, 2018

#### T10 - L3 DRG Technique

Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Syracuse, NY; July 28, 2018

#### L4, L5 and S1 DRG Technique

Proclaim<sup>™</sup> DRG Neurostimulation System Education Program Syracuse, NY; July 28, 2018

#### Right Therapy, Right Patient

North American Neuromodulation Society 21<sup>st</sup> Annual Meeting Tao Restaurant, Las Vegas, Nevada; January 2018

#### ACCURATE Study

Axium<sup>™</sup> Neurostimulation System Regional Education Program Portland, Oregon; September 2017 L4, L5 and S1 DRG Technique

Axium<sup>™</sup> Neurostimulation System Regional Education Program Portland, Oregon; September 2017

**DRG Patient Management** 

Axium<sup>™</sup> Neurostimulation System Regional Education Program Portland, Oregon; September 2017

<u>Spinal Cord Stimulation for the Management of Chronic Pain</u> Coalition of Advanced Practice Nurses of Indiana Meeting Harry & Izzy's; Indianapolis, Indiana; September 2016

<u>Advanced Topics in Neurostimulation Round Table</u> Faculty; St. Jude Medical New York, New York; September 2011

#### **Industry Invited Cadaveric Based Teaching Courses**

<u>Abbott Fellows 301 – Dorsal Root Ganglion Workshop</u> Faculty; Abbott Chicago, IL: February 15, 2025

<u>Abbott Accelerator Program – Module Three</u> Faculty; Abbott Austin, TX: September 28, 2024

<u>Abbott DRG Neurostimulation System Education Program</u> Faculty; Abbott Toronto, Ontario: September 13, 2024

<u>Techniques in Neuromodulation: Understanding the Percutaneous SCS Procedure</u> Faculty; Abbott Toronto, Ontario: September 13, 2024

<u>Abbott Accelerator Program – Module Two</u> Faculty; Abbott Austin, TX: June 22, 2024

<u>Abbott Coordinated Care</u> Faculty; Abbott Austin, TX: April 27, 2024

<u>Abbott Accelerator Program – Module One</u> Faculty; Abbott Austin, TX: March 2, 2024

<u>Abbott Accelerator Program – Module One</u> Faculty; Lab Director; Abbott Austin, TX: February 17, 2024 <u>Abbott Proclaim DRG Neurostimulation Education Program</u> Faculty; Rush University Chicago, IL: February 10, 2024

<u>Abbott Fellows DRG New Implanter Training</u> Faculty; Lab Director; Abbott Austin, TX: April 30, 2023

<u>Abbott Accelerator Program</u> Faculty; Abbott Austin, TX: March 5, 2023

<u>New Implanters: Proclaim DRG Neurostimulation System Education Program</u> Faculty; Abbott Pittsburg, PA: September 10, 2022

<u>Coordinated Care Optimizing Outcomes for the Pain Patient</u> Faculty; Abbott Austin, TX: July 23, 2022

<u>Coordinated Care Optimizing Outcomes for the Pain Patient</u> Faculty; Abbott Austin, TX: June 4, 2022

<u>Abbott Fellows Advanced Neuromodulation Program</u> Lab Director; Abbott Austin, TX; April 3, 2022

<u>Proclaim™ DRG Neurostimulation System Education Program</u> Lab Co-Director; Abbott Austin, TX: March 5, 2022

<u>Abbott Fellow Neuromodulation Program</u> Faculty; Abbott Austin, TX; February 19, 2022

Abbott Fellows Introduction to Neuromodulation Program Faculty; Abbott Austin, TX; November 6, 2021 <u>Proclaim<sup>™</sup> DRG New Implanters Education Program</u> Faculty; Abbott Austin, TX; October 16, 2021

<u>Proclaim™ DRG Neurostimulation System Education Program</u> Faculty; Abbott Detroit, MI; June 12, 2021 <u>Spinal Cord Stimulation Procedural Skills Cadaver Lab</u> Faculty; Boston Scientific, JW Marriott Indianapolis, IN; September 19, 2020

<u>Proclaim<sup>™</sup> DRG Neurostimulation System Education Program</u> Faculty; Abbott Cincinnati, OH; December 7, 2019

<u>Proclaim™ DRG Neurostimulation System Education Program</u> Faculty; Abbott Dallas, TX; November 10, 2019

<u>Proclaim<sup>™</sup> DRG Neurostimulation System Education Program</u> Faculty; Abbott Dallas, TX; October 26, 2019

<u>Proclaim<sup>™</sup> DRG Neurostimulation System Education Program</u> Faculty; Abbott Carmel, IN; October 5, 2019

<u>Proclaim™ DRG Neurostimulation System Education Program</u> Faculty; Abbott Dallas, TX; May 11, 2019

<u>Proclaim™ DRG Neurostimulation System Education Program</u> Faculty; Abbott Chicago, IL; April 6-7, 2019

<u>Proclaim™ DRG Neurostimulation System Education Program</u> Faculty; Abbott Beverly, MA; January 13, 2019

<u>Proclaim<sup>™</sup> DRG Neurostimulation System Education Program</u> Faculty; Abbott Boston, MA; January 12, 2019

<u>Proclaim™ DRG Neurostimulation System Education Program</u> Faculty; Abbott Hartford, CT; October 27-28, 2018

<u>Proclaim<sup>™</sup> DRG Neurostimulation System Education Program</u> Faculty; Abbott Sterling, VA; September 22, 2018

<u>Proclaim™ DRG Neurostimulation System Education Program</u> Faculty; Abbott Dallas, TX; September 8, 2018 <u>Proclaim<sup>™</sup> DRG Neurostimulation System Education Program</u> Faculty; Abbott Maywood, IL; July 28, 2018

<u>Proclaim™ DRG Neurostimulation System Education Program</u> Faculty; Abbott Philadelphia, PA; July 7, 2018

<u>Proclaim<sup>™</sup> DRG Neurostimulation System Education Program</u> Faculty; Abbott Syracuse, NY; June 9, 2018

- <u>Proclaim<sup>™</sup> DRG Neurostimulation System Education Program</u> Faculty; Abbott Hicksville, NY; May 19, 2018
- <u>Proclaim™ DRG Neurostimulation System Education Program</u> Faculty; Abbott Dallas, Texas; May 11, 2018

<u>Axium<sup>™</sup> Neurostimulation System Regional Education Program</u> Faculty; Abbott/St. Jude Medical Portland, Oregon; September 2017

- <u>Axium™ Neurostimulation System Education Program</u> Faculty; Abbott/St. Jude Medical Dallas, Texas; July 2017
- <u>Axium™ Neurostimulation System Education Program</u> Faculty; Abbott/St. Jude Medical Dallas, Texas; February 2017
- <u>Axium<sup>™</sup> Neurostimulation System Education Program</u> Faculty; Abbott/St. Jude Medical Dallas, Texas; October 2016

Axium<sup>™</sup> Neurostimulation System Education Program Faculty; Abbott/St. Jude Medical Dallas, Texas; August 2016

- <u>Axium™ Neurostimulation System Education Program</u> Faculty; Abbott/St. Jude Medical Dallas, Texas; July 2016
- <u>Axium™ Neurostimulation System Education Program</u> Faculty; Abbott/St. Jude Medical Dallas, Texas; May 2016

Epiducer Training Course Faculty; St. Jude Medical Las Vegas, Nevada; December 2012

Epiducer Training Course Faculty; St. Jude Medical Plano, Texas; August 2012

<u>Epiducer Training Course</u> Faculty; St. Jude Medical Chicago, Illinois; April 2012

# **Independent Lectures**

DRG Neuromodulation for Chronic Pelvic Pain Urology of Indiana Department Meeting; 47 Prime Carmel, IN; September 10, 2020

# **Neuromodulation**

Grand Rounds, Department of Neurological Surgery, Indiana University School of Medicine; Goodman Hall; Indianapolis, Indiana; April 2016

# Spinal Cord Stimulation – Who is a Good Candidate?

Indiana University Health Spine for Primary Care Symposium; Goodman Hall; Indianapolis, Indiana; July 2013

# Low Back Pain

St. Vincent's Hospital Neuroscience Institute Lecture Series Indianapolis, Indiana; February 2006

# <u>Practical Aspects of Radiofrequency Neurolysis</u> CRNA Pain Management Course, IPGE Indianapolis, Indiana; January 2006

# <u>Breast as an Uncommon Metastatic Site of Gynecological Cancer</u> American College of Surgeons, Annual District Meeting Indianapolis, Indiana 1997

# **CLINICAL ACTIVITIES**

#### **Medical Licensure**

State of Indiana Health Professions Bureau • 01047150A Drug Enforcement Administrtion License National Provider Identification Number • 1780669267 ACLS Certified BLS Certified CITI Trained for St. Vincent's Hospital

#### **Board Certification**

American Board of Anesthesiology

- Diplomate of Anesthesiology
  - Specialty Certification in Anesthesiology, September 2006
  - Maintenance of Certification, December 2016
- Diplomate of Pain Medicine
  - Subspecialty Certification in Pain Medicine, September 2008
  - Maintenance of Certification, December 2018

# World Institute of Pain

- Diplomate Fellow of Interventional Pain Practice, August 2017
- USMLE Step 1, May 1994

USMLE Step 2, October 1995

USMLE Step 3, November 1997

#### **ORGANIZATIONAL ACTIVITIES**

#### **Professional Memberships and Societies**

American Society of Interventional Pain Physicians International Neuromodulation Society North American Neuromodulation Society World Institute of Pain Spine Intervention Society American Society of Pain & Neuroscience American Society of Regional Anesthesia and Pain Medicine American Society of Anesthesiology American Academy of Pain Management American Medical Association/ Indiana State Medical Association

# **Procedural Training**

<u>Superion<sup>™</sup> Education Program (Proctor)</u> Vertiflex, Miami, Florida; January 2018

Axium<sup>™</sup> Neurostimulation System Education Program (Proctor) Abbott/St. Jude Medical, Dallas, Texas; March 2016

<u>St. Jude Medical Epiducer Course (Proctor)</u> Plano, Texas; August 2011

<u>Kyphon/Medtronic Balloon Kyphoplasty and Vertebroplasty Course (Proctor)</u> Las Vegas, Nevada; March 2008

Spine Intervention Society Intensive Anatomy, Imaging & Injection Workshop University of New England School of Medicine Biddeford, Maine; April 2006

<u>Spine Intervention Society Lumbar Workshop</u> San Francisco, California; January 2005

Spine Intervention Society Thoracic Workshop Memphis, Tennessee; September 2005

<u>ITB Therapy – Intrathecal Baclofen Therapy: Managing Severe Spasticity</u> Dallas, Texas; February 2005

# RECOGNITION

# **Honors and Awards**

Indianapolis Monthly Magazine Top Doctor	
America's Most Honored Doctors - Top 5%	
Indianapolis Monthly Magazine Top Doctor	
America's Most Honored Doctors - Top 5%	2023
Top Doctors, Castle Connolly	2023
Indianapolis Monthly Magazine Top Doctor	2022
America's Most Honored Doctors – Top 1%	2022
Indianapolis Monthly Magazine Top Doctor	2021
Regional Top Doctor, Castle Connolly	

America's Most Honored Doctors – Top 1%	2021
Indianapolis Monthly Magazine Top Doctor	
Regional Top Doctor, Castle Connolly	
America's Most Honored Doctors – Top 1%	
Patients' Choice 5 Year Honoree	2020
Compassionate Doctor 5 Year Honoree	2020
Regional Top Doctor, Castle Connolly	2019
On-Time Physician Award, Vitals	
Indianapolis Monthly Magazine Top Doctor	2018
America's Most Honored Professionals Top 1%	2018
Regional Top Doctor, Castle Connolly	2018
Patients' Choice Award, Vitals	2018
On-Time Physician Award, Vitals	2018
Compassionate Doctor, Vitals	2018
Indianapolis Monthly Magazine Top Doctor	2017
Regional Top Doctor, Castle Connolly	
Patients' Choice Award, Vitals	2017
Compassionate Doctor, Vitals	2017
America's Most Honored Professionals Top 5%	2017
Indianapolis Monthly Magazine Top Doctor	2016
Regional Top Doctor, Castle Connolly	2016
Patients' Choice Award, Vitals	2016
Compassionate Doctor, Vitals	2016
America's Most Honored Professionals Top 5%	

Indianapolis Monthly Magazine Top Doctor	2015
Top Doctor, Castle Connolly	
Compassionate Doctor, Vitals	
Top Doctor, Castle Connolly	2014
Patient's Choice, Vitals	2014
On-Time Physician, Vitals	2014
Patient's Choice 5 Year Honoree, Vitals	2012
Patient's Choice Award, Vitals	2012
Compassionate Doctor Award, Vitals	2012
Patient's Choice Award, Vitals	2011
Patient's Choice Award, Vitals	2010
Compassionate Doctor Award, Vitals	2010
Patient's Choice Award, Vitals	2009
Patient's Choice Award, Vitals	2008
Academic Honors; Indiana University School of Medicine; Ob/Gyn	1996
Academic Honors; Indiana University School of Medicine; Physiology	1996
Academic Honors; Indiana University School of Medicine; Internal Medicine	1996
Floyd T. Romberger, Jr., Teaching Award; Department of Ob/Gyn Indiana University School of Medicine	
Academic Honors; Indiana University School of Medicine; Pathology	1993
Academic Honors; Indiana University School of Medicine; Genetics	1993
Academic Honors; Indiana University School of Medicine; Neurobiology	1992
Academic Honors; Indiana University School of Medicine; Microbiology	1992