Let me start by stating how privileged I am to serve the membership as the 11th president of the North American Neuromodulation Society (NANS). Our organization continues to experience robust growth as represented by the results of the 2015 annual meeting. This past year in Las Vegas, NV, 1,600 physicians and medical professionals and more than 2,200 attendees were present for our 19th Annual Meeting. Once again, these attendance figures set a new milestone for the society! Thank you for your support and for making this happen.

You should know that this would not have been possible without the many volunteers who devoted hundreds of hours of personal time over the past year to organize and bring the meeting to life. Salim Hayek, MD PhD, and Peter Konrad, MD, PhD, have been the engines behind the scientific program for the past several years, and their vision for it and efforts have allowed it to grow into what it has become today. In conjunction, Parag Patil, MD PhD, and Lawrence Poree, MD PhD, as the annual meeting chairs, helped ensure that the overall atmosphere, meeting venue, and related events were of the caliber our attendees have grown to expect from the NANS Annual Meeting.

I also would like to acknowledge and commend the efforts of Steven Falowski, MD; Jason Pope, MD; and David Provenzano, MD, who organized the largest hands-on course for fellows and residents in the neuromodulation space. A special thanks also is due to Gail McGlothlen, MS APRN CNS; Michael Saulino, MD PhD; Dean Willis, MD; and Dr. Poree for their efforts in leading our neuromodulation overview course for nurses, advance practice nurses, and physician assistants and the intrathecal therapies preconference course, respectively. I would also like to offer a special thanks to William Abraham, MD, and Ali Rezai, MD, for their hard work on NANS’3.

While the meeting was a great success and a more formal summary is available on the following pages, I particularly would like to recap and highlight for you the Groundbreaking Clinical Trials Results session. The 2015 meeting was the second year we offered this special lecture during one of the main plenary sessions. It has been given a special place in our program in order to share with the membership top clinical and basic science studies. The session also was created as a challenge to membership and industry to continue to produce top science for our field. The two presentations this year highlighted studies that were performed and supported by industry. As such, and in the spirit of transparency that is paramount to myself and our board, I’d like to take this opportunity to review both the selection and vetting process that was incorporated.

During this past summer, we made repeated requests to the membership to submit abstracts for the clinical trials session. During the submission period, we received 14 abstracts, from which two were accepted. All submitted abstracts were reviewed by the entire NANS board and then voted on, with the two submissions receiving the most votes offered the chance to present. We, as a board, value the sharing of knowledge and recognize how important it is for data to be shared, especially when concerning the unique and groundbreaking clinical trials being performed.

Upon receipt of the final clinical trials presentations, the scientific planning committee reviewed each one to remove any semblance of commercial interest because we wanted the membership to be able to look at the data, critically assess it, and evaluate the therapies to determine when they could be appropriately used for our patients. The board and I stressed that the presenters make a “vanilla talk without sprinkles.” At the end of the presentation, Eric Buchser, MD, provided commentary about data evaluation in this type of setting to provide everyone with a balanced opinion and approach. As the data are presented for publication and distributed to an even wider audience, we, as a board, look forward to revisiting the discussion with membership in future forums, if there is interest.

NANS strives for continued improvement, and we sincerely value and appreciate the feedback we have received from members. We are currently taking a very serious approach to matters related to the conflicts of interest present in our society. As we work to find and implement an appropriate solution, we will formally share our progress with you in future communications. If there are other topics or issues that you feel, as a member,
need to be emphasized or looked at more closely by the organization, please reach out to me or the board directly. We look forward to engaging with you and creating a dialogue. If you find inconsistencies with that, please reach out to us.

At this time, I would like to welcome the new board members who began their terms during the annual meeting. Our three newly elected directors at large are Julie Pilitsis, MD PhD; Leonardo Kapural, MD PhD; and David Provenzano, MD. You can read more about them below.

Additionally, during the annual meeting, the NANS board approved a slate of new officers. Joining me on the NANS Executive Committee are B. Todd Sitzman, MD MPH, president-elect; Dr. Konrad, vice president; Dr. Poree, treasurer; Dr. Hayek, secretary; and David Kloth, MD, past president. Continuing their service on the board are Marc Huntoon, MD; Dr. Falowski; Dr. Pope; and Richard Rauck, MD.

It is an honor to follow in the footsteps of Dr. Kloth and the other leaders in the field of neuromodulation who have preceded me. I want to thank the board and Nominating Committee who expressed faith in my ability to lead NANS and serve as president. I will do my best to continue moving this organization forward and ensure that NANS continues to flourish during the next 2 years and beyond.

We continue to have a long journey ahead of us. We have a strong board who can take us there. In the coming months, we hope to report our progress to you on our initiatives concerning conflicts, education, advocacy and leadership building.

Again, thank you for your support and trust.

Sincerely,
Ash

Ashwini D. Sharan, MD
President, North American Neuromodulation Society

Welcome, New Board Members

Leonardo Kapural, MD PhD

Leonardo Kapural, MD PhD, is a pain physician at the Carolinas Pain Institute and Center for Clinical Research in Winston Salem, NC. He is also professor of anesthesiology at Wake Forest University School of Medicine. Dr. Kapural’s interests include peripheral nerve stimulation, spinal cord stimulation, discogenic low back pain, and visceral abdominal pain.

After a pain management fellowship at the Cleveland Clinic, he stayed on for 10 years in the pain management department, serving also as director of clinical research and professor of anesthesiology at the Cleveland Clinic Lerner College of Medicine of Case Western University.

Dr. Kapural is an active member of the American Academy of Pain Medicine (AAPM), American Society of Regional Anesthesia and Pain Medicine, and the North American and International Neuromodulation Societies. He served as director at large for the AAPM and currently is director at large for the International Neuromodulation Society. He speaks at many national and international meetings.

Dr. Kapural’s broad experience encompasses teaching and clinical education, research, and innovations in the area of pain treatments for which he has won two Innovator Awards. He has published his research findings in more than 100 journal articles, more than 100 abstracts, two books, and 20 book chapters. He is listed by his peers in “Best Doctors in America.”
Coding and Reimbursement Changes for 2016

David Kloth, MD

Each year there are a number of changes to Current Procedural Terminology (CPT) codes (new codes, revised codes, and deleted codes) as well as for reimbursement for most codes. This year there were limited changes to reimbursement and a few relevant changes to CPT codes used in billing neuromodulation therapies. The following changes to CPT coding related to neuromodulation therapies were instituted for physician reimbursement by Centers for Medicare & Medicaid Services (CMS) for 2016:

- Deleted CPT code 95973—Electronic analysis of implanted neurostimulator pulse generator system (i.e., rate, pulse amplitude, pulse duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient compliance measurements); complex spinal cord or peripheral (i.e., peripheral nerve, sacral nerve, neuromuscular) (except cranial nerve) neurostimulator pulse generator/transmitter, with intraoperative or subsequent programming, each additional 30 minutes after first hour. (List separately in addition to code for the primary procedure.)
- Revised code 95972—Electronic analysis of implanted neurostimulator pulse generator system (i.e., rate, pulse amplitude, pulse duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient compliance measurements); complex spinal cord or peripheral (i.e., peripheral nerve, sacral nerve, neuromuscular) (except cranial nerve) neurostimulator pulse generator/transmitter, with intraoperative or subsequent programming.
- Added a new paragraph to the introductory text that reads: Code 95970 describes subsequent electronic analysis of a previously implanted simple or complex brain, spinal cord, or peripheral neurostimulator pulse generator system, without reprogramming.

Code 95973 describes intraoperative or subsequent electronic analysis of an implanted simple spinal cord, or peripheral (i.e., peripheral nerve, autonomic nerve, neuromuscular) neurostimulator pulse generator system, with programming. Code 95972 describes intraoperative (at initial insertion/revision) or subsequent electronic analysis of an implanted complex cranial nerve neurostimulator pulse generator system, with programming. Codes 95974 and 95975 describe intraoperative (at initial insertion/revision) or subsequent electronic analysis of an implanted complex spinal cord or peripheral (except cranial nerve) neurostimulator pulse generator system, with programming.

- Added the following sentence to the end of the introductory material: “For 95974 and 95978, use modifier 52 if less than 31 minutes in duration.”
  - 95974 is electronic analysis with programming of complex cranial nerve neurostimulator—first hour.
  - 95978 is electronic analysis with programming of complex deep brain neurostimulator—first hour.

**NOTE:** The definition of simple versus complex programming did not change and reads as follows: Simple intraoperative or subsequent programming of the neurostimulator pulse generator/transmitter (95971) includes changes to three or fewer of the following parameters: rate, pulse amplitude, pulse duration, pulse frequency, eight or more electrode contacts, cycling, stimulation train duration, train spacing, number of programs, number of channels, alternating electrode polarities, dose time (stimulation parameters changing in time periods of minutes including dose lockout times), more than one clinical feature (i.e., rigidity, dyskinesia, tremor). Complex intraoperative or subsequent programming (95972–95979) includes changes to more than three of the above.

Julie G. Pilitsis, MD PhD

Julie G. Pilitsis, MD PhD, is professor of neurosurgery and neuroscience at Albany Medical College in Albany, NY. She completed a neurosurgery residency at Wayne State University in Detroit, MI, while earning a PhD in neurophysiology. It was during this time that she became active in basic science and translational research. She then completed a fellowship in functional neurosurgery at Rush University Medical Center in Chicago, IL, focusing on the neurosurgical treatment of movement disorders. She returned to Albany Medical College in 2011, joining the Center for Neuropharmacology and Neurosurgery and the neurosurgery division as an associate professor of neurosurgery. She has published numerous journal articles and received funding for functional neurosurgery research from the National Institutes of Health.

She is the immediate past chair of the Joint Section on Pain for the American Association of Neurological Surgeons/Congress of Neurological Surgeons and is on the executive council of the American Society for Stereotactic and Functional Neurosurgery. She served as an ex-officio member of the NANS board of directors and was the first chair of the Women in Neuromodulation Section. She is passionate about neuromodulation and sponsors junior faculty in this arena.

David Provenzano, MD

David Provenzano, MD, is president of Pain Diagnostics and Interventional Care. He received his undergraduate degree from Colgate University and his medical degree from University of Rochester School of Medicine and Dentistry. He completed a surgical internship at Thomas Jefferson University Hospital, a residency in anesthesiology at the Western Pennsylvania Hospital, and a pain management fellowship at Dartmouth Hitchcock Medical Center.

Dr. Provenzano has served as a principal investigator on multiple research studies, published numerous scientific articles, and lectured at numerous international and national meetings on the management of acute and chronic pain. He also serves as an external member of the Robert Morris University institutional review board, an adjunct assistant professor at Duquesne University Department of Pharmacology, and an adjunct clinical instructor in the Department of Physician Assistant Studies at the Duquesne University Rangos School of Health Sciences.

He has leadership roles in a number of professional societies, including the North American Neuromodulation Society, American Society of Regional Anesthesia and Pain Medicine, and American Society of Anesthesiologists.
Save the Date for the Midyear Meeting of the North American Neuromodulation Society

Steven M. Falowski, MD; Parag Patil, MD PhD

Given the ongoing success and growth of the North American Neuromodulation Society in terms of membership and the annual meeting (next in Las Vegas, NV, January 19–22, 2017), a midyear meeting known as NANS² has been planned to provide an additional opportunity to obtain premier neuromodulation education in the eastern United States. The meeting will be in Baltimore on June 25–29 and will offer a variety of opportunities in cadaver training, plenary sessions on the latest technology, and cross-pollination across multiple specialties.

The organizing chairs for the meeting are Parag Patil, MD PhD, and Steven Falowski, MD. Dr. Falowski is a member of the NANS board, co-director of the NANS premeeting educational workshops, and a member of the NANS Annual Meeting Committee. He is head of functional neurosurgery at St. Luke’s University Health Network in Bethlehem, PA. Dr. Patil is the NANS Annual Meeting Scientific Program co-chair. He is associate professor of neurosurgery, neurology, anesthesiology, and biomedical engineering at the University of Michigan. Additional members of the planning committee include NANS President Ashwini Sharan, MD; NANS Vice President Peter Konrad, MD PhD; and NANS board members Jason Pope, MD; and David Provenzano, MD.

NANS will host NANS² in collaboration with the Neural Interfaces Conference Steering Committee (NIC) as a joint scientific conference. Since 1996, the NIC has been the premier meeting for those working in the engineering and neuroscience of neuromodulation. The NANS²-NIC meeting will bring together a diverse group of scientists, engineers, and clinicians, representing the basic and translational scientific aspects of neural interfaces and neuromodulation. The goal of the conference is to foster collaboration between these groups and to provide an in-depth overview of implantable medical devices, including research and development, implantation techniques, and integration into clinical practice.

The NANS²-NIC clinical focus will be on integrating neuromodulation into your practice, patient selection, practical decision making, and applications of neuromodulation. On Saturday, June 25, the meeting will focus on plenary sessions and presentations of the latest spinal cord stimulation technology. This year, neuromodulation is experiencing a rapidly changing landscape not experienced in years past with the incorporation of new advancements in technology and commercial offerings. Sessions will focus on the “nuts and bolts” of neuromodulation therapy, the science behind the new innovations, and integration of these novel technologies into your practice.

Sunday, June 26, will focus on educational offerings. NANS has established itself as the premier education forum for neuromodulation with the unparalleled growth and success of its annual premeeting workshops. NANS²-NIC will offer courses for residents and fellows, as well as those already in practice, and include hands-on cadaver exposure to the latest technology and offerings in the field of neuromodulation. Additional courses will focus on integrating neuromodulation into your practice, practice setup and contracts, and practical decision-making among numerous new therapy options.

The third part of the meeting (June 27-29) will feature the joint conference and collaboration of NANS with NIC providing a forum for presentation and discussion of state-of-the-art developments in areas that include neural stimulation, neural plasticity, functional electrical stimulation, deep brain stimulation, auditory prosthesis, cortical prosthesis, peripheral nerve interfaces, biomaterials, microelectrode array technology, brain computer/machine interfaces, and other emerging areas. A daylong workshop collaboration to bring together clinicians, scientists, and representatives of federal governmental agencies to explore regulatory, scientific, and coverage issues in neuromodulation is also in the works.

The NANS²-NIC meeting will be June 25-29 at the Sheraton Inner Harbor in Baltimore, MD. Save the date!
INS Makes Progress on Guideline Updates and Creates Committee for Globalization

Timothy Deer, MD, INS President

I would like to wish all my fellow members of the International Neuromodulation Society (INS) a fantastic new year and share news of an encouraging forecast for our field. In this column, I will highlight two things involving your global society.

First, I am excited to share progress of the latest updates to guidelines initiated by the INS concerning intrathecal drug delivery and neurostimulation. The two sets of journal articles under development will present new treatment algorithms that will guide clinical practice and improve care for our patients.

Second, we have formed 11 new committees to carry out the important work of the society. One committee in particular will pursue our theme of globalization, which will involve seeking and administering grants and scholarships.

Regarding the new treatment algorithms that are being prepared for submission to Neuromodulation: Technology at the Neural Interface, intrathecal drug delivery has been addressed in regular updates since 2000 by the Polyanalgesic Consensus Congress (PACC). PACC comprises experts who evaluate current evidence to create comprehensive treatment guidelines concerning medication choices to treat nociceptive and neuropathic pain for patients with cancer, terminal illness, and noncancer etiologies.

Drawing upon an extensive literature search from the past several years, with gaps filled in by expert opinion, PACC co-authors have developed and ranked 23 consensus points. These recommendations will be embodied in evidence-based algorithms for pain care, patient selection, drug selection, trialing strategies, implantation, and concentration and dosing.

The neurostimulation guidelines, first published in 2013, are being updated for the first time by the Neuromodulation Appropriateness Consensus Committee (NACC). The NACC articles will cover:
- bleeding and coagulation management
- infection prevention and control
- safety guidelines for neurologic injury.

In addition to watching for NACC and PACC updates, please stay tuned for messages from the INS about our newly formed committees. The 11 committees cover:
- research and scientific oversight
- finance and resources
- interim meetings
- biennial congress program
- globalization
- advocacy and society liaison
- public education, outreach, and website
- education and continuing medical education
- membership and chapter creation
- international women in neuromodulation
- young neuromodulators.

In particular, through the committee that focuses on globalization, INS intends to offer grants to support the needs of medical professionals and patients in developing countries where neuromodulation has recently become available. The focus will be on developing systematic education, infrastructure, and funding to impart best practices in patient selection and interventions, which should lead to better therapy accessibility and outcomes.

In closing, I want to acknowledge all your efforts, large and small, made during our mutual journey to foster this evolving group of therapies that can help improve the lives of our patients.

NANS2-Neural Interfaces (NIC) Joint Meeting 2016

June 25–29, 2016
Baltimore, MD, Sheraton Inner Harbor

NANS, in conjunction with NIC, invites physicians, allied health professionals, researchers, and scientific investigators of all levels to submit an abstract for the 2016 meeting. The deadline for submissions is April 1, 2016, at 5pm CT. Please visit www.neuromodulation.org to access the 2016 Abstract Submission Site.
Annual Meeting Exceeds Expectations Again

Peter Konrad, MD PhD; Salim Hayek, MD PhD

The NANS 19th Annual Meeting in December was yet another record-setting conference. With more than 1,600 medical and allied health attendees plus exhibitor and industry members, a total of 2,293 participants made the meeting our largest to date. The NANS Annual Meeting has grown from 771 medical attendees in 2011 to 1,600 in 2015—more than 100% growth!

Healthy growth in the field is reflected in the development of novel therapies and product approvals. The increase in NANS meeting attendance created a need for a larger venue and the inclusion of richer and more diverse content. In addition to the three general plenary sessions, 20 parallel sessions took place Friday and Saturday, including five concurrent sessions offering an unprecedented breadth of topics for varied neuromodulation interests.

In addition to the core meeting, specialized peripheral sessions focusing on niche topics attracted a larger, more diverse audience to the meeting. The fourth annual NANS P* (Invention, Investment, and Invigoration) premeeting conference focused on autonomic therapies and brought together attendees from industry, research, venture capital, regulatory, and clinical backgrounds who share a passion for innovation in the field of neuromodulation and for driving new technologies to market. The 2015 meeting also included a half-day concurrent session exclusively for residents and fellows covering topics such as selecting a practice, contract negotiation, advanced training, and emerging topics in neuromodulation. Friday evening saw the second annual Women in Neuromodulation special interest group meeting. This session brought together more than 40 female leaders from the clinical and industry sides of neuromodulation and provided a forum for networking and continuing education.

The 2015 Neuromodulation Overview for Nurses, Advance Practice Nurses, and Physician Assistants focused on neurostimulation and was chaired by Michael Saulino, MD PhD, and Gail McGlothlen, MS APRN CNS. It was well-attended and received positive reviews.

For the second year in a row, an extremely successful intrathecal pump management course, led by Lawrence Poree, MD PhD, focused on troubleshooting and best practices for physicians and other practitioners who use intrathecal drug delivery technology. Ten individuals participated in the course to learn the latest in pump management, reprogramming, and troubleshooting approaches. The session was capped by roundtable discussions with experts.

The perennially popular and innovative spinal cord stimulation course and cadaver workshop was once again offered to a select group of pain fellows and neurosurgery residents. The workshop included 80 pain medicine fellows and 21 neurosurgery residents from programs across the country. For a third consecutive year, the course featured a neuromodulation session for neurology residents; 25 residents participated. NANS is grateful for the course sponsors, including Boston Scientific, Medtronic, St. Jude Medical, Allergan, Cyberonics, Flowonix and Jazz Pharmaceuticals.

Additional highlights of the 2015 Annual Meeting included plenary presentations by respected scientists including Scott Delp, PhD; Paul Larson, MD; Richard North, MD; Kevin Kilgore, PhD; Bengt Linderoth, MD; David Ginberg, MD; Jaimie Henderson, MD; and Vivian Mushahwar, PhD. For the second year in a row, a session on breakthrough clinical trials highlighted evidence-based clinical research in neuromodulation. In several focused topic sessions, presenters promoted particular sides of an issue in neuromodulation and participated in lively and informative debates.

Plenary lectures focused on the evolving landscape in the healthcare arena, including reimbursement, advocacy, and emerging applications and research. Viktor Mayer-Schönberger, PhD, professor of Internet governance and regulation at the University of Oxford, gave the keynote address on big data and its effects in medicine and healthcare.

During the meeting, NANS presented Tony Yaksh, PhD, the NANS Lifetime Achievement Award for his contributions to the field. Casey H. Halper, MD, received the Kumar New Investigator Best Manuscript Award.

NANS has always appreciated our generous meeting sponsors and exhibitors. Once more, the annual meeting enjoyed healthy sponsorship with four diamond-level sponsors (Boston Scientific, Medtronic, Nevro, and St. Jude Medical) and two silver-level sponsor (Jazz Pharmaceuticals and Nuvecra). A total of 54 exhibitors filled the exhibit hall, which also boasted more than 300 scientific abstracts displayed on electronic poster boards. Membership in the society is at a record high, and plans are underway to recruit and retain more members, focusing on new graduates and other medical specialties where use of neuromodulation therapies is still evolving.

This year, a first-of-its-kind midyear joint meeting between NANS and the Neural Interfaces Conference will take place in Baltimore, June 25–29. It will bring together clinicians, engineers, and scientists focused on neuromodulation and will offer hands-on courses and a device access workshop.

The 20th Annual NANS Meeting, to be held at Caesar’s Palace and Convention Center January 19–22, 2017, promises to be an even more exciting event. Look for an innovative scientific program presented by world-class faculty and rich in quality scientific abstract presentations. NANS also hopes to offer attendees a larger array of workshop opportunities. Stay tuned for more details. We look forward to seeing you in Las Vegas next January!
Groundbreaking Clinical Trial Results Shared

Ashwini Sharan, MD

At this session on clinical trial results, three highly respected individuals in the neuromodulation field—Tim Deer, MD, Peter Staats, MD, and Robert Levy, MD PhD—presented the results of two important studies. The studies—the SUNBURST (Success Using Neuromodulation with BURST) trial and the dorsal root ganglion trial—represent 6–8 years of intense labor, science, technology, and development.

Drs. Deer and Levy disclosed commercial interests in Spinal Modulation and that currently they do not hold any equity interest in that company. Drs. Deer, Levy, and Staats disclosed that they are consultants with St. Jude Medical, Inc.

Prior to the presentation, the planning committee carefully vetted their talks to remove any semblance of commercial interest because we wanted attendees to look at and critically assess the data to be able to evaluate the treatments for appropriate use with their patients. The board and I asked the speakers to give “a vanilla talk without sprinkles.” NANS values your input on the quality of our sessions and would appreciate your feedback if you found any inconsistencies.

Dr. Deer presented the results of the SUNBURST study, a prospective, randomized controlled trial assessing Burst stimulation for treating chronic pain. The steering committee comprises Drs. Deer, North, Slavin, and Staats.

Dr. Deer provided background on why the group studied this waveform. “There’s a big need right now in America, I believe, and I think that most of you would agree, to seek out new innovations. How many people see opioid problems in their communities, with diversion of use, and overdose?” he said. The severity of the problem is demonstrated by the fact that the Centers for Disease Control and Prevention recently awarded him a grant and that he chairs a related mortality committee.

He added that it is known from Krishna Kumar’s work with the Neuromodulation Appropriateness Consensus Committee (NACC) that the longer clinicians wait to do neuromodulation, the more the problem can occur. It is also known that people develop habituation and tolerance over time and that they quit responding to stimulation particularly with tonic waveform, he said.

As a result, Dirk De Ridder, MD PhD, of Belgium, developed the concept that Burst stimulation mimics natural neuroma signaling and that this should be introduced in clinical practice. Thalamic cells fire in tonic and burst modes. When you are only in tonic, you may be missing one of the pathways.

Thalamic burst firing is considered a more potent activator to the cortex so, in theory, it could provide a much better analgesic effect for pain, Dr. Deer said. “This is largely based on the current hypothesis that there’s a medial pathway, which has the affective disorder of pain and then a lateral pathway, which is more pain perception.

“With tonic stimulation, we’re covering the lateral pathway with any type of tonic-type waveform. And then with burst, the theory may be that we would cover the medial pathway, which is the effect of pain,” he said.

Steven Falowski, MD, and Thomas Yearwood, MD PhD, are planning a substudy of patients in the United States looking at positron emission tomography scanning and electroencephalography to further identify the medial pathway component. This study already has been done in Europe so the hope is to follow up on that research in this group of patients.

Is is certainly not surprising that burst waveform is a different concept for patients. “If you have the same mechanism continuously going through to the nervous system over time, the nervous system quits responding in the same fashion,” Dr. Deer said. “We’ve all seen this over time where the patient says, ‘I still feel a paresthesia but it no longer helps my pain.’ So the concept of a burst, a high burst of stimulation through the nerve root to the primary nerve body may change the way in which the nervous system responds.”
WIN Gatherings an Overwhelming Success

Jackie Weisbein, DO

While in Las Vegas, NV, the Women in Neuromodulation (WIN) board met to discuss goals for the upcoming year. Julie Pilitsis, MD PhD, passed the helm to incoming Chair Lisa Stearns, MD, who led the meeting. Members discussed possible upcoming research projects, ideas about existing research, data collection, and recruiting women from various specialties to connect with WIN.

At a reception shortly after the meeting, attendees honored the accomplishments of the current board and engaged with all WIN members. Although WIN was just formed in 2014, the reception boasted an unprecedented number of attendees.

During the event, speakers from Medtronic, Boston Scientific, and St. Jude Medical, Inc., encouraged attendees to continue to work together to advance personal and professional goals. They focused on leadership, work-life balance, developing interpersonal relationships, and leveraging contacts. WIN thanks Heidi Hinrichs of St. Jude Medical, Viktorija Telbis of Boston Scientific, and Matt Thomas of Medtronic for speaking. WIN also thanks these organizations for the exemplary support of the section.

The overarching theme of both gatherings was to encourage WIN members to participate in new scientific endeavors and expand their comfort zones. For more information, to get involved, and to suggest new ideas for the organization, please contact WIN Secretary Jennifer Sweet at jennifersweet@gmail.com.

AHP Preconference Program Summary Report

Gail McGlothlen, RN DNPc

The seventh annual preconference course for the nonphysician clinician co-directed by Michael Saulino, MD PhD, and Gail McGlothlen, RN DNPc, provided new and experienced clinicians the opportunity to explore the history of neuromodulation through the eyes of Elliot Krames, MD; refresh their neurobiology knowledge base with Marc Huntoon, MD; increase their awareness of the most widely used neuromodulation therapies and patient management strategies; and appreciate the exciting future for treating chronic disease as shared by Robert Levy, MD PhD.

In other sessions:
- John Hatheway, MD, and Dr. Saulino reviewed treatment options and current patient management strategies for targeted drug delivery (TDD) for chronic pain and spasticity.
- Jaqueline Weisbein, MD, discussed spinal cord stimulation for chronic pain.
- John Chae, MD, shared his research on muscle stimulation to improve upper extremity function.
- Ken Alo, MD, described sacral nerve root stimulation for the treatment of pelvic pain and urinary and fecal incontinence.
- Meghan Wilock, PA-C, reviewed the indications, patient management, and treatment outcomes of deep brain stimulation.
- Dr. McGlothlen introduced foundational concepts on the safety and practical utility of using ultrasound for pump reservoir refills in preparation for the simulation lab that was included with this year’s registration fees.

Two important clinical topics presented for the first time were the:
- Challenges of inpatient management of the patient on TDD by Ramana Naidu, MD.
- Management of the patient with a pump in the home care setting by Kathy Clagg, RN.

Following the didactic course, expert clinicians proctored participants during the simulation lab for ultrasound-guided reservoir refills using gel models and pump programming with the Medallion*, Prometra*, and SynchroMed®II pumps.

Registrants for the nonphysician clinician course doubled from last year, and attendees provided positive feedback.

Thank you to the exemplary faculty members who shared their knowledge and expertise through informative, evidence-based presentations and the dedicated clinicians committed to lifelong learning who made the 2015 nonphysician clinician program a success.

Special thanks to Dr. Saulino for “cooking” all the gel molds; Linda Wolbers, MD, for her assistance with the simulation lab; GE Healthcare for providing the ultrasound machines; and Flowonix, Medallion Therapeutics, and Medtronic for providing pump refill and programming technical support!
Residents and Fellows in Neuromodulation

Michael Fishman, MD; Jason Pope, MD; Chengyuan Wu, MD; Steven Falowski, MD; David Provenzano, MD; Nick Elbaridi, MD; and Andrew Shaw, MD

The NANS Resident and Fellows Section (RFS) had a productive year in 2015, which culminated in a variety of offerings at the annual meeting. Many thanks to the outgoing officers of the section who were instrumental in expanding on the groundwork laid by their predecessors, planning and executing the breakout sessions, and initiating the first RFS job fair. Our gratitude goes to Andrew Shaw, MD; Michael Fishman, MD; Sharona Ben-Haim, MD; Anish Sen, MD; Michael Hanes, MD; and Shannon Hann, MD, for their service in 2015.

The highly acclaimed 2015 cadaver course and RFS breakout session was well attended, so much so that there was standing room only during the breakout session! The topics ranged from professional development and negotiation to cutting-edge and emerging technologies in neuromodulation. Many thanks to the faculty members for their rousing lectures.

At the conclusion of the breakout session, attendees elected the following leadership for the RFS in 2016: Co-Chairs Dr. Fishman and Nick Elbaridi, MD; Secretary Jay Shah, MD; Treasurer Ajay Antony, MD; Education Sam Grodofsky, MD; and Webmaster Vishad Sukul, MD. Dr. Shaw and Chen Wu, MD, will continue to serve as directors at large. Jason Pope, MD; Steven Falowski, MD; and David Provenzano, MD, will continue to mentor and advise the group as board liaisons.

Following the breakout session, the RFS hosted its first career fair. This intimate event was designed to facilitate networking among NANS members and NANS-RFS attendees. The goal was to place hiring physicians and recruiters in the same room as some of the brightest young minds in neuromodulation.

The NANS-RFS officers were busy on many fronts during the year. The “Landmark Articles for Neuromodulation” page has been updated (neuromodulation.org/Media/Publications/LandmarkPapers.aspx). Further updates will be made over the course of 2016 to include the most recent major developments in the field.

In 2015, the first NANS Legislative Awareness, Health Policy, and Advocacy Fellows travelled to Washington, DC, where they worked tirelessly to bring important neuromodulation issues to the attention of the U.S. Congress. As the inaugural fellow, Michael Leong, MD, applied his extensive clinical experience to these important health-policy issues. We look forward to expanding this program and the possibility of pairing senior, mid-to-late career fellows with early-career fellows.

The NANS-RFS mentorship program was piloted during 2015 with nine mentor/mentee pairs. The inaugural year was incredibly successful with both mentors and mentees benefiting from shared knowledge and experience. The program will continue with another nine pairs of mentors and mentees in 2016. We are continuing to receive feedback to enhance the experience and grow the program in the future.

Future RFS endeavors include expanding upon existing programs and planning and executing offerings for trainees at the mid-year NANS-NIC Joint Meeting in Baltimore, MD, June 25-29, 2016. We plan to expand the career fair in 2016 by further engaging the NANS membership to identify those who are expanding their practices so that we can connect them with qualified candidates.

The NANS-RFS Committee looks forward to continuing to foster connections and enrich the training of young physician neuromodulators.

Please consider making a donation to the North American Neuromodulation Society Foundation (NANSF) to provide quality education and research.

Every dollar donated to NANSF directly supports residents, fellows, graduate students, and medical professionals in their education, research, and career development.

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Review of 2015 NANS Educational Opportunities

Steven Falowski, MD; Jason E. Pope, MD; David Provenzano, MD

Each year, the North American Neuromodulation Society hosts a neuromodulation workshop focused on advanced pain care strategies, including spinal cord stimulation (SCS) and intrathecal drug delivery. The workshop is always held the day before the start of the annual meeting. Paralleling the tremendous growth and popularity of the NANS meeting, the workshop has grown considerably since its inception. Under the direction of NANS Board Members Steven Falowski, MD; Jason Pope, MD; and David Provenzano, MD, the 2015 course was a landmark event.

Dr. Falowski, also a member of the NANS Annual Meeting Planning Committee, is head of functional neurosurgery at St. Luke’s University Health Network in Bethlehem, PA. Dr. Pope, also a member of the NANS Annual Meeting Planning Committee, is president of Summit Pain Alliance in Santa Rosa, CA. Dr. Provenzano is president of Pain Diagnostics and Interventional Care in Pittsburgh, PA.

The 2015 workshop continued the premise of integration and cross-pollination among neuromodulation specialties, with the combined presence of neurosurgery, pain medicine, and neurology. There is always a special interest in developing interdisciplinary referral strategies and patient-centric multidisciplinary care. The workshop included a comprehensive combined lecture series and specialty-specific didactic sessions, with hands-on cadaver workstations.

This year’s course had more than 400 applications for 125 slots (85 for pain fellows, 15 in neurosurgery, and 25 in neurology). Applicants were chosen in a lottery and were required to be resident or fellow member of NANS. The NANS workshop remains the largest international course available and is one of the only known courses to integrate multiple specialties. This year saw the addition of three new industry partners, orchestration of exposure to the newest technology, over 19 cadavers, and a participant-to-faculty ratio of 4:1.

As in the past, the cadaver section of the workshop offered a novel training opportunity for attendees because it provided equitable exposure to the neuromodulation options available in the United States. The neurology section had both spinal cord stimulation (SCS) and intrathecal drug delivery demonstrations, with an interactive, real-time, moderated discussion, hands-on programming with deep brain stimulation therapies, and the newest neuromodulation techniques for epilepsy. The hands-on SCS workshop was designed for neurosurgery residents and pain medicine fellows and focused on all facets of SCS, including patient selection, psychological screening, anchoring, device programming, complication identification and management, troubleshooting, and personalized training for percutaneous and surgical laminectomy implantation techniques. Neurosurgical residents were not only trained in paddle lead placement, but also percutaneous lead placement and trialing techniques. Pain medicine fellows rotated through SCS trial and implantation and had extensive exposure to surgical skill stations.

Intrathecal drug delivery was represented for the fourth consecutive year. Each attendee had a hands-on experience with intrathecal drug delivery implantation techniques. Other didactic topics included headache management and destructive procedures, such as a cordotomy and trigeminal rhizotomy for facial pain. The newest didactics included brain neuromodulation for epilepsy and spasticity management.

All specialties had a focused approach on the clinical utilization of neuromodulation therapies for patients in their practice, as well as with cross-pollination of specialties. Topics included implementing neuromodulation in a practice, programming devices, and billing and coding of the therapies. Didactic sessions were reinforced with hands-on cadaver exposure with a low participant-to-faculty ratio.

To reinforce the principles taught in the course and accountability with attendance, a pre- and post-NANS workshop neuromodulation test was given, along with a survey describing attendees’ present neuromodulation experience. These will be repeated to the same group in the next 2 years, highlighting the importance of early exposure and reinforcement of patient selection and implementation of these advance modalities.

Education is paramount in the field of neuromodulation and is a focal point for NANS. This year saw the continuation of the Certificate of Attendance (COA) program that trained and educated 15 practicing physicians on incorporating pain therapies into their practice as well as personalized training on implantation and management techniques. This was performed with premier faculty at a ratio of 3:1 for attendees, demonstrating NANS’s dedication to education. The Certificate of Attendance program accepts qualified applicants through an online application process.

The development of mentorship opportunities among the attendees and the faculty is the hallmark of the NANS workshop, fostering a network for collaboration and continued guidance. Each attendee received the faculty’s contact information and online access to the didactic sessions. This year saw NANS continued interest in education and field development by implementing a pre- and posttest for the course to quantify the learning objectives, as well as tracking mechanisms including surveys to follow the progression of course participants as they enter practice.

In addition, the mentorship program, which augments postgraduate training and pairs 10 NANS faculty members with mentees, entered its second year. The program provides additional in-depth education on neuromodulation through reading and discussion over the course of 12 months on important, selected content. In addition, each mentee visits their mentor’s practice. Throughout the year, data are collected on the mentors’ and mentees’ experiences to allow for continued quality improvement to enhance the activity. The feedback to date has been very positive. The outstanding results of the inaugural year were also presented at the 2015 annual meeting in an abstract.

Last year, to accommodate the growth of the NANS resident and fellows membership and presence, the Residents Fellows Section (RFS) introduced an annual formal breakout session during the general meeting. Topics this year included integration of specialties, early practice development, advancements in neuromodulation, and contract negotiations.

Given the high demand for the premeeting workshop held annually in Las Vegas, NV, and the success of the RFS, a midyear cadaver workshop has been created to provide an additional opportunity for residents and fellows to gain hands-on experience with neuromodulation techniques and provide a presence in the eastern United States. This will be run in conjunction with the NANS mid-year meeting in Baltimore June 25–29, 2016.
Meetings of Interest

NANS members are encouraged to attend these meetings of interest presented by other pain, spine, and neurology associations. Please see the following websites for more information.

February
AAPM 32nd Annual Meeting
American Academy of Pain Medicine
February 18–21
Palm Springs, CA
www.painmed.org/annualmeeting/

March
18th Annual Pain Management Symposium
Cleveland Clinic Department of Pain Management
March 5–9
Coronado, CA
www.clevelandclinicmeded.com/live/courses/pain/

11th Annual Scientific Meeting
Neuromodulation Society of Australia and New Zealand
March 12–13
Perth, Western Australia

41st Annual Regional Anesthesiology and Acute Pain Medicine Meeting
American Society of Regional Anesthesia and Pain Medicine
March 31–April 2
New Orleans, LA
www.asra.com/

May
2016 FSIPP Annual Meeting
Florida Society of Interventional Pain Physicians
May 19–22
Orlando, FL

Neuromodulation: The Science
NTS Conference
May 25–29
San Francisco, CA
www.ntsconference.com/#intro

June
NANS² Neural Interfaces Joint Meeting
NANS and Neural Interfaces Conference
June 25–29
Baltimore, MD
neuromodulation.org
NANS Newsletter Available Online
Visit www.neuromodulation.org to read current and past issues.

SAVE THE DATE

NANS²: A Mid-Year Meeting of NANS and NIC

JUNE 25–29, 2016
BALTIMORE, MD
SHERATON INNER HARBOR