President’s Message

NANS Membership Offers Value and Stake in Future of Neuromodulation

Ali R. Rezai, MD

As we move into the fall, I have begun to reflect on my term as NANS president. During these past 2 years, NANS has achieved tremendous growth in both membership and member involvement. Last year, the NANS Board of Directors created the NANS Foundation to foster the development of education, training, and research in the field of neuromodulation. Our annual meeting has shown unprecedented growth each year, and all indications are that attendance will continue to increase as NANS expands its reach to include and provide more relevant and critical content for all related specialties involved in the field of neuromodulation.

Membership Highlights

The NANS board has made a concerted effort to re-energize our committees to provide you with relevant information on subjects that matter to you. In addition to helping advance the society, committees provide an excellent opportunity for professional development and networking with leaders in our field. Committee participation is open to all active NANS members and I encourage you to get involved with one that interests you by contacting the chair of the committee. You also may contact the NANS office at info@neuromodulation.org. A list of the society’s committees is always available on the NANS website at www.neuromodulation.org.

Over the course of the next year, the NANS board and committees will be implementing several new initiatives to enhance member benefits and value. Current benefits include registration discounts to attend the annual meeting, access to a searchable directory of members through the Members Only section of the NANS website, an annual subscription to the NANS Newsletter, and access to the online archive of the society’s journal, Neuromodulation: Technology at the Neural Interface. Some of the new benefits to watch for are additional exclusive members’ only content on the NANS website, including a focus on educational content for practitioners, and greater access to annual meeting presentation materials. Other benefits include continued advocacy work in areas related to treatment guidelines and reimbursement issues.

Soon, we also will begin introducing several new membership levels. One level will be aimed at nurse practitioners, physician assistants, and other allied health professionals; the other will be dedicated to our industry members. We hope that by offering these additional options, we will be able to connect with and expand the reach of our society to our colleagues in all arenas supporting neuromodulation.

The board also hopes that members will begin to recognize the NANS Foundation as an important benefit of membership in the society. We hope not only that the foundation will help foster research and education within our field, but also that our members will participate in and support the efforts of the foundation in the future.

Annual Meeting

One of the greatest benefits members receive from NANS is the unique opportunity to connect with colleagues from around the country by participating in the annual meeting. The NANS Annual Meeting Planning and Scientific Program Committee members, led by David Caraway, MD PhD; Salim Hayek, MD PhD; Peter Konrad, MD PhD; Lawrence Poree, MD PhD; and Ashwini Sharan, MD, have been hard at work putting together another outstanding program for this year’s meeting, taking place December 5–8, 2013, at the Mandalay Bay Resort and Casino and Four Seasons Las Vegas in Las Vegas, NV. In addition, they have been supported by an outstanding group of NANS members who also have volunteered their time and talents to help bring the program to reality.

Last year’s meeting broke attendance records for NANS, and we hope to build on that success for the 2013 meeting by exposing attendees to the latest information on research, technology, and new developments within the field of neuromodulation. This year, we will be expanding our pre-meeting workshops to include a symposium on intrathecal pumps and a quality- and customer service-oriented session developed with practice and office managers in mind. This course will be conducted by faculty from the Four Seasons Las Vegas, who run a widely respected program on how to deliver exceptional service and quality to customers.

Based on the excellent feedback received, we also will be offering the “NANS Investment, Invention, and Invigoration Forum” to bring together researchers, industry partners, and emerging companies. New for this year is our first session specifically

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dedicated to residents and fellows. NANS established the Residents and Fellows Committee to develop offerings for this group and better serve our future colleagues who are just beginning their work in the field.

As noted, this year’s meeting will take place at a new venue. We hope that the Mandalay Bay Resort and Four Seasons Las Vegas will enhance our attendees’ experience by offering a larger meeting space, allowing for an increased number of sessions as well as greater possibilities for networking and engaging with colleagues. We also will be offering a more dynamic exhibit hall and multiple optional lunch symposia. Updates on these exciting program details for the 2013 Annual Meeting are available at www.neuromodulation.org/meeting.

Thank You

I also want to take a brief moment to acknowledge the NANS Board of Directors and staff, with whom I have had the honor of serving these past 2 years. Together, we have made significant improvements to the overall operations and focus of the society. We have initiated and reinvigorated several committees that are providing tremendous benefits to NANS and our membership. We also have established a foundation that will provide resources to support the advancement of neuromodulation. I am delighted with these developments and am looking forward to what our society will be able to accomplish in the future.

Speaking of the future of NANS, I would like to introduce our next NANS president, David Kloth, MD. Dr. Kloth has been an active NANS member for many years and has served on our board in several different roles. Through his leadership and guidance, NANS has begun to play a more prominent role in advocacy efforts both to promote the field and ensure patients continue to receive access to neuromodulation therapies. Dr. Kloth also has helped NANS establish a public relations campaign that has produced news articles for patient and practitioner education as well as interviews with prominent researchers in the field highlighting innovative uses of neuromodulation therapies. Please join me in welcoming Dr. Kloth as the next president of the North American Neuromodulation Society.

Thank you again for your support of NANS and our programs. Your active participation ensures the success of NANS well into the future. I look forward to continuing my involvement with the society and to helping grow the field of neuromodulation. It has been a privilege and an honor to be the NANS president. I look forward to visiting with you at our annual meeting in December.

Ali R. Rezai, MD
Meet the Newest NANS Board Members

Marc A. Huntoon, MD

Born in Alma, MI, Marc A. Huntoon, MD, remembers aspiring to be a physician since grade school. He received his BA from Alma College and went on to receive his MD from Wayne State University School of Medicine in Detroit, MI. Because of financial constraints, he applied for armed forces scholarship support and began service with the US Navy as a general medical officer in Virginia Beach, VA.

While there, Dr. Huntoon applied for entrance into the Portsmouth Naval Medical Center residency in anesthesiology and was accepted; later, he completed a subspecialty track fellowship at Wake Forest in obstetric anesthesia, where he was mentored by James Eisenach. He became the first pain management fellow in the Navy while being mentored by Bill Little, and during this time introduced the then-new procedures of spinal cord stimulation and intrathecal drug delivery system implants to his patients.

Following his time in the Navy, he switched to academic practice in Toledo, OH, at the Medical College of Ohio (MCO; now University of Toledo), where he started one new pain clinic, revamped another, and worked on the first permanent neuromodulation cases as an anesthesiologist. Dr. Huntoon was chairman of the Department of Anesthesiology at MCO before becoming chairman of the Pain Medicine Division at the Mayo Clinic in Rochester, MN. He currently leads the Division of Pain Medicine at Vanderbilt University in Nashville, TN.

Most recently, he has served as editor in chief of the journal Regional Anesthesia and Pain Medicine. Dr. Huntoon looks forward to continuing to advocate for patients, colleagues, and the field of neuromodulation in his new role with NANS.

Richard Rauck, MD FIPP

Richard Rauck, MD FIPP, graduated from Wake Forest University Bowman Gray School of Medicine in 1982, after receiving his BS from Davidson College in Davidson, NC. He completed his residency in anesthesiology and his fellowship in pain control at the University of Cincinnati College of Medicine at Cincinnati, OH. Dr. Rauck is board certified in anesthesiology with subspecialty certification in pain medicine through the American Board of Anesthesiology.

Dr. Rauck has a long and active history of publishing in well-known medical journals, speaking at many national and international professional meetings, and practicing clinical pain management. Dr. Rauck is founder and president of the Carolinas Pain Institute and medical director for The Center for Clinical Research, LLC. He has published more than 80 articles in peer-reviewed journals and has written and edited numerous books.

His current appointments include serving as an editorial board member for Pain Practice, a reviewer for several peer-reviewed journals, president and founding member of the Sceptor Foundation for Pain Management, and president-elect of the World Institute of Pain. Dr. Rauck was the founder of the Pain Society of the Carolinas and continues to serve as a board member. He also founded Pain Pathways, a national magazine devoted to chronic pain and patient inspiration and awareness, and serves as senior editor.

He is a clinical associate professor of the Department of Anesthesiology at Wake Forest University School of Medicine and has continuously served as Pain Fellowship Director at Wake Forest for the past 26 years. Dr. Rauck was selected by his peers for the Best Doctors in America® designation from 1992-2012.

Parag G. Patil, MD PhD

A native of Philadelphia, PA, Parag Patil, MD PhD, studied electrical engineering at Massachusetts Institute of Technology and Philosophy and economics at Oxford University before pursuing combined medical and doctoral studies in biomedical engineering at Johns Hopkins University. A childhood interest in brain-machine interfaces led to a strong clinical interest in functional neurosurgery; a residency at Duke University with Allan Friedman, Dennis Turner, and Miguel Nicolelis; and fellowship training at the University of Toronto with Dr. Andres Lozano.

Dr. Patil is currently assistant professor of neurosurgery, neurology, anesthesiology, and biomedical engineering at the University of Michigan. He is co-director of both the Surgical Therapies Improving Movement (STIM) and the Psychiatric Neuromodulation programs. He was recently named a Taubman Emerging Scholar at the University of Michigan, an honor identifying a small number of early-career physician scientists. Dr. Patil participates in an active clinical practice spanning neuromodulation for movement disorders, psychiatric disorders, cancer pain, and degenerative pain. His research applies engineering and imaging techniques to better understand the neurophysiology and clinical efficacy of neuromodulation for movement disorders, depression, and pain.

Within NANS, Dr. Patil is dedicated to the advancement of new clinical approaches, such as novel applications of neuromodulation and percutaneous cordotomy, and teaching residents and fellows. He instructs and currently directs the NANS Spinal Cord Stimulation Workshop, and is honored to serve as a member of the NANS Board of Directors.
Upcoming Expert Panels

The International Neuromodulation Society (INS) is planning two expert panels centered on neuromodulation for pain to begin in October. NANS and INS members who cannot attend are welcome to participate by following the online discussions and asking questions or making comments. The expert panels are moderated daily during the active discussion period.

The first panel discussion, open October 8-22, will address research into repetitive transcranial magnetic stimulation for neuropathic pain. Turo Nurmikko, MD PhD, professor in pain relief at The Walton Centre NHS Foundation Trust and director of the Pain Research Institute in Liverpool, UK, will be the moderator for this panel.

The second online panel discussion, open October 27-November 10, is inspired by a research paper in *Neuromodulation: Technology at the Neural Interface* by Shivanand P. Lad, MD PhD, and colleagues comparing complications, reoperation rates, and healthcare costs of paddle or percutaneous leads for spinal cord stimulation in a cohort of 13,774 patients from 2000-2009. INS President Simon Thomson, MBBS FFPMRCA, a consultant in anesthesia and pain management services at Basildon and Thurrock University Hospitals NHS Foundation Trust, will comoderate this session on the pros and cons of percutaneous versus paddle leads with INS Director at Large Konstantin Slavin, MD, who heads the section of Stereotactic and Functional Neurosurgery at the University of Illinois Medical Center at Chicago.

The sessions, accessible from the Members Only section of the INS website (www.neuromodulation.com), will employ a forum-like question-and-answer format and will be archived for future reference.

Consensus Guidelines

In addition, the 60 NANS members and international colleagues who make up the Neuromodulation Appropriateness Consensus Committee are in the process of issuing the first consensus guidelines for neurostimulation, which will be submitted to *Neuromodulation: Technology at the Neural Interface*. Led by INS President-Elect Timothy Deer, MD, this effort by the committee was announced at the start of the INS 11th World Congress in Berlin in June, and also was covered by *Pain Medicine News*.

11th World Congress Recap

NANS had 313 delegates at the 11th World Congress, where NANS also had a prominent booth staffed by NANS Executive Director Chris Welber. All are thanked for their active participation.

Leading up to the congress, NANS members were busy contributing to expanded patient education and other materials on the INS site; Lisa Stearns, MD, submitted an overview discussing cancer pain and neuromodulation, and Annu Navani, MD, contributed images from her clinic to the INS Image Bank, which provides members with images to use in posters, slides, or other presentations.

The patient handout by Dr. Stearns, along with about 24 other fact sheets, is available in the INS Members Only section of the website as a PDF to which practitioners can add their contact information and either print or send via e-mail. You also can find non-copyrighted images in the growing Image Bank.

Finally, audio files of select presentations from the INS 11th World Congress also are available in the INS Members Only section of the website. Abstracts and posters also are being published online in *Neuromodulation: Technology at the Neural Interface*, Volume 16, Number 5.

Plans are underway for the 12th INS World Congress, which will take place June 6-11, 2015, at the Fairmont The Queen Elizabeth Hotel in Montreal, QC, Canada. The abstract submission deadline is January 12, 2015. Congress Chair and fellow NANS member Timothy Deer, MD, invites all NANS members to attend.
Thank You, Chima Oluigbo, MD FRCSC

The NANS Board of Directors would like to extend its appreciation and gratitude to Chima Oluigbo, MD FRCSC, who is leaving his post as editor in chief of the NANS Newsletter after more than 2 years. During his term, Dr. Oluigbo influenced the coverage of clinical content and oversaw the continued progression of the newsletter as the society’s primary communication vehicle to share updates about its activities, advocacy issues, and advances in the field of neuromodulation.

In addition to his work with the newsletter, Dr. Oluigbo served on the faculty for the neurology course at the 2012 NANS Annual Meeting and has presented at numerous conferences in the field.

We thank Dr. Oluigbo for all of his efforts with the newsletter and wish him all the best in the future.

Welcome, Lawrence Poree, MD PhD

The NANS Board of Directors is pleased to welcome Lawrence Poree, MD PhD, as the new editor in chief for NANS Newsletter. Dr. Poree has served on the NANS Board of Directors since 2011 and is also on the board of the California Society of Interventional Pain Physicians. He currently serves on the editorial boards for two journals, Pain and Neuromodulation.

Dr. Poree received his MD from Stanford University School of Medicine and completed his anesthesia residency at Stanford University Medical Center and a pain fellowship at the University of California at San Francisco. He is currently associate professor at the Pain Clinic of Monterey Bay in Aptos, CA.

Dr. Poree is interested in expanding the content covered in the newsletter and working with committee chairs and the board to ensure that their work to promote the field and the organization is shared with members. Please contact him at poreel@anesthesia.ucsf.edu if you have any suggestions for the newsletter.

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 contacts for more information.

November
New York and New Jersey Societies of Interventional Pain Physicians
November 7-10, 2013
Jersey City, NJ

EANS 2013 Annual Meeting
European Association of Neurological Societies
November 11-14, 2013
Tel Aviv, Israel
www2.kenes.com/eans2013/Pages/Home.aspx

December
NANS 17th Annual Meeting
North American Neuromodulation Society
December 5-8, 2013
Las Vegas, NV
www.neuromodulation.org

January
AASSFN 9th Scientific Meeting
Asian Australasian Society for Stereotactic and Functional Neurosurgery
January 10-12, 2014
Shanghai, China
www.aassfn.com
NANS 17th Annual Meeting: Why You Should Attend

Peter Konrad, MD PhD, and Salim Hayek, MD PhD, Scientific Meeting Co-Chairs

It is a great pleasure to provide the membership of NANS with a sneak preview of the expanded scope of this year's annual meeting.

NANS will be holding the 17th Annual Meeting at a new location this year, the Mandalay Bay Resort and The Four Seasons in Las Vegas, NV, December 5-8, 2013. This new venue offers many advantages, including attractive room rates at both hotels as well as world-class entertainment and dining. As a result, we have been able to significantly increase our meeting space and exhibitor areas to allow for more interaction with exhibitors, attendees, and presenters.

This year's theme is *Today's Vision, Tomorrow's Reality*—a theme which we believe is truly fitting for our field. NANS is the premier global society leading the field of neuromodulation, and this year's theme reflects the expanded opportunities and growth in the field. Attendees will receive the most comprehensive presentation available of state-of-the-art technology evolving in the field of neuromodulation for brain, spinal cord, and peripheral nerve disease. New or expanded areas of coverage that will be explored this year include:

- an in-depth discussion of the role of performing clinical trials and bringing new devices to market
- a thorough review of intrathecal drug delivery devices and important conceptual developments in understanding the complexities of drug and device interaction
- an introduction to and unique examples of how software development can change the way neuromodulation devices are used
- the value of data registries and outcomes studies that will impact our field
- an exploration of the pros and cons of spinal cord, nerve root, or peripheral nerve stimulation in the treatment of pain
- the expanding role of neuromodulation in pelvic pain and gastrointestinal/genitourinary dysfunction
- a new session on the treatment of pain related to cancer
- the financial burdens of current practice and of bringing new devices to market.

Our keynote speaker, Tan Le, CEO of Emotiv Lifescience and a TED Global speaker, was selected because of her visionary leadership in interactive brain sensing technology to guide thought-controlled devices. Whether this may be a future option for neuromodulation device interaction should provoke significant discussion. We also have recruited several other speakers and vendors to present the uses of external biosensing as a feedback control for devices, especially in rehabilitation.

This year's meeting will feature a serious expansion in the total content of our educational program. There are now nine parallel sessions over the span of 2 days that expand the scope of focused presentations and discussions covering a large breadth of topics. We are certain that there is a session that will specifically address a question or topic of interest in your area of specialty beyond the general topics in the morning plenary sessions.

Being able to interact with many diverse medical specialists, engineers, and scientists is a unique advantage for those who attend the NANS Annual Meeting as well as become members of our organization. It is our mission to broaden the scope of our annual meeting and to continue recruiting all specialists involved in neuromodulation therapy to attend. This year, we have placed special emphasis on expanding interest from our urology colleagues and scientists who have an interest in neuromodulation for genitourinary disorders, pain, and incontinence. For future meetings we hope to continue expanding our recruitment to other specialists who are involved in neuromodulation therapy.

This year we also anticipate a significant increase in attendance by midlevel practitioners as well as residents and fellows who are entering the field of neuromodulation. By providing five different premeeting workshops, we believe that the NANS Annual Meeting can provide the leaders of tomorrow with the knowledge and skills needed for this rapidly evolving field.

*Today's Vision, Tomorrow's Reality.* Come join us for what will likely be once again the world's largest meeting on neuromodulation therapy. Help us develop tomorrow's reality by being a part of the vision brought to you through the NANS 17th Annual Meeting.
Spinal Cord Stimulation Workshop: A Hands-On Cadaver Course for Pain Fellows and Neurosurgery Residents

Steven Falowski, MD; David Provenzano, MD; and Jason Pope, MD, Spinal Cord Stimulation Workshop Directors

NANS hosts a spinal cord stimulation (SCS) workshop focusing on neuromodulation for the pain and neurosurgery communities. The goal and direction of this workshop not only involves training with a cadaver and didactic lessons, but more importantly in specialty integration. Physicians in pain management, neurosurgery, and neurology are brought together to learn the multidisciplinary approach to patient selection, implantation, and management.

This course has continued to grow each year. The 2012 NANS SCS workshop was one of the largest international courses offered and highlighted the integration of neuromodulation among these various specialties, which has been a major goal of NANS. The workshop offers didactic sessions and hands-on cadaver instruction for pain physicians and neurosurgeons. It also involves integration with the simultaneously running neurology workshop.

Geared toward neurosurgery residents and fellows in pain management, the SCS workshop focuses on all aspects of SCS, including techniques for implantation, complications, and troubleshooting, as well as percutaneous versus placement via surgical laminectomy. In addition, intrathecal pain pump therapies are addressed in the course with some of the newest methods available such as refilling of pumps using ultrasound.

This year’s course promises to be even more successful and build on the foundations already established. The teaching ranges from basics in neuromodulation to high level training and complication management. An extensive cadaver training lab will be used with the goal of small, hands-on groups and mentoring.

Neurology Course

Alon Y. Mogilner, MD PhD, and Michael Pourfar, MD, Neurology Course Directors

The opportunity for cross-training and cross-fertilization between trainees in different specialties is the key to continued growth in the field of neuromodulation. To that end, the 2013 NANS meeting will feature a full complement of training courses in interventional pain management, neurosurgery, and neurology.

The primary goal of these courses is to introduce residents and fellows to the field of neuromodulation through a combination of didactic lectures and hands-on training. The training for pain fellows will be devoted to spinal cord stimulation, and the course for neurosurgeons will include training in both spinal cord stimulation and lesioning techniques. Neurology trainees will receive hands-on training in programming of neurostimulators and intrathecal pumps.

In addition to individual lectures for each specialty, all trainees will have a combined midday didactic and roundtable session led by the faculty. At the conclusion of the course, we expect the trainees will have a fundamental understanding of the clinical indications for neuromodulation and to have familiarity with the basic techniques relevant to each specialty.

The courses will be held Thursday, December 5, at the Oquendo Center in Las Vegas, a short drive from the Las Vegas Strip, and will consist of both didactic and hands-on cadaver sessions. The following day, the neurology residents will have an additional afternoon didactic session at the conference center.

The 2012 NANS meeting was the first to introduce a course specifically for neurology residents, following the neurosurgery resident course introduced in 2011. Thanks to our continued industry support, we are able to subsidize the costs of attendance for the trainees as well as offer a discounted conference registration fee.
Intrathecal Pump Evaluation, Management, and Refill Course

Lawrence Poree, MD PhD, Intrathecal Pump Course Director

For the 17th Annual Meeting, NANS is offering a new course designed to serve as a primer and to provide an update on the latest in intrathecal drug delivery for providers who care for patients with implanted intrathecal pumps. This full-day workshop will offer 8 hours of continuing medical education credit.

The workshop will highlight the latest technological and pharmacological advances in the use of intrathecal pumps for the treatment of spasticity, cancer pain, and non-cancer pain. World-renowned faculty including David Caraway, MD PhD; Peter Konrad, MD PhD; Elliot Krames, MD; Christophe Perruchoud, MD; Richard Rauck, MD; Michael Saulino, MD PhD; B. Todd Sitzman, MD MPH; and Lisa Stearns, MD, will lecture and lead discussions and case reports. Attendees are invited to participate in hands-on cadaver training to learn the latest in pump management, reprogramming, troubleshooting, and refill techniques with and without ultrasound guidance. Participants will gain experience with all of the commercially available intrathecal pumps.

The agenda for this exciting new workshop includes the following:

- Past, Present, and Future of IT Therapy and Pump Technology
- Anatomy and Physiology and Pharmacology of IT Therapy
- Using the S.A.F.E. Principles for Patient Selection and IT Trial Methods
- On-Label and Off-Label Use of Intrathecal Medications and PACC Review
- Pharmacokinetics and Pharmacodynamics and Catheter Placement as Determinants of Clinical Effectiveness
- Evaluation and Management of Patients with IT Pumps Implanted for Spasticity: Special Concerns for Brain and Spinal Cord Injuries
- Evaluation and Management of Patients with IT Pumps Implanted for Non-Cancer and Cancer Pain: With Special Concerns for Palliative Care and Hospice Patients
- Logistics and Mechanics of IT Pump Refills in Hospital, Office, Home: With and Without Fluoroscopic and Ultrasound Guidance; Physician and Nurse Interaction
- Identification of Problems with Intrathecal Pumps Requiring Surgical Intervention
- Hands-On Cadaver Workshop for Pump Interrogation Interpretation and Refills With and Without Ultrasound Guidance for All Commercially Available Pumps

This workshop is open to novice and experienced physicians and midlevel providers who wish to launch or advance their intrathecal pump management skills.

5th Annual Course on Neuromodulation for Midlevel Practitioners—Focus on Spinal Cord Stimulation

Konstantin Slavin, MD FAANS, 5th Annual Course on Neuromodulation for Midlevel Practitioners Director

One of the primary tenets of NANS's mission is education—not only education for the physicians who practice neuromodulation procedures, but also for our colleagues who refer patients to us, help us during our interventions, and manage our patients afterward. In addition to neurologists, psychiatrists, internists, and other physicians, this large category of colleagues includes so-called midlevel providers—our nurses, surgical assistants, physician assistants, and nurse practitioners—who are deeply involved with all aspects of preoperative, intraoperative, and postoperative patient care.

To fulfill this educational mission, NANS has been holding educational events for midlevel practitioners for the past 4 years, and as our programs have evolved, we have progressed from providing a general overview of neuromodulation as a medical field to presenting more in-depth reviews that will benefit participants in their daily work. Instead of offering a pure didactic program made of lectures by physicians and key opinion leaders, we invited experienced midlevel practitioners to share their expertise on subjects and topics that are most useful to their colleagues.

In 2012, our midlevel course was dedicated to intrathecal drug delivery. We covered both pain and spasticity management and, based on audience feedback, the single-subject concentration was more useful and practical than our previous, general format. To continue this tradition, the 2013 midlevel neuromodulation course is dedicated to spinal cord stimulation (SCS): the most common surgical intervention worldwide in the field of neuromodulation. The 4.5-hour program will cover basic and advanced aspects of SCS, including anatomy and patient selection, psychological aspects of patient screening, and surgical and programming nuances, and will include a special presentation on how to choose the right hardware for the right reasons.

The symposium promises to be a unique source of useful information and peer-to-peer exchange. By the end, those who are familiar with SCS will be more confident in using it in practice, and those who are learning or considering SCS for daily practice will be better prepared to work with this important neuromodulation modality.
**NANS I³: The Driving Forces Around Neuromodulation**

*Ashwini Sharan, MD; Ali Rezai, MD; Ben Pless; Tracy Cameron; and Tom Tefft, NANS I³ Planning Committee*

NANS I³ (Invention, Investment, and Invigoration) is a premeeting symposium held at the NANS Annual Meeting, and this year’s NANS I³ theme is *The Driving Forces Around Neuromodulation*. The event is the brainchild of Scientific Program Senior Advisor Ashwini Sharan, MD; NANS President Ali Rezai, MD; and NANS Past President Joshua Prager, MD MS. Composed of members of industry and a community of physicians dedicated to promoting the field of neuromodulation, the mission of NANS I³ will again be to find positive ways to promote innovation and collaboration among scientists, engineers, clinicians, executives, investors, and all other stakeholders in the arena of neuromodulation.

The first NANS I³ session was a huge success. It was overbooked, with standing room only available throughout the day and great participation by an engaged audience. With their excellent presentations, the faculty members were instrumental to the success of the event, as were the very capable moderators for the sessions, including Kathy Chester; Eric Grigsby, MD; Mir Imran, PhD; Peter Konrad, MD PhD; Robert Levy, MD PhD; Dana Meade; Richard Penn; Ben Pless; Ali Rezai, MD; and Michael Stanton-Hicks, MD. In addition, the support of the I³ Committee—including Dr. Grigsby; Brian Kopell, MD; Joshua Prager, MD MS; and Tom Tefft—was much appreciated.

This year's organizing committee includes Dr. Sharan (Thomas Jefferson University), Dr. Rezai (Ohio State University), Mr. Tefft (Medtronic), Mr. Pless (Autonomic Technologies, Inc.), and Tracy Cameron, PhD (NICTA).

The day will include introductory comments followed by a talk by Claus Richter, MD PhD, on lessons applicable for neuromodulation, based on his experience in the field of cochlear technologies. Then, David Robinson will challenge the audience and industry by looking deep into the forces that drive innovation and asking which market forces are involved in this process. Robinson will question attendees—do we want new technologies or better services?

NANS I³ will focus on three main sessions: Emerging Technologies, Medical Economics, and Focus on Data. The first session, Emerging Technologies, will focus on advancements in the brain and spinal cord, drug delivery, and the sensing systems. Following this will be a panel discussion that will bring together thought leaders and their impressions on how the industry will bring these new innovations into the consumer space. The second session is aimed at covering broad aspects of a number of economic issues concerning the field of neuromodulation. Presenters, including leaders of the main companies in the neuromodulation space, will cover perspectives from physician groups, payers, investors, and the industry, and how they make the difficult decisions when it comes to the appropriation of their investment dollars. The final session will dive into the analysis of data. Representatives from the US Food and Drug Administration (FDA) will present their impressions on clinical trial design; Clement Hamani, MD PhD, will speak on outcomes from a physician's perspective, and Tracy Cameron will talk about study design. The session will culminate in a presentation by representatives from Medtronic, Boston Scientific, and St. Jude Medical detailing data registries and lessons learned from their own experiences and device registries.

Featured lunchtime speaker Timothy Marjenin of the FDA will speak about some of the regulatory changes underway and then answer questions from Winifred Wu, an experienced regulator.

The NANS I³ Planning Committee hopes that the discussion is lively and the content pertinent to anyone interested in advancing the field of neuromodulation. We look forward to seeing you in Las Vegas.

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**Registration and Travel Information**

Learn more and register for the NANS Annual Meeting at www.neuromodulation.org/meeting. NANS has secured a block of rooms at the Mandalay Bay Resort and Four Seasons Las Vegas. Rooms are available at the Mandalay Bay Resort for a conference rate of $139 single/double, plus applicable taxes and at the Four Seasons Las Vegas for $199 single/double, plus applicable taxes. For reservations, please call 877.632.9001 or visit https://resweb.passkey.com/go/snans. Be sure to mention that you are attending the NANS conference and make your reservations before **November 8, 2013**. After this date, reservations will be taken on a space-available basis.
Advocacy and Policy Committee

David Kloth, MD, Chair

Over the past several years, NANS has put considerable effort into developing its advocacy program to ensure access to neuromodulation therapies for our physician members and their patients. In 2010, the Advocacy and Policy Committee (APC) was created with the understanding that there were numerous reimbursement challenges facing NANS members that would need to be addressed as health care changes in this country. Committee membership grew over the past year, and we are pleased that so many physicians have stepped up to help us with APC-related activities. The APC meets every 2 months, and we welcome the involvement of interested NANS members.

In 2012, NANS was approached by Palmetto GBA, a Medicare intermediary for a number of states, to help with the development of a local coverage determination (LCD) for spinal cord stimulators (SCS). Palmetto was very concerned with what it considered to be excessive use of SCS trials, more specifically by a number of physicians, some of whom had trial-to-perm ratios of less than 20%. In addition, in the course of their investigation into SCS trials, Palmetto determined that the current fee schedule for lead reimbursement overly compensated physicians for SCS trial leads in the office setting. NANS provided recommendations and worked closely with Palmetto’s medical directors to develop a reasonable and effective LCD policy that allows for appropriate care while controlling inappropriate utilization. As part of this project, we were asked to develop potential improvements to the fee schedule for lead reimbursement in the office; in lieu of this, Palmetto would approach the Centers for Medicare and Medicaid Services (CMS) directly, an approach we felt posed significant risk.

In June 2012, NANS representatives approached CMS to propose several solutions to address issues with office-based trials that would ensure adequate reimbursement while limiting the financial incentives that may lead to inappropriate and excessive utilization. Although CMS appreciated that we approached it proactively, it elected not to address the issue and instead requested that the American Medical Association’s Specialty Society Relative Value Scale Update Committee (RUC) provide input for the practice expense associated with office-based trials. The RUC submitted these recommendations to CMS in spring 2013, but there remain several issues that could be problematic for reimbursement. NANS has spoken with CMS and also has submitted written comments and effective LCD policy that allows for appropriate care while controlling inappropriate utilization. As part of this project, we were asked to develop potential improvements to the fee schedule for lead reimbursement in the office; in lieu of this, Palmetto would approach the Centers for Medicare and Medicaid Services (CMS) directly, an approach we felt posed significant risk.

Another pressing matter at this time relates to CMS’s proposed changes to the Hospital Outpatient Prospective Payment Rule for calendar year 2014, which will have a significant negative effects on hospital and ambulatory surgical center reimbursement. These proposals will result in significant changes to the hospital outpatient payment mechanisms for neurostimulators, including SCS, by bundling lead and generator insertion into a single Ambulatory Payment Classification, with a combined proposed fee significantly lower than is currently reimbursed. What we find most problematic is that there would be no differentiation between less expensive and more expensive systems, one and two lead systems, or rechargeable and nonrechargeable generator insertion. NANS is greatly concerned that a drastic reduction in total reimbursement for the most commonly implanted SCS system today, two leads and a rechargeable generator, may financially incentivize care that is not consistent with current clinical practice standards.

NANS’s comment letters can be reviewed in their entirety on the society’s website. APC members include David Kloth, MD, chair; Joshua Prager, MD MS; David Caraway, MD PhD; B. Todd Sitzman, MD MPH; Joshua Rosenow, MD; Phil Kim, MD; Haroon Hameed, MD; Maged Hamza, MD; Ray d’Amours, MD; Jeff Arle, MD; Ben Venger, MD; and Nameer Haider, MD.

Membership Committee

Lawrence Poree, MD PhD, Chair

The Membership Committee is pleased to announce the expansion of our membership categories in response to the growing diversity of our members. In keeping with the spirit of our mission to promote collaboration among clinicians, scientists, and engineers, we have added more membership categories to better reflect the diversity of both our membership and our committee. Our committee members represent a wide array of specialties including anesthesiology (Ray d’Amours, MD; David Dickenson, MD; Ramana Naidu, MD; and Lawrence Poree, MD PhD), neurosurgery (Konstantin Slavin, MD, and Brian Lee, MD), urology (Steven Siegel, MD), neuroscience (Jiande Chen, MD), and family practice (Linda Wolbers, MD).

The professional categories were expanded to better characterize the specialties of our members and to anticipate the needs of our regular advanced degree professional members. An allied health category was also added to recognize the contribution of nurses and physician assistants in the field of neuromodulation. The trainee categories now include those fields related to neuromodulation, including basic science and engineering as well as medicine.

In conjunction with the Compliance Committee, we have also added an industry category that recognizes the importance of collaboration with industry professionals and leaders while maintaining the appropriate safeguards against untoward conflicts of interest.

Membership benefits have also expanded to include greater discounts for the annual NANS meeting, priority for training workshops, and access to the Members Only section of the NANS website that contains the annual meeting presentations. Members who prepay for 4 years of membership dues will receive their fifth year of membership for free. A full list of benefits is listed below:

• discounts on annual meeting registration and educational courses
• priority for enrollment in educational courses
• a subscription to Neuromodulation (with the exception of trainee membership)
• a subscription to NANS Newsletter
• access to the Members Only section of the NANS website, which includes handouts and downloads from the annual meeting
• ability to hold office, vote for elected positions, and serve on committees and task forces (for regular members)
• ability to vote for elected positions and serve on committees and task forces, but not to hold office (for trainee and allied health members).
The Membership Committee looks forward to the growth and participation of our members in all areas related to neuromodulation, including advocacy, clinical practice, basic science, and engineering. We welcome all members to get involved and participate on various committees. For more information on how to participate, please call NANS Member Services at 847.375.4714 or e-mail info@neuromodulation.org.

Research Committee

Robert Foreman, PhD, Chair

Research is one of the pillars of NANS, as stated in the vision statement of the society: “NANS will promote and support clinical and basic science research to improve the understanding of the mechanisms, expand the scope of, and enhance the evidence base support for the use of neuromodulation therapies.” The goals of the NANS Research Committee are to initiate, promote, and fund research supporting the overall mission to advance neuromodulation. A specific aim of the committee is to encourage multidisciplinary collaboration among clinicians, scientists, engineers, and others. The committee is focusing on ways to support investigations that explore new frontiers or concepts in neuromodulation. Committee members include Robert Foreman, PhD, chair; David Caraway, MD PhD; Clement Hamani, MD PhD; Peter Konrad, MD PhD; Lawrence Poree, MD PhD; and Ashwini Sharan, MD.

Translational research is the catchphrase to promote collaboration between basic researchers and clinicians, and NANS is well-poised to promote this exciting concept. The National Institutes of Health Medical Research Scholars Program defines translational research as follows:

To improve human health, scientific discoveries must be translated into practical applications. Such discoveries typically begin at “the bench” with basic research in which scientists study disease at a molecular or cellular level then progress to the clinical level, or the patient’s “bedside.” Scientists and clinicians are increasingly aware that this bench-to-bedside approach to translational research is really a two-way street. Basic scientists provide clinicians with new tools for use in patients and for assessment of their impact; whereas, clinical researchers make novel observations about the nature and progression of disease that often stimulate basic investigations.

Thus, we believe that translational research can be conducted from “bench to bedside” as well as “bedside to bench.” In fact, an example of translational research has occurred with members of NANS. In the mid-2000s, Dr. Foreman—along with Bengt Linderoth, MD, from Sweden and Beverley Greenwood-Van Meerveld, PhD, a colleague of Dr. Foreman—used an animal model to show that spinal cord stimulation reduced the nociceptive visceromotor reflexes resulting from noxious colorectal distension. These results yielded evidence that spinal cord stimulation may provide a therapeutic potential for treating visceral pain of gastrointestinal origin associated with abdominal cramping and painful abdominal spasms. This study caught the eye of Elliot Krames, MD, who applied the bench to bedside concept by using spinal cord stimulation in a patient suffering from irritable bowel syndrome. He and his colleague, Dr. Mousad, showed that spinal cord stimulation curbed diarrhea and reduced pain in a patient who had suffered from this syndrome for several years. Subsequently, Leonardo Kapural, MD PhD, and others have used spinal cord stimulation to treat patients with a broad spectrum of visceral pain of abdominal and pelvic origin. Thus, the concept of translational research has propelled the interest of using the Research Committee to advance the field of neuromodulation.

Two excellent proposals have been submitted for evaluation to help determine the direction the Research Committee should take to support research. One possible process is to use the “American Idol” mechanism to provide reasonable startup funds that encourage and create enthusiasm to conduct a neuromodulation research project. Another possible mechanism is to fund smaller research awards for investigators conducting research in sections such as neuromodulation access, neuromodulation biology, neuromodulation clinical studies, neuromodulation engineering, and neuromodulation economics. One of the goals of either research plan or a combination of both is to encourage the neuromodulation community to pursue grants so that investigators will be more competitive in obtaining federal grants and those from other sources. Mechanisms to apply for these proposals will be presented on the NANS website in the near future.

Conference calls and meetings are being conducted to develop guidelines for reviewing research proposals and to explore short- and long-term strategies for establishing a research program for NANS. We believe the research program will increase our membership and meeting attendance.

References

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Visit www.neuromodulation.org to read current and past issues.

NANS 17th ANNUAL MEETING

DECEMBER 5–8, 2013
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