

# Stereotactic and Functional NEUROSURGERY NEWS



Spring 2013

## AANS/CNS Section on Stereotactic and Functional Neurosurgery and American Society for Stereotactic and Functional Neurosurgery

Editor: Michael G. Kaplitt, MD, PhD, FAANS

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## Message from the President



Konstantin Slavin, MD, FAANS

As I near completion of my first year as president of the American Society for Stereotactic and Functional Neurosurgery (ASSFN), I am pleased to report on the many initiatives being taken by the organization.

As I mentioned in a letter to ASSFN members in December, we actually have reduced the annual membership dues this year to \$300. This step is fairly unique among neurosurgical societies, and recognizes the financial complexities placed upon surgeons who are members of multiple organizations. Despite this, our society is in strong financial health due to a very successful annual meeting last year in San Francisco, combined with the steady membership base.

Although we have reduced the annual dues, the ASSFN leadership continues to strive to increase the value of that membership to each of you. The journal, as detailed in an article in this newsletter, is stronger than ever. The excellent work of David Roberts, MD, FAANS, editor of *Stereotactic and Functional Neurosurgery*, and his editorial board, combined with ongoing expansion of outstanding science in our field, continues to make the journal subscription an important feature of ASSFN membership. In order to reduce the cost to our members and facilitate the reduction in dues, Dr. Roberts and the board have worked with the publisher for a significant reduction in rates for online-only access. As a result, hardcopy journals are no longer provided as part of the regular dues. Hardcopy journals are still available to any member wishing to receive these for an additional fee, and this is facilitated by the society (See the article on page four of this

newsletter regarding the journal for more information).

We also are working to expand opportunities for members. As always, ASSFN members are automatically members of the World Society for Stereotactic and Functional Neurosurgery (WSSFN), and qualify for member rates at the upcoming WSSFN meeting in Tokyo at the end of May. As outlined in an accompanying article on page five in this newsletter, the WSSFN highly values ASSFN members and have included many of our members in their excellent scientific program. New this year, however, is a reciprocity agreement with the International Neuromodulation Society (INS) for ASSFN members to use INS member-only rates for their upcoming meeting in Berlin, which takes place June 8-13, 2013. From the experience of the past INS congresses, it appears that participation of North American stereotactic and functional neurosurgeons brings unique levels of expertise to the scientific program. In exchange, these congresses with wide international representation and cutting edge research in the field of neuromodulation may be of particular interest to the ASSFN members. To take advantage of this opportunity, please go to the INS website ([www.neuromodulation.com](http://www.neuromodulation.com)) and enter the code "neuro9" within the registration area for the discounted member rate. Of course, we all look forward to our biennial ASSFN meeting, now confirmed for the Renaissance Hotel in Washington, D.C., from May 31-June 3, 2014.

With his history of successful leadership of the Congress of Neurological Surgeons (CNS) and North American Neuromodulation Society annual meetings, we anticipate a particularly outstanding program and overall experience from the meeting chair and past-president Ali Rezai, MD, FAANS, and his team. Please mark your

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calendars for this key ASSFN event. Much more information will be provided through the website, newsletter, journal and via e-mail as further details become available.

We continue to invigorate society activities, and we welcome active participation of all members. We have active committees in many areas, some of which are fairly new. These include (with the names of committee chairs next to each): Socioeconomic (B. Kopell, P. Konrad and R. Gross), Education (R. Gross), Membership (M. Kaplitt), Guidelines (C. Hamani and J. Pilitsis), Website (K. Lee and C. Hamani), Newsletter (M. Kaplitt), Psychiatric Neurosurgery (J. Neimat), Young Neurosurgeons, Residents and Fellows Committee (A. Viswanathan), Bylaws (P. Konrad), Biennial Meeting Planning Committee (A. Rezai, A. Sharan and K. Lee), and Industry Liaison (A. Sharan). Many of you have responded to our earlier call for participation and hopefully have been contacted by the chairs of committees in which you expressed interest to request your participation. We welcome assistance from all members who have a particular interest in any of these areas, or who simply wish to help advance the mission of our society. Please contact me, or one of the chairs of a particular committee, directly if you would like to be more active in ASSFN functions. Key changes to the bylaws also will allow the ASSFN to be a more vibrant, healthy and responsive society for all members. At the last general business meeting on Oct. 9, 2013, the membership approved the recommendation of the officers for key changes in the by-laws. Most important is the incorporation of the ASSFN as a non-profit organization, which will keep the society compliant with various federal accounting requirements, and will facilitate ongoing contributions to society activities. The ASSFN therefore remains an independent society, but is now a formal affiliate of both the American Association of Neurological Surgeons (AANS) and CNS, and will continue to function as the organizer of the stereotactic and functional joint section for these societies. The increased functionality of our website under the direction of Kendall Lee, MD, PhD, FAANS, now permits online voting, which will allow critical and time-sensitive motions to be brought before the membership without delay. This was approved as well.

This is a very exciting time for stereotactic and functional neurosurgery, and as the largest continental society dedicated to surgeons within our specialty, the ASSFN plays a critical leadership role in the ongoing evolution and success of our field. We welcome any thoughts, comments or assistance from interested members, and hope that we will continue to increase the value and maintain the cost-effectiveness of membership in our society.

## ASSFN Clinical Trials Database: Call for Contributions

As part of the American Society for Stereotactic and Functional Neurosurgery's (ASSFN's) efforts to increase activities that better serve current and future members, we have developed a database of active clinical trials by stereotactic and functional neurosurgeons. This project was initiated several years ago by our current president, Konstantin Slavin, MD, FAANS, when he was editor of the ASSFN newsletter. At that time, a listing of active clinical trials found within public databases was provided in specific newsletter issues, but this labor-intensive process could not be readily sustained in each issue. There remains, however, great interest in this type of information — particularly among fellows, residents and other trainees who have great enthusiasm for developments in our field but may not have exposure to the range of ongoing clinical trials. Therefore, the society leadership has agreed that as the organized representative of stereotactic and functional neurosurgery, the ASSFN should provide a central location for any interested party to find active studies in our field. To accomplish this, website editor Kendall Lee, MD, PhD, FAANS, and research co-editor Clement Hamani, MD, have agreed to create a database on the ASSFN website that will maintain a list of active clinical trials. This will be based upon voluntary contributions of investigators, along with some additions from public websites such as [clinicaltrials.gov](http://clinicaltrials.gov). This will be on the public section of the website, making it available to members, trainees and physicians from other specialties who may be interested in research of the membership.

The information contained within the database will be limited in order to facilitate submission without great effort, and to minimize concerns about providing confidential information on a public website. To submit a trial to this database, please provide the title, name(s) of key investigator(s), performance site(s) and a maximum of two to three sentences about the goals, design and/or methodology of the study to Dr. Hamani at [c.hamani@sympatico.ca](mailto:c.hamani@sympatico.ca). Initially, this will be an online listing, but depending upon the popularity of this effort, database features such as keyword searching will be considered in the future.

# Physician Sunshine Act: New Federal Regulations

The practice and future evolution of stereotactic and functional neurosurgery depends heavily upon the development of new technologies. These include novel neuromodulation devices for the brain and spine, drugs to be delivered to specific central nervous system sites, and biologicals such as gene and cell therapies. A robust and healthy relationship with industry is critical to continued progress in these areas. However, societal concerns regarding conflicts of interest have led to increased government interest in regulating such activities. One result of this is the Physician Payment Sunshine Act, a provision of the Patient Protection and Affordable Care Act (ACA) passed by Congress and signed into law by President Obama in April 2011. However, implementation and enforcement of specific rules were lacking until recently.

On Feb. 1, 2013, the Centers for Medicare and Medicaid Services (CMS) issued a final rule implementing the Sunshine Act, an act with which all physicians actively engaged in any type of technology development, testing or consulting should be familiar. The major component of this act is a public reporting requirement, whereby CMS publicly will disclose various financial relationships between physicians and industry. Key provisions include the following:

1. Industry is responsible for collecting and reporting information to CMS, not physicians. The first reporting period will begin on Aug. 1, 2013, and end on Dec. 31, 2013, with reporting required by March 31, 2014, for release on a public CMS website by Sept. 30, 2014.
2. Sometime after March 31, 2014, and before public reporting, CMS will make data available to physicians and teaching hospitals. There will be a 45-day review period to resolve disputes with the reporting entity (manufacturer, company, etc.) and an additional 15 days for final resolution of disputes.
3. There is currently no mechanism to adjudicate unresolved disputes. CMS will flag entries that remain disputed but they will be made public, and CMS will monitor the volume of unresolved disputes to decide on any future action.
4. Unlike many university policies and prior National Institutes of Health (NIH) policies, which required payments to exceed a certain amount, essentially any payment or provision of something of value (such as a meal, gift or travel costs) must be reported, regardless of amount.
5. Exemptions from reporting include payments to an accredited continuing medical education (CME) activity, which then used those funds in an unrestricted manner to provide support to a physician for that activity (i.e. speaking fees) without input from the manufacturer. If the manufacturer pays the physician directly or selects the speaker, then this must be reported. Similarly, payments for provision of meals at a CME where individual physician use cannot be documented (such as a group lunch at a CME event) are not reportable, but meals provided to select physicians who can be tracked should be reported (for example, a lunch activity sponsored by a manufacturer that requires specific registration by physicians). These exemptions do not apply to unaccredited CME activities, in recognition of the greater level of review, scrutiny and independence of accredited CME activities.
6. Research payments to either teaching hospitals or physicians will be reported as well.
7. CMS also will make public ownership or investment interests in applicable manufacturers or group purchasing organizations by physicians or their family members. Details on how those will be provided to CMS will be forthcoming.

Sometime after March 31, 2014, physicians will be able to register on the public website to view activities that are being reported on their behalf. The American Society for Stereotactic and Functional Neurosurgery, along with the AANS/CNS Washington Committee and other representatives of organized neurosurgery, will continue to monitor the implementation of this new reporting regimen, and will continue to advise our memberships of any further developments.

# Stereotactic and Functional Neurosurgery: Journal Update

*Stereotactic and Functional Neurosurgery (SFN)*, the official journal of the American Society for Stereotactic and Functional Neurosurgery (ASSFN), continues to be a vibrant and influential source of novel clinical and basic research in our subspecialty. The last several years have been very promising for the journal. The number of high-quality submissions has increased substantially over the past few years. This also has led to an increase in the rejection rate for the journal, which is unfortunate but reflects the volume of quality submissions highlighting advances in many areas of our specialty. This also has allowed the journal to publish volumes every two months for the past several years.

The journal also maintains a strong impact factor of 1.85, and a five-year impact factor (the average citations to articles from each of the past five years) of 1.9. This places *Stereotactic and Functional Neurosurgery* among the top tier of neurosurgical journals, and among the very top of subspecialty neurosurgery journals. Self-citation of past *SFN* articles within the journal itself represents less than 10 percent of citations, indicating that the vast majority of citations are within articles published in other journals. Furthermore, the cited half-life, which is the median age of *SFN* articles cited within the past year, is 9.4 years. Together, these data indicate that articles in *SFN* are cited broadly in other journals and have a longevity that reflects their ongoing importance in our field. While the journal welcomes articles of all types, these statistics have been achieved without excessive reliance upon review articles, which are known to have higher citation rates than new submissions. This means that novel contributions to *SFN* are being read widely and cited due to their importance.

The journal continues to innovate to the advantage of both authors and ASSFN members. Each issue, one article is selected as the “Editor’s Choice,” which is both highlighted on the homepage of the journal website and is provided free of charge to anyone. The journal continues to strive for rapid publication, which is very attractive to authors of cutting-edge articles. Although the journal publishes issues every two months, once accepted, online publication and citation of articles within PubMed and other indices occurs very rapidly, regardless of the issue slated to publish

the contribution. This should help increase both the immediacy and impact of the journal going forward.

Finally, changes to the journal distribution have allowed us to provide value to ASSFN members and readers of the journal. As the official journal for the World Society for Stereotactic and Functional Neurosurgery (WSSFN) and European Society for Stereotactic and Functional Neurosurgery (ESSFN), we have been able to leverage the combined strengths of these societies to arrange for substantially reduced fees from our long-time publisher, Karger, for online-only subscriptions to the journal. While ASSFN membership continues to include a subscription to *SFN*, this will be an online-only subscription starting this spring. As mentioned in the President’s Message in this newsletter, this move has allowed the ASSFN to reduce the dues for membership in the society. However, we encourage anyone who prefers to receive a hard copy of the journal to consider the additional fee of \$172 per year. For new members, this option will be available on their membership form and will be processed by the American Association of Neurological Surgeons (AANS), which performs these activities on behalf of the ASSFN. For existing members, you may either contact Karger directly, and they will send an invoice for the fee, or you can contact Ashley Hamm of the AANS at [ahh@aans.org](mailto:ahh@aans.org), who graciously has agreed to forward any requests for paper subscriptions to the appropriate representatives at Karger. We also are making the journal available on the ASSFN website for members to have another easy portal of access.

*SFN* Editor David Roberts, MD, FAANS, and the editorial board, in consultation with the ASSFN leadership, continue to innovate and improve the journal so that it remains an important voice in the development stereotactic and functional neurosurgery. Any ideas, suggestions or comments from the ASSFN membership are welcome and should be directed to Dr. Roberts’ editorial assistant, Melissa Robb, at [Melissa.D.Robb@Hitchcock.org](mailto:Melissa.D.Robb@Hitchcock.org). We will continue to update the membership about any changes or improvements to either journal editorial or distribution processes.

# Neurostimulation for Early Parkinson's Disease

Jonathan Miller, MD, FAANS

Neurosurgeons frequently are faced with the challenge of determining exactly how aggressive to be in supporting appropriate conservative management without missing opportunities to improve patients' lives through surgery. This balance can be especially difficult for functional neurosurgeons, since the diseases we treat are rarely life-threatening, and medical physicians sometimes are reluctant to refer patients when non-surgical options exist. Neurostimulation of the subthalamic nucleus has been established as a safe and effective treatment for motor dysfunction in Parkinson's disease, but some patients might benefit from surgical consideration early in the disease while symptoms are still relatively mild. However, existing studies generally include only older patients with relatively advanced disease, and the safety and efficacy in a younger population of patients is not clear.

To address this issue, Shuepbach et al. (NEJM 368:610-622, 2013) report the results of a large multi-center prospective, randomized, controlled trial of subthalamic nucleus neurostimulation in patients with early Parkinson's disease, which continues their previously published single-center trial of 20 patients randomized to neurostimulation or medical management. The present report consists of 251 patients with Parkinson's disease studied at 19 centers in France, Germany and the Netherlands, all less than 60 years of age (mean 52), with less than three years of motor fluctuations and dyskinesia (mean 1.7 and 1.5 years, respectively). All patients had onset of Parkinson's symptoms at least four years prior to enrollment to rule out atypical causes, but the average time from first symptom to implantation was only 7.5 years, which makes this a very different population from most previous studies. Patients were randomized to either neurostimulation or continued medical management and followed for two years. The primary outcome measure, quality of life as measured by the Parkinson's disease questionnaire (PDQ-39), was significantly different: the neurostimulation group saw a 7.8 point (26 percent) improvement, compared with a 0.2 point (one percent) worsening in the medical group. These effects reached a maximum by five months and persisted through the end of the study. Patients undergoing DBS treatment also had 53 percent less motor disability (16.4 point difference on UPDRS-III), improvement in activities of daily living (6.2 points in the worst state on UPDRS-II), fewer levodopa-induced motor complications (4.1 points on UPDRS-IV) and more time with good mobility without dyskinesias (1.9 hours, with 1.8 hours less bad mobility). Taken as a whole, this is a larger difference than has been seen in most previous clinical trials.

The study did offer a few surprises. Unlike several previous reports of neurostimulation of the subthalamic nucleus in Parkinson's disease, there was no evidence of cognitive decline after implantation. However, there was a small but significant worsening

of depression scores in the neurostimulation group compared with those undergoing medical management alone. Multiple suicides in both groups led to institution of a special monitoring process midway through the study, although the risk was similar in both groups. There were significantly more severe adverse events in the neurostimulation group (54.8 percent vs. 44.1 percent), but those related to surgery (17.7 percent) were relatively minor and resolved completely in all but one case (scarring with impaired wound healing). On the other hand, the frequency of nonsurgical complications was much higher in the medical group, who saw medications increase 21 percent (compared with a 39 percent reduction in the neurostimulation group) and frequently suffered side effects such as hallucinations and behavioral problems. This suggests that while there certainly are risks of surgery, conservative management may not be as benign as often thought.

This study is remarkable for its strict entry criteria, uniformity of treatment, exceptional follow-up with a low number of withdrawals, and lack of crossover with consistency between the results of intent-to-treat and per-protocol analysis. The primary outcome measure, disease-related quality of life, provides an assessment of what really matters to patients, but the subjectivity of the PDQ-39 does raise the possibility of placebo effects. Since both groups had already failed an attempt at medical management, patients in the neurostimulator group might have had an incentive for optimism because of their investment in surgery. This effect is mitigated by the use of video review by blinded experts using traditional objective outcome measures to verify that motor improvements did indeed occur. Finally, as pointed out in an accompanying editorial, the population under study represents a small proportion of patients with Parkinson's disease, since the vast majority is older than 60 years of age, and a significant number have dementia or other health problems or will not demonstrate an adequate response to levodopa challenge.

There is a tendency among some physicians to delay surgical referral of patients with Parkinson's disease until all attempts at medical management are exhausted, by which time quality of life is already severely impaired by motor complications. Influencing practice and referral patterns will require tangible proof that earlier treatment offers real benefits to patients that outweigh the risks. A well-executed clinical trial like this one will be a valuable tool to accomplish this goal. If these safety and efficacy results are confirmed by similar ongoing trials in other countries, including the United States, this may provide powerful support for expanding the role of deep brain stimulation to patients with earlier stages of Parkinson's disease.

# Update on Plans for WSSFN Biennial Meeting — Tokyo 2013

Hiroki Toda, MD, PhD

Planning is complete for the 16th Quadrennial Meeting of the World Society for Stereotactic and Functional Neurosurgery (WSSFN), to be held at the Hotel Nikko in Tokyo, Japan, May 27-30, 2013. An exciting list of international guest speakers, including many active American Society of Stereotactic and Functional Neurosurgery (ASSFN) members, are slated for this year's event, and more than 400 abstracts have been submitted. The current scientific program is available on the meeting website.

There will be two afternoon satellite symposia on the first day of the meeting, Monday, May 27. One of the symposia is titled "Neurosurgery for Psychiatric Disorders." The speakers from ASSFN are Andres Lozano, MD, PhD, FAANS, FRCS(C); Rees Cosgrove, MD, FAANS, FACS; and Brian Kopell, MD, FAANS. The allied speakers include Mark Bernstein, MD, FAANS, FRCSC (Toronto); Marwan Hariz, MD (London); Keith Matthews, MD, PhD (Professor of Psychiatry, University of Dundee); Jiro Nudeshima, PhD (Tokyo Foundation); and Bart Nuttin, MD (Leuven). They will review the current issues and historical background of psychiatric surgery. The talks will cover recent cutting-edge scientific research as well as ethical considerations for this controversial topic, with a goal of providing a framework for further investigation. The other symposium is titled "Microelectrode Recording and Intraoperative Electrophysiology," building upon the last WSSFN symposium that gathered more than 100 participants in Toronto. The speakers include Parag Patil, MD, PhD, FAANS; Daniel Cleary, MS, PhD (Oregon); Mesbah Alam, MD (Hannover); Akio Ikeda, MD, PhD (associate professor of neurology, Kyoto University); Zvi Israel, MD (Jerusalem);

Kazutaka Kobayashi, MD, PhD (Tokyo); Atsushi Nambu, MD, PhD (professor of neurobiology, Okazaki); and Akihiro Yugeta MD, PhD (assistant professor of neurology, Tokyo University).

The three-day program will cover major current stereotactic and functional neurosurgery issues with more than 120 worldwide experts as speakers and/or moderators. To allow more time for talks at this meeting, there will be three breakfast seminars, three bento box debates and two afternoon sessions on each day. Contemporary topics and future perspectives in sessions and debates will include new ablative technologies; new stimulation targets for movement disorders, psychiatric disorders, and epilepsy; clinical trials for memory enhancement; gene therapy and stem cell transplantation; new stereotactic radiosurgery technologies; and more. Expert discussions also will focus on clinical difficulties such as long-term control of dystonia, Tourette's syndrome and refractory pain.

During the last four years, the scientific committee has developed and polished the very attractive program, and the fundraising committee has handled the meeting management. Secretary-Treasurer Michael Schulder, MD, FAANS; committee members Mojgan Hodaie, MD, FAANS, and Joseph Neimat, MD, MSc, FAANS; and WSSFN administrator Melody Dian, have led the team and supported the President Takaomi Taira, MD, PhD; Vice President Joachim K. Krauss, MD; and other directors and local organizing committee members. As automatic members of the WSSFN, all ASSFN members enjoy member registration rates for this exciting meeting. We look forward to seeing our members in Tokyo.

## ASSFN Officers and Executive Council

### ASSFN Leadership

#### *President -*

Konstantin Slavin, MD, FAANS

#### *Vice-President -*

Aviva Abosch, MD, PhD, FAANS

#### *Secretary-Treasurer -*

Emad Eskandar, MD, FAANS

#### *Past-President -*

Ali Rezai, MD, FAANS

### Board of Directors

Robert Gross, MD, PhD, FAANS (2010-2014)

Clement Hamani, MD (2010-2014)

Michael Kaplitt, MD, PhD, FAANS (2010-2014)

Peter Konrad, MD, PhD, FAANS (2010-2014)

Brian Kopell, MD, FAANS (2012-2016)

Kendall Lee, MD, PhD, FAANS (2010-2014)

Joseph Niemat, MD (2012-2016)

Parag Patil, MD, PhD, FAANS (2012-2016)

Julie Pilitsis, MD, PhD, FAANS (2012-2016)

Ashwini Sharan, MD, FAANS (2010-2014)

## American Society for Stereotactic and Functional Neurosurgery Application for New Membership

Name \_\_\_\_\_

Office Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Country \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

Residency training program: \_\_\_\_\_ Years: \_\_\_\_\_

Medical School: \_\_\_\_\_

Specialty (circle):    Neurosurgery    Neurology    Other: \_\_\_\_\_

AANS Member     Yes     No                    CNS Member     Yes     No

Interests in Stereotactic and Functional Neurosurgery: (please circle)

Movement Disorders                    Pain                    Epilepsy                    Psychosurgery  
Biomedical engineering                    Tumors                    Radiosurgery                    Image guidance

Determine and circle your membership category:

Category	Yearly Fee	Description
Active	\$325	For practicing neurosurgeons in the USA or Canada who have completed residency/fellowship
Resident/fellow	\$25	One time fee (not yearly). For neurosurgical trainees currently in residency or fellowship
Senior	Free	For neurosurgeons who are retired and over 65 years old
Associate	\$50	For non-neurosurgeons

The benefits of active membership include:

- Membership in the AANS/CNS Section on Stereotactic and Functional Neurosurgery
- Membership in the World Society for Stereotactic and Functional Neurosurgery
- Reduced fees for the biennial ASSFN meetings
- Subscription to *Stereotactic and Functional Neurosurgery* (including on-line access)

The benefits of all other membership categories are:

- Membership in the AANS/CNS Section on Stereotactic and Functional Neurosurgery
- Reduced fees for the biennial ASSFN meetings
- Eligibility to subscribe to *Stereotactic and Functional Neurosurgery* at a reduced rate. If you are joining as a resident/fellow, associate, or senior member and wish to have the journal subscription, the fee is \$135. Please check this box:
  - YES I would like to receive the society journal at the reduced rate

There are two ways to become an ASSFN member:

- Apply online at [www.MyAANS.org](http://www.MyAANS.org) (for Active Member applications only)
- Mail or fax this application form to ASSFN  
c/o Melody Dian  
ASSFN Administrator  
419 Oak Street West  
Frederic, WI 54837  
Fax at 866-362-1101

**All applicants will be invoiced through AANS once the application has been approved.**

For questions or concerns, contact the ASSFN administrator Melody Dian [mdian@centurytel.net](mailto:mdian@centurytel.net), secretary-treasurer, Aviva Abosch ([aabosch@umn.edu](mailto:aabosch@umn.edu)), or the membership chairman, Emad Eskandar, ([eeskandar@partners.org](mailto:eeskandar@partners.org)).

*The application may also be faxed to Melody Dian at (866) 362-1101*