

# WOMEN IN NEUROSURGERY



## President's Message

### The Pregnant Neurosurgeon: Not an Oxymoron

#### Pregnancy and Neurosurgery

As Organized Neurosurgery embraces consideration of the issues surrounding the recruitment, advancement and retention of women neurosurgeons, the unavoidable and complex concept of the Pregnant Neurosurgeon emerges. While serving as the current President of Women in Neurosurgery, I concurrently serve the equally, if not more, challenging role of the Pregnant Neurosurgeon, pregnant with my fourth son. My pregnancies have occurred during all phases of a neurosurgical career— when I was a resident, fellow, on a pre-attending “career break,” and, now, 10 years into life as a neurosurgery attending.

The literature on pregnant surgeons is sparse; there is essentially no literature on pregnant neurosurgeons. Neurosurgery, not entirely by choice, has adopted a “don’t ask/don’t tell” approach in the workplace, a strategy not always helpful to the Pregnant Neurosurgeon or to her colleagues. Women in neurosurgery often attempt to “blend” so as not to cause undue attention to their femaleness. During pregnancy, the female neurosurgeon becomes unavoidably visibly different from men. The most well-intentioned may find this physical reminder of gender difference difficult to reconcile. Pregnancy in Neurosurgery is a sensitive, perhaps even taboo, topic with far-reaching implications. However, as women become more prevalent in Neurosurgery, the topic of the Pregnant Neurosurgeon becomes unavoidable, and deserves reflection.

One can easily imagine the physical risks inherent to working as a Pregnant Neurosurgeon. For the Pregnant Neurosurgeon, there are issues generic to working in a medical environment, as well as challenges particular to neurosurgery. General concerns include contact with infectious materials, exposure to anaesthetic gases and physical dangers of heavy lifting during patient positioning. Ionizing radiation, a known cause of miscarriage and birth defects, may be encountered in neurosurgery, especially during fluoroscope-guided surgeries and neuroendovascular procedures. Some radiosurgery environments may expose the pregnant worker to unacceptable levels of radiation. The long duration of neurosurgical procedures may increase

risk of deep venous thrombi in the setting of pregnancy’s hypercoagulable state and may produce dehydration, associated with preterm labor<sup>1</sup>. Interestingly, some pregnant neurosurgeons have reported triggering of emesis in the operating room by particular stimuli such as cautery smoke and the initial view through the surgical microscope when it is introduced into the operative field.

Perhaps less well understood than the physical hazards are the more complex other concerns surrounding Pregnancy and Neurosurgery.

#### Pregnancy as an Impediment to Recruitment in Neurosurgery

Maximizing recruitment of the best and brightest neurosurgeons of the future includes recognition of the deterrents to recruitment of qualified potential applicant groups. Neurosurgery is widely considered a specialty poorly compatible with having children. This perception inhibits application of female medical students for whom childbearing is important. Even the uncertainty of the compatibility between a neurosurgical career and family may serve as deterrent enough to discourage application.

The residency application and interview process bilaterally discourages discourse about plans for pregnancy during or after neurosurgical residency. Employment and hiring laws essentially prohibit open discussion of this important matter. The laws are intended to prevent gender discrimination in the recruitment and hiring process, but in some cases may actually encourage it. Residency programs are left uneasy about accepting female applicants due to the inherent “risk” of hiring a woman (i.e. she gets pregnant and drops out); the applicant is discouraged from addressing the issue, fearful of opening a Pandora’s Box.

A quick look at the medical student “blogs” reveals some poignant concerns and highlights the impact that consideration of pregnancy in Neurosurgery has for young women considering a career in Neurosurgery. Here are some excerpts from the Student Doctor Forum<sup>2</sup>:

*“The two female medical students I know who are pursuing neurosurgery have both resigned themselves to not having children. I find this to be kind of depressing. Is it really impossible to balance both a career in*



Susan C. Pannullo, MD  
WINS President

*neurosurgery and a family? I value family and enjoyment of life as much as I do my career, and I cannot imagine discarding one for the other. I would love to hear some female neurosurgeons’ perspectives. Any feedback will be greatly appreciated.” (powermd, 05-28-2006, 06:00 AM)*

*“...the 1 woman neurosurgeon I know is single, no kids.... Good luck pursuing NS. I think you have to turn in your ovaries though.” (Fomites, 05-24-2006, 02:54 AM)*

*“OK, well all these posts are depressing.... You have to be dedicated to your career, no doubt. And it doesn’t help that the residency lasts during the child-bearing years of your life.” (betz, 05-24-2006, 06:02 PM)*

#### Pregnancy During Neurosurgical Residency and Fellowship

Unique characteristics of Neurosurgery Residency, as opposed to most other surgical training programs, include small program size, length of training and the rigorosity of the training experience. The reality of Neurosurgery residency programs is that these programs are small relative to other training programs, often hiring only 1-2 residents per year. Neurosurgical residency programs are not staffed to support the prolonged absence that may accompany a pregnancy. Reduction in work hours allowed and strict enforcement of work hour limitations have produced increasing inflexibility regarding resident leave. In addition, a program, as above, may be hesitant to “waste” a coveted spot on a female resident, who biologically (for now at least) is more likely than a male counterpart to become pregnant during her career.

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2008

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## WINS MISSION

To educate,  
inspire, and  
encourage women  
neurosurgeons  
to realize their  
professional and  
personal goals,  
and to serve  
neurosurgery in  
addressing the issues  
inherent to training  
and maintaining a  
diverse and balanced  
workforce.



**Bawarjan Schatlo, MD**  
*University Hospital of Geneva, Switzerland*  
*First-year Neurosurgery Resident*



**Jobyna Whiting, MD**  
*University of Florida, Gainesville*  
*Chief Resident, Department of Neurosurgery*



## The 2008 Louise Eisenhardt Resident Travel Scholarship

*Cortical Infarct in a Primate Model of Subarachnoid Hemorrhage (SAH): Is it an Animal Model of Delayed Ischemic Deficits?*

**This paper and award will be presented at the AANS Annual Meeting, Chicago, Illinois, AANS/CNS Cerebrovascular Section, Tuesday, April 29, 2008 3:01-3:08 p.m.**

The Louise Eisenhardt Resident Travel Scholarship is granted yearly to an outstanding resident abstract accepted at the American Association of Neurological Surgeons Annual Meeting. Up to \$2000 stipend is given to cover travel expenses.

For both Sherry Apple and Louise Eisenhardt Resident Travel Scholarships, all interested residents may submit their abstracts through the CNS and AANS Abstract Center and indicate WINS award consideration in the provided menu.

## The 2007 Sherry Apple Resident Travel Scholarship

*Atypical Non-Benign Clinical Course for Spontaneous Angiogram-negative Subarachnoid Hemorrhage: A Single Center Experience with 95 Patients.*

This award was presented at the WINS reception during the CNS Annual Meeting, Tuesday, September 18, 2007, San Diego, California.

The paper was presented during the Select Abstract Session, Monday, September 17, 2007, 4:00-5:30 PM.

The Sherry Apple Resident Scholarship was named in honor of our colleague and WINS President who died in 2001. The Sherry Apple Resident Travel Scholarship is granted yearly to an outstanding resident abstract accepted at the Congress of Neurological Surgeons Annual Meeting. Up to \$2000 stipend is given to cover travel expenses.

*Contributed by Jamie Ullman, MD*

## The Pregnant Neurosurgeon...

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Neurosurgery residency is generally at least 7-8 years, a long period relative to the short time considered optimal for attempting pregnancy. Advanced maternal age alone, due to postponing of pregnancy, is a well recognized factor associated with numerous obstetrical complications<sup>1</sup>.

Finally, the rigors of neurosurgical training may produce risks for the pregnant neurosurgical resident and her unborn child. Rotating shift work, especially involving night shift hours, has been associated with increased incidence of spontaneous abortion, preterm birth and intrauterine growth retardation<sup>3</sup>. In the UK, workers by law are not obligated to work at nights during pregnancy, the postpartum period and while breastfeeding. In many European countries, night work was banned for pregnant woman; this mandate was later softened to a guideline to prevent discrimination against female workers<sup>4</sup>.

Fellowship training may be a kinder, gentler time for pregnancy, depending

upon the type of fellowship and schedule involved.

Some fellowship programs are less "operative," and, hence, may be better-suited for a concurrent pregnancy. Some fellowship programs are custom made and thus more flexible. Some may rely less heavily upon the fellow in the call schedule, allowing less disruption of a program should the pregnant neurosurgeon need to temporarily adjust work hours or type. All of this talk, however, assumes that women can perfectly time their pregnancies to coincide with a particular time in their careers.

### The Pregnant Neurosurgery Attending

For the Neurosurgeon in practice, oddly, pregnancy may be especially difficult to manage. The concept of taking time from practice is complex. The high degree of subspecialization in Neurosurgery today may leave even a large practice without coverage in a specific subspecialty if the Pregnant

Neurosurgeon takes a pregnancy-related leave of absence. As with hiring of female neurosurgery residents, concerns about future pregnancy may give pause to a practice considering hiring a woman. Creative workforce solutions such as locum tenens, neurosurgery job virtual billboards and job-sharing may be responses to this challenge.

In academic neurosurgery, time off as a neurosurgery attending may produce delays in promotion and academic advancement. The Pregnant Neurosurgeon (or one planning pregnancy) may be perceived as less serious or committed to Neurosurgery. Even the issue of Board Certification for an early-career female Neurosurgeon may be complicated by the timeline imposed by the case accrual needed to meet board requirements. The woman who finds herself having completed well over a decade of preparation to become a Neurosurgery attending thus faces a difficult choices between a running career start and (finally) beginning a family.

### Pregnancy and Neurosurgery: The Future

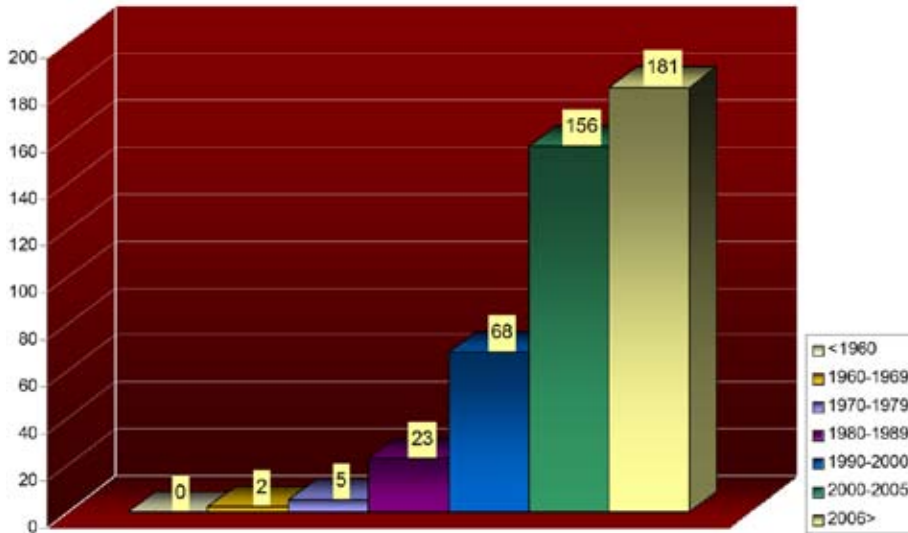
Not all women Neurosurgeons wish to have children. But for the ones that do, the challenges faced by the Pregnant Neurosurgeon, although surmountable, are currently great. A discussion of Pregnancy in Neurosurgery sparks consideration of recruitment, advancement and retention of women neurosurgeons, neurosurgery work safety, and employment law as well as a host of other difficult topics. It is my hope that Organized Neurosurgery will continue its efforts to optimize the contribution and experience of both genders in neurosurgery, and consider these challenges as it moves toward the future.

#### REFERENCES

1. Phelan ST. Pregnancy during residency: Obstetric complications. *Obstet Gynecol*, 1988; 72: 431-436.
2. Student Doctor Forum. <http://forums.studentdoctor.net>.
3. Nurminen T. Shift work and reproductive health. *Scand J Work and Environ Health*, 1998; 24: 28-34.
4. Cross KLR. The pregnant surgeon. *Bulletin of The Royal College of Surgeons of England*, 2006; 88, vol 4: 137-139).

## Board-Certified U.S. Women Neurosurgeons

UPDATED 01/08 • Contributed by Roxanne Todor, MD



Renew or become a member of  
**WINS** on line at  
**www.myaans.org**

For help obtaining a password,  
please contact  
**Sandy Meyer** at [sjm@aans.org](mailto:sjm@aans.org) or  
**Chris Philips** at [cap@aans.org](mailto:cap@aans.org)



**Kali Evans-Raoul**  
Founder and President  
The Image Studios

## Join us for the Spring 2008 Women in Neurosurgery Meeting and Ruth Kerr Jakoby Lecture

**Tuesday, April 29, 2008**

**6-8 p.m. • Sheraton Chicago Hotel & Towers • Sheraton 2**

### “Image Impact: Your Professional Presence”

Studies have shown that over 80% of career success is attributed to image and exposure. This interactive presentation reinforces the importance of Image and Exposure – two critical factors of success. The exciting session explains the core components of visual, verbal and non-verbal image; and allows participants to gain insight into their own “first impression” and how to control it.

Kali Evans-Raoul, founder and president of The Image Studios, launched her successful Chicago-based image communication firm in 2000 out of a commitment to helping others understand, define and present their own message. She holds a Chemical Engineering degree from Carnegie Mellon University, and has worked in research & development, marketing and consumer education for a range of companies, including L’Oreal, Kraft Foods, and the boutique hair care and beauty company Dudley Products. She has spent over 25 years in the personal care product and service industry, and has experience in both creating and running a business.

The impetus for creating The Image Studios came from Ms. Evans-Raoul’s experiences in corporate America, where she watched talented and competent individuals miss out on promotions and advancement opportunities primarily because they weren’t recognized as “high potential” individuals. With The Image Studios she has created the business model that provides the tools and process to help individuals move out of the shadows and be seen and heard.

The Image Studios has been featured on ABC’s Starting Over, and has been covered in CNN.com, *The Chicago Sun-Times*, *The Chicago Tribune*, *Well Magazine* and *Crain’s*. Corporate clients include ExxonMobil, Citibank, KPMG, The Gap, Kraft Foods and PepsiCo. Ms. Evans-Raoul is an active member of the Association of Image Consultants International (AICI), National Association of Women Business Owners (NAWBO), the National Cosmetology Association (NCA), and volunteers monthly with Look Good Feel Better (LGFB). She lives in Chicago with her husband, Illinois State Senator Kwame Raoul, and their two children, Ché & Mizan.

WINS thanks our 2008 Spring Women in Neurosurgery Reception Program sponsors:



Contributed by Susan C. Pannullo, MD

## 2008 American Association of Neurological Surgeons Annual Meeting: FOCUS ON LEARNING

April 26-May 1, 2008 • Chicago, IL

**WINS Highlights**

### Saturday, April 26, 2008

#### PRACTICAL CLINICS

##### 007 Hands-On Peripheral Nerve of the Upper Extremities

**Co-Directors** ..... Rajiv Midha, MD, MS, FRCS; Robert L. Tiel, MD  
**Faculty** ..... Allan H. Friedman, MD, FACS; David G. Kline, MD; John E. McGillicuddy, MD; Stephen M. Russell, MD; Robert J. Spinner, MD, FACS; Christopher J. Winfree, MD; **Lynda Jun-san Yang, MD, PhD**; Eric L. Zager, MD

##### 012 Spinal Radiosurgery

**Co-Directors** ..... Mark H. Bilsky, MD; Peter C. Gerszten, MD, MPH  
**Faculty** ..... **Lilyana Angelov, MD, FRCS(C)**; Steven D. Chang, MD; Fraser C. Henderson, MD; Jason P. Sheehan, MD

##### 014 Strategies for Building Hospital Partnerships

**Co-Directors** ..... **Deborah L. Benzil, MD**; **Edie E. Zusman, MD, FACS**  
**Faculty** ..... Gene H. Barnett, MD, FACS; Mark H. Camel, MD; Emmet Hunter Dyer, MD; M. Sean Grady, MD; L. Dade Lunsford, MD; Clarence B. Watridge, MD, FACS

##### 023 Non-Invasive Pre-Operative and Intra-Operative Brain Mapping and Treatment of Epilepsy

**Co-Directors** ..... Gerald A. Grant, MD; Guy M. McKhann, II, MD  
**Faculty** ..... Nicholas M. Barbaro, MD; Gene H. Barnett, MD, FACS; Mitchel S. Berger, MD, FACS; William E. Bingaman, Jr., MD; Peter McL. Black, MD, PhD; **Isabelle M. Germano, MD, FACS**; Gerald A. Grant, MD; Dennis D. Spencer, MD

##### 025 Practical and Technical Aspects of Transsphenoidal Surgery

**Co-Directors** ..... William T. Couldwell, MD, PhD; **Gail L. Rosseau, MD**  
**Faculty** ..... Helmut Bertalanffy, MD; William F. Chandler, MD, FACS; Matthew G. Ewend, MD, FACS; Carl Barnes Heilman, MD; John A. Jane, Jr., MD; Amin Kassam, MD; Daniel F. Kelly, MD; Edward R. Laws, Jr., MD; Ian E. McCutcheon, MD; Basant Kumar Misra, MD; Edward H. Oldfield, MD; Jean Regis, MD; Warren R. Selman, MD; Jonas M. Sheehan, MD

##### 026 Head Trauma: Current Treatments and Controversies with Hands-On Practical Session in Brain Monitoring and Techniques

**Co-Directors** ..... Geoffrey T. Manley, MD, PhD; **Shelly D. Timmons, MD, PhD**  
**Faculty** ..... M. Ross Bullock, MD, PhD; William M. Coplin, MD; Domenic P. Esposito, MD, FACS; Michael G. Fehlings, MD, PhD; Anthony Marmarou, PhD; Raj K. Narayan, MD

##### 027 Update on Tumors for the General Neurosurgeon

**Director** ..... Jeffrey N. Bruce, MD, FACS  
**Faculty** ..... Ossama Al-Mefty, MD; Frederick G. Barker, II, MD, FACS; Mitchel S. Berger, MD, FACS; Michael W. McDermott, MD; Thomas C. Origitano, MD, PhD; Joseph M. Piepmeier, MD; Corey Raffel, MD, PhD; **Gail L. Rosseau, MD**; James T. Rutka, MD, PhD; Raymond Sawaya, MD

##### 032 Movement Disorder Surgery: Techniques, Decision Making, Complication Avoidance and Management

**Director** ..... Robert G. Grossman, MD  
**Faculty** ..... **Aviva Abosch, MD, PhD**; Ron L. Alterman, MD; Jeffrey E. Arle, MD, PhD; Roy A. E. Bakay, MD; Nicholas M. Boulis, MD; Brian H. Kopell, MD; Alon Y. Mogilner, MD, PhD; Joshua M. Rosenow, MD; Ashwini D. Sharan, MD; Philip A. Starr, MD, PhD

##### 033 Neurosurgical Case Coding: Cranial and Non-Spine Procedures

**Director** ..... Robert R. Johnson, II, MD, FACS  
**Faculty** ..... **Mina Foroohar, MD**

##### 038 Choosing and Developing a Neurosurgical Practice

**Co-Directors** ..... Jonathan A. Friedman, MD; G. Edward Vates, MD, PhD  
**Faculty** ..... H. Hunt Batjer, MD, FACS; E. Sander Connolly, Jr., MD; William T. Couldwell, MD, PhD; Craig H. Rabb, MD; **Judith Rosman**

### April 28, 2008

#### BREAKFAST SEMINARS

##### 101 Quality and Efficiency Measures in an Action Plan

**Moderator** ..... Mark E. Linskey, MD  
**Panelists** ..... Robert E. Harbaugh, MD, FACS; **Stacey Lambeth**; Daniel K. Resnick, MD; Alan M. Scarrow, MD, JD

##### 103 Cerebral Neuromonitoring

**Moderator** ..... R. Loch Macdonald, MD, PhD  
**Panelists** ..... **Odette Althea Harris, MD, MPH**; Michael O. Kelleher, MD, FRCS; Gary K. Steinberg, MD, PhD

##### 105 International Opportunities in Neurosurgery

**Moderator** ..... Merwyn Bagan, MD, MPH  
**Panelists** ..... Jack P. Rock, MD; **Gail L. Rosseau, MD**; David I. Sandberg, MD; Benjamin C. Warf, MD

##### 108 Pediatric Head Injury

**Moderator** ..... Thomas G. Luerssen, MD  
**Panelists** ..... **Ann-Christine Duhaime, MD**; Hugh J. L. Garton, MD, MHSc; John Ragheb, MD, FACS

## 113 Update in Psychosurgery

**Moderator** ..... G. Rees Cosgrove, MD, FRCS(C)  
**Panelists** ..... **Aviva Abosch, MD, PhD**;  
 Paul S. Larson, MD; Andres M. Lozano, MD, PhD; Parag G. Patil,  
 MD, PhD; Veerle Visser-Vandewalle, MD, PhD

## 121 Meet the Press

Open to AANS Members Only.

**Moderator** ..... **Patricia Ann Clark**  
*Today's neurosurgeons need to be expert communicators to be effective in delivering the specialty's message to patients, public and legislative audiences. This highenergy session taught by an experienced media coach will show you how. You will discuss how to dress and act when you step before the cameras, how to develop your media message and most important, how to deliver that message successfully.*

## 122 Neurosurgical Decision Making in the Elderly

**Moderator** ..... **Deborah L. Benzil, MD**  
**Panelists** ..... Peter David Le Roux, MD; **Linda L. Sternau, MD**;  
**Mary K. Sturaitis, MD**; Stephen E. Sullivan, MD

## Plenary Session I

### 601 Conventional Surgery Versus Stereotactic Radiosurgery in the Treatment of Single Brain Metastases: A Prospective Study with Both Randomized and Nonrandomized Arms

**Authors**..... Frederick F. Lang, MD, FACS; Dima Suki, PhD;  
 Moshe Maor, MD; Eric Chang, MD; Kenneth Hess, PhD;  
**Susan Graham, RN**; Stephen Hentschel, MD; Raymond Sawaya, MD  
**Discussant**..... Philip H. Gutin, MD

## Scientific Session I - Tumor

### 605 A Phase I/II Clinical Trial Evaluating RNA-Loaded Dendritic Cells Targeting Human Cytomegalovirus in Patients with Newly-Diagnosed GBM

**Authors**..... John H. Sampson, MD, PhD; Duane A. Mitchell, MD, PhD; Gary E. Archer, PhD; **Sharon McGehee-Norman**;  
**Beth A. Perry, RN**; **Denise Lally-Goss, ANP-C**; Robert Schmittling,  
 PhD; Darell D. Bigner, MD, PhD; Allan H. Friedman, MD; Henry S. Friedman, MD; David A. Reardon, MD; James J. Vredenburgh, MD;  
 James E. Herndon, PhD; Peter E. Fecci, MD, PhD  
**Discussant**..... Robert L. Martuza, MD

### 609 National Brain Tumor Foundation Mahaley Award Proliferative CD8 T Cell Infiltrate in Newly Diagnosed Glioblastoma Patients Correlates with Long Term Survival

**Authors**..... Andrew T. Parsa, MD, PhD;  
 Tarik Tihan, MD; **Margaret Wrensch, PhD**  
**Discussant**..... Allan H. Friedman, MD, FACS

### 610 Long-Term Recurrences of Cushing's Disease After Initial Successful Transsphenoidal Surgery

**Authors**..... Chirag G. Patil, MD; Daniel M. Prevedello, MD;  
 Shivanand P. Lad, MD, PhD; **Mary Lee Vance, MD**; Michael O. Thorne,  
 MD; Laurence Katznelson, MD; Edward R. Laws, Jr., MD  
**Discussant**..... Nelson M. Oyesiku, MD, PhD

## Scientific Session II – Spine

### 613 Visual Loss After Spine Surgery: A Population Based Study

**Authors**..... Shivanand P. Lad, MD, PhD; Chirag G. Patil, MD; **Eleonora M. Lad, MD, PhD**; Christopher Ho, BS; Maxwell Boakye, MD  
**Discussant**..... C. Wayne Hamm, MD

### 618 Thorascopic-Assisted Microsurgical Resection of Symptomatic Thoracic Disc Herniations

**Authors**..... Scott D. Wait, MD; Douglas J. Fox, MD;  
 Gregory P. Lekovic, MD, PhD;  
**Kathy J. Kenny, RN, MS, NP**; Curtis A. Dickman, MD  
**Discussant**..... Patrick W. Hitchon, MD

### 619 Trends and Variations in Cervical Spine Surgery for Degenerative Disease in Medicare Beneficiaries, 1992-2005

**Authors**..... **Marjorie C. Wang, MD, MPH**; William Kreuter; Christopher Wolfla, MD; Dennis J. Maiman, MD, PhD; Richard A. Deyo, MD, MPH  
**Discussant**..... Peter Douglas Angevine, MD

## Scientific Session III – Stereotactic and Functional

### 621 Deep Brain Stimulation of the Ventral Internal Capsule/Ventral Striatum for Obsessive-Compulsive Disorder: World-Wide Experience

**Authors**..... Ali R. Rezai, MD; Loes Gabriels, MD; Benjamin Greenberg, MD, PhD; Donald Malone, MD;  
 Gerhard Friehs, MD; Kelly Foote, MD; Andre Machado, MD, PhD;  
 Michael Okun, MD; Nathan Shapira, MD, PhD; Paul Cosyns, MD;  
 Kubu Cynthia, PhD; Paul Malloy, PhD; Steven Salloway, MD; Wayne Goodman, MD  
**Discussant**..... **Aviva Abosch, MD, PhD**

### 622 Reinforcement Learning in the Basal Ganglia During Deep Brain Stimulation

**Authors**..... Kareem Zaghloul, MD, PhD; Justin Blanco, BSC; **Kathryn McGill, MSN, ACNP**; Michaux Kilpatrick, MD,  
 PhD; Patrick Connelly, MD; Jurg L. Jaggi, PhD; Michael J. Kahana, PhD;  
 Gordon H. Baltuch, MD, PhD  
**Discussant**..... Matthew A. Howard, III, MD

### 623 Gamma Knife Radiosurgery For Trigeminal Neuralgia: Comparison of the Root-Entry Zone and Retrogasserian Targets

**Authors**..... K. Singh Sahni, MD, FACS; Aditya Gupta, MD;  
 Alfred M. Strash, PhD; **Karla M. Mossi, PhD**  
**Discussant**..... Bruce E. Pollock, MD

### 624 Deep Brain Stimulation Does Not Affect Neurons in the Subthalamic Nucleus

**Authors**..... Jonathan D. Carlson, MD, PhD; **Mary Heinricher, PhD**;  
 Justin Cetas, MD, PhD; Kim Burchiel, MD  
**Discussant**..... Gordon Hirsh Baltuch, MD, PhD

### 628 Medically Intractable Temporal Lobe Epilepsy in Patients with Normal MRI: Surgical Outcome in Twenty-Four Consecutive Patients

**Authors**..... Adam P. Smith, MD; Richard W. Byrne, MD;  
 Andres Kanner, MD; Sepehr Sani, MD; Matthew Morrin; **Susan Palac,**

## WINS Highlights... Continued

MD; Donna Bergen, MD; Antoaneta Balabanov, MD; Michael Smith, MD; Walter W. Whisler, MD, PhD  
**Discussant**..... Robert E. Gross, MD, PhD  
 Scientific Session IV – Pediatrics

### 629 Urinary Biomarkers Predict Brain Tumor Presence and Response to Therapy

**Authors**..... Edward R. Smith, MD; David Zurakowski, PhD; Ali Saad, MD; R. Michael Scott, MD; **Marsha A. Moses, PhD**  
**Discussant**..... Corey Raffel, MD, PhD

### 631 Clinical Predictors of Developmental Outcome in Patients with Cephaloceles

**Authors**..... Benjamin W. Y. Lo, MD; Andrew Jea, MD; James Rutka, MD, PhD; James Drake, MD, MSc; Peter Dirks, MD, PhD; Abhaya Kulkarni, MD, PhD; **Maria Lamberti-Pasculli, RN; Lehana Thabane, PhD**  
**Discussant**..... **Karin M. Muraszko, MD**

### 634 Pathogenesis of Epilepsy in Children Who Were Born Preterm: A Translational Study

**Author** ..... **Shenandoah Robinson, MD**  
**Discussant**..... Dennis D. Spencer, MD

## Scientific Session VI – Neurotrauma

### 646 Temporal Relationship Between ICP & PbtO<sub>2</sub> in Acute Brain Pathology; The Role of Real-Time Analysis Using Symbolic Regression

**Authors**..... John F. Morrison, MS; Michael D. Schmidt, MSE; Matthew C. Ringgenberg, BS; Narendra Nathoo, MD, PhD; Pradeep K. Narotam, MD, FACS  
**Discussant**..... **Shelly D. Timmons, MD, PhD**

### 651 Transverse Process Fractures Do Not Warrant Neurosurgical Consultation or Involvement

**Authors**..... Wayne C. Paullus, MD; Lucas H. Bradley; Norman S. Litofsky, MD, FACS; James R. Howe, MD  
**Discussant**..... **Jamie S. Ullman, MD**

**Tuesday, April 29, 2008**

### BREAKFAST SEMINARS

#### 203 Lumbar Spine Fusion

**Moderator** ..... **Joan Frances O'Shea, MD**  
**Panelists** ..... Peter Douglas Angevine, MD; Andrew T. Dailey, MD; Iain H. Kalfas, MD; Eric M. Massicotte, MD, MSc

#### 205 Cavernous Malformations: Current Controversies in Management

**Moderator** ..... Murat Gunel, MD  
**Panelists** ..... Michael T. Lawton, MD; **Gabriele Schackert, MD**; R. Michael Scott, MD

#### 207 Chiari Malformations: Diagnosis Treatments and Failures

**Moderator** ..... Ulrich Batzdorf, MD  
**Panelists** ..... Richard G. Ellenbogen, MD, FACS; **Karin M. Muraszko, MD**

#### 209 Treatment of Complex Regional Pain Syndrome and Hyperhydrosis

**Moderator** ..... Samuel J. Hassenbusch, MD, PhD  
**Panelists** ..... **Zelma HT Kiss, MD, PhD**; Robert M. Levy, MD, PhD; Christopher J. Winfree, MD

#### 212 Pituitary Tumors

**Moderator** ..... **Gail L. Rosseau, MD**  
**Panelists** ..... William T. Couldwell, MD, PhD; Daniel F. Kelly, MD; Edward R. Laws, Jr., MD; Jean Regis, MD

#### 222 Becoming a Neurosurgeon: A Practical Course for Medical Students and Residents

**Moderator** ..... Lawrence S. Chin, MD, FACS  
**Panelists** ..... **Deborah L. Benzil, MD**; M. Sean Grady, MD; Jayant Jagannathan, MD; N. Scott Litofsky, MD

#### 224 Management of Acute Spinal Cord Injury

**Moderator** ..... Michael G. Fehlings, MD, PhD  
**Panelists** ..... Charles Kuntz, IV, MD; Michael Patrick Steinmetz, MD; **Andrea Strayer, MSN, CNRN**, Michael Y. Wang, MD

## Plenary Session II

#### 700 The Economic Impact of the Prestige Cervical Disc System: Results from a Randomized Clinical Trial

**Authors**..... Joseph Menzin, PhD; Bin Zhang, MD; Peter J. Neumann, DSc; **Lisa M. Lines, BS**; Vincent C. Traynelis, MD; David W. Polly, Jr., MD  
**Discussant**..... Paul C. McCormick, MD

#### 701 Surgical Management of Cavernous Malformations of the Brainstem Presenting in Childhood

**Authors**..... Gregory P. Lekovic, MD, PhD; **Elisa Beres, MD**; L. Fernando Gonzalez, MD; Randall Porter, MD; Harold Rekate, MD; Robert F. Spetzler, MD  
**Discussant**..... R. Michael Scott, MD

#### 702 Journal of Neuro-Oncology Award Impact of Surgery on the Leptomeningeal Dissemination (LMD) of Supratentorial Brain Metastasis (SBM)

**Authors**..... Raymond Sawaya, MD; Dima Suki, PhD; Mustafa Aziz Hatiboglu, MD; Akash J. Patel, MD; Weiming Shi, MD; **Anita Mahajan, MD**; Jeffrey Weinberg, MD; Morris D. Groves, MD  
**Discussant**..... Joseph M. Piepmeier, MD

#### 703 Deep Brain Stimulation (DBS) For Treatment of Depression: Long-Term Outcomes from a Prospective Multi-Center Trial

**Authors**..... Ali R. Rezai, MD; Donald Malone, MD; Darin

Dougherty, MD; Gerhard Friehs, MD; Emad Eskandar, MD; Andre Machado, MD, PhD; **Cynthia Kubu, PhD; Linda Carpenter, MD; Audrey Tyrka, MD, PhD**; Paul Malloy, PhD; Stephen Salloway, MD; Scott Rauch, MD; Lawrence H. Price, MD; Steven Rasmussen, MD  
**Discussant**.....Philip A. Starr, MD, PhD

## 705 Long-Term Follow-Up in Patients Surgically Treated for an Unruptured Intracranial Aneurysm

**Authors**..... James Torner, PhD; David Piepgras, MD; **Irene Meissner, MD**; John Huston, MD; Robert Brown, MD, MPH  
**Discussant**.....Robert A. Solomon, MD

## Louise Eisenhardt Lecture

**Introduction** ..... Jon H. Robertson, MD  
**Speaker**..... **Marcia Angell, MD**

## 501 Integration of Patient Assessment Technology Into Practice

**Moderator** ..... **Twyila Lay, NP, MS**  
**Speakers**.....**MaryKay Bader, MSN**, Leo Timothy Harris, PA-C, Geoffrey T. Manley, MD, PhD; **Karen March, RN, MN**

## Diminishing Professional Liability Exposure: Patient Safety, Error Disclosure, Enhancing Communication

**Moderator** ..... **Jamie S. Ullman, MD**  
**Speakers**.....**Julie Brightwell**; Stanley W. Fronczak, MD, JD, FACS; John A. Kusske, MD; Matson Sewell

## AANS/CNS Section on Neurotrauma

**Moderators** .. **Odette Althea Harris, MD, MPH**; Roland A. Torres, MD

## Codman 2007 Award Presentation

**Speaker**..... TBD  
**Codman 2008 Award Recipient** ..... **Amy Lee, MD**

## 734 The Use of Selective NMDA Modulators in Traumatic Brain Injury

**Author** ..... **Jennifer Jennings, MD**

## AANS/CNS on Cerebrovascular Section

### 738 Intraoperative Angiography in Intracranial Aneurysm Surgery. Experience with 1025 Cases

**Authors**.....Eric S. Nussbaum, MD; Michael Madison, MD; Mark Myers, MD; James Goddard, MD; **Leslie Nussbaum, MD, PhD**

### 739 Evaluation of the Glasgow Coma Scale in the Prediction of Long-Term Outcome in Poor-Grade Aneurysmal Subarachnoid Hemorrhage: The Relative Value of the Motor, Verbal and Eye Examinations

**Authors**.....Ricardo J. Komotar, MD; Robert M. Starke, BA; William J. Mack, MD; Christopher P. Kellner, BS; **Grace H. Kim, MD**; David Hahn, BS; Marc L. Otten, MD; Maxwell B. Merkow, BS; Matthew C. Garrett, BS; Michal A. Rynkowski, MD; Brian Y. Hwang, BS; **Laura E. Fischer, MS**; Michael J. Schmidt, PhD; Stephan A. Mayer, MD; E. Sander Connolly, Jr., MD

### 740 C3a-Receptor Antagonist Attenuates Brain Injury after Intracerebral Hemorrhage in Mice

**Authors**..... Michal A. Rynkowski, MD; **Grace H. Kim, MD**; Ricardo J. Komotar, MD; Marc L. Otten, MD; Andrew F. Ducruet, MD; Sergei A. Sosunov, MD, PhD; Matthew C. Garrett, BS; Robert M. Starke, BA; Maxwell B. Merkow, BS; David K. Hahn, BS; Christopher P. Kellner, BS; Vadim S. Ten, MD, PhD; E. Sander Connolly, Jr., MD

### 741 Factors Predictive of Complications from Onyx Embolization of Intracranial Arteriovenous Malformation Embolization (AVMs)

**Authors**.....Gregory J. Velat, MD; Gregory L. Fautheree, MD; W. Christopher Fox, MD; John F. Reavey-Cantwell, MD; **Jobyana Whiting, MD**; Stephen B. Lewis, MD; Christopher S. Firment, MD; Brian L. Hoh, MD

## AANS/CNS Section on Spine

### 723 Prospective Assessment of Axial Back Pain Symptoms Before and After Bariatric Weight Reduction Surgery

**Authors**.....Paul Khoueir, MD; **Mary Helen Black, MS**; Peter F. Crookes, MD; Howard S. Kaufman, MD; Namir Katkhouda, MD; Michael Y. Wang, MD

## AANS/CNS Section on Tumors

### 709 Gamma Knife Surgery for Cushing's Disease: Long-Term Outcomes

**Authors**.....Jason P. Sheehan, MD, PhD; Jay Jagannathan, MD; Nader Pouratian, MD, PhD; Edward Laws, MD; Ladislau Steiner, MD, PhD; **Mary Lee Vance, MD**

## AANS/CNS Section on Stereotactic Surgery

### 713 The STEPS Trial: Design of a Phase 2 Study to Evaluate Spheramine, A Novel Cell-Based Therapy Administered by Stereotactic Implantation into the Striata of Patients with Parkinson's Disease (PD)

**Authors**..... Robert E. Gross, MD, PhD; Roy A. E. Bakay, MD; Wilhelm Eisner, MD; Robert Hauser, MD; Walter Hong; Heinz Reichmann, MD; Elke Reissig, MD; Heike Steiner; Raymond L. Watts, MD

### 716 Long-Term Benefits of Subthalamic Nucleus Deep-Brain Stimulation for Cervical Dystonia

**Authors**..... Peter A. Pahapill, MD, PhD; **Barbara O'Connell, MD**

### 718 Complications of Subdural Electrode Epilepsy Recording

**Authors**.....Larry R. Shannon, II, MD; Richard W. Byrne, MD; **Michelle Cecchini, BS**; Matthew Morrin; George S. Selas, BS; Andres Kanner, MD; Michael Smith, MD

### 719 Intrastratial Implantation of Human Retinal Pigment Epithelial (hRPE) Cells Attached to Gelatin Microcarriers (GM) for the Treatment of Parkinson's Disease (PD)

**Authors**..... Roy A. Bakay, MD; Michael Cornfeldt, PhD; Alan Freeman, MD; Elke Reissig, MD; Raymond L. Watts, MD

## WINS Highlights... Continued

### 721 Hypofractionated Stereotactic Radiation for Giant AVMs: Preliminary Results

**Authors**..... Rajashree Sarkar, MD; **Alessandra Gorgulho, MD;** **Ana Maria Moura, MD;** Waren Ishida, MD; Nzhde Agazaryan, PhD; Michael T. Selch, MD; Antonio A.F. De Salles, MD, PhD

### 2007 NREF/Kyphon Young Clinician Investigator Award

**Eve Tsai, MD, PhD**

University of Ottawa

**Sponsor**..... Peter Stys, Professor

**Project**..... Bioengineering Strategies to Enable Combination Therapy for the Repair of Spinal Cord Injury.

## Wednesday, April 30, 2008

### BREAKFAST SEMINARS

#### 305 Lumbar Interbody Fusion

**Moderator**.....Eric J. Woodard, MD

**Panelists**.....Christopher Pearson Ames, MD; Catherine J. Gallo, MD; Nicholas Theodore, MD; Kenneth S. Yonemura, MD

#### 306 Surgical Treatment of Parkinson's Disease

**Moderator**.....Philip A. Starr, MD, PhD

**Panelists**.....**Aviva Abosch, MD, PhD;** P. Charles Garell, MD

#### 313 Syringomyelia: Pathophysiology and Treatment Approaches

**Moderator**..... Edward H. Oldfield, MD

**Panelists**.....Nicholas M. Barbaro, MD; Ulrich Batzdorf, MD; **Karin M. Muraszko, MD**

#### 316 Low-Grade Gliomas

**Moderator**.....Joseph M. Piepmeier, MD

**Panelists**.....Mitchel S. Berger, MD, FACS; Hugues Duffau, MD; **Linda M. Liau, MD, PhD**

#### 319 Cerebral Trauma State-of-the-Art Treatment

**Moderator**..... Alex B. Valadka, MD

**Panelists**..... Austin R. Colohan, MD, FACS; Geoffrey T. Manley, MD, PhD; David O. Okonkwo, MD, PhD; **Jamie S. Ullman, MD**

#### 320 The Spectrum of Adjuvant Therapy for Brain Tumors

**Moderator**.....Raymond Sawaya, MD

**Panelists**..... Jeffrey N. Bruce, MD, FACS; **Amy B. Heimberger, MD;** Randy Lynn Jensen, MD, PhD; James M. Markert, Jr., MD

#### 324 Neurosurgical Patient Assessment Scales: Critique and Practice Integration

**Moderator**..... **Christina M. Stewart-Amidei, MSNRN, CCRN**

**Panelists**..... Susan Bell, RN, MS, CNRN; Kathleen Redelman, RN, CNRN; Nancy Eleanor Villanueva, ANP-C

## Plenary Session III

### 800 Twenty-Three-Year Experience of a Single Neurosurgeon in Transphenoidal Pituitary Surgery for Cushing's Disease in Children and Adolescents

**Authors**..... Mohammed Awad, MBBS, BSc; Jonathan A. Hyam, MBBS, FRCS; Shabin Joshi, MBBS, FRCS; **Helen L. Storr, MBBS, BSc;** **Ashley B. Grossman, MD;** Martin O. Savage, MD; Fary Afshar, FRCS

**Discussant**.....Edward R. Laws, Jr., MD

### 801 Efficacy and Risks Associated with Adjustable Valves in the Treatment of Idiopathic Normal Pressure Hydrocephalus

**Authors**.....Raqeeb Haque, MD; Jason A. Ellis, MA; Christopher P. Kellner, BA; **Amanda J. Silverman, BS;** Guy M. McKhann, II, MD; Robert R. Goodman, MD, PhD

**Discussant**.....Matthew A. Howard, III, MD

### 803 Factors Associated with Aspirin and Clopidogrel Resistance in Endovascular Neurosurgery Procedures

**Authors**.John F. Reavey-Cantwell, MD, MS; W. Christopher Fox, MD; Brett D. Reichwage, MD; Gregory L. Fautheree, MD; Gregory J. Velat, MD; **Jobyna H. Whiting, MD;** Christopher S. Firment, MD; Brian L. Hoh, MD

**Discussant**.....John A. Wilson, MD, FACS

### Rhoton Family Lecture

**Introduction**..... Jon H. Robertson, MD

**Speaker**.....**Mrs. Lee Woodruff**

## AANS/CNS Section on Pain

### 809 William Sweet Award

#### Unmasking A Novel Brainstem Compensatory Mechanism in Neuropathic Pain

**Authors**.....Jonathan D. Carlson, MD, PhD; **Jennifer Maire;** **Mary Heinricher, PhD**

### 811 Tailored Deep Brain Stimulation Targets for Chronic Pain Syndromes

**Authors**.....Jean-Philippe Langevin, MD; Antonio A. De Salles, MD, PhD; **Alessandra Gorgulho, MD;** Sandi Lam, MD; **Jackie King, MS**

### 815 Cranial Peripheral Nerve Stimulation for Intractable Headache: Prospective Two Year Follow-Up Results

**Authors**..... Robert M. Levy, MD, PhD; **Janna L. Silverstein, BA**

## AANS/CNS Section on Tumors II

### Human Embryonic Stem Cells

**Speaker**..... **Viviane S. Tabar, MD**



**827 Development of a Mouse Model of Malignant Glioma Through the Overexpression of Platelet Derived Growth Factor in White Matter Progenitor Cells**

**Authors**.....Christopher E. Mandigo, MD; **Monique Vanaman, BS; Marcela Assanah, PhD**; Peter Canoll, PhD; Richard CE Anderson, MD; Jeffrey N. Bruce, MD

**829 BrainLAB Community Neurosurgery Award Survival Following Stereotactic Radiosurgery for Newly Diagnosed and Recurrent Glioblastoma Multiforme**

**Authors**..... Alan T. Villavicencio, MD; Sigita Burneikiene, MD; Pantaleo Romanelli, MD; Lee McNeely, MD; John Lipani, MD; **Laura Fariselli, MD**; Steven D. Chang, MD; **Melinda McIntyre, RN**; Giovanni Broggi, MD; Jeffrey J. Thramann, MD; John Addler, MD

**830 Microarray Analysis of Paired Initial and Recurrent High Grade Gliomas**

**Authors**.....Peter D. Kim, MD, PhD; **Jennifer S. Jennings, MD**; Frank A. Middleton, PhD; Gregory W. Canute, MD; Walter A. Hall, MD, MBA

**831 Myxopapillary Ependymomas of the Filum: A Single Center Retrospective Review**

**Authors**.....Nicholas C. Bambakidis, MD; **Elisa Beres, MD**; Robert Spetzler, MD

## AANS/CNS Section on Peripheral Nerve

**806 Patient Satisfaction after Brachial Plexus Surgery**

**Authors**..... Thomas Kretschmer, MD, PhD; **Sarah Ihle**; Gregor Antoniadis, MD, PhD; **Julia Seidel, MD**; Christian Heinen, MD; Wolfgang Barm, MD, PhD; Hans-Peter Richter, MD, PhD; Ralph Kanig, MD

**807 Tissue-Engineered Nerve Grafts with a Capillary-Like Network**

**Authors**.....**Marie-Noëlle Hébert-Blouin, MD**; René Caissie, MD; Line Jacques, MD; François Berthod, PhD

## AANS/CNS Section on Pediatric Neurosurgery

**Moderator** .....**Sarah J. Gaskill, MD, FACS**

**838 Congenital Hydrocephalus Still Beats the Shunt Technology: Programmable Shunts Did Not Change the Scenario of Revisions**

**Authors**.....**Christina Notarianni, MD**; Papireddy Bollam, MD; Prasad Vannemreddy, MD; **Gloria Caldito, MD; Esther Wylen, MD**; Brian Willis, MD; Anil Nanda, MD

**839 Correlation of Cognitive Deficits and Noninvasive Measurement of ICP and CBF in Hydrocephalus**

**Authors**.....**Roberta P. Glick, MD**; Terry Lichtor, MD, PhD; Aaron Lee, BS; Noam Alperin, PhD

**840 Evaluation of CSF Drainage by Subcutaneous Ventricular Reservoir and Permanent Diversion Procedures in the Management of Posthemorrhagic Hydrocephalus in Premature Infants**

**Authors**.....Vijayakumar Javalkar, MD; Prasad Vannemreddy, MD; **Gloria Caldito, MD**; Anil Nanda, MD

**841 Parent Assessment on the BRIEF Correlates with Executive Performance of Children with Shunted Hydrocephalus**

**Authors**.....**Maureen A. Lacy, PhD; Emily Astria, BS; Christina Lee**; David Frim, MD, PhD; Scott Hunter, PhD; Martin Oliveria, PhD; **Kristen Kasza, PhD**

**Thursday, May 1, 2008**

### BREAKFAST SEMINARS

**404 Tumor Neurosurgery: Meet the Experts**

**Moderator** ..... **Linda M. Liau, MD, PhD**  
**Panelists** ..... Mitchel S. Berger, MD, FACS; Henry Brem, MD, FACS; Jeffrey N. Bruce, MD, FACS

### Socioeconomic Plenary Session

**902 The Effect of Transfer and Emergency Department Admissions on Mortality of a University Neurosurgical Service**

**Authors**.....Ronald L. Hammers, MD; **Susan Anzalone, BS**; T. C. Oigitano, MD, FACS

**903 Assessing the Impact of Certificate of Need Laws in Patient Access to Elective Neurosurgical Care**

**Authors**.....**Elana Fric-Shamji, MD**; Mohammed F. Shamji, MD, MSc

**904 Ventral Surgery Versus Dorsal Decompression with Fusion for Cervical Spondylotic Myelopathy: A Cost Analysis**

**Authors**.....Zohar Ghogawala, MD; **Rachel Potter**; **Ellyn Wasserberger, BS**; Fred G. Barker, II, MD

**Medicare Participation Options CMS Rules Regarding Medicare Participation**

**Speaker**.....**Katie Orrico, JD**

*Highlights Contributed by Chris Phillips*





Marcia Angell, MD

## The 2008 Louise Eisenhardt Lecturer: Marcia Angell, MD

The 2008 Louise Eisenhardt Lecturer at the AANS meeting is Marcia Angell, MD. Dr. Angell is a distinguished American physician and author, and the first woman to serve as the editor-in-chief of the New England Journal of Medicine (NEJM). She is currently a senior lecturer in the Department of Social Medicine at Harvard Medical School. After completing her undergraduate studies in Chemistry and Mathematics at James Madison University in Harrisonburg, Va., Dr. Angell spent a year as a Fulbright Scholar studying microbiology in Frankfurt, Germany. Dr. Angell went on to complete her medical studies at Boston University School of Medicine and received her MD degree in 1967. She is a board certified Pathologist, having trained in both internal medicine and anatomic pathology. Dr. Angell joined the editorial staff of NEJM in 1979, became executive editor in 1988, and interim editor-in-chief from 1999 until June 2000. She is a frequent contributor to both medical journals and the popular media on a wide range of topics, particularly medical ethics, health policy, the nature of medical evidence, the interface of medicine and the law, and end-of-life healthcare. Her book, *Science on Trial: The Clash of Medical Evidence and the Law in the Breast Implant Case* (1996), received critical acclaim. With Stanley Robbins and, later, Vinay Kumar, she co-authored the first three editions of the textbook *Basic Pathology*.

*Time* magazine has named Marcia Angell one of the 25 most influential Americans.

Contributed by Lauren Schwartz, MD

**2008 Louise Eisenhardt Lecture: Marcia Angell, MD**  
**Tuesday, April 29, 2008 • 11:15 - 11:45 a.m. • Main Hall Convention Center**

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WINS is sponsoring a private breakfast in Dr. Angell's honor on the morning of the Louise Eisenhardt Lecture at Hyatt Regency McCormick Place, CC12B 4/29/2008 8:30 - 10:00 AM.

For information regarding the WINS Breakfast contact Ann Marie LaCasha at aml@aans.org.

Women in Neurosurgery thanks MGI PHARMA, INC., a wholly-owned subsidiary of Eisai Corporation of North America, Biomet and Leica for their generous support of the Louise Eisenhardt Breakfast at AANS 2008.



### Women Neurosurgeons Board-Certified in 2007

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*Congratulations!!!*

## WINS Holds First Regional Meeting

Women in Neurosurgery held its first regional meeting in New York City on December 14, 2007. Despite the weather, the event was well-attended. Members were treated to dinner at BLT Fish in Chelsea. The program included an interactive discussion with two management consultants, Licia Hahn and Susan Longhito, under the title, "Achieving What You Want in the Workplace." Ms. Hahn is the President of her own consulting firm with extensive experience in coaching high-powered executives and CEOs. Ms. Longhito, President of Paideia Communications, is an executive advisor in the healthcare and biotechnology industries. Members were afforded the opportunity to site examples and discuss workplace issues with these experts. WINS would like to thank DePuy Spine/Spinal Dimensions and MGI Pharma for their generous support of this event.



Contributed by Jamie Ullman, MD





Women in Neurosurgery  
5550 Meadowbrook Drive  
Rolling Meadows, IL 60008



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**2008 Women in Neurosurgery  
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- At AANS Meeting,  
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- Sheraton Chicago  
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Sheraton 2
- Tuesday, 4/29/08
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Secretary-Treasurer 2008-2009 will be  
held this summer. You may nominate  
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**EMAIL NOMINATIONS TO:  
Chris Philips [cap@ans.org](mailto:cap@ans.org) by  
June 30, 2008.**

*Please include a brief statement (2-3 sentences)  
regarding why you or your nominee wish to serve  
on the WINS Executive Committee.*