Two important articles have recently been published in regard to the neurosurgical workforce: “The Neurosurgical Workforce in North America: A Critical Review of Gender Issues” by Woodrow, Gilmer-Hill, and Rutka (Neurosurgery 59:749, 2006); and “Towards Harnessing Forces of Change: Assessing the Neurosurgical Workforce” by Benzil and von der Schmidt (AANS Bulletin 15:7, 2006). Both articles address the growing disparity in numbers of women in neurosurgical training and practice compared to those of the general workforce and medical school admissions. The time has certainly come to address these issues head on by endeavoring to promote and encourage the interest of female students, giving them more freedom to choose the specialty of their dreams rather than succumbing to “practical” and often misconceived concerns about lifestyle and sacrifices.

Some important statistics were gleaned from Benzil’s article. In 2005, women comprised over 55% of medical school acceptances. While the number of medical students has risen from a nadir in 2002, female applicants have consistently outnumbered males since 1995. In addition, there has been a change in the number of neurosurgeons, overall, relative to the general population “…from 1:80,000 in 1990 to 1:91,500 in 2000.” suggesting a drop-out of neurosurgeons to 1:91,500 in 2000.”

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“…from 1:80,000 in 1990 to 1:91,500 in 2000.”

Woodrow, et al, cite a graph from JAMA indicating a general rise in female residents in all specialty training programs, with a highly disproportionate, slower rise in neurosurgery, especially when compared to general surgery. Only about 10% of all neurosurgery residents are female.

Currently, approximately 5.9% of practicing neurosurgeons are women. We are now re-manded to reconcile the disparities of female students relative to neurosurgeons as well as the decreasing number of neurosurgeons relative to the general population. The call has gone out to recruit more of the best and the brightest into this highly specialized discipline.

Viewing our medical student pool, as was the similar case for the defense industry during World War II, we have no choice but to tap into this vital workforce resource where women are now, and possibly will remain, the majority.

Some obvious impediments to recruiting women into neurosurgery include long working hours; high risk for liability and civil litigation; fear and knowledge of gender inequity in regard to salaries, academic promotion, and achieving leadership positions; and lack of sufficient role models. On a medical student bulletin board, I discovered that there are gross misconceptions about the sacrifices women must make to pursue their dreams. One student lamented that if she became a neurosurgeon, she will never be able to marry or have children. Not many respondents came to her rescue to dispel this belief and such beliefs are probably the norm.

WINS has undertaken several steps towards aiding in this recruitment process. We are in the early stages of organizing a Speaker’s Bureau which can be circulated to medical schools, offering lectures on neurosurgery careers. We are currently organizing a Mentoring Program through which we will match students and residents with practicing female neurosurgeons. We will be establishing a Virtual Mentor bulletin board on our website to allow students to ask questions or express concerns, and receive responses from WINS members. The AANS Young Neurosurgeons Committee has worked in collaboration with WINS to create a Breakfast Seminar devoted to medical students and junior residents regarding neurosurgery opportunities. Lastly, we have begun our own strategic planning process to assess and revamp our role as a women’s advocacy group ben-

continued on page 7
Coveted “Friends of WINS” Award bestowed on Donald O. Quest, M.D.

Women in Neurosurgery has unanimously voted to honor Donald O Quest, M.D., current president of the American Association of Neurological Surgeons (AANS) with the coveted “Friends of WINS” award. This honor is bestowed only when the organization chooses to recognize an individual or group who has demonstrated outstanding commitment to the mission of WINS “to inspire, encourage and enable women neurosurgeons to realize their professional and personal goals.”

During Dr. Quest's tenure on the executive board of the AANS, he has tirelessly sought to identify and appoint qualified women to key leadership positions. He has publicly recognized the need for neurosurgery to attract more women applicants to neurosurgery residencies in order to maintain the “best and the brightest” minds within the specialty. To this end, he engaged WINS to draft a position statement on impediments to attracting and retaining a diverse workforce for neurosurgery.

During this year’s annual AANS meeting in Washington, D.C., Dr. Quest has promoted the first Louise Eisenhardt Lecture during a plenary session. This year, Sally Ride, American’s first woman in space, will deliver the talk in honor of Dr. Eisenhardt — a pioneer in neurosurgery. Even before his tenure on the executive board of the AANS, Dr. Quest was actively supporting women in neurosurgery as professor and Vice Chair at Columbia University, College of Physicians and Surgeons. Dr. Quest trained Emily Friedman, M.D. and Karin Muraszko, M.D., Professor and Chair of Neurosurgery, University of Michigan, two of the first presidents of WINS and of the first fifty women board certified. Dr. Muraszko praised him saying, “He has always recognized that there is a place at the table of neurosurgery for a wide variety of individuals, particularly women. He is a strong advocate of diversity and made significant efforts to be an outstanding mentor for all medical students and residents. He is richly deserving of this award.”

Dr. Quest has shown a life-long dedication to organized neurosurgery. In addition to serving as president of the AANS, he served on the AANS executive board, was elected a director of the ABNS from 1994-2000 (secretary 1996-1999 and chair 1999-2000), selected to serve on the RRC for neurological surgery from 2000-2005, and held the position of president of the American Academy of Neurological Surgery from 2001-2002.
WOMEN IN NEUROSURGERY NEWS

2007 Ruth Kerr Jakoby Lecture
BUSINESS AND CAREER OPPORTUNITIES IN NEUROSURGERY
Joan F. O’Shea, MD • Judy Rosman, JD
WINS Reception, Tuesday, April 17, 2007

WINS is happy to announce the program for the 2007 Ruth Kerr Jakoby Lecture during the upcoming WINS reception at the AANS Annual Meeting in Washington, DC. Two lectures will focus on business and career opportunities in neurosurgery:

DEVELOPING A SURGICAL SPINE CENTER
Joan F. O’Shea, MD

MAXIMIZING YOUR CAREER OPPORTUNITIES AS A FEMALE NEUROSURGEON
Judy Rosman, JD

Joan F. O’Shea obtained her medical degree from the State University of New York (SUNY) Upstate Health Center in Syracuse, New York and graduated from the residency program at the Mount Sinai School of Medicine, Department of Neurosurgery. She completed an orthopaedic spine surgery fellowship under the direction of Dr. Michael Neuwirth at the Hospital for Joint Disease and the Spine Institute of Beth Israel Medical Center, both located in New York City. After training, Dr. O’Shea joined the faculty at the UMDNJ—Robert Wood Johnson Medical School at the Cooper Medical Center in Camden. Currently, she practices in New Jersey having created the Spine Institute of Southern New Jersey where, in addition to treating multiple, complex spinal disorders, has developed a surgical spinal care center. Dr. O’Shea has been a valued member of WINS since her residency.

Judy Rosman is President of RosmanSearch, Inc., a recruitment firm specializing solely in neurosurgical recruitment. She graduated from the University of Virginia Law School in 1994 where she had a dual specialty in Tax Law and Health Law, and was the recipient of the Charles J. Frankel Award in Health Law. She has published on both matters of health law policy and tax law has assisted with the movement for tort reform at the state level. She worked for five years for one of the top law firms in St. Louis, Missouri in the areas of health law and tax law before relocating to Cleveland, Ohio and starting her own company specializing solely in neurosurgical recruiting. Ms. Rosman represents a wide range of academic neurosurgery departments and private practices, and assists neurosurgeons with counseling at every stage of their careers.

• WINS Reception
• AANS Annual Meeting, Washington, DC
• Renaissance Hotel, Meeting Room 4
• Tuesday, April 17, 2007
• 6:00 - 8:00 p.m.

• Sally Ride, PhD

Subsequent to Challenger, Dr. Ride established the NASA office of Exploration, producing a report entitled “Leadership and America’s Future in Space.”

After retiring from NASA in 1987, Dr. Ride became a Science Fellow at the Center for International Security and Arms Control at Stanford University, as well as serving as Director of the California Space Institute. She is currently a Professor of Physics at the University of California, San Diego. Dr. Ride is the CEO of www.sallyridescience.com, a company that produces products designed to foster children’s, especially girls’, interest in science, technology, and mathematics. Products include a series of publications on science careers including Totally Amazing Careers in Health Sciences.

Sally Ride has authored several children’s books:

An inductee in the National Women’s Hall of Fame and Astronaut Hall of Fame, she is honored with a namesake, the Sally K. Ride Elementary School in Woodland, Texas.
Saturday, April 14

**PRACTICAL CLINICS**

**008—Head Trauma: Current Treatments and Controversies with Hands-on Practical Session in Brain Monitoring and Techniques**
Co-Directors: Geoffry T. Manley, MD, PhD; Shelly A. Timmons, MD, PhD
Faculty: P. David Adelson, Ross Bullock, Domenic P. Esposito, Michael G. Fehlings, Anthony Marmarou, Raj K. Narayan, Jamie S. Ullman

**009—Practical and Technical Aspects of Transsphenoidal Surgery**
Co-Directors: William T. Couldwell, MD, PhD; Gail L. Rosseau, MD

**014—Movement Disorder Surgery: Techniques, Decision Making, Complication Avoidance and Management**
Director: Robert G. Grossman, MD
Faculty: Aviva Aboch, Ron L. Alterman, Roy A. Bakay, Alim L. Benabid, Nicholas M. Boulis, Robert E. Gross, Brian H. Kopell, Andre Guelman Machado, Alon Y. Mogilner, Joshua M. Rosenow, Ashwini D. Sharan

**016—Basics of Spinal Stabilization, Fusion and Instrumentation**
Co-Directors: Kaushik Das, MD; Michael G. Kaiser, MD
Faculty: Peter Douglas Angevine, MD; Deborah L. Benzil, Regis Hald, Jr., Virany H. Hillard, Steven L. Ondra

Sunday, April 15

**PRACTICAL CLINICS**

**019—Strategies for Building Hospital Partnerships and Leadership Skills**
Co-Directors: Deborah L. Benzil, MD; Edie E. Zusman, MD, FACS

**023—Spinal Radiosurgery**
Co-Directors: Mark H. Bilsky, MD; Peter C. Gerszten, MD, MPH
Faculty: Liliana Angelov, Deborah L. Benzil, Steven D. Chang, Fraser C. Henderson, Eric W. Nottmeier, Jack P. Rock, Jason P. Sheehan

Monday, April 16

**BREAKFAST SEMINARS**

**103—Lumbar Spine Fusion: Indications, Patient Selection and Current Techniques**
Moderator: Joan Frances O’Shea, MD

**106—Functional Mapping of the Cerebral Cortex: Advantages and Limitations**
Moderator: Matthew A. Howard, III, MD
Panelists: Mitchel S. Berger, Isabelle M. Germano, Johannes Schramm

**107—Chiari Malformations: Diagnosis and Treatments and Failures**
Moderator: Bermans J Iskandar, MD
Panelists: Richard G. Ellenbogen, Timothy M. George, Karin Muraszko

**112—Pituitary Tumors: State-of-the-Art**
Moderator: Gail L. Rosseau, MD

**121—Patient Safety Strategies for Neurosurgical Practice**
Moderator: Jamie S. Ullman, MD

Tuesday, April 17

**BREAKFAST SEMINARS**

**205—Complication and Outcome Assessment of Lumbar Interbody Fusion**
Moderator: Michael G. Fehlings, MD, PhD
Panelists: Christopher Pearson Ames, Catherine J. Gallo, Anthony A. Salerni, Kenneth S. Yonemura
206—Current Surgical Alternatives and Complications in the Treatment of Parkinson’s Disease
Moderator: Phillip A. Starr, MD, PhD

211—Spinal Cord Tumors: Neurosurgical Approaches and Risk Avoidance
Moderator: Paul C. McCormick, MD
Panelists: Albino P. Bricolo, Jacques Brotchi, Barth Green, Karim M. Muraszko

213—Syringomyelia: Pathophysiology and Treatment Approaches
Moderator: Edward H. Oldfield, MD
Panelists: Nicholas M. Bararo, Ulrich Batzdorf, Ghassan K. Bejani, Karim M. Muraszko

216—State-of-the-Art Treatments for Low-Grade Gliomas
Moderator: Joseph M. Piepmeier, MD
Panelists: Mitchel S. Berger, Peter Mcl. Black, Linda M. Liau

219—Cerebral Trauma State-of-the-Art Treatment
Moderator: Alex B. Valadka, MD
Panelists: M. Ross Bullock, Austin R. Colohan, Geoffrey T. Manley, Jamie S. Ullman

PLENARY SESSION II
10:25-10:32 AM Tribute to Louise Eisenhardt
Jamie S. Ullman, MD

Louise Eisenhardt Lecture
10:32-10:40 AM Introduction
Donald O. Quest, MD
10:40-11:10 AM Speaker
Sally Ride, PhD

AANS/CNS SECTION ON TUMOR 2:45-5:30 PM
Symposium ........................................ 2:45-3:35PM 3:05-3:15 PM
The Use of Intra-operative MRI to Improve the Extent of Tumor Resection
Linda Liau, MD, PhD.

SOCIOECONOMIC SECTION I: 2:45-5:15 PM
3:25-3:45PM Neurosurgical Emergency Coverage in Private Practice
Deborah L. Benzl, MD
4:05-4:25 PM Fixing the Emergency Medical System—Where Do We Go From Here?
Shelly Timmons, MD, PhD

Wednesday, April 18

BREAKFAST SEMINARS
304—Current Options in Cerebral Neuromonitoring
Moderator: Johannes Schramm, MD
Panelists: Odette Althea Harris, Robert L. MacDonald, Gary K. Steinberg

306—International Opportunities in Neurosurgery
Moderator: Daniel F. Kelly, MD

316—Management of Spinal Column Tumors
Moderator: Ziya L. Gokaslan, MD, FACS
Panelists: Deborah L. Benzl, Mark H. Bilsky, Peter C. Gerzten, Ehud Mendel, Laurence D. Rhines, Phillip Tibbs

AANS/CNS SECTION ON NEUROTRAUMA AND CRITICAL CARE 2:45-5:30 PM
Moderators: Roland Torres, MD; Patricia Raksin, MD

AANS/CNS SECTION ON TUMOR 2:45-5:30 PM
Symposium ........................................ 2:55-3:25 PM
Controversies in Neurosurgery I: Vestibular Schwannomas: Radiosurgery Versus Surgery
Moderator: Isabelle M. Germano, MD, FACS

Thursday, April 19

BREAKFAST SEMINAR
404—Tumor Neurosurgery: Meet the Experts
Moderator: Isabelle M. Germano, MD, FACS

ABNS Certification
WINS would like to congratulate the following women who have become certified by the American Board of Neurological Surgeons in 2006:
Laurie Lynn Ackerman MD
Melissa R. Chambers MD
Jill W. Donaldson MD
Susanne E. Fix MD
Lisa L. Guyot MD, PhD
Judy Huang MD
Barbara E. Lazio MD
Catherine Anne Mazzola MD
Renatta J. Osterdock MD
Angela V. Price MD
Viviane S. Tabar MD
Kimberly P. Walpert MD
Marjorie C. Wang MD, MPH
The 2007 Louise Eisenhardt Resident Travel Scholarship

WINS is proud to announce this year’s recipient of the Louise Eisenhardt Scholarship:

**Taryn M. Bragg, MD**
Loyola University Chicago, Stritch School of Medicine
Fourth-year Neurosurgery Resident
Effects of IGF-1 and Peripheral Nerve Stimulation on the Recovery of Rats Following Spinal Cord Injury
This paper will be presented at the AANS Annual Meeting Scientific Session II—Spine and Peripheral Nerve, Monday, April 16, 2007, 3:45-4:00 PM.

The Louise Eisenhardt Resident Travel Scholarship is granted yearly to an outstanding female resident abstract accepted at the American Association of Neurological Surgeons Annual Meeting. A $1000 stipend is given to cover travel expenses.

The 2006 Sherry Apple Resident Travel Scholarship

**Simona Velicu, MD**
Loyola University Chicago, Stritch School of Medicine
First-year Neurosurgery Resident
Gene Therapy of Malignant Glioma Using a Novel Lipopolymer, PEG-PEI-CHOL (PPC) Engineered to Secrete IL-12 Prolongs the Survival of Mice with Experimental Brain Tumors
This award was presented at the WINS reception during the CNS Annual Meeting.

WINS would like to thank the Integra Foundation for its generous support of resident education and research through the Sherry Apple and Louise Eisenhardt Scholarships.

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. Starting with the CNS Annual Meeting, 2007, the awards’ value will increase to up to $2000.

WINS Web Update/ Mentoring Program

The WINS executive committee is pleased to announce new and future changes to the WINS Executive Board WINS website www.neurosurgerywins.org. The website was originally developed and maintained by Dr. Sherry Apple as a source of information for women interested in pursuing a career in neurosurgery. It was also intended to be a communication tool for WINS members in training and in practice.

To that end, the website features the brochure, “So You Want to Be a Neurosurgeon?”, biographical sketches of earliest Women in Neurosurgery, as well as copies of the WINS newsletter. In addition, there is a new medical student’s corner, which, together with the resident’s corner, has links to our mentoring page (see below). The home page now features information about upcoming WINS meetings and receptions. Currently, we are looking forward to the 1st Louise Eisenhardt Lecture to be given by Sally Ride during the Tuesday plenary session at the AANS annual meeting.

In the future, the webpage will feature a password protected member’s only section that will allow payment of dues, updating contact information and the nomination and election of the WINS officers. The website updates will be coordinated by Dr. Roxanne Todor. She can be contacted by email (todorrr@pol.net) for any questions or suggestions concerning the WINS website.

MENTORING PROGRAM

WINS is pleased to offer a mentoring program for students interested in a neurosurgical career. Experienced WINS members will be matched with participants on the basis of potential subspecialty interest, research interests and geographical location. We are also working on a “Virtual Mentor” bulletin board feature, to foster dialogue between students and mentors. The mentoring program will be coordinated by Dr. Roxanne Todor (todorrr@pol.net). Students from all levels of training are encouraged to participate in the mentoring program.

WINS Membership/Contributions to WINS

WINS always welcomes new members to our organization and encourages men as well as women, to join. All female residents are now granted membership automatically with no fee. In addition, we have created a new Medical Student category which provides membership without charge. A new Associate Member category consists of physician assistants, nurse practitioners, and other physician extenders at the reduced fee of $25. An online membership application will soon be available through the MyAANS section of www.aans.org, and a link from the WINS site, www.neurosurgerywins.org.

As always, we are grateful to all members who endeavor to contribute separately to such WINS activities as the Louise Eisenhardt Resident Scholarship Fund, Sherry Apple Resident Scholarship Fund, and the new Web Site Development Fund. We rely on membership fees and contributions to make these opportunities available and to help our organization grow.

All those interested in becoming a WINS member may contact Susan Pannullo, Membership Chair at...
Celia Sandys, granddaughter of Winston Churchill spoke on the legacy of her grandfather’s leadership.

WINS Reception
Tuesday, October 10, 2006

From left: Gabrielle F. Morris (2006 Alexa Canady Lecturer), Simona Velicu (2006 Sherry Apple Resident Travel Scholarship recipient) with Jamie Ullman, Mary Gumerlock, Susan Pannullo

From left: Margaret Wacker, Gabrielle Morris, Jamie Ullman, Mary Ellen Dandy Marmaduke (Walter Dandy’s daughter), Susan Pannullo.

• Balanced Workforce

• balanced Workforce continued from page 1

recruiting those in the beginning of their careers and those established neurosurgeons wishing to become leaders in their communities and in organized neurosurgery.

In addition to actual recruitment, general systemic issues will need to be resolved. It is increasingly clear that many men, as well as women, are envisioning careers that will allow them more time with their families, time that they may not have been granted by their own fathers in days gone by. Neurosurgery’s striving for a balanced workforce must recognize and fulfill that need as much as possible. We are, indeed, humans after all.

Recruiting more women into academic neurosurgery will provide social as well as professional role models for potential female applicants. As Dr. Muraszko aptly addressed in her comments on Woodrow, et al., it is important to improve flexibility in residency training and neurosurgery practice by promoting the “team” approach to patient care instead of focusing exclusively on the individual practitioner. Other specialties have moved towards this approach to allow more opportunity for surgeons to live that “balanced life.” Such a feeling of well being on behalf of the neurosurgeon can only improve one’s sense of dedication towards providing excellent patient care.

Once fundamental changes in the structure of neurosurgery practice are in place, our specialty will further become attractive to all available “best and brightest” medical students regardless of gender. Such changes will precipitate a self-perpetuating cycle of growth and prosperity in neurosurgery, meeting the demands of our ever-expanding knowledge base through research and innovation, and ultimately achieving improved patient care and outcomes.

continued from page 1
Louise Eisenhardt was a woman of many “firsts.” As the first and only woman President of the Harvey Cushing Society (HCS), now known as the American Association of Neurological Surgeons (AANS), she has been duly honored with a lectureship beginning with this year’s AANS annual meeting.

Dr. Eisenhardt was born in New Jersey in 1891. In 1915, she became Harvey Cushing’s editorial assistant, overseeing the publication of his book, *Tumors of the Nervus Acusticus*. She attended Tufts College Medical School graduating in 1925 and followed with an internship at the New Haven Hospital, but changed, at his request, to join Dr. Cushing at the Boston Brigham Hospital for Women and Children, subsequently becoming a Junior Associate of Surgery on his service, publishing several important papers, including a landmark paper on the “supravital technique” for the immediate analysis of surgical biopsies. In addition to becoming the Section Chair of Neuropathology at Harvard, Dr. Eisenhardt kept detailed records, collected pathology specimens, and analyzed statistics for intracranial operation outcomes.

In 1934, a year after Dr. Cushing, Louise Eisenhardt moved to New Haven Hospital of Yale University, establishing the Brain Tumor Registry, initially consisting of over 2000 specimens and 50,000 pages of case records. The Harvey Cushing Society was established in 1932, of which Dr. Eisenhardt became the Secretary-treasurer until 1938, then from 1939-1952. She was President for a one-year term from 1938-9. In 1952 until 1965, she served as the Society’s historian. She was honored as the first Cushing Orator in 1965.

Louise Eisenhardt became the first editor of the Journal of Neurosurgery, a position that she held for 22 years. The first issue was published in January 1944. This year marks the 40th anniversary of her passing on January 22, 1967 after a long illness.

It is clear that Louise Eisenhardt’s was an exemplary career. Dr. Eisenhardt’s portrait graces the halls of Yale University Medical School and her legacy still exists in the Brain Tumor Registry and the ongoing successes of both the AANS and the Journal of Neurosurgery. Her posthumous honors include the neurosurgery library at the University of Arkansas for Medical Sciences, a WINS resident travel scholarship, as well as the new AANS annual lectureship, all of which bear her name.

Celebrating Louise Eisenhardt

Louise Eisenhardt receives a medal from President Frank Mayfield honoring her as the first Cushing Orator at the HCS meeting, New York, 1965.