Leadership has always been a major emphasis of Women in Neurosurgery (WINS) and the theme of WINS for 2012-2013 is International Leadership. There is much that we can learn from the international community and much we can do to enrich it. To this end, I am pleased to announce the creation of the WINS-Greg Wilkins-Garrick Chair Visiting International Surgeon Award to support international collegiality, education and collaboration. Thanks to the generosity of Dr. Mark Bernstein, Greg Wilkins-Barrick Chair in International Surgery, two awards will be available annually to sponsor an international female resident or faculty neurosurgeon to attend the Congress of Neurological Surgeons (CNS) or American Association of Neurological Surgeons (AANS) meeting and awardees will present a lecture at either the WINS Louise Eisenhardt Breakfast at the AANS meeting or the WINS Reception at the CNS meeting. Our international theme was also highlighted by the CNS WINS International Symposium/Reception, entitled “Challenges in Neurosurgery: Lessons Learned Globally”, which was also co-sponsored in part by Dr. Bernstein, Greg Wilkins-Barrick Chair in International Surgery. Speakers included Dr. Karin Muraszko who enlightened us on her ongoing work in Guatemala with respect to Project Shunt and Dr. Sarah Woodrow who has sustained an ongoing effort, since her residency, to improve neurosurgical care in Ethiopia. The following pages contain not only a more detailed look at our international neurosurgeons, but also highlights many of the other inspirational accomplishments and achievements of WINS and its members.

The WINS Annual Reception at the CNS meeting in Chicago, IL

The CNS/WINS International Symposium and Reception was entitled, “Challenges in Neurosurgery: Lessons Learned Globally”, and was co-sponsored by Dr. Mark Bernstein, Greg Wilkins-Barrick Chair in International Neurosurgery. The WINS Annual Reception at the CNS meeting featured two of our outstanding WINS members who have contributed greatly in international endeavors: Drs. Karin Muraszko and Sarah Woodrow. Our two speakers packed the Chicago Ballroom, and captivated and inspired the audience which included students, residents, neurosurgeons and international neurosurgeons. Dr. Muraszko enthralled us with the challenges that she met and overcame in Guatemala which included limited resources, stolen resources and machine guns! Dr. Woodrow fascinated the audience with her ongoing efforts to build a sustainable neurosurgery workforce in Ethiopia. After their lectures, both Drs. Muraszko and Woodrow stayed on to continue to inspire and encourage the attendees in their desires to become more involved in international neurosurgery.

The Annual WINS Eisenhardt Breakfast Reception

The annual WINS Breakfast Reception was held April 18, 2012 at the AANS meeting in Miami. Dr. Cynthia Breazeal, ScD, was the WINS 2012 Eisenhardt Lecturer and is the Associated Professor of Media Arts and Sciences at the Massachusetts Institute of Technology. At the breakfast reception, she presented details of her pioneering work in the field of social robotics and Human-Robot Interaction. Dr. Breazeal was the recipient of 2008 TIME Magazine’s 50 Best Inventions and is the author of the book “Designing Social Robots,” and has published more than 100 peer-reviewed article in journals on the topics of autonomous robotics and artificial intelligence.
Editors Note: One of the best ways to emulate success is to learn from successful people. Dr. Woodrow candidly answered our questions on how she was able to succeed in her international endeavors in Ethiopia.

Q&A

Could you tell us about the work you and your group do in Ethiopia?
I travel to Ethiopia working with FIENS (Foundation for International Education in Neurological Surgery). FIENS is an organization made up entirely of volunteer neurosurgeons, like myself, who travel to more than 20 sites around the world. The focus of the group is on providing education to local neurosurgeons – this may take the form of teaching new techniques, developing certain subspecialties or even helping to support training programs, as in the case of Ethiopia. When I first started traveling to Ethiopia, there were only 3 or 4 neurosurgeons in the entire country and the University of Addis Ababa had just established the first neurosurgery training program in all of East Africa. At the time there were two residents in training there. Both have since graduated and are now faculty themselves in the program which now has almost 20 residents at various stages of training. Moreover, the knowledge and skills that these residents now have is so much more advanced than it was even 2 years ago – I can see real progress.

How and why did you get involved?
I have been travelling to the Black Lion Hospital of the University of Addis Ababa in Ethiopia for the last 7 years. I initially went there when I was a senior resident training at the University of Toronto. I was fortunate in that there was a tremendous interest in and support for international work there and I was allowed to organize my own 3-month international neurosurgery elective. At that time FIENS had just partnered up with the Black Lion to provide them with neurosurgeon educators. I was interested in this site in particular because of the newly established neurosurgical training program. Having just completed a Master’s in Health Professional Education, I thought it was an excellent opportunity to combine several of my professional interests – namely surgical education and work in the developing world – with neurosurgery. I truly believe that one of the keys to improving healthcare delivery in developing world countries is through education. I continue to travel back regularly for a few weeks at a time to teach in their program.

What are some of the challenges/obstacles and how did you get around them?
The biggest challenge for me doing this work relates to the lack of resources over there. It starts at the most basic level with patients having extremely limited resources accessing healthcare and as a result they experience long delays prior to treatment. Once there, resources within the public hospital system are scarce which further delays treatment plans. As a result, when patients arrive on a neurosurgical service, they often do so with quite advanced pathology, and all the morbidity that brings with it. With these lack of resources comes continued on page 3
difficult ethical challenges. You become the gatekeeper to services – trying to prioritize one patient for surgery over another. We do it all the time in our own practices but the pathology is so much more extreme over there at times it can become overwhelming. Often, for example, you are left trying to choose which 2 surgeries you can get accomplished that day knowing that all of the patients should have been operated on days if not weeks ago. I do not think you ever really get around these challenges but you do learn to focus on the positives – the people that have been helped, and the ones that will be helped as more neurosurgeons are trained in that country.

What would be your advice to others who would like to be involved in medical missions?

These days there is no shortage of organizations with which to volunteer. I think the key for anyone interested in pursuing international work is to become involved in a thoughtful, sustainable project. FIENS, for example, focuses on education of surgeons in those countries so there is a ripple effect – once you leave the effect of what you have done carries on. Over the last few years there has been an exponential growth in people/ organizations that have an interest in international work including not just volunteer organizations but also academic institutions as they try to achieve a more global impact. While the potential in this human power is huge I have come to realize that we need to better co-ordinate our efforts. Each time I visit Ethiopia, for example, I encounter an increasing number of individuals and groups, from different specialties and countries, most of whom know nothing about each others’ existence. I can only imagine what could be accomplished if we rallied our resources together. I would challenge anyone interested in medical missions to think outside the traditional volunteerism model and take this type of work to the next level.

How could someone help or be involved with your project?

First of all, let me stress – this isn’t “my project”. I am – maybe – a drop in the bucket of this project. There are so many other individuals and organizations that have been far more instrumental to the development and success of the training program in Addis than me. For anyone interested in this type of work I would suggest checking out the FIENS website (http://www.fiens.org). There they can find out details about this site and others. FIENS can help put them in touch with volunteers who have been to different sites to make sure what they have to offer complements well with what those sites need. If anyone is interested in traveling to Addis – please send me an email – I would be happy to tell you more. I would love to see a consistent flow of instructors travel there. If you can not make time to volunteer right now, we are in constant need of new and used equipment to take over to various sites.

Dr. Woodrow can be contacted by email at: funnywhitedog10@gmail.com

Rounding on the Wards. Each day we make rounds with the residents. In Ethiopia families play important roles nursing relatives during their hospital stay often sleeping on the floor next to their beds.

What would be your advice to others who would like to be involved in

Hydatid Cyst: Patients who can afford it now have the option of paying for a CT scan, often paying more than a month’s salary for the test. To the left is a scan of a girl who had been somnolent in bed for almost 2 months while her family saved up for the 2-day bus ride to the city. Her scan shows incredible mass effect due to a parasitic infection - a hydatid cyst.

Ethiopian Light box in the OR - you learn to make due with what you have.

OR shot - most of the equipment at the hospital is second or third hand having been donated by various groups that have visited over the years. This includes the drapes that are clearly well-worn and the overhead lights that are only partially functioning.

TO RENEW OR BECOME A MEMBER OF WINS:

Go to:

www.my-WINS.org

(and use your AANS login information)

Help in obtaining a password can be obtained by contacting Ashley Hamm at: aeh@aans.org
Women in Neurosurgery: A Medical Student’s Perspective

Editor’s Note: WINS constantly strives to promote and support the next generation of Women in Neurosurgery. Soraya Mehdizadeh was asked to give her perspective on the current environment and attitudes facing medical students when deciding on whether or not to choose a career in Neurosurgery.

Women in Neurosurgery: A Medical Student’s Perspective

I still recall my first time in the OR. I was shadowing one of my mentors, a gifted neurosurgeon at the Toronto Western Hospital. Suited in a pair of surgical scrubs, I entered the cold, sterile operating room and quickly noticed the team of residents and staff who were gathered around the patient’s MRI, and reviewing the best surgical approach for the case. Minutes later, I witnessed the surgeons delicately cutting through bone and dura to get to the brain, much like one would unlock a mysterious and intricate vault. Once exposed, I immediately succumbed to the elegant architecture of this enigmatic organ. I observed the meticulous surgery for hours. I was free of all other thoughts. Nothing mattered except for this patient and the exquisite anatomy that rested before my eyes. It felt incredibly liberating.

The rush of witnessing neurosurgery first-hand was matched by my comfort in what surgery had to offer: an objective lens with which to approach medicine. Unlike other fields, where results can be highly variable and extremely time dependent, surgery almost invariably offered the complete polar opposite. This is just one of the many aspects that drives me towards a career in surgery.

Here’s the problem. As a female student in medicine, your career is often dichotomized into two paths: a non-surgical specialty that offers the flexibility and lifestyle that is conducive for child rearing and families, or a surgical specialty, which is designed for those who are more “career oriented”. My question is, why do the two have to be mutually exclusive? Yes, surgical training is a tough 5 + year road. The reality is that many female surgical residents will be dealing with things like pregnancy, and other challenges that males will not need to deal with during this time. That said, I have seen countless women in surgical specialties that are in healthy relationships and have children, yet this stereotype continues to persist amongst students and the medical community. Unfortunately, this seems to be a driving force that pushes the younger generation of women in medicine away from pursuing a surgical specialty, and the proof is in the pudding. For example, in the 2012 R–1 Canadian match results, it was reported that 597 women placed family medicine as their first choice, compared to 305 men; while 244 men ranked surgery as their first choice, compared to 161 women. Although one could argue that these numbers are more respectable than what we would have seen ten years ago, I believe that a shift in paradigm towards a more gender equitable mentality in surgery would have a positive influence on women and their decision to pursue this field.

While the archaic stereotype of women in surgery (or any other traditionally male dominated field for that matter) is hardly unique, I have personally been surprised to learn about some of the stereotypes that exist within various surgical specialties as well. For example, there is the concept of “lifestyle” surgical specialties; essentially, those that involve less gruesome call schedules and less lengthy and life-threatening procedures. I cannot tell you how many times some of my female classmates who are interested in surgery and I have been persuad-
Mentoring the Next Generation of Neurosurgeons

In a joint effort between YNC, Women in Neurosurgery (WINS), and Council of State Neurological Societies (CSNS), a research project was conducted to assess barriers to medical student interest and involvement in neurosurgery http://w3.cns.org/dp/2011CNS/7.pdf. The project was acknowledged as the best poster in the CSNS section at the Congress of Neurological Surgeons in October 2011 (1). Briefly, two separate surveys were designed to assess perceptions of neurosurgery in the present medical school curriculum; one targeted attending neurosurgeons and the other, third and fourth year medical students. Forty seven percent (47%) of students indicated that clinical mentors were a primary reason for deciding on a chosen specialty yet only 40% of students had any opportunity to work with neurosurgeons during medical school. 78% of attending neurosurgeons stated that working clinically with a neurosurgeon was the crucial factor resulting in the decision to pursue the field. Thus mentorship is an important component of attracting dedicated students into our field as well as helping them to start their careers.

A medical student mentorship program was first developed by WINS in 2004 after the RRC approached WINS to help find ways to increase female applicants for neurosurgical residencies and was run from then until now by Dr. Roxanne Todor for many years. I have been fortunate enough to serve as co-director with Dr. Todor since 2011. In 2011, we matched 45 mentees with mentors. In 2012, that number rose to 50 and we are on track this year to have 60 mentee/mentor pairs. This year, 60% of the mentees are from US MD medical schools, 27% are from US DO medical schools and 13% are international students. Drs. Karin Muraszko and Deborah Benzil created a brochure explaining the process entitled “So you think you want to be a neurosurgeon” available on the WINS website, which was recently updated by Dr. Roxanne Todor and Ms. Chris Phillips of the AANS. We have augmented this resource with podcasts addressing the most popular 10 questions asked by medical school mentees. Our webpage also points out a number of other on-line resources that are available at www.aans.org/Young%20Neurosurgeons/Medical%20Students.aspx.

Mentorship from both men and women is important at all stages of one’s career from medical school to residency to practice. With the support of YNC and other organizations in organized neurosurgery, we hope to expand our mentoring program by attracting diverse mentees/mentors, to improve access to our resources, and to ultimately increase the number of medical students interested in our field through mentorship.

Our current mentors include both men and women. We welcome all medical students interested in neurosurgery to participate. Often times, it is a commonality such as geography, a military commitment, and/or similar career interests that is most important for the relationship. What the mentoring experience constitutes ranges dramatically based on what works for the mentee/mentor pair. Sometimes, it is as simple as a phone call while other times a long-lasting relationship develops. If you are a resident or an attending and are interested in finding out how you can be involved with this program, please contact Ashley Hamm at aeh@aans.org for further information. The experience of helping someone maximize all their opportunities as they discover our field is truly rewarding.

WINS Awards News

WINS has a long tradition of supporting neurosurgery residents. This page highlights some of the most recent award winners.

For both Sherry Apple and Louise Eisenhardt Resident Travel Scholarships, all interested residents may submit their abstracts through the CNS and AANS Abstract Center, respectively, prior to the deadlines, and select the above scholarships from the menu.

For the WINS Greg Wilkins-Barrick Chair Visiting International Surgeon Award, application details can be found at: www.neurosurgerywins.org

New Award Announcement: WINS/Greg Wilkins-Barrick Chair Visiting International Surgeon Award

Women in Neurosurgery (WINS) is pleased to announce the creation of the WINS/Greg Wilkins-Barrick Chair Visiting International Surgeon Award.

Thanks to the generosity of Mark Bernstein, MD, FRCSC, the Greg Wilkins-Barrick Chair in International Surgery, two awards will be available to encourage international collegiality, education and collaboration. The award will fund travel and registration fees to a maximum of $5000 of an international female resident or faculty neurosurgeon to attend the CNS or AANS meeting and awardees will present a talk at one of the WINS events: WINS Breakfast (AANS meeting) or WINS Reception (CNS meeting).

Application details can be found at: www.neurosurgerywins.org

2013 Louise Eisenhardt Resident Travel Scholarship

Scott Parker, MD, Vanderbilt University Medical Center in Nashville, TN, Second-year Neurosurgery Resident

Dr. Parker’s paper “Comparative Effectiveness, Cost Utility and Cost Benefit Analysis of Intra-Operative Neuromonitoring in Cervical Spine Surgery: Where is the Value?” and award will be presented at the AANS Annual Meeting, New Orleans, Louisiana, Monday, April 29 at the Spine and Peripheral Nerve Section Session at 3:41–3:49 PM. The Louise Eisenhardt Resident Travel Scholarship is granted yearly to an outstanding resident abstract accepted at the American Association of Neurological Surgeons Annual Meeting. A stipend of up to $2000 is given to cover travel expenses.

2012 Sherry Apple Resident Travel Scholarship

Roy Dudley, MD (receiving award on right at the CNS), Washington University in St. Louis School of Medicine Resident, Department of Neurosurgery

Dr. Dudley’s paper “Beneficial Functional Outcomes of Selective Dorsal Rhizotomy (SDR) Are Long Lasting and Alter the Natural History of Motor Development in Spastic Cerebral Palsy” and award was presented at the Pediatrics Section Oral Presentation Session at the CNS Annual Meeting, Tuesday, October 9, 2012, 2:00–2:09 PM in Chicago, Illinois. The Sherry Apple Resident Scholarship was named in honor of our dear colleague and WINS President who, sadly, died in 2001. The Sherry Apple Resident Travel Scholarship is granted yearly to an outstanding resident abstract accepted at the CNS Meeting. A stipend of up to $2000 is given to cover travel expenses.

Inaugural 2013 WINS/Greg Wilkins-Barrick Chair Visiting International Surgeon Award Winner

The inaugural 2013 WINS/Greg Wilkins-Barrick Chair Visiting International Surgeon Award Winner is Dr. Helen Marie Fernandes, MD, FRCS. Dr. Fernandes is a Consultant Neurosurgeon at Addenbrooke’s Hospital in Cambridge and was the first female surgeon to be appointed at her institution. She has chaired the UK equivalent of WINS, the Women in Surgery arm of the Royal College of Surgeons of England. She has been influential on the trend of increasing female trainees in Neurosurgery to be at an all time high of 23%. She began a collaboration with the Department of Psychology of the University of Exeter and explored the issues of workplace gender with respect to the surgical workforce. She was named as one of the Times Newspaper Top 50 UK Surgeons 2011 and as one of the Times Newspaper Top 100 UK Children’s Doctors in 2012. We are honored to have Dr. Fernandes speak at the Louise Eisenhardt Breakfast on Wednesday, May 1, 2013 at 8:35AM in the Mardi Gras Ballroom D of the New Orleans Marriot.
Myth: WINS is just for women
Fact: Recruiting diverse talent to the field of neurosurgery is the goal of everyone who wants to provide optimal patient care and ensure that our field is at the cutting edge of neuroscience research.

There are 8,121 members of the AANS worldwide working together to prevent, diagnose, treat, and rehabilitate people with disorders of the spinal column, spinal cord, brain, nervous system and peripheral nerves. One goal of WINS is to assist organized neurosurgery in attracting the best and brightest medical students to join this pursuit. By encouraging talented students, regardless of gender, to pursue neurosurgical careers, we not only ensure a balanced workforce with diverse perspective, but also make sure that we are capitalizing on the aptitude and capabilities of everyone who wishes to enter our field.

WINS thanks the following male donors, program directors and current and former chairs and chiefs for their support this year:

**Donors:**
- Mark Bernstein
- Paul Marcotte

**Members:**
- Russell J. Andrews,
- Mitchel S. Berger,
- Robert E. Breeze,
- Henry Brem,
- Arthur L. Day,
- Richard G. Ellenbogen,
- Jason H. Huang,
- Anil Nanda,
- Nathan R. Selden,
- Warren R. Selman,
- Gary K. Steinberg,
- Philip E. Stiegl,
- Christopher E. Wolfia,

Note that WINS membership is open to medical students, residents, and post-residency neurosurgeons, regardless of gender. It is free for students and residents to join, and annual membership fees for all others and donations go to help educate, inspire, and encourage medical students, residents and neurosurgeons to realize their professional and personal goals.

Contributions have been used to support activities such as:
- Leadership and career development seminars for neurosurgeons and surgeons-in-training
- Scholarships for outstanding domestic and foreign abstract presenters attending the annual American Association of Neurological Surgeons meeting
- Mentorship programs for pre-medical students, medical students and residents seeking careers in neurosurgery
- Inspirational seminars by invited guests at the AANS meeting
- Networking opportunities for young neurosurgeons

You can become an Active Member of WINS or make a donation online by visiting [www.mywins.org](http://www.mywins.org) or by check made out to Women in Neurosurgery and sent to Chris Philips' attention at: Chris Ann Philips Director, AANS Member Services 5550 Meadowbrook Drive Rolling Meadows, IL 60008

### Congratulations to all Women Neurosurgeons Board-Certified in 2011 & 2012

- Michelle Jennifer Clarke, MD
- Keyne K. Johnson, MD
- Jody Leonardo, MD
- Mallini Narayanan, MD
- Lauren Faith Schwartz, MD
- Deepa Soni, MD
- Eve C. Tsai, MD, PhD
- Hong Yu, MD
- Hongyan Jenny Zou, MD
- Anje Kim, MD, FAANS
- Rebekah Crump Austin, MD, FAANS
- Erica F. Bisson, MD, FAANS
- Claudia Martin, MD
- Amanda L. Yaun, MD
- Wendy Jennifer Spangler-Morrison, MD, FAANS
- Julie Pilitsis, MD, PhD
- Rose Du, MD
- Virany Huynh Hillard, MD
- Sheila Madigan Smitherman, MD
WINS Proudly Thanks the Sponsors of the 2013 WINS Louise Eisenhardt Breakfast

2013 EISENHARDT LECTURER

Dr. Carolyn M. Clancy

Wednesday May 1, 2013 at the 81st AANS Annual Meeting New Orleans, LA

Past Eisenhardt Lecturers:

Sally Ride, PhD
American Astronaut - 2007

Marcia Angell, MD
Editor, New England Journal of Medicine - 2008

Geraldine Brooks
Pulitzer Prize winning author of People of the Book, Nine Parts of Desire, March, and others - 2009

Mary Sue Coleman, PhD
President of University of Michigan - 2010

Kristen Iversen
Author: Molly Brown: Unraveling the Myth - 2011

Cynthia Breazeal, ScD
Associate Professor of Media Arts and Sciences at MIT, where she is the director of the Personal Robots Group (formerly the Robotic Life Group) at the MIT Media Laboratory - 2012

WINS is proud to announce that the 2013 Louise Eisenhardt Lecturer will be Dr. Carolyn M. Clancy, MD. Dr. Clancy has served as Director of the Agency for Healthcare Research and Quality (AHRQ) since 2003.

She leads the organization in its effort to improve the quality, safety, efficiency and effectiveness of healthcare for Americans. As Director of AHRQ, she launched the first annual report to Congress on healthcare disparities and healthcare quality. There will be two opportunities to hear Dr. Clancy speak.

She will be speaking at the Louise Eisenhardt Breakfast at 7:30 - 9:00 am, Wednesday May 1, 2013 in Mardi Gras Ballroom D, New Orleans Marriott Hotel, 555 Canal Street, and the title of her talk will be “Inequality in Quality: Addressing Gender Issues Through Patient-Centered Care”

She will also be speaking later that morning at Plenary Session III at the Ernest N. Morial Convention Center at 9:45 – 10:10 AM and the title of her talk will be “Putting Patients First: Promoting a Culture of Patient-Centered Care”