## **UW** Medicine

A Publication of the Department of Neurological Surgery



# The Montlake Cut



Fall 2016



**Richard G. Ellenbogen** M.D., F.A.C.S.

## **A View From Puget Sound**

The practice of neurological surgery began when the first Shaman took to grinding holes with obsidian flints into the skulls of their fellows, who were sometimes immobilized by ingesting Mandrake root. The reasons for this practice remain lost in the conjecture of prehistory, but the motivations were surely to help the ill. The obligation to help sick people remains the primary goal for our residents and faculty today, and in this issue of the newsletter I am happy to be able to tell you about some of their successes.

The UW has been a leader for years in its desire to prevent sports injuries in youth, and with the football season underway we happily report that Sam Browd, MD, PhD has been named UW Invertor of the Year for his work in designing a better, safer football helmet. Dr. Browd and colleagues hope their VICIS helmet's innovative design will absorb more energy instead of transmitting it to the brain. VICIS's new technologies are far reaching in application from sports to the military.

Matthew Howard, MD finished as Chief Resident at UW in 1993 and moved to the University of Iowa, where he rose rapidly from assistant professor to academic star as Professor and Chairman. Matt has been the Chair at Iowa for some years, and reports passionately about his career, his family and his goal to combine research advances with clinical productivity.

Newly appointed Assistant Professor Ali Ravanpay, MD, PhD, whose roots are at the UW will be working with Misha Gelfenbyn, MD serving our Veterans. Rajiv Saigal, MD, PhD has been recruited as a new Assistant Professor, from UCSF and Miami and will augment the already world class neurosurgical spine service at HMC. His specialty is the newly evolving field of endoscopic and minimally invasive spine surgery and spinal cord injury research. Ryan Morton, MD who also finished this June, is staying as a Endovascular Fellow for the year under the auspices of Louis Kim and the Neurovascular/Endovascular Team. Rakshith Shetty will spend the year as Research Fellow in the Department under Dr. Sekhar's tutelage. Philip Martel, MD has been transplanted from Montreal to join us for a year as the Spine Fellow under the skillful Fangyi Zhang, MD and Randy Chesnut, MD. Neena Marapudi, MD from Detroit is the Pediatric Neurosurgical Fellow at Children's under Jeff Ojemann, MD and team. Anoop Patel, MD a surgeon/scientist joined us from MGH to be our Cerebrovascular/Skull Base Fellow for the year.

The Neurological Surgery Summer Student program, a nationally acclaimed program designed to inspire under-represented college scholars, to pursue neuroscience careers, is finished its 9th successful year. The exciting new aspect of the program is that it is now supported by a R-25 NIH/NINDS grant. The students have something to say about their terrific experiences.

Professor of Neurology and Neurological Surgery Mike Williams, along with other walkers and runners, participated in the 6th annual Children's Hospital and Hydrocephalus Association Walk at Magnuson Park. And, lastly there are new clinics and faculty at UWMC to tell you about, including the world class multidisciplinary pituitary clinic.

1

2

3

4

Richard G. Ellenbogen, MD, FACS Professor & Chairman Department of Neurological Surgery

#### In This Issue

Sam Browd: Inventor of the Year Where Are They Now: Matt Howard, MD New Faculty Welcome New Fellows

**Research Fellow/News from UWMC** 5 Summer Program 2016 6 Hydrocephalus Walk - 2016 7 **Puzzler** 8

## Sam Browd: Inventor of the Year



#### Neurological Surgery's Culture of Invention and Innovation

The Inventor of the Year Award honors outstanding UW research scientists whose innovations have had a major, positive effect on both healthcare and our local economy. In 2016 the UW School of Medicine recognizes **Samuel Browd**, Jonathan Posner, and Per Reinhall for their collaborative work inventing and developing a football helmet that reduces the risk of concussion. - <u>http://vicis.co/</u> - We are exceptionally proud of Dr. Browd not only for his outstanding clinical care but also for innovations and medical devices that will define the future of our field. Importantly, Dr. Browd and his colleagues are reaching beyond the boundaries of our institution to help prevent injuries in the first place.

We are also proud of the setting in which these advances take place. **UW Neurological Surgery** faculty and staff contribute to a highly innovative environment focused on scientific discovery and enterprise. Our faculty hold 50 patents and have 50 patents pending; Neurological Surgery Residents are named on 14 listed and 22 filed patents. Seven of our current faculty have founded 11 active companies directed toward improving patient care or, in the case of *Vicis*, preventing injuries to begin with. Two of our faculty (Drs. Browd and **Mourad**) have been named UW Presidential Entrepreneurial Faculty Fellows. This is a tribute to the ingenuity of our faculty and reflects the ongoing support for a culture of innovation in our Department and the UW.

## Where Are They Now: Matt Howard, MD



I've been keeping pretty busy doing mostly fun stuff. John VanGilder hired me to join the faculty at the University of Iowa and it turns out Iowa City is a great place to live and work. It can get a little chilly in the winter, but our friends at the Mayo Clinic have it much worse, not to mention all those nice people living up in Canada. Dr. VanGilder was a great boss and made it possible for me and my Iowa colleagues to develop a human brain research program. There have been the expected ups and downs but fortunately NIH has stuck with us and this year extended support for years 20-25 of the program. I'm still chipping away at medical device inventions. Most don't pan out but some do. It's always fun to think about how successful each one will be until it isn't.

In 2001 I was appointed Chairman of the department here and that made it possible to set up some neat things. I have the fondest memories of the UW Atkinson Morley's rotation, so we set up an overseas training period for our Iowa trainees. They go to different places (e.g. Australia, France, Belgium, Japan, etc...) and seem to enjoy these experiences very much. My faculty colleagues are fantastic. Everyone under retirement age is NIH funded or has their K award applications currently under review. We don't have many neurosurgeons in Iowa (ranked 50th), and that's OK because we're never short on patients. Although my wife Delia was initially horrified when I said I wanted to take the job in Iowa, now she and our daughters love it. Our oldest, Caroline, is serving with the Peace Corps in West Africa. Susanna just finished her first year of medical school at the University of Chicago and Lily is starting her senior year at UVA.

Thinking back, I can't believe how lucky I was to match in the UW program. The faculty were all academic superstars and my fellow residents were exactly the kind of teammates you want to be "in the trenches" with. Boy was it fun!

New Faculty



#### Ali C. Ravanpay, M.D., PhD

Ali C. Ravanpay, M.D., PhD, who completed his residency here, has been appointed to the faculty as an Assistant Professor. He has outstanding intellectual and personal attributes that will enable him to become a successful academic neurosurgeon in support of our clinical care, research and training mission. Dr. Ravanpay attended UC Berkley, and graduated Magna Cum Laude in 1999 with dual degrees in Biochemistry and Near Eastern Studies. He then arrived at the UW where he completed his Ph.D. in Neurobiology and Behavior in 2007 and his M.D. in 2009. He distinguished himself in our Residency Program by an excellent work ethic and an eagerness to learn. In addition to superb clinical and interpersonal skills, Dr Ravanpay has great promise as a researcher. He has a substantial record of publication and significant pre and post-doctoral research experience at both UW and UC Berkeley. Dr. Ravanpay has a long list of honors and awards that underscore his accomplishments and future promise as an academician. Most recently, he received a Congress of Neurological Surgeons Tumor Fellowship. He also has an interest in resident education, and will join Dr. Gelfenbeyn at the VA, expanding our department presence there. He is dedicated to an academic neurosurgery career with a laboratory focus in the study of brain tumors.



Rajiv Saigal, M.D., PhD

Rajiv Saigal, M.D., PhD, Assistant Professor of Neurological Surgery, is fellowship-trained in spinal deformity and minimally invasive spine techniques. His clinical interests include complex spine surgery, spinal deformity, spinal tumors, minimally invasive techniques, spine trauma, and degenerative disease. Dr. Saigal completed neurosurgery residency at UC San Francisco (UCSF), where he trained with international leaders in spinal deformity and spine tumors. He then completed an orthopedic spine deformity fellowship at Scripps, San Diego Spine Foundation, in less invasive techniques for spinal deformity. He completed a second spine fellowship at the University of Miami, gaining further expertise in minimally invasive spine surgery, including endoscopic fusion.

Prior to UCSF, Dr. Saigal completed a PhD in medical engineering at the Harvard-MIT Division of Health Sciences and Technology and an MD at the Tufts University School of Medicine. He also has a B.Sc. in electrical engineering from Georgia Tech and a M.Sc. in biomedical engineering from Aalborg University in Denmark. His clinical research focuses on outcomes after spine surgery and his laboratory research focuses on use of biomaterials for treatment of spinal cord injury and traumatic brain injury. He is the recipient of numerous awards for research, teaching, and leadership, including the Boldrey Young Investigator Award, UCSF Neurosurgery Research and Rosegay awards, NSF Graduate Research Fellowship, and Whitaker Graduate Research Fellowship.

**Dr. Morton** will work under the supervision and mentorship of Professor of Neurological Surgery, Louis Kim, M.D. at Harborview Medical Center, with a focus on clinical training in Endovascular Surgery. Dr. Morton completed his B.Sc Cum Laude in Biological Sciences from the University of Notre Dame in 2005 and the attended Loyola University Stritch School of Medicine where he graduated Summa Cum Laude and Valedictorian June 2009. Dr. Morton entered the University of Washington Neurological Surgery Residency Program in 2009 and graduated in June, 2016.



**Ryan Morton, MD** 



**Dr. Martel** will work as a Spine Fellow at both UWMC and Harborview Medical Center. Dr. Martel received his medical school and neuroscience training in 2003-2009 at the University of Montreal in the joint M.D./M.Sc program (M.Sc. in Pharmacology). Following graduation in 2009 he then became a Resident in Neurological Surgery at McGill University finishing in 2015. Dr. Martel then did a one – year Scoliosis and Spine Fellowship at McGill before coming to UW.

Philip Martel, MD

**Dr. Marupudi** will focus on clinical involvement in the Pediatric Neurosurgery Program at Seattle Children's Hospital under the supervision of Jeffrey G. Ojemann, MD, Professor and Chief. Dr. Marupudi is a 2005 graduate of Johns Hopkins with dual BA honors degrees in Anthropology and Neuroscience, as well as an MS in Neuroscience. She did her MD at Penn State and her residency at Detroit Medical Center/Wayne State University. Dr. Marupudi has multiple peer reviewed publications and national and international presentations.



Neena Marapudi, MD



Anoop Patel, MD

**Dr. Patel** will work with Professor Laligam Sekhar, MD, with a focus on clinical training in Skull Base and Cerebrovascular Surgery. Dr. Patel completed his BS at Yale in 2005 and his MD at Harvard Medical School in 2009. He graduated from residency training at Massachusetts General Hospital/Harvard Medical School in June 2016. Dr. Patel has won many awards during his medical school and residency years, including being named on an NIH/NINDS R25 award in 2013 to study single cell RNA-seqences in glioblastoma.

**Dr. Shetty** will conduct outcomes research in the field of neurological surgery under the supervision and direction of Richard G. Ellenbogen, MD Professor and Chairman as well as Laligam Sekhar, MD Professor and Vice-Chairman. He attained his MBBS in 2006 from JSS Medical College in Mysore Karnataka, India, and finished a six-year Neurosurgery Residency in 2014 at NIMHANS, Bangalore He was then appointed to be Assistant Professor in the Department of Neurosurgery at KS Hegde Medical College in Mangalore, and Consultant at that same institution.



Rakshith Kumar Shetty AB, MD

## News from the UWMC

There have been productive changes recently at UWMC. UW Chief of Neurological Surgery Associate Professor **Dr. Manuel Ferreira** has transferred his now very large pituitary practice that is acquiring patients from all over the WWAMI Region to UW. The feature that has helped to make this clinic so attractive to patients as well as staff is its multispecialty nature. In addition to Dr. Ferriera, an expert in minimally invasive endoscopic trans-nasal surgery for pituitary tumors, the clinic also includes Dr. Kris Moe of ENT and Dr. Courtney Francis from the Department of Ophthalmology. All these faculty members are part of the team that evaluates patients with suspected tumors. The pituitary clinic is held on Tuesdays, and appointments can be made by calling 598-5637.



In addition, there has been an augmentation of the neurovascular presence at UWMC. Professor **Louis Kim**, Professor **Daniel Hallam**, and Assistant Professor **Michael Levitt** have moved part time to UWMC, and are available on Wednesdays to preform angiograms and interventions as well as to see patients in clinic.

Assistant Professor **Michelle Chowdhary** is also now seeing patients at UWMC on Thursdays from 8:30 to 4:00 pm.

## **Neurological Surgery Summer Student Program 2016**

The Neurological Surgery Summer Student Program successfully concluded its 9th year with graduation presentations on August 12th 2016 at the School of Medicine South Lake Union

To date the Department has hosted 100 students from 63 different schools, including 10 Rainier Scholars. The summer program benefits from substantial commitments from a wide range of Departmental research, clinical, and support staff. Since 2008, we have had 22 different summer speakers, 17 different faculty mentors, and 14 clinical faculty members who have hosted observations and shadowing opportunities. Our support includes donations from 39 different individuals, corporations and foundations. This year for the first time we received NIH funding, which allowed us to broaden the program to include 5 out-of-area students who could not have otherwise participated. This year 15 students, a record number, were placed in 11 labs, including one at The Allen Institute for Brain Science in the lab of Dr. Ed Lein – another Program first.

The program includes not only laboratory-based learning, but also social opportunities and practical elements such as sessions devoted to vocational issues and pathways to success in neuroscience careers. Students gain valuable experience in presenting their research in a public setting at graduation, and this year they shared their results with a large audience of family members, mentors, and peers. One student's summer work has already been accepted for a poster presentation at the 2016 Black Doctoral Network Conference Convention to be held in Atlanta, Georgia.



The students say it best:

-What I liked most about the program is the willingness of everyone to teach. I am interested in entering academic medicine, so seeing how the neurosurgeons teach us, their residents and medical students opened my eyes to the fascinating and intellectually stimulating career that I hope to pursue.

-I absolutely loved the observation opportunities; in fact, the surgery I observed this past Monday with Dr. Browd was so fascinating that it has completely inspired me to pursue neurosurgery. I think any experience that shapes your life in such a dramatic way is valuable, and something to be appreciated immensely.

-I loved the camaraderie that the program participants shared with each other and with the program administrators. Everyone got along very well and it helped to amplify our experience. The administrators truly cared about our well-being and were always available for to answer questions or provide us with resources.

-I loved getting experience working in a lab and I loved getting OR observation opportunities

-Of course, the experience in the lab was exceptional, and I look forward to continuing to help with my lab's work electronically even after I've left Seattle.

## Hydrocephalus Walk - August 6, 2016



an Hanak, MD &

Professor of Neurology and Neurological Surgery Michael A. Williams, MD, was the featured speaker at the 6th Annual Seattle Children's Hospital & Hydrocephalus Association WALK held at Warren G. Magnuson Park. Dr. Williams leads the University of Washington Medical Center program for Adult and Transitional Hydrocephalus and CSF Disorders. Neurological Surgery Resident Brian Hanak provided introductions and ran as part of the event. The event website contains valuable information about the Association whose mission is to promote a cure for hydrocephalus and improve the lives of those affected by the condition – see <u>http://hawalk.kintera.org/faf/home/default.asp?ievent=1156176</u> for further information.

Dr. Hanak is not only an outstanding sixth year resident but also a seasoned runner who won the race portion of the day's events. As a long-time runner himself, the Editor can attest to Dr. Hanak's excellent form having been forced to run with him by accident (but only very briefly).



Dr. Minku Chowdhary





Director, Neurosurgery Overlake Hospital

## New Puzzler

*Q*: This proposed inspiration for Indiana Jones, discovered a city that reportedly is the site of the oldest known product of this type, better known to us today as a product popularized by a partnership between a Bavarian and a Latvian immigrant. What is the old product?

## **Previous Puzzler**

**Question**: Instead of being described as a sharp tongue, this presidential wife had a sore tongue, and some peculiar habits. The missing link that will help you solve this puzzle is a famous *Cheers* bartender who couldn't quite jump, and a Baywatch beauty who was famous alongside Hoff (not Christof).

Answer: Mary Todd Lincoln, possibly had B12 deficiency, which Vegans, like Woody Harrelson and Pamela Anderson have to supplement to prevent.

 $\label{eq:http://www.nytimes.com/2016/07/09/health/mary-todd-lincoln-anemia-vitamin-b12.html?rref=collection%2Fsection \\ \underline{ncollection\%2Fscience\&action=click\&contentCollection=science\&region=stream\&module=stream\_unit&version \\ \underline{n=latest\&contentPlacement=3\&pgtype=sectionfront\&\_r=0 \\ \underline{n=latest\&contentPlacement=3\&pgtype=sectionfrontest\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype=sectionfrontest\&contentPlacement=3\&pgtype$ 

We remain eager to publish stories and photos about all aspects and activities of the Department. Please share your memories, ideas and suggestions for stories and news items that expand our common ground. Please contact us at these email addresses:

Editor-in-Chief, Richard G. Ellenbogen, MD, FACS rge@uw.edu

Editor, Richard Rapport, MD *rappor@uw.edu* 

Associate Editor, James Pridgeon, MHA pridgeon@uw.edu

Director, Jana Pettit, MBA *jmpettit@uw.edu* 

Publications Specialist, Christina Buckman *cbuckman@uw.edu* 

The Puzzler-in-Chief, Minku Chowdhary, MD

facebook.com/uwmednsi



twitter.com/UWNeurosurgery



youtube.com/UWNeurosurgery



neurosurgery.washington.edu

This publication does not constitute professional medical advice. Although it is intended to be accurate, neither the publisher nor any other party assumes liability for loss or damage from reliance on this material. If you have medical questions, consult your medical professional.