

## The Montlake Cut

A Publication of the Department of Neurological Surgery, UW Medicine Health Care System

July 2013



### *Chairman's Message... The View from Puget Sound ...*



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

In this issue we are pleased to introduce our three new Neurological Surgery Residents; Josh Abecassis, Chibawayne Ene, and Lynn McGrath, and provide an overview of our 2013 Resident and Fellows Graduation celebration. We profile Dr. David Pitkethly's medical volunteer work with the Foundation for International Education in Neurosurgery, and give an overview of a major new NIH funded Traumatic Brain Injury study starting in Latin America. We also bring you news of several staff members and Harborview associates including, Drs. Anthony Avellino and Franck Kalume, Theresa Braungardt, and Ms. Sasha Dombek. And for your edification and amusement we bring you a new puzzler created by Dr. Minku Chowdhary and introduce a new feature authored by Mary Gilbert, our Associate Editor and Layout Director – a Neurological Surgery specific crossword puzzle. Our best wishes to you for a wonderful summer.

Sincerely,

Richard G. Ellenbogen, MD, FACS

Professor & Chairman, Department of Neurological Surgery

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## 2013 Residency Match Results... Welcome R1s

The faculty, residents, and staff of the Department of Neurological Surgery are proud and happy to welcome three more beginning R-1 residents into the program. As has been true over the past ten years, this group represents the best there is of new medical school graduates, and all three of them promise to continue a tradition of producing excellent academic neurosurgeons dedicated to patient care, teaching and research. We are delighted that they will be a part of our department in Seattle.

**Isaac (Josh) Abecassis** was born in Toronto where his father was a medical student and then a surgery resident. Josh moved to Iowa City with his parents at age 3, and there his father finished a pancreas Fellowship. The senior Dr. Abecassis, now the head of the Feinberg School of Medicine organ transplantation service, started at Northwestern as his oldest son entered kindergarden. Both Josh and his mother attribute some of his interest in neurosurgery to the fact that she was a nurse on the TBI floor at the University of Toronto when she met his dad hanging around that unit as part of the transplant team, waiting.

Josh, three brothers and a sister all grew up in the Chicago suburbs. The summer before he started as an undergrad at Northwestern he worked in an islet cell transplant lab. As a side project in that lab over the next few summers, he landed some funding to begin investigating a novel MRI contrast agent as a way to label cells.

As a medical student, he became more interested in the tissue engineering research that he had collaborated on then the actual chemistry and synthesis of the agents from his prior lab experience. So after his M-1 year, he worked studying spinal cord injury. Although committed by then to a neurosurgical career, Josh went in search of a more intense research experience by applying for and winning a Howard Hughes Fellowship. He wound up working in Howard Fine's lab at NIH studying the ubiquitin proteasome system in tumor stem cells. Specifically, he investigated two tumor suppressors implicated in gliomagenesis (PTEN and p53) and began to document a novel E3 ligase for each (work currently still underway).

Out of all of this effort, Josh has co-authored a book chapter and has one published paper, two more peer-reviewed journal papers submitted, all as first author. He graduated from medical school *cum laude*.

In addition, Josh is a guitar player, and co-founded bands both as an undergraduate and in medical school. He's also a runner. We have enough residents who share these two interests now to found a new musical genre: people running while playing the [air] guitar. Should work in Seattle.



Josh Abecassis

## Welcome R1s (continued from page 2)

**Chibawayne (Chiba) Ene's** trip to us originated in Benin City, Nigeria. His education began under the remnant of colonial rule in Africa when he was 3-years-old. Because of intermittent strikes, their university



Chibawayne Ene

system was unreliable when he graduated from high school at 15. Through serious diligence and some luck, Chiba was accepted at Wayne State College in Nebraska, which must have been a shocking experience both for him and the Nebraskans. Then he had to figure out how to fund that education. He did, and graduated *magna cum laude* in 2004.

Although admission to an American medical school is difficult for any applicant, only about 1% of international students find a place. Wait-listed at several schools because of uncertainty over his ability to pay the tuition, Chiba instead headed for graduate school at Vanderbilt. Two weeks before he was to begin course work for a PhD, he was admitted at the Indiana University School of Medicine, and qualified for enough loan money to accept. In the spring of his first year as a med student, Chiba and Rachel, his girlfriend who was still finishing at Wayne State College, were married.

During his years in the Midwest (and maybe because he was in Indianapolis alone for a year while Rachel finished college), he developed the interest that some prairie people have in both running and in basketball.

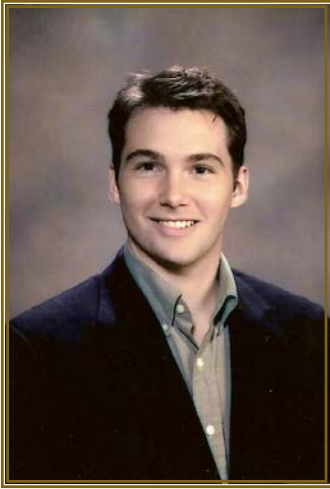
In 2007, Chiba also won a Howard Hughes Medical Institute 1 year Fellowship to do basic research on glioblastoma, but found that a single year was insufficient. So he applied for and was accepted to the PhD program at Cambridge, then somehow convinced Rachel to spend the next 4 years dividing time between England at Bethesda while he finished his PhD, work addressing the relationships between adult neural stem cells and GBM. He was attracted to Seattle because of his interest in this subject. He currently has three peer-reviewed publications, one as first author, and a fourth submitted.

Chibawayne and Rebecca have a 20-month-old son, Benjamin, who met his Nigerian grandparents for the first time when his father graduated from medical school in Indianapolis, a long, long way from Benin City.

For **Lynn McGrath**, his neurosurgical apprenticeship began in a hastily constructed field hospital in Haiti following the 2010 earthquake. His interest in trauma and global health encouraged him to join a University of Miami relief team offering help in the aftermath of the earthquake, where he saw the massive trauma to the country and it's people. Initially, he did "logistical" tasks - like organizing the morgue, attempting to set up a blood-sharing system, and arranged moving the worst, but still salvageable, cases to the US for treatment.

## *Welcome R1s (continued from page 3)*

However, even the rigor of rowing on the Dartmouth crew team (occasionally in ice storms) didn't prepare him for the spectacles a young neurosurgeon from Baylor ultimately introduced him to there. Lynn scrubbed with Ed Duckworth, the two of them figuring out how to do neurosurgical cases in a canvas tent with an often-flooded dirt floor and unreliable power.



Lynn McGrath

The child of a cardiac surgeon father and RN mother who met at the Brigham, Lynn grew up in Moorestown, N.J. As a competitive rower through high school, and after winning the US Rowing National Championships, he was recruited to row for Dartmouth, where he met his now fiancé, Anika Mirick. Both were athletes (she raced for the alpine ski team) and neuroscience majors planning on going to medical school. Although he now sees this relationship as a “natural,” Lynn admits it took him a while to convince her of that. At Dartmouth, Lynn received honors for his research into the algorithms the brain utilizes in conducting searches of specific memories using functional

MRI. He is interested in pursuing that research.

Following graduation, Lynn and Anika both found work in Washington, DC—she at the NIH and he with the Defense Department. At Dartmouth, he had worked with an engineering professor who had several projects with DOD, most related to humanitarian assistance and disaster relief. Lynn continued these efforts before applying to medical school. While working as an intern at a national security think tank he started a company (McGrath Defense Consulting) that won a DOD contract to support projects similar to some of his previous efforts.

Applying together, Lynn and Anika were members of the first class at the new medical school at the University of Central Florida. Through med school he continued to be involved in the TBI work previously done with the military, and conducted research creating blast waves and testing helmets under the conditions of a simulated improvised explosive device. Anika and Lynn became engaged the day after his Sub-I rotation at UW ended, and somehow couples-matched at UW. She will do an intern year in Chicago before joining the UW Radiology Department.

Lynn is an outdoorsman, so maybe someone will help him buy his first plaid shirt at REI. Then he'll look like a real Northwesterner when Louis Kim leads this summer's Hike to the Heaven.

***WELCOME NEW R'1s***

## Resident Graduation 2013

The annual June Resident and Fellows Graduation marks one of the Department's most anticipated events, and represents not only a joyous occasion but also reflects a critical part of our mission. Surrounded by family, friends, mentors and peers, Residents Juanita Celix, MD, Rohan Ramakrishna, MD and Tong Yang, MD formally completed their training program and embarked on their next steps towards fellowships and clinical practice.

In addition to Resident Graduation, six fellows completed their training and received certificates commemorating their accomplishments. They are:



Dr. Richard Ellenbogen (l), Dr. Tong Yang

Sergey Abeshaus, MD:	Pediatric Fellowship Program in Neurological Surgery
Huy Duong, MD:	Cerebrovascular & Skull Base Surgery Fellowship
Jorge Gonzalez-Cruz, MD:	Spine Surgery Fellowship Program
Renee Reynolds, MD:	Pediatric Fellowship Program in Neurological Surgery
Hai Sun, MD:	Epilepsy Surgery and Research Fellow
Farzana Tariq, MD:	Cerebrovascular & Skull Base Research Fellowship



Dr. Juanita Celix (l), Sir Henry Marsh

Every year as part of this celebration, the Department presents a special resident award in recognition of exemplary leadership. This year, for the first time, the "Courage to Lead" Award was shared by two residents - Michael Levitt, MD and Ryan Morton, MD. Congratulations to them and all of our graduates. They are the best possible representatives of our mission to provide the highest level of compassionate, surgical care, train the next generation of neurological surgeons, and improve public health by fostering collaborative, innovative research that maintains, restores or repairs neural function.



Dr. Rohan Ramakrishna (r)

## Dave Pitkethly Helps Bring Neurological Surgery to Ethiopia

The Foundation for International Education in Neurosurgery (FIENS) [www.fiens.org](http://www.fiens.org) offers volunteer opportunities throughout the world, and arranges contacts and accommodations in 20-plus countries, including Addis Ababa in Ethiopia. We organized donations from several large medical supply



David Pitkethly, M.D.  
'Tikur Anbessa' translates to 'Black Lion' in Amharic

companies, tailored to the specific needs of the Black Lion Hospital. Transporting this stuff is always the biggest hurdle. Items really can't be mailed because cost is prohibitive and theft rampant. So, we did the same thing we did when we went to Kenya: we bought very large suitcases at Goodwill, packed them to the max and then left them behind at the end of our stay. Our biggest concern was customs, and we had lots of supplies to worry about (almost \$80,000 worth), including boxes of cranial reconstruction tools and materials, bone wax, and gigli saws. Gigli saws are dinosaurs in American hospitals, but precious and essential in countries that lack funding for power equipment.

One of the neurosurgery residents met us at the airport (they have a moderately new and ambitious program with 21 residents) and delivered us to our apartment, which was basic but manageable. Next we met Dr. Mer-sha, head of the neurosurgery department at the Black Lion Hospital. The residents were sharp and well-read. They knew the correct answer to almost every question posed to them, just like our own residents.

Here was my schedule: one clinic day a week, and teaching rounds that afternoon. Three days a week in the OR. 8:00 AM rounds with the medical residents who discussed their new admissions or those patients who were in the ICU. Then there was radiology conference, neuroscience conference, or presentations.

The government is working hard to create more doctors. It sponsors free education to those who qualify and accepts 300 new medical students every year. In return, the students are obligated to spend 2-3 years working in a remote part of Ethiopia or 4-5 years in Addis. At the completion of this time, the government will hand them their M.D. diploma. Ethiopia has 90 million inhabitants, but until 6 years ago there were only 2 neurosurgeons in the entire country. *(Continued on next page 'Ethiopia')*



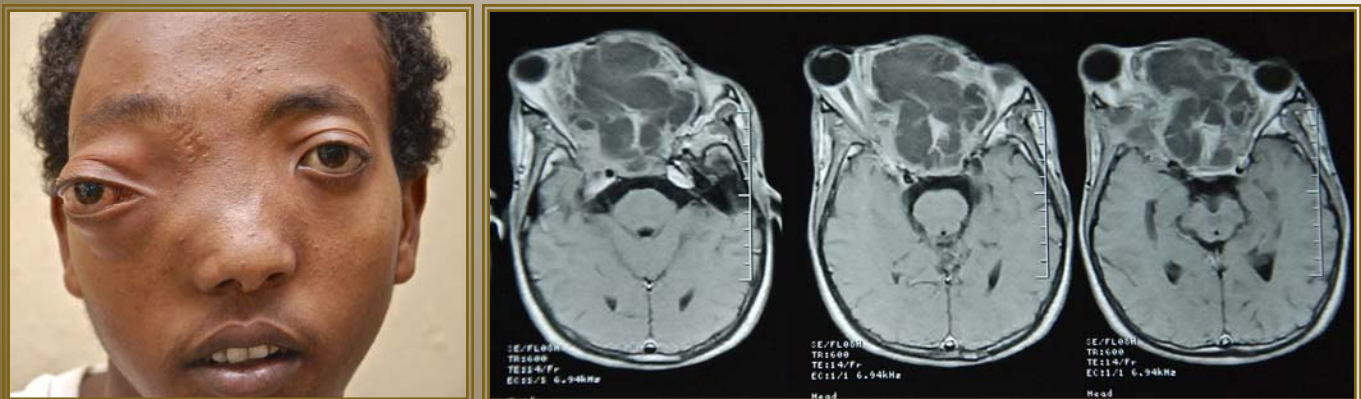
Waiting for clinic.

## *Ethiopia* (continued from previous page)

One Ethiopian physician told me that doctors in the government hospitals earn about 2500 birr (\$135) monthly, while doctors at the Korean private hospital earn 8000-10000 birr (\$432 - \$540) to start. Once they have completed their specialty training many Ethiopian doctors are eager to leave the country, as is true all over the developing world.

Ethiopia is a poor country, ranking 169 out of 177 countries measured on the United Nations Development Index. Unemployment in the urban areas is over 20%. The latest figures available (2008), show that Ethiopia spends just \$16 per person per year for health care, while Americans spend \$8233 per person yearly. Hydrocephalus, scoliosis and juvenile heart conditions (rheumatic fever, congenital heart /valve disease) are often not diagnosed until the disease is advanced. A folic acid deficient diet is known to cause neural tube defects that are often are life-threatening or debilitating. Crippled adults and children with maimed extremities are seen standing, lying or begging on every street, often the result of birth defects, car accidents, or just walking on any sidewalk and falling into a hole 10 feet deep lacking barriers.

On a positive note, the Black Lion is installing a new Tesla 1.5 MR imaging machine that should be free for its patients (current cost of CT in private hospital \$40, more than most can afford). It is also in the midst of completely remodeling an old ward and creating a new and modern 20 bed ICU with almost as many ventilators. They expect it to be completed by the end of 2013. This will allow the Black Lion surgeons to do aneurysms, skull base and instrumented spine surgeries that must now be sent out.



Patient with an ossified fibroma (or maybe fibrous dysplasia of bone) and mucocele waiting for surgery

You can read more about this trip on Dave and his wife Mara's blog at <http://dtpit10.blogspot.com>.



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## Theresa Braungardt, MN, RN

Theresa started at HMC as a staff nurse in 1991 in a then 5 bed Medical ICU, and was the assistant manager there until 2000. The NICU at that time was only 6 beds, and in the summer, neurosurgery patients



Theresa Braungardt, MN, RN  
VP, Nursing Acute Services  
Valley Medical Center

were everywhere, including the MICU. She says she worked with some of the greatest residents and attendings ever--Tony Avellino, Sean Grady, Alex West, Paul Santiago. But they weren't around much as the program was growing, and the nurses managed the patients while the residents were in the ED and OR. In 2007, she took over as the manager of the NCCU, which was then growing fast.

Theresa says, "In 2004 Dr. Ellenbogen came and life went from good to unbelievably great--imagine a neurosurgeon that actually talked to the nurse manager, and asked for my opinion. He was the best morale boost the unit had seen in many years. He actually knew the nurses names, and he cared about making things better. My outlook on managing the unit improved so much I took it over for good in 2007 when he decided it was going to be 30 beds."

Theresa hired 80 nurses in 2007-2008 and opened 22 of the 30 beds. They were joined by another 20 nurses to open the remaining 8 beds. She had a wonderful team of assistant managers: Larry Healey, Celeste Horton, Jessica Nitka, Nate Rozeboom, Cesar Castillo, Kelly Tirone, Dan Carratturo.

As the manager of the NICU until Feb. 2013, Theresa supervised these new nurses as they all grew and blossomed into a wonderful neurological surgery critical care unit. "The expansion of the NICU is the highlight of my career at HMC," Theresa said.

At Valley, she has been named Vice President of Nursing Acute Services and has responsibility for all of the inpatient medical/surgical units (neuro, cardiac/tele, respiratory/renal, general medicine, general surgery and the joint/spine center), as well as the Critical care unit, respiratory therapy, the sleep center, cardiology studies, and the staffing office and house supervisors.



### Puzzler

While someone else got the Nobel Prize, this famous neurosurgeon laid the groundwork for the award with his experiments to control epilepsy with commissurotomy. He died before he could write about the intralaminar nucleus of the thalamus gland.

*See page 8 for answer to April 2013 Puzzler.*



Dr. Minku Chowdhary  
Chief, Neurosurgery  
Overlake Hospital



## *New NIH Funded Latin America TBI Research Study Begins*

In 2012, faculty from the UW Departments of Neurological Surgery and Rehabilitation Medicine working in collaboration with 45 researchers and support staff in five Latin American countries concluded a landmark study of severe Traumatic Brain Injury (TBI) care comparing patient outcomes between those managed with and without Intracranial Pressure Monitoring (ICP) vs a standard care protocol. The results were published in the New England Journal of Medicine in December, 2012 - <http://globalneurotrauma.org/RCT.html>

Now the UW team is taking the next steps and have received a five year \$3M grant to continue research started with their Randomized Control Trial of ICP monitoring in Latin America. Neurological Surgery Professor Randy Chesnut, MD, is Principal Investigator of this new project entitled *Managing severe TBI without ICP monitoring - guideline development and testing*: or, the CBG Project.



*Global Neurotrauma Research Group at All Team Meeting in Bolivia*

TBI is a major cause of mortality and disability, both in High Income Countries (HIC) and Low and Middle Income Countries (LMIC). A recent WHO study projected trauma would be a leading cause of death by the year 2020. TBI accounts for the majority of all trauma-related fatalities. Injuries account for more death and disability than AIDS, TB and Malaria combined. Unfortunately, if present trends continue, injury-related TBI will continue to grow in response to increasing population concentration in urban environments.

Management of intracranial hypertension (ICH) in patients with severe TBI is crucial to survival and optimal recovery. Evidence-based guidelines for care usually recommend use of ICP monitors to assess ICH and inform physicians when and how to intervene. Unfortunately, most of the world lacks ICP monitoring technology. There are no guidelines and no literature on how to treat severe TBI without use of ICP monitors.

*Continued on next page 'TBI Research'*

## **TBI Research** *Continued from previous page*

The objective of the newly funded CBG project is to create these guidelines by working with a team of clinicians that practice in austere environments in Latin America and routinely make patient care decisions based either on a treatment protocol, their clinical experience, or both. The purpose is to develop a consensus for the guidelines. This design will allow a comparison of outcome between centers that do and do not use a protocol to manage severe TBI. It will also allow within-center comparisons of outcome when a state-of-the-art consensus based protocol is implemented and when changing from a protocol of convenience to one that has been developed using rigorous, consensus-based methodology.



*ICU—Hospital Japonese, San Juan de Dios, Bolivia*

This research, will create and test treatment guidelines that can be used globally to improve outcomes for TBI patients and validate a new, systematic process to accomplish consensus. An additional benefit comes with the NIH requirement to develop research capacity in Low and Middle Income Countries. As part of this study we will train personnel in centers new to research in how to conduct high-quality scientific studies, will train the personnel, and initiate new efforts.

### **April 2013 Puzzler Answer:**

*Mahatma Gandhi coined this phrase in the year that another man, who has an asteroid named after him, won a very famous award named after another man, who had one of his most famous inventions improved, but that improvement resulted in the loss of 120 lives and a major French scandal.*

**Answer:** Mahatma Gandhi coined the phrase “Satyagraha” (insistence on truth) in 1906.

Also in 1906 the Nobel Prize in Physiology and Medicine was awarded to Ramon Cajal.

The asteroid “117413 Ramonycajal” was discovered January 8, 2005 by Juan Lacruz and named after Cajal.

The French ship, Iena, suffered a series of internal explosions because of Powder B (Nobel invented gelignite and ballistite which were improvements of Powder B), sinking, killing 120 and causing a major French Scandal called the "Gunpowder Scandal."

**Puzzler Winner:** Dr. David Pitkethly



## *EMPIRE Award*

Anthony Avellino, MD, MBA, Professor of Neurological Surgery and Director of the UW Neurosciences Institute was honored by the Extraordinary Men Pursuing Intellectual Readiness through Education (EMPIRE) at their 3rd Annual Spring Awards Recognition Ceremony at Central Washington University.

The Extraordinary Men Pursuing Intellectual Readiness through Education is an organization based on community development, mentorship, and scholarship. The purpose of the special ceremony was to recognize and honor the efforts of the EMPIRE members and officers, CWU faculty and staff, CWU Alumni, and community members who continue to positively impact the local and global community.

Dr. Avellino received the “Social Impact Award,” for his success as “a surgeon and philanthropist who has dedicated his life to public service, student development”.



L-R: CWU President James L. Gaudino, Andre Dickerson, President of EMPIRE, and Anthony M. Avellino, MD, MBA

### *Staff Spotlight...*

*Sasha Dombek* began working at the University of Washington in 1997 as an office assistant temp at the Law School Student Services. She joined the Department of Neurological Surgery in December 1997 as an office assistant temp and was hired as a secretary in May 1999. She is currently working at Harborview Medical Center and the UW Medical Center. “This has been one of the most amazing journeys of my life and I really appreciate all the people that have helped me along the way.”

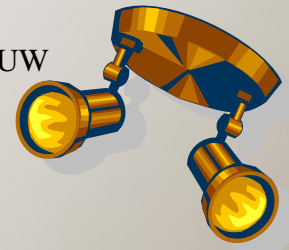
Sasha was born in southern Thailand into a large family of three brothers and four sisters. “Family has always been an important part of my life and always will be as I continue on my journey through life.”

Sasha enjoys spending time with her husband and daughter walking, bicycle riding, hiking and camping. She is a member of the Puget Sound Mycological Society and enjoys cooking dishes containing wild mushrooms. In her spare time she volunteers at her church helping seniors.



## Faculty Spotlight...

*Dr. Franck Kalume* is a neuroscientist and Assistant Professor in the UW Departments of Neurological Surgery and Pharmacology and a Principal Investigator with the Center for Integrative Brain Research (CIBR) at the Seattle Children's Research Institute.



Dr. Kalume earned his undergraduate degree in Biology at LeMoyne-Owen College and his PhD in Neuroscience at the University of Tennessee Health Science Center in Memphis. During his post doc, he trained in the laboratory of Professor William Catterall to study the structure and function of ion channels



*Dr. Franck Kalume*

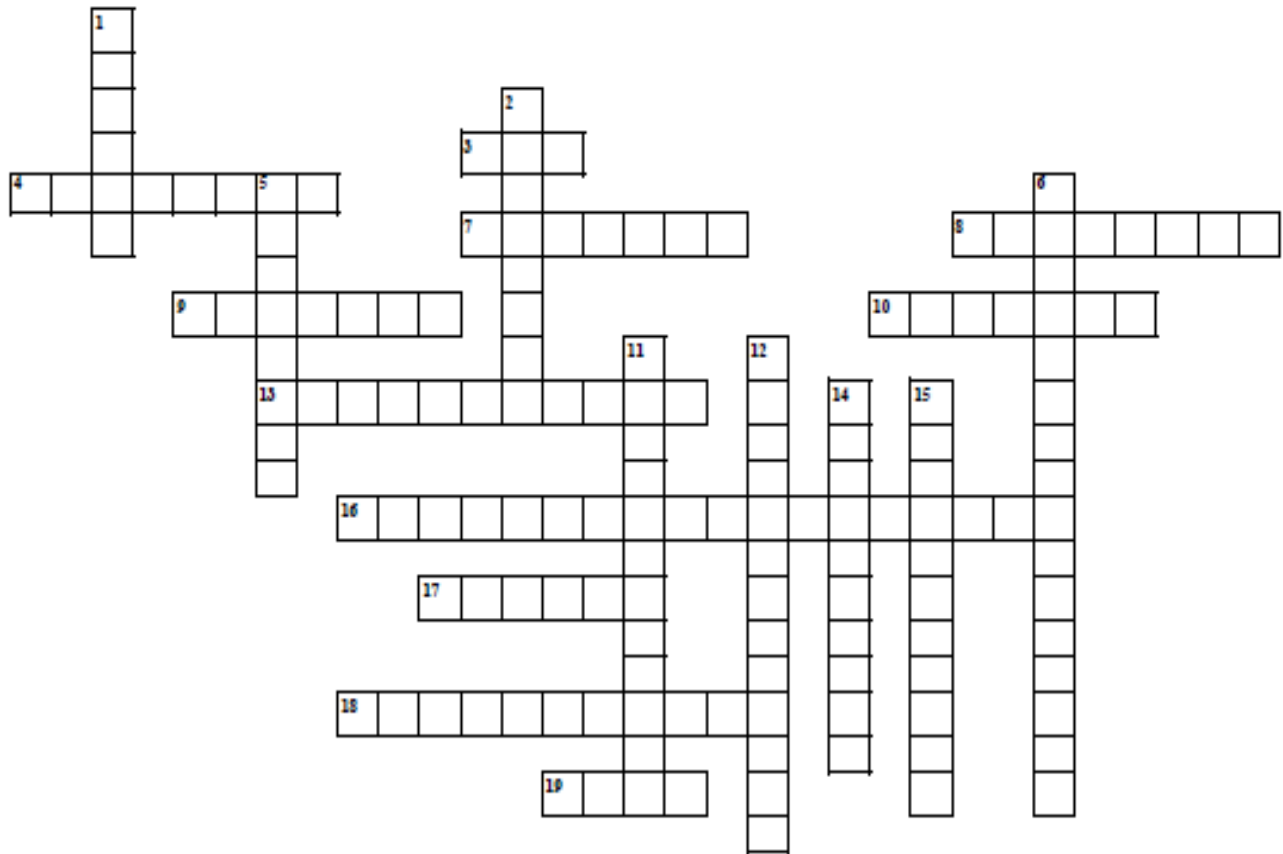
and their roles in normal and diseased states. In 2009, Dr. Kalume was appointed Acting instructor in the Department of Pharmacology at the University of Washington where he continued to collaborate with the Catterall lab. He joined the faculty of the UW Department of Neurological Surgery and the CIBR at Seattle Children's Research Institute in December of 2012. At the same time, he was appointed Adjunct Assistant Professor in the UW Department of Pharmacology. His research interests aim to understanding the pathophysiological bases of epilepsies, and find new drugs and therapeutic approaches to these disorders. His current research projects focus on two sets of studies:

1) Investigations of the cellular and molecular mechanisms underlying sleep disturbance, sudden unexpected death, and anti-seizure properties of ketogenic diet in Dravet syndrome. His lab uses innovative approaches combining behavioral assay, patch-clamp electrophysiology, pharmacology, electroencephalography, electrocardiography, electromyography, immunohistochemistry, biochemistry, mouse genetic techniques, and optogenetics to identify changes in  $Na_v$  channel function as well as changes in neuronal and network excitability that cause epilepsy and associated conditions in a mouse model of Dravet syndrome.

2) Investigations of the roles of sodium channels in the etiology of pediatric epilepsies. Studies have demonstrated alterations of sodium channel expression and function in a rodent model of temporal lobe epilepsy. His lab will closely collaborate with Drs Jan Ramirez, Jeff Ojemann, and Edward Novotny of Seattle Children's Hospital and Research Institute to characterize the molecular and electrophysiological properties that underlie pediatric epilepsies using resected human epileptic tissues.

Dr. Kalume's lab is funded by the National Institute of Health. Dr. Kalume is very excited to pursue his career in the UW Department of Neurological Surgery "as it offers a research environment with unique integration of clinical and research programs."

## UW MEDICINE DEPARTMENT OF NEUROLOGICAL SURGERY



### ACROSS

3. Abnormal collection of blood vessels
4. Cause of some seizures
7. Dr. Daniel Silbergeld research focus
8. ISIS\_\_\_\_\_ Skills Lab
9. Director of Seattle Children’s CIBR
10. Leader of Latin American TBI studies
13. UW Neurological Surgery Chairman (current)
16. Structural defect in the cerebellum (2 words)
17. Current President of the WSANA
18. Type of skull base tumor
19. Medical school attended by  
Dr. Arthur A. Ward, Jr

### DOWN

1. “Circle of \_\_\_\_\_”
2. Director of UW Neurosciences Institute
5. Institute for \_\_\_\_\_ and Regenerative  
Medicine (2 words)
6. Early fusion of skull sutures (in baby)
11. \_\_\_\_\_ pressure monitor
12. Also referred to as ‘water on the brain’
14. Radiosurgical (2 words)
15. Department Newsletter (2 words)

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:

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