



Fusion

The Bi-Annual Newsletter of the Department of Neurological Surgery

UCDAVIS
HEALTH

Department of
Neurological Surgery

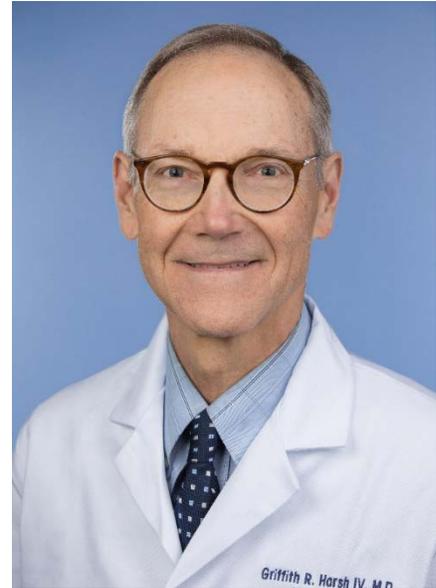
Issue 2: December 2019

Message from the Chair

Welcome to the second installment of the Department's newsletter, Fusion. Inside, compiled by Kally Turner, you'll find department and staffing updates, faculty publications and grant activities, resident news and important department information.

The department has had an exciting and rewarding second half of 2019. Over the past six months, we have extended our expansion of the faculty, residency, clinical activities, and academic efforts and continued to re-engineer our staff functions, led by Stacy Miller.

Our faculty recruitments in spine and critical care are reaching fruition and that in cerebrovascular surgery has identified three top candidates. We have had the pleasure of hosting candidates for interviews and Grand Rounds presentations. I greatly appreciate the efforts of Jennifer Aten and Joe Valadez in organizing recruitments and all who have made time in your busy schedules to serve on search committees, attend the candidate ad hoc lectures and participate in the selection process. Nothing could be more important than choosing skilled and compatible future partners.



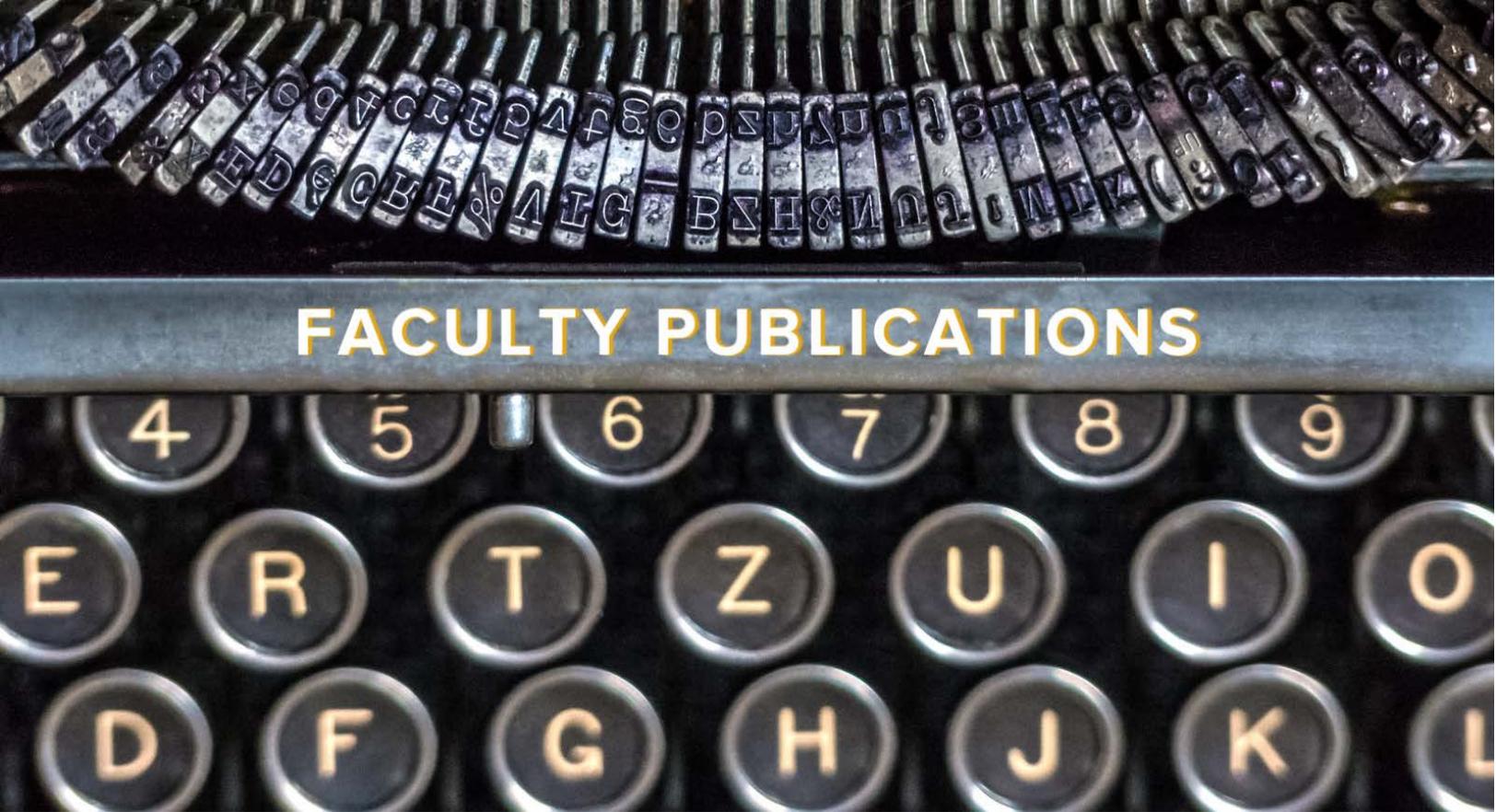
*Griffith R. Harsh IV, M.D., M.B.A.
Professor and Chair*

The residency program continues to thrive and expand. The quality of our teaching, led by Kia Shahlaie, is outstanding. The residents are grateful and rate our faculty very highly on UC Davis and ACGME surveys. These good reviews and our full and varied case flow at UC Davis and Kaiser resulted in our being allowed to increase our resident complement to a full 14, two residents a year. I thank each of our faculty and nurses for your commitment and dedication of time and effort to training, education, and mentoring. Particular kudos to those involved in special teaching exercises such as the Skull Base Dissection Course, the Hydrocephalus Shunt Training and the Stryker Mobile Cadaver Lab.

The clinical service remains very busy. The morning rounds of my most recent call day covered 61 patients. Successful management of such a large service is a tribute to the skill and teamwork of our residents and APPs. As with the residency, our complement of nurse practitioners has expanded to a full complement of 11. Christine Picinich's new 1:1 model, under which APP's are paired with a faculty member and will see patients both in clinic and in the hospital, has initially met with positive reviews. This is an exciting opportunity to shape our patient centered practice to deliver outstanding care.

We are also building collaborative clinical and research networks. The Neuroscience Strategy Steering Committee has been formed to facilitate multidisciplinary information exchange, program planning and partnerships for opportunities such as, neuroengineering, brain trauma and sports medicine. Our clinical research program remains robust, particularly Kee Kim's spine outcomes studies managed by Nancy Rudisill and her outstanding team. In the basic research realm, we are moving forward with a Target of Excellence recruitment of a senior neuroscientist to replace Rob Berman in leading our laboratory effort. The target is an authority regarding brain networks mediating the sleep-wake cycle and consciousness, expertise that will reinforce our current focus on neuromodulation and inform some of our clinical investigations in traumatic brain injury. One project related to the former, led by Ignacio Saez, just achieved the impressive feat, previously accomplished at only one other place in the world, of simultaneous brain monitoring in two individuals interacting in conversation and game playing. All of these projects will likely be enhanced by new imaging capability. In September, the Explorer, the total body PET scanner developed at UC Davis, debuted. With approximately 40 times the capacity of current scanners, it has remarkable potential both for basic research (small animal PET) and clinical research and practice (high resolution, rapid whole-body PET).

As 2019 draws to a close, I thank all faculty, residents, nurses, and staff for your contributions to the Department and its mission. I appreciate the collaboration and teamwork that daily characterizes our department as we continue to build a culture of excellence. I look forward to more of the same in the new year.



FACULTY PUBLICATIONS

Dr. Orin Bloch is the corresponding author in "[Tumor-induced peripheral immunosuppression promotes brain metastasis in patients with non-small cell lung cancer](#)," published in Cancer Immunology, Immunotherapy. Epub ahead of print, September 2019. This article examines "peripheral blood immune phenotype in NSCLC patients with and without brain metastasis," and the potential role of immunosuppressive factors in "peripheral blood" as targets for intervention.

Dr. Michael S. B. Edwards is one of multiple authors in, "[Arterial spin labeling perfusion changes of the frontal lobes in children with posterior fossa syndrome](#)," published in the Journal of Neurosurgery: Pediatrics, 2019 Aug 2:1-7 (epub ahead of print). **Dr. Edwards** is also one of multiple authors of "[Posterior fossa syndrome and increased mean diffusivity in the olivary bodies](#)," in the Journal of Neurosurgery: Pediatrics, 2019 Jul 26:1-6 (epub ahead of print) in which the authors "investigated whether immediate postoperative diffusion tensor imaging of the inferior olivary nuclei can serve as an early imaging marker". He and several of his former Stanford colleagues recently published, "[Diffusion tensor magnetic resonance imaging of the optic nerves in pediatric hydrocephalus](#)," in the December issue of Neurosurgical Focus.

Dr. Griff Harsh is co-author of [Brain Metastases](#) published in Nature Reviews Disease Primers in July of 2019. This article is a comprehensive review of the molecular pathology, demographics, imaging and clinical management of metastatic brain tumors. It received the "Highly Cited Paper" designation by Web of Science. It has been viewed more than 14,000 times and is one of the top 100 most frequently cited scientific publications of the year in medical scientific literature.

Dr. Kee Kim is the corresponding author in "[Risk factors of secondary lumbar discectomy of a herniated lumbar disc after lumbar discectomy](#)," published in the Journal of the Korean Neurosurgical Society," 62(5): 586-593, which analyzed results from 160 patients after open microscopic lumbar discectomy. Dr. Kim also published "[Stem and progenitor cell microenvironment for bone regeneration and repair](#)," published in Regenerative Medicine, 14(7): 693-702. This study analyzed the data from approximately 700 clinical trials using mesenchymal stem cells and calls attention to the need for careful consideration of the "microenvironment," for optimal bone regeneration. Dr. Kim is one of multiple authors in, "[Hyper-crosslinked carbohydrate polymer for repair of critical-sized bone defects](#)," published in BioResearch Open

Access, 8(1): 111-120. This study reviews the current bone graft substitutes and demonstrates some promise for a new polysaccharide-based technology for bone regeneration.

Dr. Fady Girgis and Dr. Tiffany Green, a neurology resident, recently published, "[Trigeminal neuralgia: medical management and surgical options](#)," in the August issue of the Journal of Pain & Palliative Care Pharmacotherapy, as part of the "Patient Education and Self Advocacy: Questions and Responses on Pain Management" series. The link also includes an audio version.

Drs. Fady Girgis and **James Boggan** are co-authors along with UCD colleagues in Biomedical Engineering, Radiology and Pathology and Laboratory Medicine, in "[Real time augmented reality for delineation of surgical margins during neurosurgery using autofluorescence lifetime contrast](#)," which looks at the functionality and safety of a "fluorescence lifetime imaging instrument that integrates with surgical microscopes" providing "real-time intraoperative augmentation of the surgical field of view with fluorescent derived parameters encoding diagnostic information." Published in the Journal of Biophotonics, 2019 Jul 15:e201900108 (epub ahead of print).

Dr. Ryan Martin is one of several authors of, "[A two-level large-volume epidural blood patch protocol for spontaneous intracranial hypotension: retrospective analysis of risk and benefit](#)." Published in the Sept 2019 issue of Regional Anesthesia and Pain Medicine (epub ahead of print) this study analyzed the data on ninety-four patients and emphasizes the importance of monitoring neurological symptoms throughout the procedure given the variability of blood patch volumes.

Dr. Ben Waldau and Dr. Frank Sharp (UCDH Neurology) along with colleagues from UCSF, University of Maryland and the University of Alberta published, "[mRNA expression profiles from whole blood associated with vasospasm in patients with subarachnoid hemorrhage](#)," in the October 2019 issue of Neurocritical Care. "This is the first study to demonstrate that mRNA expression in whole blood distinguishes SAH patients with vasospasm from those without vasospasm and supports a role of coagulation and immune systems in vasospasm." Dr. Waldau and Dr. Harjot Thind published the case report, "[De novo blister aneurysm formation in 16 days associated with mucorales fungi](#)," in August issue of Cureus 11 (8): e5301.

Dr. Lara Zimmermann is one of multiple authors on "[Clinical metagenomic sequencing for diagnosis of meningitis and encephalitis](#)," published in the June edition of the New England Journal of Medicine. This multicenter prospective study showed that metagenomic sequencing of CSF from, "patients with meningitis or encephalitis improved diagnosis of neurologic infections and provided actionable information in some cases." N Engl J Med 380: 24, p. 2327-2340. Dr. Zimmermann is also a member of the ENLS Writing Group that collaborated on "[Emergency neurological life support: fourth edition, updates in the approach to early management of neurological Surgery](#)," which is published (Epub ahead of print) in the September issue of Neurocritical Care.

Dr. Marike Zwienenberg is the senior author of, "[The molecular oncology of bilateral high-grade thalamic astrocytomas in children](#)," published in Child's Nervous System, epub ahead of print, September 2019. This article features all UC Davis authors, **Dr. Amir Goodarzi** is first author, and it includes Drs. Mirna Lechpammer, Reuben Anthony and Nicholas Garza. This case report follows the diagnosis and treatment of a 12-year-old boy with a very rare and challenging case of bilateral thalamic astrocytoma.





GRANTS

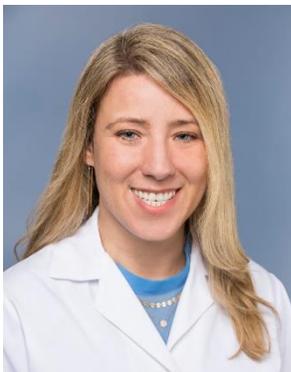
Congratulations to the following faculty members for their successful efforts to secure funding for the following projects:

Dr. Ryan Martin has received funding for his proposal, “**Imaging of glial activation and risk for post-traumatic epilepsy.**” This Department of Defense, Congressionally Directed Medical Research Program grant which will run from 7/1/19 to 6/30/22, will examine the role of neuroinflammation in the development of epilepsy in survivors of traumatic brain injury, which can occur in “approximately 20% patients with severe TBI.”

Dr. Lara Zimmermann, local principal investigator of “**EpiBioS4Rx**” has been awarded additional funding for expanding her patient database. This study collects and disseminates among several institutions serial blood biomarker samples at 30, 90, & 180 day intervals, EEG and MRI data, neurocognitive studies, a seizure log, neuropsychiatric histories and PTSD testing .

Dr. Kee Kim has received an extension on his study titled, “**Prospective, randomized, multi-center, open-label pilot study of Infuse bone graft with Mastergraft Strip and posterior fixation for posterolateral fusion treatment of multi-level degenerative lumbosacral spinal conditions.**”

RECOGNITIONS



Lara Zimmermann, M.D., has been selected as the UC Davis Health NeuroNEXT Fellow for academic year 2020-21. Funded by NIH NINDS, NeuroNEXT (Network for Excellence in Neuroscience Clinical Trials) “was created to conduct studies of treatments for neurological diseases through partnerships with academia, private foundations, and industry.” As the NeuroNEXT fellow, Dr. Zimmermann will take courses in clinical trial designs and statistics through the CTSC and receive support for additional research time.

Congratulations! Dr. Zimmermann has also been selected to participate in the Early Career Leadership Development Program as a part of the Vice Chancellor Council of Chairs Diverse Leadership Mentee Program.





Julius Ebinu, M.D., has been selected to participate in the Early Career Leadership Development Program as a part of the Vice Chancellor Council of Chairs Diverse Leadership Mentee Program. He will attend ten sessions covering a variety of topics including identifying core values, participant strengths emotional intelligence, negotiation and conflict management and expanding leadership style repertory.



Professor Emeritus **Robert Berman, Ph.D.**, was elected as a Fellow for the American Association for the Advancement of Science, (AAAS) for his numerous research contributions to the understanding of brain injury, neurodevelopmental disorders and neurotoxicology. Dr. Berman's research focuses on brain disorders such as autism, Fragile X associated disorders and fetal alcohol syndrome. He is one of ten UC Davis faculty members elected as AAAS Fellows.



Marike Zwienenberg, M.D., attended the CURE International training program in Uganda in July. CURE Uganda is a "global leader in a minimally invasive, shuntless treatment for hydrocephalus (endoscopic third ventriculostomy and choroid plexus cauterization). Dr. Zwienenberg's recent publication "Selection of children with ultra-severe traumatic brain injury for neurosurgical intervention," was 1 of 14 "Most Noteworthy" papers selected for the JNS Editor's Choice Awards and is available for CME credit. Also, we congratulate Dr. Zwienenberg on the successful completion of the 10th fetal surgery case!



Dr. Kee D. Kim recently spent a week as a Visiting Professor at the Neurosurgery Department of Hanyang University Medical Center in Seoul, Korea and presented his UC Davis neurospinal research. On November 2nd Dr. Kim presented "Sinuvertebral Nerve and Pain" as an invited guest speaker at the 9th Annual Neuro Spine Forum held in Jeju, Korea.

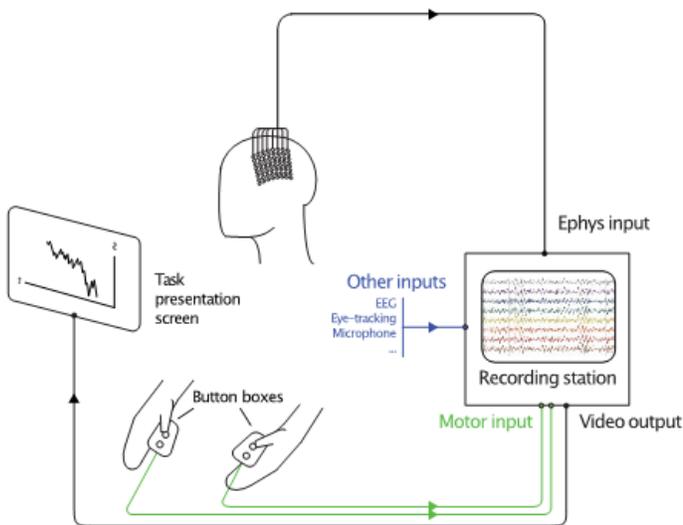


Advancing Research

Congratulations to **Dr. Ignacio Saez** on the successful completion of a dual-sEEG recording experiment in October. This experiment, conducted in collaboration with researchers at UC Berkeley and the Donders Institute for Brain, Cognition and Behavior, was part of a study which seeks to decipher the neural basis of social communication. Taking advantage of the opportunities provided by surgical interventions that require implantation of cortical surface electrodes, Dr. Saez's team carried out electrophysiological recordings of high quality to understand the basis of human thought.

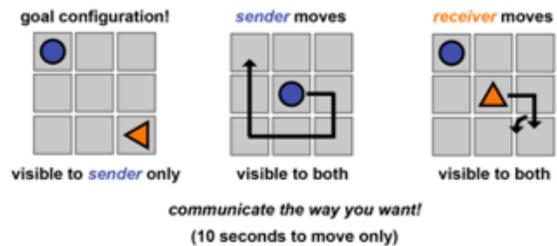
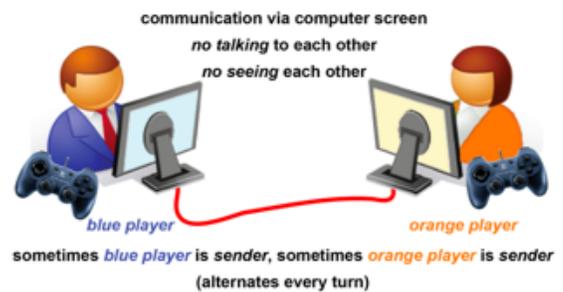
EMU sEEG recording

Integrated electrophysiological and behavioral recording



It is hoped that these studies will yield insight into how human brains perform the unique feat of achieving mutual understanding. Dr. Saez is grateful to the patients and the research and clinical personnel who helped conduct these experiments.

Studying the neural basis of social communication



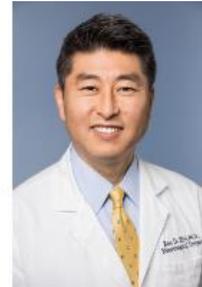
Recently, leveraging the rare occurrence of two patients simultaneously having cortical electrode arrays in place in the epilepsy medical unit, Saez's team recorded from both patients during a communication task in which they had to cooperate towards a common goal. The patients were in two separate rooms and only able to communicate in writing using the computer screen. UC Davis is the second clinical center in the world to conduct such an

In the news

In August, **Dr. Kee Kim** was interviewed by Laura Dyrda of Becker's Spine Review on "[How the spine field could change in the next few years.](#)" He was interviewed again in November by Alan Condon on "[The trends that will have the biggest impact on spine in 2020.](#)"

BECKER'S
SPINE REVIEW

Q&A with Dr. Kee Kim
Professor and Co-Director
UC Davis Spine Center



Also, in August, Mark Slaughter, CEO and Founder of On-Belay Medical wrote an article, "[The importance of medical missions and giving, one person to another,](#)" published on Linked In. It features the organization's most recent medical mission to Uganda and highlights **Dr. Julius Ebinu's** surgical contributions and his experience returning to Uganda, his place of birth. He will return in November for another mission. Both articles are currently featured on our website.



Dr. Marike Zwienenberg and the UC Davis Children's Hospital were highlighted on ABC10.com for treating Gianna Arredondo, an 11-year-old girl, suffering from multiple cavernous malformations of the brain. These rare lesions are often challenging to treat because of their tendency to enlarge, their propensity to bleed and their common location deep in the brain. Read the story [here](#).



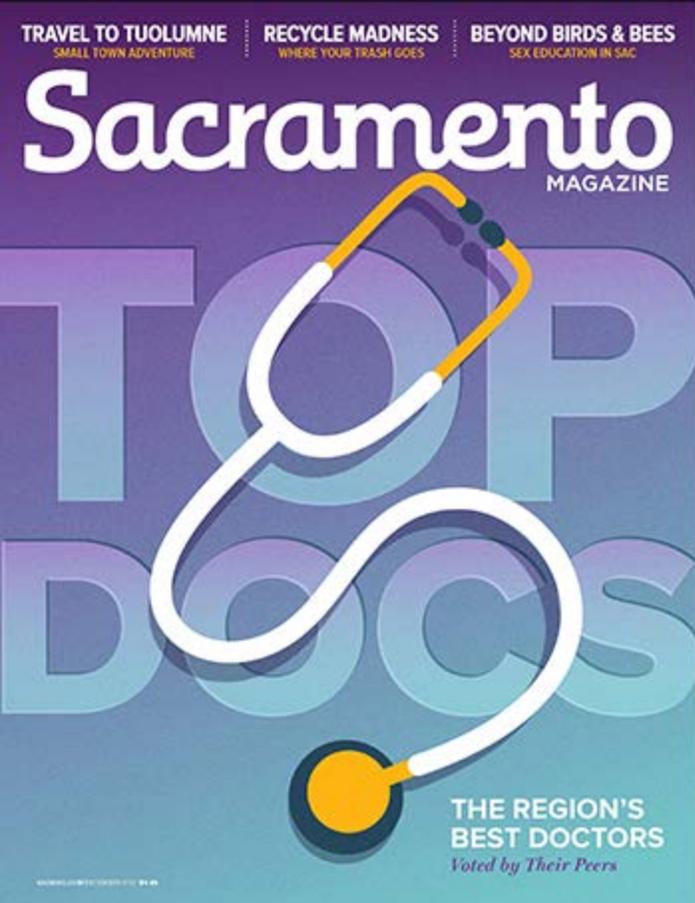
Gianna and her brother



The Arredondo Family

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Congratulations!

The following faculty members from Neurological Surgery have been listed as the region's best doctors by Sacramento Magazine:

- Fady Girgis, M.D.
- Griff Harsh, M.D., M.B.A.
- Kee Kim, M.D.
- Kia Shahlaie, M.D., Ph.D.
- Marike Zwienenberg, M. D.

219 UC Davis doctors were listed in more than 60 specialty areas. The list is compiled by Professional Research Services, a third-party firm and based on peer-review surveys.

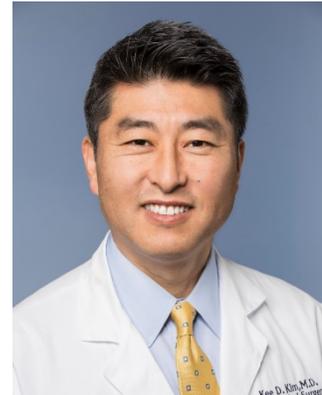
Fady Girgis, M.D.



Griff Harsh, M.D., M.B.A.



Kee D. Kim, M.D.



Kiarash Shahlaie, M.D., Ph.D.



Marike Zwienenberg, M.D.



Advanced Practice Providers

Essential, exceptional care

In July of 2019 we made the decision to transition to a 1:1 care model. This model is widely used by surgical specialties. Each APP is paired with a surgeon, staffs their clinic, and follows patients in the hospital. All APPs will participate in providing inpatient coverage. This model improves continuity of care, APP utilization and patient satisfaction. This change is being gradually implemented as we hire new APPS.

New Hires

Rex Ambatali, M.S.N., F.N.P.-C.: Rex earned his N.P., at Walden University. He is a detail-oriented nurse practitioner with a background in cardiology and emergency medicine. He is excited to transition to neurosurgery as he has an affinity towards stroke and cerebrovascular disease. He will be paired with Dr. Waldau in our 1:1 model.

Cassandra Chin, M.S.N., F.N.P.-C.: Cassandra earned her M.S.N. and her F.N.P., at Samuel Merritt University in 2016. She is an exceptional nurse practitioner who has been working at the Spine Center for over a year. She will continue to work with Dr. Ebinu and is looking forward to working inpatient.

Jeff Kasten, M.S.N., A.C.N.P.: Jeff earned his N.P. degree at UCSF. He is an accomplished nurse practitioner with vast experience in trauma, neurosurgery, and critical care. He is excited to accept the NP position on the Neurocritical Care service.

Stephanie Hetrea, N.P.: Stephanie joins us from Rush University. She has a background in PM&R and, most recently, transplant surgery. She enjoyed taking care of spine patients in PM&R and looks forward to working with Dr. Kim as his 1:1 APP.

Jasleen Kaur, P.A.: Jasleen has a background in urgent care and some experience working with neurosurgery patients. She is passionate about neuroscience and eager to learn neuro-oncology. She will be paired with Dr. Bloch.

We welcome our new advanced practice providers and look forward to working with them to provide optimal care and service to our patient population. Team members can look forward to participating in future wellness events and professional activities as the group expands.

AMSN

PRISM
Award®

Premier Recognition In the Specialty of Med-Surg

Congratulations! to the East 5 Physical Medicine and Rehabilitation and Neuroscience Units on earning the Premier Recognition in the Specialty of Med-Surg (PRISM) Award from the Academy of Medical-Surgical Nurses and the Medical-Surgical Nursing Certification Board. They exceeded in each of the six categories measured:

- Effective leadership
- Recruitment and retention of competent staff members
- Evidence-based practice
- Positive patient outcomes
- Healthy practice environment
- Lifelong learning of unit staff members



Administrative

Updates

The reception area in suite 3740 was recently reconfigured to house three members of our administrative staff team: **Elisa Valenton**, **Joe Valadez** and **Stephanie Celestin**. Suite 3700 is now the primary entrance for both the Department of Neurology and Neurological Surgery. We are making these adjustments now in anticipation of needing additional faculty office space in the near future.

Joe Valadez serves as our Academic Human Resources Analyst and handles all phases of faculty recruitment for both departments from inception of the search plan to execution of the faculty interviews and the appointment process. Joe previously worked in the Department of Ophthalmology as an administrative officer and we are thrilled to welcome him to the department and suite.

Stephanie Celestin is the Lead for the Cluster Analyst Team in Academic Personnel. She handles all faculty and academic appointments, and merit and promotion actions for both departments. She is also responsible for faculty MyInfoVault accounts. She splits her time between ACC 3740 and the Dean's office.

Jennifer Aten has also joined us in Suite 3740 and is currently in Room 3747. Jennifer was recently promoted to Academic Operations Manager for both departments. She will provide leadership on academic and staff personnel actions and assist in the implementation of short- and long-term goals for the departments.

Meriah Horton accepted a permanent position in the Departments of Neurological Surgery and Neurology. She will be working as a faculty Administrative Assistant and the DBS Program Coordinator. She is also responsible for handling the academic day calendar for the department of Neurological Surgery. She is an outstanding resource for navigating education building technology for grand rounds and guest speaker presentations.



RESIDENCY PROGRAM

We are well into the 2019-2020 Academic Year and our residents are busy balancing substantial clinical and educational demands; however, they took time out of their busy schedules to practice volleyball as we approached the 2nd Annual Neurosurgery West Coast Games. **Drs. Clayton Gerndt, Amir Goodarzi, Kristin Nosova, Edwin Kulubya** (captain), **Jared Clouse, Matthew Kercher**, and faculty, **Drs. Kia Shahliaie and Fady Girgis** flew to Los Angeles to represent our program in the 2nd Annual 2019 Neurosurgery West Coast Games which featured a 6 on 6 volleyball tournament. UC Davis was one of 8 teams that participated in the event this year, joining OHSU, Stanford, Cedars Sinai, USC, UCLA, UCI, and UCSD. We won 2 of our 3 first matches, and then defeated OHSU in a tiebreaker set to make it into the Final Four. The last four teams were UC Davis, USC, Cedars Sinai, and UCSD.





Drs. Kulubya, Goodarzi and Kercher exploring the bike and scooter sharing options in LA.



Dr. Bart Thaci is in his 6th month of a yearlong enfolded endovascular neurosurgery fellowship at the University of Alabama in Birmingham. Though we miss him, we wish him all the best while he's training in the deep south and look forward to his return.

The Stryker mobile cadaver lab was here on October 1st, 2019. The Neurosurgery Residents were able to use the lab from 2 to 8pm. The EEA Skull Base Lab training was led by **Dr. Amir Goodarzi**. It covered nasal cavity preparation, sphenoid sinus exposure, and the transsellar, transterculum and transclivial approaches.



Resident Interviews were held on December 3rd. We received 275 applications for our residency program and interviewed 15 applicants. The interviews took place in the ACC and lasted a full day. The applicants, current residents and faculty members all met at the Sawyer Hotel for dinner on Monday, December 2nd to interact in a more informal social setting.

Residents had fun participating in **No Shave November 2019** to help raise cancer awareness. Participants were encouraged to grow a beard, cultivate a mustache, forego waxing sessions and to donate the money they would typically spend on hair grooming products to help raise cancer educational awareness.



Pictured below L-R: Drs. Thind, Karnati, Gerndt, Kulubya, Goodarzi, Clouse and Nosova.





Program Director's Corner

by **Kia Shahlaie, M.D., Ph.D.**

Professor & Residency Program Director

I am very proud of our amazing resident team, currently comprised of 10 talented, motivated, and extremely successful physicians with a passion for becoming great neurosurgeons! In addition to ensuring that our training program provides our residents with exposure to all aspects of clinical neurosurgery, we also continue to place increasing emphasis on promoting wellness and work-life balance and recognizing the importance of ongoing professional and personal development. Our

wellness initiatives include quarterly off-campus team building events, annual financial wellness presentations, and annual participation in sporting activities with other neurosurgery programs in our region. To provide our residents with the skills necessary for success in all aspects of their lives, we recently launched the first resident training program at UC Davis focused on emotionally intelligent leadership. Our Resident Leadership Development Series, which I co-lead with Gene Crumley, Director of the Emotionally Intelligent Leadership Program at UC Davis, is a monthly meeting that includes didactic presentations, interactive discussions, and small group activities. We realize that our neurosurgery residents are placed in leadership positions very early in their clinical training, and there is a need to augment traditional residency training curricula with dedicated time towards recognizing and developing the skills necessary to succeed as a leader in various scenarios. Thus far, this initiative has been a great success, and we are all very grateful for the amazing work Gene Crumley has done to help us enhance our residency training program!

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NEUROCRITICAL CARE FELLOWSHIP

Ryan Martin, M.D.
Director, NCC Fellowship



The **Neurocritical Care Fellowship Program** directed by Dr. Ryan Martin, officially launched in June of 2019. The fellowship's primary goal is to provide trainees with comprehensive competence in caring for critically ill and neurocritically injured patients. It's a collaborative program, bringing together the Departments of Neurological Surgery, Neurology, Neuroradiology, Interventional Neuroradiology, and Internal Medicine's Division of Pulmonary and Critical Care. The fellowship is accredited by the United Council of Neurologic Subspecialties and has been accredited until 2024.

The program offers three tracks dependent upon the applicant's educational background:

- 2-year traditional post residency fellowship
- 1-year post critical care fellowship track
- 1-year neurosurgery fellowship track

Applicants interested in starting in July 2020 should contact Dr. Martin. For July 2021 we will be utilizing the San Francisco/Application Match.



Endoscopic Endonasal Skull Base Surgery Course

Dr. Griff Harsh and **Dr. Kia Shahlaie** gave the Thursday evening special lecture, “**The Evolution of Skull Base Surgery**,” on August 15th, 2019, at the Stanford School of Medicine Endoscopic Endonasal Skull Base Surgery: Hands-On Course held in Berg Hall, Li Ka Shing Center on Stanford’s campus and the Dissection Lab in Milpitas on August 15th-18th, 2019. Our residents, **Drs. Edwin Kulubya, Amir Goodarzi** and **Seun Omofoye** were included as guest attendees and Dr. Harsh was the Honored Guest.





Drs. **Omofoye**, **Kulubya**, **Harsh** and **Goodarzi** at the dissection lab in Milpitas. The 3-day course included lectures and labs. Saturday night dinner was held at Left Bank in Santana Row.





New Faculty Members

The **Department of Neurological Surgery** extends a warm welcome to our new colleagues on the Skull Based Surgery Team from the Department of Otolaryngology. A collaborative team-based approach is crucial for these complex procedures, and we look forward to working with Drs. Abouyared and Birkeland.



Marianne Abouyared, M.D., earned her Medical Degree in 2013 and completed her residency program in 2018, both at the University of Miami School of Medicine in Miami, Florida. She completed a fellowship in Head and Neck Oncologic and Microvascular Surgery in the Department of Otolaryngology at the University of Washington School of Medicine in Seattle in 2019. She is originally from Stockton, CA. She is board certified and joins UC Davis as an Assistant Professor and the Instructor of Record for the clerkship in Otolaryngology Surgery.



Andrew Birkeland, M.D., received his Medical Degree from Weill Cornell Medical College in 2012. He completed an internship in 2013 and residency program in 2018 in Otolaryngology and Head and Neck Surgery at the University of Michigan. He completed a clinical research fellowship at Columbia University in 2011, a two-year translational research fellowship at the University of Michigan in 2016, and a microvascular head and neck surgery fellowship at Stanford University in 2019. He is board certified and joins UC Davis as an Assistant Professor.

2nd Annual

Franklin Wagner Jr., M.D. Endowed Lecture

Regis Haid Jr., M.D., founding partner of Atlanta Brain and Spine Care and current Chair of the Neurosurgery Research and Education Foundation was the invited speaker for the 2nd Annual Franklin Wagner Jr., M.D., Endowed Lecture held on July 30th, 2019. Dr. Haid's lecture, "**Spinal Alignment: Keys to the Kingdom**," was well attended and we were pleased to see many of our Kaiser neurosurgical colleagues present. Dr. Haid spent time with residents, met with faculty and concluded his visit with a dinner at TableVine in Sacramento attended by Drs. Kim, Ebinu and Harsh and Drs., Guppy and Hawk from Kaiser.



Dr. Regis Haid





Hydrocephalus Shunt Training

The Department of Neurological Surgery hosted our first Hydrocephalus Shunt Training Course on Saturday, November 16th, 2019 from 8 to noon. Organized by Dr. Michael Edwards, the course reviewed CSF Physiology, shunt systems and complications. William Sugleris from Medtronic gave a “hands-on” demonstration of different types of shunt systems and the course was available to the faculty, residents, fellows and APPs of both Neurological Surgery and Neurology. Pediatric operating room nursing staff were also invited to attend. We plan to off the course again in 2020, more details will be forthcoming.



In Memoriam

Celebrating the life of Julian R. Youmans, M.D., Ph.D.



The UC Davis Department of Neurological Surgery honors the life and many wonderful contributions of **Julian Ray Youmans, M.D., Ph.D.** Dr. Youmans earned his medical degree from Emory University in 1952. He completed an internship at the University of Michigan in Ann Arbor followed by two years of general surgery residency. From 1955 to 1956 he was awarded the National Foundation Fellowship and spent a year as a registrar and clerk at the Institute of Neurology, Queens Square, London. From 1956 to 1958, he was a resident in Neurological Surgery at the University of Michigan. While completing both residencies, he also attended the Rackham School of Graduate Studies at the University of Michigan, where he earned a Master of Science degree in 1955 and a Doctor of Philosophy in Neuroanatomy and Neurophysiology in 1957.

After completing residency, Dr. Youmans practiced Neurosurgery in St. Petersburg, FL and a year later accepted a faculty position at the University of Mississippi as an Assistant Professor and later promoted to Associate Professor. In 1963, at the age of 35, Dr. Youmans became the Chief of Neurosurgery at the Medical University of South Carolina, making him the youngest Neurosurgery Chief in the country. He founded the residency program there in 1965 with the approval of the American Board of Neurological Surgery and was awarded a \$55,000 grant to study oxygenation and cerebral blood flow.

Dr. Youmans founded the Department of Neurological Surgery at UC Davis Health and served as the Department Chair and Residency Training Director from 1967 to 1982. In 1991 he became a professor emeritus. He established the Julian R. Youmans Endowed Chair of Neurological Surgery in May 2012.

In addition to authoring numerous publications (over 160), Dr. Youmans was the founding editor of the textbook “Neurological Surgery,” first published in 1973. It was subsequently renamed “Youmans Neurological Surgery” and is considered the foundation of guidance for nervous system surgery.

Dr. Youmans was a prominent neurosurgery leader whose work had significant impact, not only in the field of neurosurgery, but also in the evolution of national seat belt and driver safety legislation in the early 1960s and the establishment of helmet requirements for motorcyclists in the 1980s. We are deeply grateful for his numerous and distinguished contributions to this department, UC Davis and the field of neurological surgery. We celebrate his tireless dedication to furthering the careers of his trainees and mentees and his efforts to make all our lives longer and safer by supporting legislation to mandate the installation of seatbelts by automobile manufacturers. We share with his family and friends our deep appreciation of Dr. Youmans life and gratitude for his profound legacy.



Julian R. Youmans, M.D., Ph.D., and Frederick Meyers, M.D., then Executive Associate Dean of the UC Davis School of Medicine, at the Endowment ceremony (May of 2012). Photos courtesy of VIP Studios Photography in Davis, CA.



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