

Neurosurgery News

Fall/Winter 2023

Baylor
College of
Medicine

Dr. Alexander Ropper recognized as 2023 BSLMC Master Clinician



Please join us in congratulating Dr. Alexander Ropper, BCM Neurosurgery Director of Spine Surgery, who was recognized as the 2023 recipient of the Baylor St. Luke's Medical Center Master Clinician Award.

The award recognizes a single physician who exemplifies St. Luke's Mission Statement, with "dedication to enhancing the quality of human life through excellence in the delivery of health services, to serve the greater Houston area by providing superior value in high-quality, cost-effective health services and with commitment to the education of physicians and other health professionals and to the development of health technologies through applied research."

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Faculty Spotlight

Meet BCM
Neurosurgery's
Newest Clinical
Faculty Member:
Justin Lee



Justin Lee, M.D., Ph.D.
Spine Neurosurgeon

Faculty Spotlight: Justin Lee

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Chair's Message

As we approach the conclusion of 2023, the Department of Neurosurgery at Baylor College of Medicine has much to celebrate. This year has been marked by numerous achievements, reaffirming our standing among the top hospitals for Neurology and Neurosurgery, as recognized by the U.S. News and World Report. Our educational programs continue to thrive, ranking #10 out of 117 in terms of program reputation according to Doximity.

Our residency program remains robust, offering a diverse range of cases from affiliated hospitals, including MD Anderson Cancer Center, Baylor St. Luke's Medical Center, Texas Children's Hospital, Ben Taub General Hospital, and The Michael E. DeBakey Veterans Administration Medical Center.

A notable highlight of the year has been the addition of esteemed faculty members. We extend a warm welcome to Dr. Justin Lee, a fellowship-trained spine surgeon with a keen interest in spinal cord injury repair. Our spine surgery service is now fully staffed with four accomplished spine surgeons: Drs. Alex Ropper, Cyrus King, Joey Grochmal and Justin Lee.

Another valuable addition to our team is Dr. Garrett Banks, who completed his fellowship with Drs. Sheth and Viswanathan. Dr. Banks will contribute to the Michael E. DeBakey Veterans Administration Medical Center and play a crucial role at Ben Taub General Hospital. His support is particularly significant for our newly installed high-frequency ultrasound unit, which has proven instrumental in treating patients with essential tremor.

Our cerebrovascular service continues to receive accolades from the American Heart Association, winning the Get with the Guidelines Award for Advanced Stroke Therapy. This recognition underscores our center's efficiency in lifesaving thrombectomy procedures.

On the research front, we have seen remarkable growth, reflected in an increased NIH funding ranking, currently standing sixth in the U.S. with over \$10 million in funding. The addition of two McNair scholars, Dr. Benjamin Hayden and Dr. Sarah Heilbronner, further enhances our research prowess. Our research portfolio spans basic science and clinical research, drawing support from diverse funding sources across various National Institutes of Health Institutes.

Ultimately, our overarching goal remains the provision of excellent patient care with subspecialty expertise. We are privileged to have world-class experts in every neurosurgical subspecialty, dedicated to patient care, and actively engaged in training our residents and fellows. My heartfelt gratitude goes to each faculty member for their unwavering commitment to excellence in patient care and education.

Upcoming Events

- December 25: Offices closed in observance of Christmas
- January 1: Offices closed in observance of New Year
- January 15: Offices closed in observance of MLK Day
- February 1: First day of Black History Month
- February 3: National Womens Physicians Day
- February 11: International Day of Women and Girls in Science



Education Spotlights

A: Dr. Richard Penn was the 15th annual Gildenberg lecturer.
 B: M.D./Ph.D. student Malcolm McDonald presents at SNO 2023.
 C: Dr. Basit Khan (PGY-6) presents at SNO 2023.
 D: (Left to right) Drs. Marc Prablek (PGY-7), Visish Srinivasan (2020), John McGinnis (PGY-5) and Basit Khan reunite at CNS 2023.

Lectureships, labs, awards and more, trainees, students and faculty keep busy

As the year comes to a close, BCM Neurosurgery faculty and residents gathered on Wednesday, November 15 to recognize a special group of faculty for their commitment to our residents.

Please join us in congratulating Dr. Ian McCutcheon for being named the 2023 Faculty of the Year Award winner! Dr. Ali Jalali was named as the Faculty of the Year Runner Up, and Dr. Nisha Gadgil was recognized as the BCM Neurosurgery Faculty Rising Star.

Additionally, please join us in congratulating Dr. Alfonso Fuentes and Dr. Shankar Gopinath, who have (un)officially been inducted into the BCM Neurosurgery Faculty Hall of Fame.

Congratulations to this group, and many thanks to the 35 faculty members across our five affiliated hospitals!



Left to right: Drs. Alfonso Fuentes, Shankar Gopinath, Nisha Gadgil, Ganesh Rao, Ali Jalali, Ian McCutcheon, and Akash Patel



Dr. Ian McCutcheon and BCM Neurosurgery residents gather at the annual faculty awards ceremony.

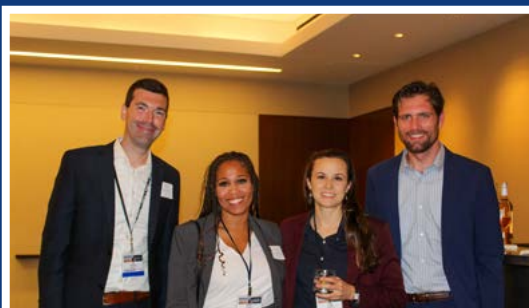
CNS Recap

BCM Neurosurgery well-represented at this year's Congress of Neurological Surgeons meeting



BCM Neurosurgery residents, alumni, faculty and med students were out in full force at this year's CNS annual meeting. In addition to poster presentations on display, members of the BCM Neurosurgery team also presented various talks and received various awards for their contributions to the field.

The meeting was also the backdrop for our annual Alumni Reception, which was attended by alumni and current residents (as well as faculty and students) alike.



BCM Neurosurgery welcomes Dr. Richard Penn as 15th annual Gildenberg lecturer

Named to honor Dr. Philip Gildenberg, a pioneering leader in stereotactic and functional neurosurgery, past president of the World Society of Stereotactic and Functional Neurosurgery, and emeritus clinical professor of neurosurgery at Baylor College of Medicine, this lecture annually hosts a leader in the field of functional and stereotactic neurosurgery.

This year, BCM Neurosurgery welcomed Dr. Richard Penn, Professor of Neurosurgery at Rush University Medical College, as the 15th annual Gildenberg lecturer. Dr. Penn presented, “Future of neurosurgery: The cutting edge of ignorance.”



Ready to work: Interns participate in SNS Boot Camp

Earlier this year, BCM Neurosurgery's newest interns, (pictured right to left), Drs. Jackson Allen, Luis Carrete, Sai Chilakapati and Jeffrey Chen, were joined by Assistant Professor Dr. Cyrus King (pictured far left), for the annual SNS Virtual Intern Boot Camp.

The virtual event is held yearly and is an opportunity for neurosurgical interns across the country to come together and hear from residents and faculty from various institutions as they ease their way into the next seven years of their residency training.

BCM Neurosurgery attends quarterly Houston Neuroendovascular Surgery Club Meeting



On Tuesday, December 12, Chief Resident and enfolded endovascular fellow Dr. Patrick Cotton and Assistant Professor Dr. Naser Jaleel (pictured here with Dr. Collin Liu, UTHealth, centered) joined other Houston-area neuroendovascular experts for the quarterly Neuroendovascular Surgery Club meeting, hosted by UTHealth.

The regular meetings are an opportunity for networking and knowledge sharing.



Research Roundup

Pictured left: Dr. Justin Lee joined BCM Neurosurgery earlier this year. In addition to bringing his expertise in a wide gamut of spine surgical interests, Dr. Lee also brings his research interests, which currently include the development of cell and gene therapy for spinal cord injury and other neurological disorders.

Faculty Spotlight: Meet Assistant Professor Dr. Justin Lee

Dr. Lee aims to utilize cutting-edge neurosurgical techniques, including the least invasive methods necessary to optimize long-term patient outcomes. He seeks to empower each patient with the knowledge to fully understand his or her therapeutic options in order to create a patient-centered and individualized treatment plan. He provides the same level of care to each patient that he would provide to a family member or friend.

Justin Lee, M.D., Ph.D., is a neurosurgeon-scientist specialized in the evaluation and treatment of complex spinal disorders. He completed his medical and doctoral degrees through the Medical Scientist Training Program at Columbia University College of Physicians and Surgeons, where he was granted the NIH-funded Ruth L. Kirchstein National Research Service Award. Dr. Lee then completed his neurosurgical residency at Keck School of Medicine of the University of Southern California (USC). During his neurosurgical training, he was awarded the NIH/NINDS R25 grant and devoted a full year working as a visiting scientist at City of Hope National Medical Center in the Center for Gene Therapy. Dr. Lee also received advanced training in minimally invasive and complex spine surgery through the enfolded AO spine fellowship at USC. His current research focuses on the development of cell and gene therapy for spinal cord injury and other neurological disorders.

Professional Interests:

- Complex spine surgery
- Minimally invasive spine surgery
- Adult spinal deformity
- Cervical degenerative disease
- Artificial disc replacement
- Thoracic disc disease
- Lumbar degenerative disease
- Spinal tumor surgery
- Spinal trauma
- Spinal cord injury
- Failed back syndrome
- Revision spine surgery

Research Interests:

- Cell and gene therapy
- Exosome biology
- Exosome modification and therapeutic development
- Spinal cord injury
- Traumatic brain injury
- Stroke
- Neuronal plasticity and regeneration



Sarah Heilbronner, Ph.D.
Associate Professor

Recipient

National Institutes of Health

**BRAIN
CONNECTS**

Grant

Baylor
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Medicine

Dr. Sarah Heilbronner brings prestigious NIH BRAIN CONNECTS grant to Baylor

In September, Dr. Sarah Heilbronner, associate professor of neurosurgery and McNair Scholar, along with a team of researchers, was awarded a \$16 million grant from the National Institute of Health's (NIH) Brain Research Through Advancing Innovative Neurotechnologies® Initiative.

Also known as The BRAIN Initiative®, the program looks to change what is currently known about the human brain by accelerating the development of innovative neurotechnologies. Through the advancement of these technologies, researchers such as Heilbronner seek to create a new picture of the brain that shows how individual cells and complex neural circuits interact in both time and space.

"The BRAIN CONNECTS program represents a new investment from the NIH to try to unravel the brain's 'wiring diagram,'" Heilbronner notes.

"Neurons in the brain are highly specialized for the communication of information. However, not all neurons are physically set up to communicate with one another. The question is, what is the wiring diagram—or connectivity—of the brain?"

Heilbronner explains that while attempts to unravel the brain's wiring diagram are not new, previous barriers

have made doing so difficult. She states, "This has, historically, been an exceptionally tricky problem to solve, mostly because of technological limitations. However, major breakthroughs in microscopy, neuroimaging, and cellular neuroscience put the solution within reach, although there will still be a great deal of development work necessary across all the funded projects."

Heilbronner, who joined Baylor in March, is part of a group of researchers from the U.S. and abroad who will use the BRAIN CONNECTS award to map the specific neural pathways that generate human behaviors and are responsible for higher-level functions. She explains, "We will be doing a deep dive into the circuitry responsible for connecting the front of the brain (frontal lobe) with the back of the brain (parietal lobe). We know from functional studies that these connections are important for higher cognitive processes like decision making and self-control. What we don't know is the pattern of connections made at a very zoomed-in scale. We want to know how single axons are connected across the frontal and parietal lobes."

Working at Baylor alongside other leading researchers in the field of neuroscience, such as Dr. Sameer Sheth, professor of neurosurgery and McNair Scholar, Heilbronner looks forward to expanding upon what is currently

known about neuromodulation and applying this knowledge to a truly translational setting.

"Many brain disorders are essentially disorders of connectivity—they are problems with how neurons communicate with one another," she observes. "Neuromodulation researchers and clinicians at Baylor can try to fix those disorders by targeting connections that have gone awry. However, that can be challenging when the underlying wiring diagram is unknown or too coarse. I look forward to bringing anatomically precise information about brain connectivity learned from BRAIN CONNECTS to neuromodulation applications at Baylor."

Click [here](#) for the full list of contributors for this project.





Members from across the Baylor community gather for the monthly Center for Cancer Neuroscience seminar. The monthly meeting is open to all.

Publications

Chen WC, Choudhury A, Youngblood MW, Polley MC, Lucas CG, Mirchia K, Maas SLN, Won M, Bayley JC, Harmanci AS, Harmanci AO, Klisch TJ, Nguyen MP, Vasudevan HN, McCortney K, Yu TJ, Bhavé V, Lam TC, Pu JK, Li LF, Leung GK, Chan JW, Perlow HK, Palmer JD, Haberler C, Berghoff AS, Preusser M, Nicolaides TP, Mawrin C, Agnihotri S, Resnick A, Rood BR, Chew J, Young JS, Boreta L, Braunstein SE, Schulte J, Butowski N, Santagata S, Spetzler D, Bush NAO, Villanueva-Meyer JE, Chandler JP, Solomon DA, Rogers CL, Pugh SL, Mehta MP, Sneed PK, Berger MS, Horbinski CM, McDermott MW, Perry A, Bi WL, Patel AJ, Sahm F, Magill ST, Raleigh DR. Targeted gene expression profiling predicts meningioma outcomes and radiotherapy responses. *Nat Med*. 2023 Dec 29. [Available here.](#)

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Williamson MR, Le SP, Franzen RL, Donlan NA, Rosow JL, Nicot-Carlson MS, Cervantes A, Deneen B, Dunn AK, Jones AT, Drew MR. Subventricular zone cytogenesis provides trophic support for neural repair in a mouse model of stroke. *Nat Commun*. 2023 Oct 10. [Available here.](#)

Welcome to the Team!

Join us in welcoming the following members to the BCM Neurosurgery family.

Ajay Gandhi — *Research Technician II*

Alfred Kwabena Dei-Ampeh — *Research Assistant*

Ana Chavez — *Research Assistant*

Angela Smith — *Research Administration Associate*

Aretha Davis — *Senior Coord, Patient Services*

Assia Chericoni — *Research Assistant*

Atalia Valdez — *Senior Financial Analyst*

Bria Winnegan — *Senior Coordinator, Program Management*

Cindy Arroyo — *Senior Coord, Patient Services*

DMia Thompson — *Senior Coord, Patient Services*

Elizabeth Ybarra — *Senior Coord, Patient Services*

Garrett Banks — *Assistant Professor*

Heyssell Ramos — *Medical Assistant I*

Jack Tremblay — *Research Assistant*

Johana Gonzalez — *Medical Assistant I*

Justin Lee — *Assistant Professor*

Katherine Kabotyanski — *Research Assistant*

Layth Mattar — *Research Technician II*

Lily Chamakura — *Postdoctoral Associate*

Maria Crespo Echevarria — *Research Technician I*

Naga Tamma — *Data Analytics Associate*

Sabah Khawaja — *Nurse Practitioner*

Congrats!

Join us in congratulating the following faculty on their recent promotions!

Andrew Watrous — *Assistant Professor*

David Bauer — *Professor (TCH)*

Daxa Patel — *Associate Professor (TCH)*

Eleonora Bartoli — *Assistant Professor*

Guillermo Aldave — *Associate Professor (TCH)*

Hormozd Bozorgchami — *Associate Professor*

Omar Tanweer — *Associate Professor*

Healthcare Highlights

The science of ergonomics: optimizing spine health in the workplace

The importance of proper posture is taught to most individuals at an early age. However, years of being told to “stand up straight” and to “stop slouching” are often lost once one enters the workforce. Ergonomics, the science of understanding how individuals function in certain systems — such as the workplace — seeks to minimize illness and injury. Dr. Cyrus King **explains** the importance of spine health on the job.



From Ecuador to Houston: Man receives life-saving emergency surgery at Baylor St. Luke's Medical Center



When sinus surgery in Ecuador led to a life-threatening abscess, Francisco Laso found himself under the care of a multidisciplinary team at Baylor St. Luke's Medical Center, led by BCM Neurosurgery chairman Dr. Ganesh Rao, thanks to the CommonSpirit Health international remote second opinion program. Click [here](#) to read Mr. Laso's story.

In the community: Dr. Jaleel speaks at local senior center



In September, endovascular neurosurgeon Dr. Naser Jaleel, spoke at a local senior center. Dr. Jaleel spoke to a large and attentive audience regarding stroke awareness and current treatment options. After his presentation, attendees had the opportunity to participate in a Q&A session with Dr. Jaleel.



Holiday Snapshots

It's the most wonderful time of the year at BCM Neurosurgery, and everyone is feeling the holiday spirit! Check out some of our favorite photos from this year's holiday party, as well as some "behind the scenes" shots of the clinic and administrative spaces decorated for the holidays!



***Neurosurgery News* is a publication of The Department of Neurosurgery at Baylor College of Medicine.**

To submit content for the next newsletter, please email:
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