

University of Nebraska Medical Center

FALL 2026

NeuroNExT

from the Departments of Neurological Sciences and Neurosurgery

From Discovery to Impact

Innovation, collaboration, and a commitment to improving lives continue to drive the Department of Neurological Sciences and our partners across Nebraska and beyond. In this issue, we celebrate significant milestones that reflect the growing reach and influence of our research, clinical care, education, and community engagement efforts.

Highlights include the Great Plains IDeA Clinical and Translational Research Network's landmark $25 million NIH award and new designation as an NIH Clinical and Translational Research Network, positioning Nebraska and its partners to expand multisite research collaborations and accelerate the translation of discoveries into patient care. We also recognize national honors for Nebraska Medicine's stroke programs, advances in neuroscience research partnerships across the Big Ten, and the achievements of our faculty, trainees, and staff.

You'll read about innovative clinical research studies, new treatment options for neurological conditions, the arrival of outstanding new faculty members, international collaborations, educational initiatives, community outreach activities, and the many accomplishments of our department's physicians, scientists, nurses, and learners.

As we approach a decade of growth in many of our collaborative programs, this issue highlights how strong partnerships, scientific discovery, and compassionate patient care are shaping the future of neurological health. Thank you for being part of our community and for supporting the mission of advancing neuroscience through excellence in research, education, and clinical care. We appreciate your continued support of the Department of Neurological Sciences. Enjoy this edition of the NeuroNExT newsletter.



Matthew Rizzo, MD, FAAN
Frances and Edgar Reynolds Professor and Chair
Department of Neurological Sciences



William Thorell, MD
Professor of Neurosurgery at UNMC
Chair of the Department of Neurosurgery



Howard Fox, MD, PhD
Senior Associate Dean, Research and Development, College of Medicine
Professor, Department of Neurological Sciences

Table of Contents

IN THIS ISSUE

Introduction 1

Great Plains IDeA-CTR Gets Five-Year, $25 Million NIH Grant 2

Big Ten Neuroscience Meeting in Omaha Looks Toward a Broader Research NTWK 4

Ramirez Achieves Doctorate 6

Hospitals Earn Gold 7

Anding wins OSNAP 8

Anáhuac Visit 9

Rolling the Dice on Brain Health at Fan Fest 10

Wang Wins New Investigator 11

A Neurovascular Partner 12

Celebrating New Associate Professors 15

Toy Drive for Ukrainian Children 18

Publications & Grants 19

Ways to Give 19

Great Plains IDeA-CTR-N Gets Five-Year, $25 Million NIH Grant

by Julie Halstead, Great Plains IDeA-CTR Network

The Great Plains IDeA Clinical and Translational Research Network (IDeA-CTR-N) has received more than $25 million from the National Institutes of Health for its next five years of work, allowing an expanded focus on multisite translational science, health system integration, and regional and national research partnerships.

The award begins the third five-year funding cycle of the Great Plains program, transitioning it from a U54 cooperative agreement to a P50 award, formally establishing it as an NIH-designated Clinical and Translational Research Network (CTR-N). Although participating institutions have worked together as a regional network for nearly a decade, the CTR-N designation is new and brings greater emphasis on coordinated, multisite clinical and translational research.

Headquartered at UNMC, the network also includes the University of Nebraska-Lincoln, University of Nebraska at Omaha, University of Nebraska at Kearney, Creighton University, Boys Town National Research Hospital, Children's Nebraska, VA Nebraska-Western Iowa Health Care System and, as a new partner in this grant cycle, Nebraska Medicine.

"This network connects academic research with clinical delivery systems, strengthening opportunities for multisite research, learning health and learning research systems, and translation of discoveries into patient care," said Matthew Rizzo, MD, director of the Great Plains IDeA-CTR-N.

While the first two funding cycles emphasized research infrastructure, investigator development and mentoring, this latest grant cycle will place greater emphasis on cross-institutional scientific teams, multisite projects and clinical studies, shared research resources, workforce development and stronger connections with regional and national research networks.

The Great Plains IDeA-CTR-N also will expand collaborations with practice-based research networks, clinical and translational science award programs and other national research initiatives, creating greater opportunities for investigators and partner institutions to participate in research at regional and national scale.

The award comes as the network approaches its 10th anniversary. On Nov. 9, investigators, health system leaders, community partners, NIH representatives and leaders from research networks across the country will gather in Omaha for the 10th anniversary meeting, "From Regional Strength to National Impact: Making Research Networks Work for Translational Science."



Subin Mathew, MD, MBBS, FAAN instructs residents in simulation.

BOOT CAMP FOR THE BRAIN: RESIDENTS PUT SKILLS TO THE TEST

by Andrew Brown, MD

The Department of Neurological Sciences was excited to host its inaugural residency "Boot Camp" this year, featuring focused didactics, mentored clinic and inpatient experiences, and simulations. The new second-year residents had the opportunity to spend multiple days in the iExcel Simulation Center on UNMC's campus, where they participated in simulated scenarios with escalating responsibility, covering complex stroke management, refractory seizures, and neurologic emergencies with standardized patients and high-fidelity mannequins, helping prepare them for experiences they will encounter in the hospital, emergency department, and overnight.

Big Ten Neuroscience Meeting in Omaha Looks Toward a Broader Research Network

by Matthew Rizzo, MD, FAAN, FANA

The **2026 Big Ten Neuroscience Annual Meeting**, held July 16 at Omaha's Scott Conference Center, brought together researchers, clinicians, trainees, staff and community partners from across the Big Ten.

Hosted by colleagues from **UNMC, UNL, UNO and UNK**, the meeting reflected the breadth of neuroscience across the University of Nebraska System and the Big Ten. Participants represented multiple departments, colleges and disciplines, including neuroscience, neurology, psychiatry, psychology, engineering, genetics, rehabilitation, data science and artificial intelligence.

The meeting was organized by **Matthew Rizzo, MD**, together with Scott Scholar **Laura Lienemann, PhD; Carrie Bailey, PhD; Howard Fox, MD, PhD**, professor in the UNMC Department of Neurological Sciences, director of the Center for Integrative and Translational Neuroscience, and senior associate dean for research; and **Anna Dunaevsky, PhD**, leader of the Cognitive Neuroscience of Development & Aging (CONDA) Center of Biomedical Research Excellence (COBRE), along with colleagues from across the Nebraska campuses. **Fox and Dunaevsky played central roles in shaping the scientific program and fostering connections across disciplines and institutions.**

UNMC Chancellor **H. Dele Davies, MD, MHCM**, welcomed attendees and opened the scientific program, organized around the theme **"Data-Driven Innovation and Neuro-Translation."**

Chiara Cirelli, MD, PhD, of the University of Wisconsin–Madison, delivered the opening keynote, **"Sleep and Synaptic Homeostasis." Jacob Michaelson, PhD**, Roy J. Carver Professor of Psychiatry and Neuroscience at the University of Iowa, followed with **"Biotypes of Disordered Sleep in Autism."** Other sessions addressed neurodevelopment, neurodegeneration, motivation and addiction, bioinformatics and AI.

A major highlight was the keynote by **John Jay Ngai, PhD**, director of the **NIH (National Institutes of Health) BRAIN Initiative**. His lecture, **"Inventing the Future,"** reviewed emerging tools for studying the brain across cells, circuits, systems and human behavior, and emphasized the value of connecting scientific capabilities across institutions.

The final session on **Bioinformatics and AI** included work in magnetic resonance elastography, functional connectivity, single-cell genomics, AI-based cell annotation and wearable sensing.

FROM ANNUAL MEETING TO RESEARCH NETWORK

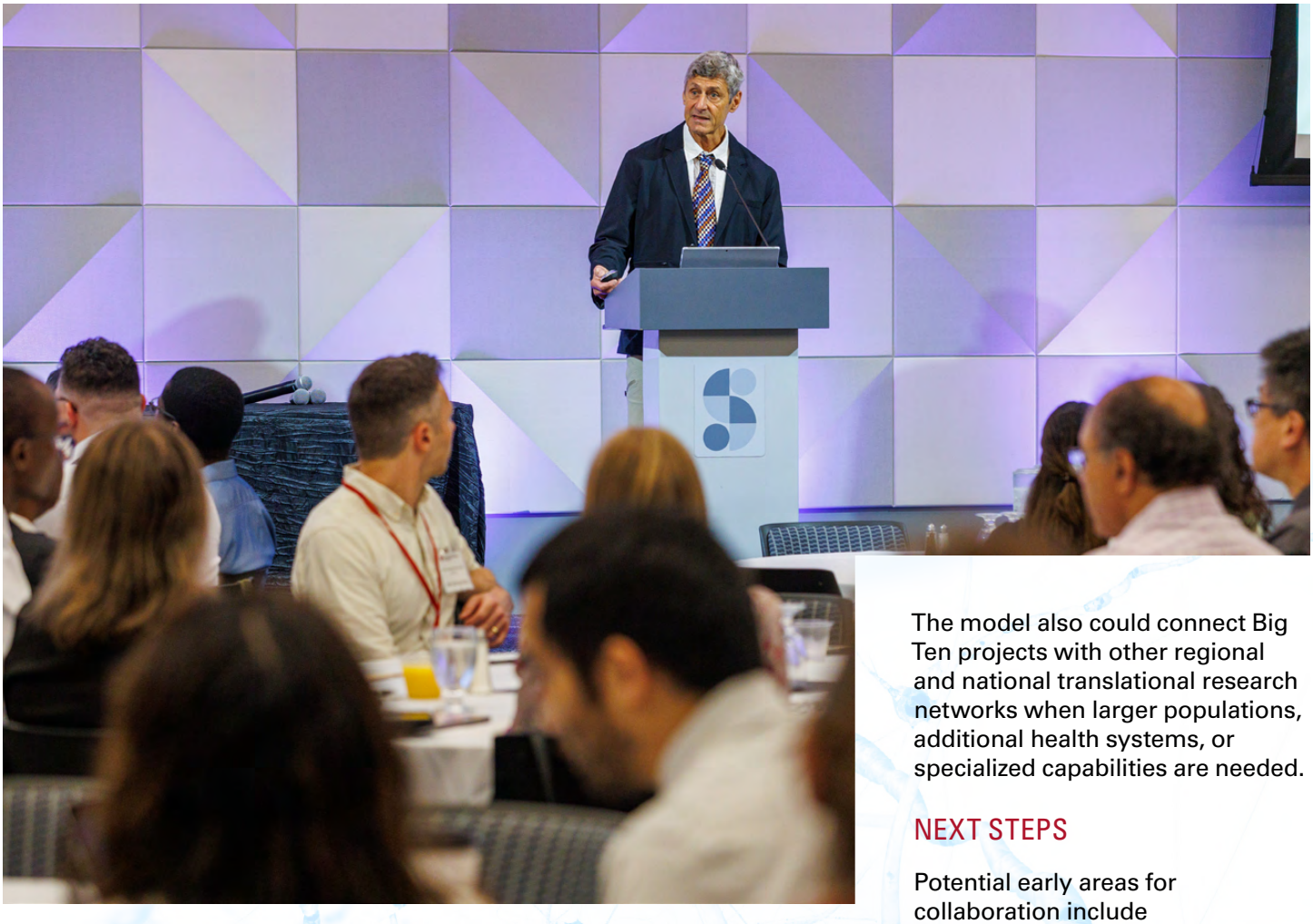
The Omaha meeting also advanced discussion about the next phase of the **Big Ten Neuroscience Academic Alliance.**

The annual meeting series began at the University of Iowa under **Ted Abel, PhD**, followed by meetings at Indiana, Purdue and Penn State. The next step is to build sustained collaboration between meetings.

The **Big Ten Cancer Research Consortium and Big Ten Neurosurgery Consortium** provide useful models. A similar neuroscience network could support focused scientific working groups, shared methods and infrastructure, multicenter studies and joint grant applications.



UNMC Chancellor H. Dele Davies, MD, MHCM attended the scientific program.



Matthew Rizzo, MD, FAAN, FANA speaking at the Big Ten Neuroscience Annual Meeting.

The potential scale is substantial. Across the Big Ten are **18 universities, 20 allopathic medical schools, an osteopathic medical school, university hospitals and health systems, 12 NIH Clinical and Translational Science Award hubs and the Great Plains IDeA Clinical and Translational Research Network.**

That existing translational infrastructure could be central to the effort.

Rather than building a new research system from scratch, Big Ten Neuroscience could link scientific teams with existing **CTSA and CTR resources** in biostatistics, informatics, recruitment, community engagement, regulatory support, clinical research operations and workforce development.

A neuroscience working group focused on neurodegeneration, sleep, neuroimmune disease or AI, for example, could identify a shared question and use CTSA and CTR infrastructure across institutions to develop common protocols, harmonize data, coordinate regulatory processes and launch multisite studies.

This creates a direct link between a **scientific network** and a **broader translational research network**. Neuroscience investigators bring the questions, cohorts, expertise and technologies; CTSAs and CTRs provide infrastructure that can help studies operate across sites.

The model also could connect Big Ten projects with other regional and national translational research networks when larger populations, additional health systems, or specialized capabilities are needed.

NEXT STEPS

Potential early areas for collaboration include neurodegeneration, neuroimmune and neuroinfectious disease, sleep and circadian neuroscience, systems and computational neuroscience, imaging, neuromodulation, omics, AI, and data science.

The **University of Washington is considering hosting the 2027 Big Ten Neuroscience Annual Meeting**, with **Rutgers considering 2028**. A committee also is being formed to help plan future meetings and identify opportunities for collaborative research.

The aim is to move from an annual conference to a research-ready network that connects investigators across institutions, departments, and colleges and uses existing Big Ten, CTSA, and CTR infrastructure to support multisite neuroscience.



Meghan Ramirez, PhD

Ramirez Achieves Doctorate

by Shari Griffin

In July, Dr. Meghan Ramirez successfully defended her doctoral dissertation, titled "Through the Looking Glass: A Neurodevelopmental Perspective on Alzheimer's Disease-Vulnerable Brain and Cognitive Variables." She was awarded her PhD through the Interdisciplinary Graduate Program in Biomedical Sciences, Department of Neuroscience.

Dr. Ramirez's work is supported by an NIH F99/K00 transition award that funds both her doctoral and postdoctoral research. Her doctoral research focuses on the social and environmental determinants of health and how these factors may influence child brain development in ways that increase risk for or resilience to Alzheimer's disease. Taking a neurodevelopmental perspective, her research aims to better understand how early-life experiences may shape brain health and cognitive outcomes across the lifespan.

She will continue her research as a postdoctoral scholar at Stanford University, where she will further investigate the factors that contribute to brain health, resilience, and risk for Alzheimer's disease in older adults using proteomic approaches.



Nisha Giridharan, MD

Giridharan Joins Neurosurgery

The Department of Neurosurgery welcomes Dr. Nisha Giridharan to the neurosurgery department. Dr. Giridharan is an Assistant Professor in the Department of Neurosurgery at the University of Nebraska Medical Center specializing in the surgical treatment of epilepsy, movement disorders, chronic pain, and psychiatric disorders. She earned her medical degree from the University of Cincinnati, completed neurosurgery residency at Baylor College of Medicine, and pursued advanced fellowship training in Stereotactic and Functional Neurosurgery at Baylor.

Dr. Giridharan has extensive experience implanting intracranial electrodes for seizure mapping in patients with refractory epilepsy. To treat seizures, she performs neuromodulation procedures, resections, and minimally invasive laser ablations. She also specializes in deep brain stimulation for Parkinson's disease, essential tremor, dystonia, and Tourette's syndrome as well as incisionless MRI-guided focused ultrasound for tremor. Her practice includes the surgical management of complex facial pain, refractory back pain, and cancer-related pain.

Dr. Giridharan uniquely had the opportunity to treat patients with severe, treatment-resistant psychiatric disorders such as obsessive-compulsive disorder, depression, and bipolar disorder in her training through NIH-funded trials. She looks forward to helping develop a neurosurgical program for psychiatric disorders at UNMC.

In addition to her clinical practice, Dr. Giridharan conducts research to understand the neural circuits involved in neuropsychiatric disorders and identify biomarkers of mood and cognitive changes in patients with Parkinson's disease, epilepsy, and obsessive-compulsive disorder, among other conditions, with the goal of advancing personalized therapies and improving patient outcomes. She is an awardee of the NIH R25/UE5 research grant for her work and has presented at several national neuroscience and neurosurgical conferences. To schedule an appointment with Dr. Giridharan call 1-800-922-0000.

Hospitals Earn Gold for Excellence in Stroke Care

Nebraska Medicine NOW, Aug '26



Nebraska Medical Center and Bellevue Medical Center have received the American Heart Association's Get With The Guidelines® - Stroke Gold Plus quality achievement award for their commitment to ensuring people experiencing stroke receive timely, appropriate treatment based on nationally recognized, research-based guidelines, ultimately helping to save lives and reduce disability.

Get With The Guidelines brings the expertise of the American Heart Association and American Stroke Association into hospitals nationwide, helping ensure patient care is aligned with the latest research- and evidence-based guidelines. Get With The Guidelines - Stroke is an in-hospital program designed to improve stroke care through consistent adherence to these guidelines, which can minimize long-term effects of stroke and help prevent death.

"This recognition reflects the high level of commitment of our multidisciplinary stroke team to deliver timely, evidence-based care when every minute matters," says William Thorell, MD, chair of the UNMC Department of Neurosurgery. "We are very proud of the collaboration across the campuses of Nebraska Medicine that allows us to achieve exceptional outcomes for patients experiencing stroke."

Each year, participating hospitals qualify for the award by demonstrating how their organization has committed to providing quality stroke care. In addition to following clinical treatment guidelines, Get With The Guidelines participants also provide education to help people manage their recovery and ongoing health at home.

"We are proud to recognize Nebraska Medical Center and Bellevue Medical Center for their commitment to caring for people experiencing stroke," says Steven Messe, MD, volunteer chair of the American Heart Association Stroke System of Care Advisory Group. "Participation in Get With The Guidelines is associated with improved patient outcomes, including greater likelihood of being discharged home, fewer readmissions and lower mortality rates — a meaningful benefit for health care systems, families and communities."

Nebraska Medical Center also received the American Heart Association's Target: StrokeSM Honor Roll Elite Plus award. To qualify for this recognition, hospitals must meet specific criteria that reduce the time between an eligible patient's arrival at the hospital and treatment with thrombolytic therapy.

In addition, Nebraska Medical Center received the American Heart Association's Target: StrokeSM Honor Roll Advanced Therapy award by meeting specific criteria that reduce the time between an eligible patient's arrival at the hospital and treatment to remove the clot causing the stroke.

Nebraska Medical Center and Bellevue Medical Center also received the American Heart Association's Target: Type 2 Diabetes™ Honor Roll award. Target: Type 2 Diabetes aims to ensure patients with Type 2 diabetes, who might be at higher risk for complications, receive the most up-to-date, evidence-based care when hospitalized due to stroke.

Nebraska Medical Center also met specific scientific guidelines as a Comprehensive Stroke Center, featuring a comprehensive system for rapid diagnosis and treatment of stroke patients admitted to the emergency department.

Bellevue Medical Center also met specific scientific guidelines as a Primary Stroke Center, featuring a comprehensive system for rapid diagnosis and treatment of stroke patients admitted to the emergency department.

"Nebraska Medicine is committed to improving patient care by adhering to the latest treatment guidelines," says Denise Gorski, Neuroscience Clinical Programs manager. "Get With The Guidelines helps our teams put proven science into practice every day. Research shows this approach can support better recovery, with the ultimate goal of helping people in Omaha live longer, healthier lives."

Stroke is the No. 4 cause of death and a leading cause of disability in the U.S., according to the American Heart Association's 2026 Heart Disease and Stroke Statistics Report. A stroke occurs when a blood vessel supplying the brain is blocked by a clot or ruptures, preventing blood and oxygen from reaching brain tissue. When this happens, brain cells begin to die. Early detection and rapid treatment are critical to improving survival, minimizing disability and supporting faster recovery.

Anding Wins National Institutes of Health Outstanding Scholars in Neuroscience Award Program



Alexandria Anding

Alexandria (Alex) Anding, a PhD candidate in the Molecular Genetics and Cell Biology program, has been selected as a 2026 recipient of Outstanding Scholars in Neurosciene Award Program (OSNAP). Alex was nominated by her predoctoral mentor, Dr. Anna Dunaevsky, professor in the Department of Neurological Sciences, in recognition of her research accomplishments and scientific training.

Her work examines the contribution of astrocytes to neural circuit dysfunction in Fragile X syndrome (FXS). During her graduate training, she has contributed to studies of astrocyte-related mechanisms underlying sensory hypersensitivity in mouse models and has studied human-derived interlaminar astrocytes in a chimeric mouse model. Using live-tissue imaging, Alex identified altered calcium activity in human FXS astrocytes, further shaping her interest in how abnormal astrocyte signaling contributes to neural circuit dysfunction.

Her dissertation extends these questions to the regulation of sleep in FXS. Using longitudinal EEG/EMG recordings, genetic mouse models and in vivo calcium imaging, Anding is investigating how loss of the Fragile X protein FMRP affects sleep architecture and whether altered astrocyte signaling contributes to sleep instability. Her unpublished data point to abnormalities in NREM sleep stability and heightened microarousal activity, motivating ongoing experiments into the underlying cellular mechanisms. More broadly, her work examines astrocytes as active regulators of neural circuits, behavioral states and brain function.

Outside the lab, she has made teaching and mentorship central to her predoctoral education, teaching gross anatomy, human neuroanatomy and medical neuroscience for College of Allied Health Professions (CAHP), Graduate Studies and College of Medicine. Her long-term goal is to lead a research-intensive academic laboratory where scientific discovery, collaboration, teaching and trainee development are deeply interconnected.

As an OSNAP awardee, Alex will travel to the NIH campus in Bethesda, Maryland, for the OSNAP Award Symposium in January 2027, where she will present her dissertation research and interact with NIH leadership, investigators, trainees and program staff. She is particularly excited to build relationships with scientists across disciplines and expand the collaborative network that will support the next stage of her career.

"I am deeply grateful for this recognition and consider it a great privilege," Alex said. "Science teaches you very quickly how to embrace failure, reconsider what you thought you knew and try again. My hope is to take the skills and knowledge I have built during my predoctoral training and use them to address increasingly challenging questions about how astrocytes shape brain function. Some of the most exciting science comes from bringing together people with different expertise and perspectives, and I am especially excited for the opportunity through OSNAP to form collaborations that challenge how I think, broaden the questions I am able to ask and ultimately strengthen the science I hope to build."

Anáhuac Veracruz Delegation Visits UNMC as 10-Year Partnership Looks to the Future

by Matthew Rizzo, MD, FAAN, FANA



Visitors from Universidad Anáhuac Veracruz

Ten years of collaboration between UNMC and Universidad Anáhuac Veracruz (UAV) came into focus this month as a senior delegation from Mexico visited Omaha to celebrate the partnership and begin shaping what comes next.

The visit in September brought together leaders from both institutions around medical education, student exchange, research, cancer research, artificial intelligence, and new opportunities for international collaboration. The UAV delegation was led by Chancellor Luis Linares-Romero, PhD, and included Omar Torres Fernández, PhD, provost of the Córdoba campus, the deans of the medical schools in Xalapa and Córdoba, faculty, trustees, and medical school advisors.

Jane Meza, PhD, UNMC vice chancellor for academic affairs, played a central role in the visit and in discussions about academic programs, student and faculty exchanges, research opportunities, and the future of the partnership. She joined the delegation throughout the visit, including meetings focused on research collaboration and artificial intelligence.

For Neurological Sciences, one of the most tangible parts of the partnership has been the medical student exchange. Subin Mathew, MD, is overseeing Anáhuac student visits to Neurology and helping visiting students experience clinical and academic neurology at UNMC.

That effort builds on a particularly strong collaboration with Family Medicine. Jeffrey Harrison, MD, Armando De Alba, MD, and Melanie Menning, MD, have developed robust student exchanges with Anáhuac, creating opportunities for students from both institutions to learn in different clinical environments and gain a broader view of medicine and health care. Student and faculty exchange was a major focus of the delegation's UNMC visit.

The week also provided a chance to look beyond existing programs. Matthew Rizzo, MD, chair of the Department of Neurological Sciences, joined Emily Glenn, MSLS, AHIP-D, dean of the Leon S. McGoogan Health Sciences Library, for a session on the use of artificial intelligence in an academic medical center. They discussed how AI is changing research, education, and clinical care and where UNMC and Anáhuac might work together on new projects.

The partnership's 10-year milestone was celebrated at a dinner hosted by UNMC Chancellor H. Dele Davies, MD, at the Wigton Heritage Center. Dr. Rizzo joined faculty, students, members of the Anáhuac delegation, and community guests for the celebration.

The delegation also toured UNMC research programs, met with faculty at the Fred & Pamela Buffett Cancer Center, talked with students and mentors, and met with Omaha business and community leaders.

After a decade of exchanges and relationship-building, the visit pointed toward a broader next chapter: deeper student and faculty connections, new research collaborations, and opportunities to work together in areas such as AI and other emerging technologies. For Neurological Sciences, it also opens the door to expanding an international educational partnership that is already bringing Anáhuac students into the department.

Endoscopic Spine Surgery Offers a Minimally Invasive Option for Herniated Discs

by Advancing Health, Fall 2026



Joshua Dian, MD

Herniated discs can cause severe pain and interfere with daily life. Symptoms often include low back pain, sciatica, numbness, weakness, or tingling.

When treatments such as physical therapy or injections do not provide enough relief, surgery may be an option. Fortunately, advances in spine surgery now allow some procedures to be performed through very small incisions.

Neurosurgeon Joshua Dian, MD, recently performed the first endoscopic spine surgeries offered by Nebraska Medicine.

"Spinal discs are like shock absorbers," says Dr. Dian. "When part of a disc pushes and presses on a nerve, surgery aims to relieve that pressure." Endoscopic spine surgery uses a small camera and specialized instruments to access the spine through a tiny incision. The procedure allows surgeons to target problem areas while minimizing disruption to surrounding muscles and tissues.

"This technique gives us access to areas that can be difficult to reach with traditional techniques," says Dr. Dian.

The procedure is performed under general anesthesia and lasts around 60 to 90 minutes.

Patients who may benefit include those with lumbar foraminal stenosis, disc herniations, and certain thoracic disc conditions.

Most patients go home the same day. Because the incision is small, recovery is often quicker and less painful than with traditional open surgery.

"Many patients experience significant pain relief and can return to their normal activities much sooner," says Dr. Dian.

To learn whether endoscopic spine surgery may be right for you, visit NebraskaMed.com/Spine.

Rolling the Dice on Brain Health at Fan Fest

by Laura Boese



Dr. William Thorell, Ashlee Portelli and Laura Boese enjoy Fan Fest 2026.

On Saturday, September 19, Dr. William Thorell, Ashlee Portelli, and Laura Boese spent the day at Fan Fest at the Hawks Championship Center in Lincoln, representing Neurology and Neurosurgery at Nebraska Medicine's community engagement booth. Visitors enjoyed participating in a fun dice game while learning more about neurological and neurosurgical care.

Since partnering with the University of Nebraska-Lincoln Athletics Department in 2024, Nebraska Medicine has continued to expand its presence at campus and community events. At Fan Fest, the team shared wellness information, distributed giveaways, and provided attendees with the unique opportunity to connect directly with a physician and learn more about the services available through Nebraska Medicine. The event offered a valuable opportunity to engage with the community and promote health and wellness in a fun, interactive setting.



Frank Mezzacappa, MD

Mezzacappa Joins Neurosurgery

The Department of Neurosurgery welcomes Frank Mezzacappa, MD, to the practice. His clinical expertise is focused on the comprehensive surgical management of benign and malignant tumors of the brain, skull base, and related intracranial structures. His practice encompasses primary and metastatic brain tumors, as well as complex skull base neoplasms requiring specialized surgical expertise and individualized operative strategies. His approach to neurosurgical oncology emphasizes maximal safe resection, preservation of neurological function, minimally invasive access when appropriate, and multidisciplinary integration to provide individualized, evidence-based care for patients with complex brain and skull base tumors.

He has expertise in awake craniotomy and functional mapping for tumors involving or adjacent to eloquent cortical and subcortical regions. These techniques allow real-time assessment of language, motor, sensory, and cognitive function to maximize tumor removal while minimizing neurological morbidity.

Additionally, for appropriately selected skull base tumors, he utilizes endoscopic endonasal approaches, including expanded approaches to the anterior and central skull base. These minimally invasive techniques provide direct access to complex pathology while minimizing brain retraction and facilitating effective tumor removal and reconstruction.

His practice also incorporates contemporary open microsurgical and minimally invasive techniques, with an emphasis on meticulous tumor-brain and tumor-neurovascular interface dissection and preservation of critical neural and vascular structures.

In addition to his subspecialty practice in neurosurgical oncology, he routinely cares for patients with a broad range of general neurosurgical conditions, including degenerative spine disease, normal pressure hydrocephalus, facial pain and hemifacial spasm, Chiari malformation, and neurosurgical trauma, among others. His overall approach emphasizes individualized, evidence-based care in all cases, regardless of pathology. To schedule an appointment with Dr. Mezzacappa, call 1-800-922-0000.



Jieqiong Wang, PhD

Wang Wins the UNMC New Investigator Award

by Shari Griffin

Jieqiong Wang, PhD, will receive a New Investigator Award on October 29 as part of UNMC's 2026 Scientist Laureate and Research Awards ceremony.

The New Investigator Award recognizes outstanding University of Nebraska Medical Center scientists who have secured their first independent national research funding and demonstrated scholarly achievement through publications and presentations.

Dr. Wang, an assistant professor in the Department of Neurological Sciences in the UNMC College of Medicine, joined UNMC in 2023. Originally from Xiangyang, China, her research combines artificial intelligence, medical imaging and clinical informatics. She develops AI tools that uncover hidden patterns in medical images and link them to clinical outcomes, helping clinicians detect disease earlier, track progression more precisely, and better predict patient outcomes. Her work aims to advance personalized care by making medical imaging a more powerful and informative tool for patient treatment.

Congratulations, Dr. Wang!



Mithun Sattur, MBBS; William Thorell, MD, Chief of Neurosurgery; Daniel Surdell, MD; and Nicholas Borg, MD

A Neurovascular Partner for Your Most Complex Patients

by Moments in Medicine – September 3, 2026

When a patient is diagnosed with a cerebral aneurysm – or arrives in crisis following a subarachnoid hemorrhage – you need a referral partner that can respond at any hour with the full spectrum of neurovascular expertise.

A PROGRAM BUILT FOR THE REGION

Nebraska Medicine offers Nebraska's only Joint Commission Certified Comprehensive Stroke Center.

"Our role is to help this region," says neurosurgeon Daniel Surdell, MD. "We try to be a helpful resource, and in that, offer consistency."

That consistency is structural. The neurosurgery team – Daniel Surdell, MD; William Thorell, MD; Nicholas Borg, MD; and Mithun Sattur, MBBS – provides attending-level coverage around the clock, so a colleague is always available for complex or demanding cases.

The program is also mission-driven in an explicit way. "We are committed to providing excellent service to the patient, educating the next generation and innovating," Dr. Surdell says.

FULL-SPECTRUM ANEURYSM TREATMENT

The neurosurgery team's experience spans the full range of treatment options, including:

Coil embolization: Soft platinum microcoils are deployed via catheter to occlude the aneurysm sac. Advances in catheter technology and microcatheter stability now allow precise treatment of aneurysms in the 3 mm to 5 mm range.

Balloon- and stent-assisted coiling: Remodeling techniques for wide-necked aneurysms that would otherwise be poor candidates for coiling alone.

Flow diversion: Devices deployed intraluminally to redirect flow and promote aneurysm occlusion via neointimal remodeling across the aneurysm neck.

Open microsurgical clipping: Available for aneurysms where endovascular approaches are precluded by morphology – including wide-necked aneurysms with branch vessels arising from the neck – or where surgical durability is a primary consideration in younger patients.

"We try to go into it with a very thoughtful approach – what we think would be best for your patient," Dr. Surdell says. "It's a discussion and an agreement. Here are our options, and what's

best – and we individualize the care, patient to patient."

THE MACHINERY BEHIND EVERY CASE

Dr. Surdell is quick to describe the program as more than its surgeons.

"I think of it as this enormous machinery for your patient's success," he says.

That machinery includes a neurocritical care team he describes as exceptional at moment-to-moment monitoring of aneurysm and stroke patients.

"I can't tell you how much the experience in the ICU translates into timely intervention when there's a problem," Dr. Surdell says.

Advanced practice providers with deep subspecialty knowledge staff the clinic and pay close attention to detail. Stroke coordinators, floor nurses, and rehabilitation therapists round out a team that Dr. Surdell says is oriented around one goal.

"We want the patient to have a good experience and a good outcome," he says.

SUBARACHNOID HEMORRHAGE CARE

The center is equipped to manage the full clinical course of aneurysmal subarachnoid hemorrhage. Upon transfer or presentation, the care pathway includes:

- Emergent imaging and diagnosis
- CSF diversion for hydrocephalus when indicated
- Aneurysm securement guided by clinical grade and time from ictus
- Post-SAH neurocritical care, including electrolyte management and vasospasm monitoring and treatment
- Daily cerebrovascular ultrasound
- Monitoring for subclinical seizure activity
- Early rehabilitation assessment

The intensive SAH monitoring period typically spans two to three weeks and may include hydrocephalus management, vasospasm monitoring, electrolyte stabilization, and CSF drain weaning.

INCIDENTAL ANEURYSM MANAGEMENT

The neurovascular clinic sees a high volume of patients with incidentally discovered aneurysms. Treatment versus surveillance decisions are individualized based on aneurysm size, morphology, location, patient age and rupture risk data.

"For an older patient with a small aneurysm, five-year rupture risk data may mean more than it does for a younger patient with decades of life expectancy ahead," Dr. Surdell says. "It's a very personal discussion."

ACADEMIC MEDICAL CENTER ADVANTAGE

The program's training mission, Dr. Surdell says, is an advantage for patients – not a caveat.

"We are picking some of the most brilliant people to be our assistants, our helpers, our colleagues. They're learning from us and we're learning from them. That's another set of eyes looking over things."

Neurosurgery residents and fellows – many with six to seven years of specialty training – participate in patient care under direct attending supervision. The program also participates in clinical trials in the endovascular space, enabling access to emerging devices and helping to advance the field.

Referrals

The Nebraska Medicine Stroke and Neurovascular Center accepts transfers and referrals 24/7. The team is available for consultation on complex or emergent cases and welcomes direct communication with referring providers.

For referrals or additional information, email **physicianoutreach@nebraskamed.com** or call 402.559.2500.

UNMC Brings EMS Professionals to Omaha for Training

by Noah Snook, iEXCEL Program

THE CLOCK IS TICKING.

A medical emergency is unfolding, and a room full of EMS professionals fight against time to recognize not just what is happening, but also how to diagnose their patient. They have experienced emergencies like this one plenty of times, only this time is different.

It isn't real. It's an escape room.

This scenario was one of several immersive learning experiences at the 2026 Active EMS Symposium at UNMC, designed to give emergency medical services professionals an opportunity to put their skills to work in realistic situations while learning from experts from around the state.

The escape room itself was about more than simply solving a series of challenges. Nichole Cooks, a stroke coordinator at Nebraska Medicine, led the charge in planning the EMS escape room.

"From the escape room itself, I hope that they're taking away how to recognize a hemorrhagic stroke early and how to identify when they need to take them to a higher level of care," Cooks said.

Cooks will also play a major role at the upcoming Statewide Stroke Conference, taking place across four UNMC campuses simultaneously on September 18. Like the conference, the Activate EMS Symposium is part of an effort to make healthcare education more accessible across Nebraska, where resources can be more limited in rural communities.

Scott Muldoon, a physician outreach liaison at Nebraska Medicine and one of the organizers of the symposium, said the event also serves as an opportunity to give back to the EMS professionals who are saving lives across the state.

"As a teaching hospital, we see folks coming from all over Nebraska get treatment," Muldoon said. "We thought it was an opportunity to get them here in Omaha to see some of our center, get to know the folks that they work with every day … and kind of give back."

For EMS professionals in rural areas, access to specialized education can be difficult, Muldoon said, adding that while other EMS events offer hands-on training, iEXCEL has resources that many EMS professionals will not encounter in their everyday work.

"There are some great hands-on sessions and use of mannequins and things like that," Muldoon said. "It is an opportunity for us to not only get them on our own campus, to show off some of the things that we have, but to give them … a hands-on experience that they're not getting at some of these other events."

The iEXCEL program at UNMC is housed at the Davis Global Center and is home to countless state-of-the-art technologies that are advancing approaches to healthcare education.

As more departments become involved and EMS professionals from across Nebraska take interest in the symposium, organizers hope to continue building on its momentum. As the third annual symposium, this year's attendance and participation was the best yet, and as the numbers continue to climb, so too does the impact it has on these EMS professionals.



An attendee at the Activate EMS Symposium uses a desktop VR tool.



Subin Mathew, MBBS, MD, FAAN, Miguel Situ-Kcomt, MD, FAAN and Miki Katzier, MD.

Celebrating New Associate Professors in the Department of Neurological Sciences

by Shari Griffin

The Department of Neurological Sciences at the University of Nebraska Medical Center proudly congratulates Drs. Miki Katzir, Subin Mathew, and Miguel Situ-Kcomt on their recent promotions to Associate Professor.

This significant academic achievement recognizes their dedication to excellence in patient care, education, research, and service. Each has made meaningful contributions to the Department and to the broader neurological sciences community, helping advance our mission of improving the lives of patients while educating the next generation of health care professionals.

Promotion to Associate Professor is an important milestone in an academic career and reflects years of hard work, leadership, scholarship, and commitment to the field. Drs. Katzir, Mathew, and Situ-Kcomt have demonstrated these qualities through their ongoing contributions to UNMC, Nebraska Medicine, their colleagues, learners, and the patients they serve.

Please join the Department of Neurological Sciences to congratulate Drs. Katzir, Mathew, and Situ-Kcomt on this well-deserved accomplishment. We are proud to celebrate their achievements and look forward to the continued impact they will make in the years ahead.

Congratulations, Drs. Katzir, Mathew, and Situ-Kcomt, on your well-deserved promotions to Associate Professor!



The Neurology Nurses Team

Coming Together: Celebrating Our Neurology Nurses

by Laura Boese

Recently, the Department of Neurological Sciences nursing staff had the opportunity to bring all our neurology nurses together for an in-person engagement event. As our Neurology department continues to grow, both in faculty and across multiple clinic locations, creating opportunities for connection has become increasingly important.

This was the first time many of our nurses had gathered in one space since the pandemic. With staffing changes and new team members joining the department, the event provided a meaningful opportunity to reconnect, strengthen relationships, and build a foundation of support across the nursing team.

It was truly an honor to spend time with such an exceptional group of nurses and celebrate the outstanding work being done every day throughout our department. The dedication, compassion, and expertise demonstrated by this team continue to make a profound impact on the patients and families we serve.

UNMC Researchers Study Novel Treatment for Emotional Distress Related to Serious Illness

by Kelsey Noble, DO



Researchers at the University of Nebraska Medical Center are participating in a national clinical trial investigating a novel approach to help people experiencing significant emotional distress related to serious diagnoses, including amyotrophic lateral sclerosis (ALS), multiple sclerosis (MS), Parkinson's disease (PD) or cancer.

The REKINDLE study is evaluating luvesilocin, an investigational medication designed to produce psychedelic effects similar to those typically associated with psilocybin. The Phase 2 study examines whether a single dose of luvesilocin can safely and effectively reduce symptoms of adjustment disorder, which may include anxiety, depression and difficulty coping following a life-changing diagnosis.

A serious medical diagnosis can affect every aspect of a person's life. While feelings of fear, sadness and anxiety are common after a diagnosis, some individuals experience symptoms that are more persistent and significantly interfere with their daily lives. Adjustment disorder is a recognized mental health condition that can develop in response to major life stressors, including serious illness. There are currently no FDA-approved medications specifically for adjustment disorder.

At UNMC, the REKINDLE study is led by Dr. Kelsey Noble in the Division of Geriatrics, Gerontology and Palliative Medicine. Participation in REKINDLE builds on UNMC's growing involvement in psychedelic research and commitment to advancing evidence-based approaches to supporting patients facing serious illness.

REKINDLE is now enrolling adults ages 19 to 80 who have been diagnosed with ALS, MS, Parkinson's disease, pulmonary fibrosis or cancer. Participants are followed for six weeks after treatment to evaluate changes in mood, symptoms, and quality of life.

Luvesilocin is being studied as a shorter-acting psychedelic medicine, with the goal of investigating whether its effects can be delivered within a relatively brief treatment session. The study is part of a broader effort to understand whether psychedelic medicines can address the psychological and emotional challenges associated with serious illness.

To learn more about the REKINDLE study at UNMC, please visit the links below or scan the QR Code:

Study Website: www.rekindlestudies.com

ClinicalTrials.gov: https://clinicaltrials.gov/study/NCT07002034

Study Team Contact: Dr. Kelsey Noble
kenoble@unmc.edu

Drs. Miguel Situ and Subin Mathew Named Fellows of the American Academy of Neurology

by Shari Griffin



Miguel Situ-Kcomt, MD, FAAN and Subin Mathew, MD, MBBS, FAAN

Miguel Situ-Kcomt, MD, and Subin Mathew, MD, have been named Fellows of the American Academy of Neurology (AAN), recognizing their accomplishments and contributions to the field of neurology.

Dr. Situ, Program Director for Movement Disorders, is a specialist in movement disorders with a strong commitment to medical student education and mentorship. Dr. Situ is also the recipient of various teacher awards.

Dr. Mathew, a neurointensivist, serves as Program Director of the Neurocritical Care Fellowship and Director of Academic Affairs in the Department of Neurology. He has contributed extensively to the education and mentorship of medical students, residents, and fellows and currently serves as President of the Nebraska Neurological Society.

This distinction recognizes their continued commitment to advancing neurological care, education, leadership, and academic medicine.

Congratulations to Drs. Mathew and Situ on this well-deserved recognition.

Emergency Neurological Life Support, A Course Strengthening the Multidisciplinary Care of Critically Ill Neurologic Patients

By Monica Johnson, MD

On June 5, 2026, a group of 12 participants gathered at the Davis Global Center to take part in a multidisciplinary Emergency Neurological Life Support (ENLS) course designed to improve the care of critically ill neurological patients. The group consisted of residents from the Departments of Neurological Sciences and Emergency Medicine, advanced practice providers (APPs), two APP fellows from the Surgical Critical Care Program, and an attending physician.

Together, the participants completed several in-person didactic modules focused on the first hour of management for comatose patients, intracerebral hemorrhage, subarachnoid hemorrhage, intracranial hypertension, brain herniation, and other neurological emergencies. Lectures were delivered by members of our Neurocritical Care Division, including Monica Johnson, MD, Steven Phillips, DO, Subin Mathew, MD, and Andrew Brown, MD.

Attendees also had the opportunity to learn about neurocritical care pharmacology from critical care pharmacist Scott Coleman, PharmD, BCCCP. Interactive discussions centered on real-world scenarios helped the group better understand the emergent care and stabilization of patients in the emergency department and Neurosciences ICU. Participants then applied their knowledge during four simulation sessions, assisted by high-fidelity mannequins and the Davis Global Center staff.

We would like to thank the Department of Neurological Sciences for making this course possible. We are also exploring opportunities to offer the course on an ongoing basis to continue enhancing interdisciplinary neurological emergency care education.



Rainbow Trout and kids learn how to make balloon art.

Summer Meet & Greet Picnic Welcomes New Faculty, Residents, and Fellows

by Shari Griffin

The Department of Neurological Sciences held its annual Summer Meet & Greet Picnic on Saturday, August 22, at the Elmwood Park Pavilion in Omaha.

Pleasure Your Palate catered the event, serving tacos and all the fixings for everyone to enjoy. The festivities also included a visit from Rainbow Trout, who entertained the children with fun face painting and balloon art.

The annual picnic provides a wonderful opportunity to welcome new faculty members, residents, and fellows to the Department of Neurological Sciences and give them a chance to connect with colleagues in a relaxed and festive setting. It was a great summer afternoon filled with food, fun, and fellowship!

Toy Drive for Ukrainian Children Gears Up

by Shari Griffin

UNMC COMMUNITY INVITED TO SUPPORT TOY DRIVE FOR UKRAINIAN CHILDREN



The University of Nebraska Medical Center Office of Global Engagement is once again bringing the campus community together to support children in Ukraine through its annual Toy Drive for Ukrainian Children. Running from October 1, 2026, through January 15, 2027, the initiative aims to collect toys and gifts that will help bring joy and comfort to children affected by the ongoing challenges in their country.

The toy drive provides faculty, staff, students, and community members with an opportunity to make a meaningful difference during the holiday season. Donations will help brighten the lives of children who may otherwise have limited access to holiday gifts and recreational items.

Participants can drop off new toys at designated collection sites across the University of Nebraska system, including:

- Williams Science Hall, Room 2.0.100
- Doctor's Building North, Neurology (2nd Floor)
- College of Nursing, Lincoln Campus

For individuals who are unable to deliver donations in person, the Office of Global Engagement is offering pickup arrangements. Donors can contact Sara Pirtle to coordinate collection of toy donations.

The toy drive is part of UNMC's ongoing humanitarian outreach efforts supporting Ukraine and its people. Organizers hope the campaign will provide children with moments of happiness, hope, and normalcy during a difficult time.

Community members are encouraged to participate by donating age-appropriate toys and gifts. A list of suggested donations and additional information about UNMC's Ukraine relief efforts is available through the event's QR code and promotional materials.

As the holiday season approaches, the Toy Drive for Ukrainian Children serves as a reminder that even small acts of generosity can have a lasting impact. Through the collective support of the UNMC community, children thousands of miles away can experience the joy and excitement of receiving a special gift during the holidays.

For more information or to arrange a donation pickup, contact the UNMC Office of Global Engagement 402-559-4517 or email them at global@unmc.edu.

Publications & Grants

PUBLICATIONS

Neurological Sciences

Anna E. Croghan, Rachel Churchill, Benjamin L. Brett, Daniel L. Huber, Jaroslaw Harezlak, Jessica M. Gill, Paul Pasquina, Steven P. Broglio, Thomas W. McAllister, Michael A. McCrea, Timothy B. Meier, CARE Consortium Investigators (2026) Reliable Change of Blood-Based Biomarkers Following Acute Sport-Related Concussion: A CARE Consortium Study. https://doi.org/10.1007/s40279-026-02479-4

Mathias Maisenbacher, Ola Alshaqi, Xiaohan Peng, Cindy Schmidt, Mariano Uberti, **Vaishali Phatak, Olga Taraschendko**, Cognitive-metabolic relationship in temporal lobe epilepsy: A systematic review (2026) https://doi.org/10.1016/j.yebeh.2026.111224

Neurosurgery

Vishnu Achyuth Suresh, Siddharth Srinivasan, Patrick J. Opperman, Sara E. Wattier, **Daniel L. Surdell, William E. Thorell, Mithun Sattur, Nicholas Borg**. Slit ventricles in idiopathic intracranial hypertension appear to expand after venous sinus stenting: a volumetric analysis. PMID: 42336641 https://doi.org/10.1136/jnis-2026-025625

GRANTS

Neurological Sciences

The Great Plains IDeA Clinical and Translational Research Network has received more than $25 million from the National Institutes of Health for its next five years of work, launching our third grant cycle with an expanded focus on multisite translational science, health system integration, and regional and national research partnerships.

Jieqiong Wang, PhD, has been awarded a two-year R03 grant from the National Cancer Institute (NCI) as MPI ($307,000; 2026-2028). The project will develop an advanced AI framework to subtype pediatric T-ALL based on Gabriella Miller Kids First Pediatric Research Data.

Jieqiong Wang, PhD, neurological sciences, receive a grant of $1,569,867 from the NSF as MPI for the study "Combine AI, multi-omics, and advanced crop science to develop data-driven approaches for understanding and improving crop resilience.

Jieqiong Wang, PhD, received a grant of $50,000 from CHRI AI grant as PI for the study to develop an accurate multi-scale fetal maturation age (FMAge) framework using large-scale datasets and validate the clinical utility of FMAge in identifying congenital heart disease.

Jieqiong Wang, PhD, neurological sciences, received a grant of $402,938 from the Nebraska DHHS/NIH/NIAAA for the study "Unveiling Adolescent BNST Development with Deep Learning: Implications for Alcohol Use and Negative Affect."

Neurosurgery

Mithun Sattur, MBBS, neurosurgery, received a grant of $60,176 from DHHS/NIH/NINDS for the "Minimally Invasive Neuroendoscopic Ultra-Early Targeted ICH Evacuation Trial."

Afshin Salehi, MD, neurosurgery, received a grant of $65,000 from the Nebraska DHHS – LB506 to study peptide-targeted gold nanorods to enhance laser interstitial thermal therapy for glioma.



Emily Tiensvold

Ways to Support Neurosciences

by Emily Tiensvold

These accomplishments depend on the shared commitment of our patients, families, faculty, staff, trainees, partners, and supporters.

We are committed to providing the best treatment available today, as well as pioneering new therapies for the future. Our team of internationally recognized physicians and researchers is dedicated to saving lives, relieving suffering, and reducing the terrible impact of neurological disease on our patients, families and community.

Private donations play a critical role in advancing our state-of-the-art research, treatment, education, and patient care programs. Whether you would like to support patient care, research in a particular disease area, or the education of our next generation of doctors and scientists, your charitable gift can be directed to a project or topic that is most meaningful to you.

Gifts can be directed to any fund of your choice, or you can talk to Emily Tiensvold with the University of Nebraska Foundation about a donation to your area of special interest: emily.tiensvold@nufoundation.org

University of Nebraska Medical Center
Department of Neurological Sciences
988440 Nebraska Medical Center
Omaha, NE 68198-8440

If you have any news or upcoming events that you would like featured in the next edition of the *NeuroNExT* newsletter, please send the information to shgriffin@unmc.edu

University of Nebraska Medical Center

FOLLOW US AT

Department of Neurological Sciences

unmc.edu/neurologicalsciences

@UNMC_neurology

Department of Neurosurgery

unmc.edu/neurosurgery

@UNMC_neurosurg