FREDERICK P. WHIDDON COLLEGE OF MEDICINE
UNIVERSITY OF SOUTH ALABAMA

Med School Watercooler

Friday, July 12, 2024

USA scientist receives $300,000 grant for Alzheimer's pilot study

A researcher at the University of South Alabama Frederick P. Whiddon College of Medicine recently received a $300,000 grant from the Coins for Alzheimer's Research Trust (CART).

Rob Funderburk, CART president, and Gary Goforth, M.D., vice president for grants, present Amy R. Nelson, Ph.D., with the award.

Amy R. Nelson, Ph.D., an assistant professor of physiology and cell biology, accepted the award at the CART 2024 annual board meeting in Columbia, South Carolina, where she and other awarded scientists gave presentations about their research.

The award will support Nelson's lab to begin a new pilot study on a highly understudied protein known as caldesmon. Caldesmon is a protein that limits cells from contracting. The lab team preliminarily found that the levels of caldesmon are reduced in brain pericytes in brain tissue from Alzheimer's disease patients. Pericytes and vascular smooth muscle cells, collectively known as mural cells, cover endothelial cells that form the inner lining of blood vessels. Pericytes regulate blood flow in the brain and are essential in maintaining the blood-brain barrier.

It is known that there is reduced blood flow and a loss of pericytes in the brain in Alzheimer's disease, but why this happens remains to be determined and is the focus of Nelson's project.

"We aim to conclusively determine whether the levels of pericyte caldesmon are reduced in Alzheimer's disease brain, and the functional consequence of caldesmon being reduced in experimental models," Nelson said.

Named the John Trojanowski Memorial Grant, the award honors the late John Quinn Trojanowski, M.D., Ph.D., an American academic research neuroscientist specializing in neurodegeneration. He and his partner, Virginia Man-Yee Lee, MBA, Ph.D., are noted for identifying the roles of three proteins in neurodegenerative diseases: tau in Alzheimer's disease, alpha-synuclein in Parkinson's disease, and TDP-43 in Amyotrophic Lateral Sclerosis (ALS) and frontotemporal degeneration.

"Receiving this award from the Coins for Alzheimer's Research Trust named after Dr. John Trojanowski was a bittersweet moment for me because I had the fortune of meeting and collaborating with Dr. Trojanowski and Dr. Lee," Nelson said. "I

admire their scientific contributions on neurodegenerative diseases and look up to them as role models."


Amy R. Nelson, Ph.D., attends a dinner with CART board members.

At a reception preceding the annual board meeting, Nelson had the opportunity to meet CART volunteers and Rotary Club members who support grants related to Alzheimer's disease. "These are individuals whose lives have been touched by this horrible disease, and they put a substantial amount of effort into raising funds towards a cure for Alzheimer's disease," she said.

One such individual is "Larry from Cary." Larry Kingsley is a musician who plays his trumpet in downtown Cary, North Carolina, six days a week to raise funds for CART.

"It means so much to me that people like Larry are supporting our work and my lab," she said. "I hope our findings will reveal new potential mechanisms of and a novel therapeutic target for Alzheimer's disease."

In 1995, the Sumter Rotary Club in South Carolina initiated the effort to prove that Rotarians voluntarily emptying their pockets of change for a good cause could produce significant levels of funds to support Alzheimer's disease research. The CART Fund was the name given to the project. Today, the trust is supported by nearly 400 Rotary Clubs across the United States.

For more information about Coins for Alzheimer's Research Trust, visit www.cartfund.org.

Posted by Med School Watercooler at 8:00 AM

Thursday, July 11, 2024

Medical students teach campers lessons in STEM and life

Whiddon College of Medicine students led a Mini Medical School summer camp for kids in the Alabama School of Mathematics and Science's STEM Leadership Academy.

Local middle school students had the opportunity to attend a summer camp that not only introduced them to the field of medicine but also taught them some important life lessons. The Alabama School of Mathematics and Science (ASMS)

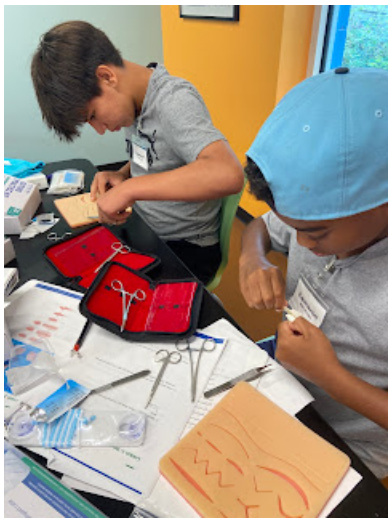
hosts the camp, called Mini Medical School, each summer as part of its STEM Leadership Academy.

This year, second-year medical students Grace Sekaya, Jade Crabtree and Noel Godang coordinated two one-week sessions of the camp for rising seventh- through ninth-graders. Numerous faculty and staff from the Whiddon College of Medicine also contributed to the camp's success.

Godang, who graduated from ASMS in 2019, had previously volunteered with the school's summer camps. He enjoyed leading the Mini Medical School this year with his classmates Sekaya and Crabtree, he said.

"These kids are incredibly bright. It was a fun opportunity to expose the next generation to different fields in healthcare, especially medicine, and get their gears turning into a possible future career," Godang said. "The students were always engaged, and their curiosity shined throughout the week at camp. They got to experience different simulations and thoroughly enjoyed our simulation of what to do when a patient codes and having to do CPR as a team."

Campers were introduced to learning how to suture, patient-centered interviewing skills, steps to formulating a diagnosis, understanding X-rays and ultrasound, and a special panel exploring the world of healthcare. During field trips to the Whiddon College of Medicine, they had the chance to tour the medical school, participate in a simulation lab, engage in an ultrasound class designed just for them, and attend a panel with the admissions team.


Campers practice their suturing techniques.

While the camp focused on exposing the students to STEM subjects and the field of medicine, Sekaya said, "more than that, it allowed a space for each camper to hopefully learn some important lessons to carry no matter where their heart leads them later in life."

One of the many lessons learned in medical school is "the beauty of being comfortable with being uncomfortable," she said. "Camp exposed the kids to complex science that they may have not yet been exposed to, big words that they sometimes could not utter back, working with other team members that they may not have talked to if not paired, and much more."

"We gave them a small insight into medical school, but overall what I got out of it the most was seeing the growth of confidence in each camper each day as they pushed through the uncomfortable – whether through case presentations or 'seeing a patient' and becoming more OK with saying 'I don't know' sometimes," she added. "To me, those can be the most valuable lessons taken away in the end."

Sekaya said the Mini Medical School would not have been possible without the support of fellow medical student volunteers; the Whiddon COM admissions team; the USA simulation lab team; and Vaughn Lee, Ph.D., and Greg Brower, DVM, Ph.D., both professors of medical education. She also acknowledged panel participants T.J. Hundley, M.D., associate dean for medical education; Maryann Mbaka, M.D., assistant professor of surgery; Yun Coronado, M.D., assistant professor of internal medicine; and Carey Johnson, M.D., pediatrics resident.

View more photos from the Mini Medical School summer camp.

Students learn how to perform CPR in the simulation lab.

Posted by Med School Watercooler at 10:49 AM

Monday, July 8, 2024

Whiddon COM employees participate in staff retreat


Staff members in the Whiddon College of Medicine participate in a team-building retreat.

The Whiddon College of Medicine finance and administration staff recently participated in a retreat that fostered interpersonal engagement, team building, and motivation for a positive and productive work environment.

The retreat was promoted by Maya Mirzoeva, MBA, associate dean of finance and administration. Marcina Lang, MPA, manager of COM support services,

coordinated the activities and presentations for the day, with support from Amanda Arnold, education and training specialist.

Binata Mukherjee, M.D., MBA, assistant dean of faculty and professional development, administered the Kolb Experiential Learning Profile assessment to the staff and discussed with the team how each individual's learning profile contributes to an effective work group.

Participants commented in a post-event review that the staff retreat was very useful time spent engaging with the team.

Posted by Med School Watercooler at 12:22 PM

Pathology celebrates graduating residents, research symposium winners announced

Current pathology residents welcome the incoming residents.

The USA Department of Pathology celebrated its graduating class of residents on June 13, at the Faculty Club on USA's campus. The Class of 2024 residents and where they will be completing fellowships:

- Mohamed Masoud, M.D.
  Hematopathology fellowship at University of Alabama in Birmingham
- Yusuf Ozcelik, M.D.
  Surgical pathology fellowship at University of Pennsylvania in Philadelphia
- Travis Berry, D.O. (October 2024)
  GI fellowship at University of South Carolina, Charleston

The department welcomed three new residents to the residency program. The Class of 2028 residents and where they received their medical degrees:

- Maha Babker, M.D.
  University of Bahri College of Medicine, Sudan
- Huseyin Kilic, M.D.
  University of Health Sciences Gulhane Faculty of Medicine, Turkey
- Ardenne Martin, M.D.
  Louisiana State University School of Medicine, New Orleans

Guillermo Herrera, M.D., chair of pathology, welcomes the new class of residents, from left, Maha Babker, M.D.; Huseyin Kilic, M.D.; and Ardenne Martin, M.D.

Additionally, 13 residents competed in the Fifth Annual Allan Tucker Pathology Resident Research Symposium. The presentations were evaluated by a committee of judges, and winners were announced at the resident graduation party.

This year's winners were:

- First place: Muhammad Tahir, M.D.
  "Subtype- and Race-Specific Disparities in Immune Microenvironment of Breast Cancer"
- Second place: Charu Shastri, M.D.
  "Racial Disparity in Clinico-Pathological Spectrum of Incidental Prostate Cancer Diagnosed Following Transurethral Resection of Prostate (TURP): Observations from a Single Tertiary Care Center"
- Third place: Lingling Xian, M.D., Ph.D.
  "Increased SMAD4 Genomic Alterations and Downregulated Protein Expression Driving Aggressiveness Among Young Colorectal Cancer Patients"

The winners received book allowances of up to $400 for first place, $300 for second place, and $200 for third place.

Muhammad Tahir, M.D., received first place at the resident research symposium.

Serving as judges at the forum were Nestor Dela Cruz, M.D., clinical pathologist and associate professor; Santanu Dasgupta, Ph.D., assistant professor, head of the Mitochondria Research Laboratory, and member of the Cancer Biology Program at the Mitchell Cancer Institute; and Elba A.Turbat-Herrera, M.D., professor, director of pathological services at the Mitchell Cancer Institute, and director of the USA Health Biobank.

The symposium is named in honor of the late J. Allan Tucker Jr., M.D., who served as the Louise Lenoir Locke Professor and Chair of Pathology as well as the director of anatomic pathology.