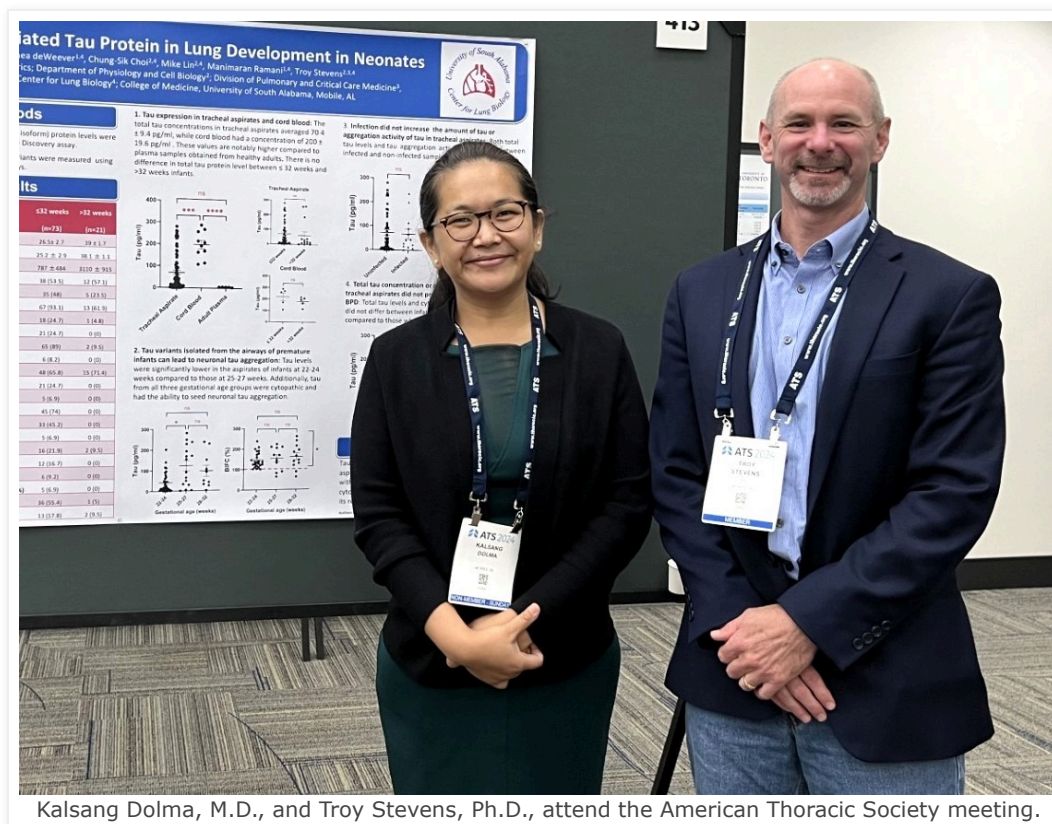


# Med School Watercooler

NEWS FROM FREDERICK P. WHIDDON COLLEGE OF MEDICINE  
AT THE UNIVERSITY OF SOUTH ALABAMA

Thursday, June 13, 2024

## Dolma shares research on premature infants at two conferences



Kalsang Dolma, M.D., and Troy Stevens, Ph.D., attend the American Thoracic Society meeting.

How spending time in a small baby unit impacts extremely premature infants was one of three research topics presented by a Whiddon College of Medicine faculty member during an international conference in Toronto.

Kalsang Dolma, M.D., an assistant professor of pediatrics, presented a total of four papers on recent research conducted at USA Health Children's & Women's Hospital at two conferences this spring.

Dolma attended the Pediatric Academic Society meeting in Toronto where she shared information during three poster presentations. They were:

- Outcomes of Periviable Infants with Birthweight less than 400 grams: A Single Center Study
- Trends in Survival and Neurodevelopmental Outcomes of Periviable Infants: A Single Center Study
- Effect of the Development of a Small Baby Unit on Neonatal Mortality and Morbidity in  $\leq 28$  Weeks' Gestation

Periviable births are typically defined as births occurring from 20 weeks and seven days gestation through 25 weeks and 6 of 7 days gestation.

Medical student Hope Lund was the first author on the poster describing outcomes in the small baby unit at Children's & Women's Hospital, while Dolma was the senior author on the paper. Because Lund was unable to attend, Dolma presented the poster.

In 2019, Children's & Women's opened a small baby unit within the neonatal intensive care unit at the hospital. Previous research showed babies born before 28 weeks' gestation or weighing less than 1,000 grams have better health outcomes in a program where a specially trained team provides around the clock care.

The new study on the effects of the development of a small baby unit on neonatal mortality and morbidity showed that constant care by a dedicated small baby unit team in a distinct unit decreases hypothermia during admission and bronchopulmonary dysplasia (BPD), a chronic lung disease that can cause long-term breathing problems.

Later in May, Dolma attended the American Thoracic Society meeting in San Deigo where she presented a poster discussion on the role of microtubule-associated tau protein in lung development in neonates.

Posted by [Med School Watercooler](#) at [1:25 PM](#)



## Medical student presents research at international MS conference

Qays Aljabi, a rising third-year medical student, recently presented research at The Consortium of Multiple Sclerosis Centers' (CMSC) 38th Annual Meeting in Nashville, Tennessee.

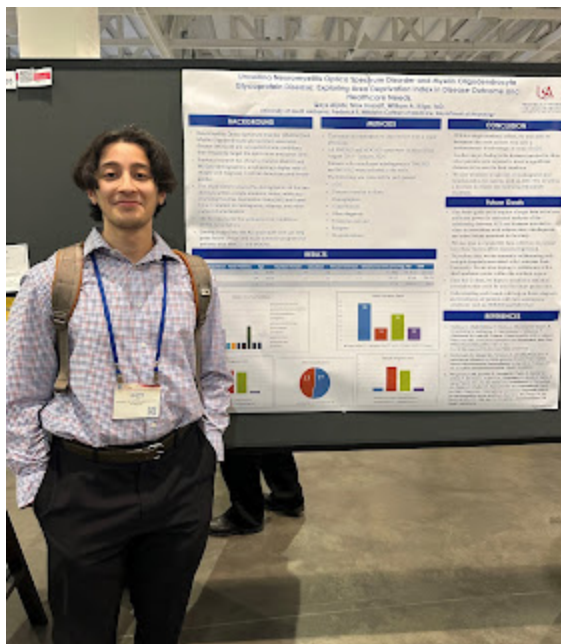
His poster presentation examined two rare autoimmune diseases that frequently target the optic nerve and spinal cord.

"The goal of the project is to examine the healthcare disparities and distance to clinic in connection to disease outcome, relapse rates, and other factors," Aljabi said. "We saw that the majority of patients with those two rare diseases are disadvantaged in terms of living conditions, and the average distance traveled to clinic was over 70 miles for each visit.

"So by looking into the connection of those two factors, we are hoping to find any correlation between how far the disease has progressed for patients who need to

travel a longer distance compared to those who do not. The same applies for patients living in disadvantaged areas compared to patients who do not."

Aljabi conducted this research with William Kilgo, M.D., a neurologist with USA Health who specializes in MS treatment, director of the neurology residency program, and assistant professor of neurology at the Whiddon College of Medicine. He is interested in the field of neuro ophthalmology and has plans to collaborate with other institutions on a multicenter project.



Qays Aljabi exhibits his poster at the CMSC conference.

"Qays has been working with me since then on another project examining health disparities and the characterization of patients we see here at USA with two rare diseases: neuromyelitis optica spectrum disorder (NMOSD) and a similar disease called MOG antibody mediated disease," Kilgo said.

The project has been expanded to collaborate with another medical school to combine patient data.

"This will allow us to get a larger data set that we can get more accurate results from," Aljabi said. "Once the project is done, we are hoping it can serve as a guide for future treatments and care for patients with those two rare autoimmune conditions."

Organized in 1986, CMSC, the [Consortium of Multiple Sclerosis Centers](#), is the leading educational, training, and networking organization for MS healthcare professionals and researchers.

Posted by [Med School Watercooler](#) at [12:59 PM](#)



## USA awarded \$1.43 million, selected as clinical site for dementia study





Amy R. Nelson, Ph.D., assistant professor of physiology and cell biology, examines a brain scan for signs of dementia. She is principal investigator of the Diverse VCID study at USA. Yelitza Rodriguez, Ph.D., is a clinical research specialist.

The University of South Alabama has been selected as a clinical site for a national research study on Alzheimer's disease and other dementias — **Diverse Vascular Contributions to Cognitive Impairment and Dementia**, or Diverse VCID.

The National Institute of Neurological Disorders and Stroke (NINDS), part of the National Institutes of Health, has commissioned a scientific team to design and implement a six-year study of 2,250 Americans from diverse backgrounds in order to understand the role that cerebrovascular disease plays in developing dementia. UC Davis Health, along with UTHHealth Houston, is leading the study.

USA was awarded \$1.43 million in funding over a four-year period to serve as a clinical site for the Diverse VCID study. The award is part of a \$53.6 million grant from the NINDS to UC Davis.

Amy R. Nelson, Ph.D., assistant professor of physiology and cell biology at the Whiddon College of Medicine, is principal investigator of the subcontracted research at the University of South Alabama. Nelson has led the establishment of the **Gulf Coast Alzheimer's Disease Research Center** at USA.

"Alzheimer's disease and related dementias are truly devastating for patients and their caregivers," Nelson said. "Alabama has the third highest mortality rate due to Alzheimer's disease in the country. The disease is becoming more prevalent because our aging population is growing, with an estimated 12.7 million Americans predicted to face this disease by 2050 if new medical breakthroughs to prevent or cure the disease are not discovered."

"Black and Hispanic individuals have a higher prevalence of both vascular diseases and Alzheimer's disease," she added. "Our goal is to understand the links between damage to blood vessels in the brain and memory loss in our local diverse community."

The Diverse VCID study uses advanced brain imaging and blood-based techniques to understand how vascular changes in late life cause brain injury that can lead to cognitive decline. This study will examine the impact of white matter injury on cognitive performance among a diverse population. The researchers are recruiting participants between the ages of 65 and 90 who have noticed changes in their memory or thinking but have not been diagnosed with dementia or experienced a stroke.

As part of the study, participants will visit the research center site two to three times a year for three years; review their medical history and current care plan; complete a memory questionnaire; and receive a medical examination, brain MRI and blood draw. The MRI and testing will be performed at USA Health University Hospital and the Strada Patient Care Center. Participants will help researchers create a risk "scorecard" with data from brain scans, genetics and other key biomarkers.

"We may have insights that indicate a person's risks are very low. Or maybe the person's risks are very high, but there are contributing factors like diabetes or hypertension that we can address," said Charles DeCarli, M.D., principal investigator for the study. DeCarli is a professor of neurology and the director of the UC Davis Alzheimer's Disease Research Center. "We hope that having a risk profile will allow us to modify the risk and potentially prevent or delay the disease."

"I am grateful and excited to have been selected as a clinical research site for this incredibly important study. I am also proud to have founded the Gulf Coast Alzheimer's Disease Center," said Nelson, who noted that these endeavors would not be possible without the support of DeCarli at UC Davis, and administrators, faculty and staff at USA and USA Health. "We now also need the support of our community members of the Gulf Coast Alzheimer's Disease Research Center, and to help to spread the word about this research study. If eligible, we encourage and welcome you to volunteer to participate in this study. Together we can begin to unravel this cruel disease and fight for a world without Alzheimer's."

In addition to Nelson, multiple faculty, staff and students at USA and USA Health are involved in the project: Hanna T. Czarkowska, M.D., assistant professor of neurology; Brett S. Martin, M.D., assistant professor of radiology; Donald Robinson, radiology technician; Benjamin D. Hill, Ph.D., professor of psychology; Allison Bauman, research technologist and lab manager; Yelitza Rodriguez, Ph.D., and Erica Sutherland, clinical trials staff; and psychology Ph.D. students.

Establishment of the study at USA was supported by Troy Stevens, Ph.D., professor and chair of physiology and cell biology; Suzy Figarola, M.D., professor and chair of radiology; and Michael Chang, M.D., chief medical officer for USA Health.

To learn more about the study, visit [diversevcid.ucdavis.edu](https://diversevcid.ucdavis.edu), email [dvcid@southalabama.edu](mailto:dvcid@southalabama.edu), or call 251-460-6834.

Posted by Med School Watercooler at 8:00 AM



**Wednesday, June 12, 2024**

## Medical students present interesting case reports at annual symposium



Medical student Jessica Irvin, with her faculty sponsor Grace Hundley, M.D., took first place at the M3 Case Symposium.

From infectious diseases to various cancers to end-of-life care, 42 medical students at the Whiddon College of Medicine presented a wide range of case studies at the M3 Case Symposium, held June 7 in the Strada Patient Care Center.

Hosted by the Student Assembly, the symposium is an opportunity for rising fourth-year medical students to present posters outlining interesting, rare or novel case studies observed during their third-year rotations.

Five attending physicians judged the posters based on originality, strength of conclusions, quality of references, overall appearance, organization and topic. Medical students Krisha Amin and Walker Phillips planned this year's event.



William Smith discusses his poster with Anne-Marie Kaulfers, M.D., and Benjamin Estrada, M.D.

Jessica Irvin won first place for her poster on the effects of suspected naphthalene ingestion. A 15-month-old boy presented to the emergency department in shock with hemolytic anemia, acute kidney injury, lactic acidosis, and respiratory distress requiring intubation. He also developed difficulty balancing and walking. The cause of illness was unknown until over a week and a half into hospitalization when further history was obtained from the parents.



"They told us that right before the patient got sick, he was seen eating dirt from the yard that was recently treated with a snake pesticide," Irvin said.

Naphthalene is the main ingredient in snake pesticide but is more commonly known as the main ingredient in mothballs. Published case reports of naphthalene toxicity after mothball ingestion describe findings that matched the presentation of the patient.

"This case is interesting because it is the first to identify snake pesticide as a source of naphthalene toxicity," Irvin said. "It is also a great example of the importance of thorough history taking, because we would not have been able to figure out the cause of the patient's illness without the additional history from the parents."

Irvin worked with Grace Hundley, M.D., assistant professor of internal medicine and pediatrics, on her case report presentation. "I feel very grateful for being named the top presenter and for having the opportunity to share such an interesting case with the Whiddon College of Medicine community," she said.

Diana Bucio received second place for her presentation of a pediatric case of stage III nasopharyngeal carcinoma. A 12-year-old girl underwent five months of chemotherapy and radiation before achieving remission. Typically, nasopharyngeal carcinoma is associated with Epstein-Barr virus (EBV), a common virus that most people carry without harm, but in rare cases it can cause genetic changes in cells that make them more likely to become cancerous.

Hamayun Imran, M.D., a pediatric hematologist/oncologist and professor of pediatrics, and Elizabeth Mancini, M.D., professor of pathology, served as Bucio's faculty mentors.

"We chose to present this case because the tumor, when biopsied, was positive for HPV16, a high-risk strain of human papillomavirus that is most commonly associated with causing cervical cancer," Bucio said. "Although her treatment regimen was the same even if it had been EBV-positive, data has shown that the cases of HPV-positive nasopharyngeal carcinoma have better overall prognosis than the more common EBV-positive associated."

Matthew Kelley took third place for his case report on Warthin-like mucoepidermoid carcinoma (MEC), an extremely rare salivary gland tumor, with only 28 reported cases since 2015. The diagnosis was made in a 9-year-old male, the youngest known case to date. This malignant tumor can easily be mistaken for a benign one, posing a risk for inappropriate treatment and follow-up.

Kelley's presentation focused on using histology and fluorescence in situ hybridization (FISH) analysis to differentiate Warthin tumors from Warthin-like MECs. FISH is a lab-based technique used for locating specific DNA sequences, diagnosing genetic diseases, gene mapping, and identifying oncogenes or chromosomal abnormalities contributing to various types of cancers.

Kelley worked with Percy Van Crocker, M.D., an ENT surgeon and assistant professor of pediatrics, on his case report. "Presenting this unique case was especially rewarding given its relevance to the field of ENT, which is the specialty I'm pursuing," Kelley said.

[View more photos from the symposium on Flickr.](#)