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UAMS Gets \$1.3 Million Grant for High School-Focused Tech and Data Science Exposure Program in NWA

FAYETTEVILLE — The University of Arkansas for Medical Sciences (UAMS) has been awarded a \$1.3 million grant from the National Institutes of Health (NIH) for its Arkansas Technology and Data Science in Health and Medicine (AR Tech-DaSH) program.

The five-year grant from the NIH's National Institute of Allergy and Infectious Diseases (NIAID) will support an outreach exposure program focused on technology and data science in health and medicine for high school students, teachers and the community, primarily in Northwest Arkansas.

AR Tech-DaSH will incorporate imaging technologies and a data science curriculum focused on health and medicine in classroom outreach programs, a 10-day summer camp, community outreach events hosted by the high school camp participants serving as science, technology, engineering and mathematics (STEM) ambassadors, and outreach focused on virtual STEM and data science to students and teachers across the state.

"The goal is to get students excited about STEM and data science careers so that the future workforce in these fields better reflects the diverse population in the U.S.," said AR Tech-DaSH program director Kevin D. Phelan, Ph.D., a professor in the Department of Neurobiology and Developmental Sciences in the College of Medicine on the UAMS Northwest Regional Campus.

The program will target underserved and underrepresented students in Northwest Arkansas and will revolve around three major health concerns prevalent in the region — cardiovascular, obesity/diabetes and immunology/cancer.

"Arkansas is a relatively poor, rural state with one of the lowest per capita income and education levels in the country," Phelan said. "It faces the same challenges as other states in trying to prepare for the demands of a properly educated and diverse STEM

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workforce. Arkansas students desperately need early and repeated exposure to STEM and data science to be prepared not only for future careers but also to enable them to make data-driven decisions about lifestyle choices that affect their health."

Visits to ninth-grade classes at schools in both rural and urban districts in Northwest Arkansas will provide students with valuable experience using a variety of medicalrelated technologies, such as stethoscopes, ultrasound, infrared and CT imaging, and data science-focused activities.

A 10-day AR Tech-DaSH camp for 25 students each year will provide an integrated exposure to medical-related skills, clinician-patient simulations, research and case-based discussions of the three primary health concerns. A major focus of the camp is to provide students with an exposure to data science skills (exploratory data analysis, data transformation, data mining and machine learning) using health or medicine-related datasets.

Students who attend the summer camp will be designated as STEM ambassadors and will design and implement outreach events in their local communities with input from community stakeholders. These STEM outreach events will focus on health and medicine and the value of data science in making important life decisions.

Virtual outreach sessions will be provided to rural classrooms across the state. Virtual teacher training workshops will show teachers how to incorporate imaging and data science into their classroom curriculum.

The UAMS Northwest Regional Campus includes 356 medical, pharmacy, nursing and health professions students, 76 medical and pharmacy residents, and two sports medicine fellows. The campus has 13 clinics including internal and family medicine, a student-led clinic, orthopaedics and sports medicine, behavioral health/psychiatry, geriatrics, genetics counseling, transplant follow-up, and physical, occupational and speech therapy. Faculty conduct research to reduce health disparities.

UAMS is the state's only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; a hospital; a main campus in Little Rock; a Northwest Arkansas regional campus in Fayetteville; a statewide network of regional campuses; and eight institutes: the Winthrop P. Rockefeller Cancer Institute, Jackson T. Stephens Spine & Neurosciences Institute, Harvey & Bernice Jones Eye Institute, Psychiatric Research Institute, Donald W. Reynolds Institute on Aging, Translational Research Institute, Institute for Digital Health & Innovation and the Institute for Community Health Innovation. UAMS includes UAMS Health, a statewide health system that encompasses all of UAMS' clinical enterprise. UAMS is the only adult Level 1 trauma center in the state. UAMS has 3,275 students, 890 medical residents and fellows, and five dental residents. It is the state's largest public employer with more than 12,000 employees, including 1,200 physicians who provide care to patients at UAMS, its regional campuses, Arkansas Children's, the VA Medical Center and Baptist Health. Visit www.uams.edu or www.uamshealth.com. Find us on Facebook, X (formerly Twitter), YouTube or Instagram.

