

**UAMS News Bureau**

Office of Communications & Marketing  
4301 West Markham # 890  
Little Rock, AR 72205-7199

[uamshealth.com/news](http://uamshealth.com/news)



**News Release**  
**Feb. 9, 2021**

**Media Contacts:**

Leslie W. Taylor, 501-686-8998  
Wireless phone: 501-951-7260  
[leslie@uams.edu](mailto:leslie@uams.edu)

Yavonda Chase, 501-686-8994  
Wireless phone: 501-416-0354  
[yavonda@uams.edu](mailto:yavonda@uams.edu)

**UAMS's Justin Leung, Ph.D., Receives \$792,000 American Cancer Society Grant to Study DNA Repair Mechanisms**

LITTLE ROCK — A four-year, \$792,000 American Cancer Society Research Scholar grant has been awarded to researcher Justin Leung, Ph.D., at the University of Arkansas for Medical Sciences (UAMS) to study DNA repair mechanisms.

“Understanding the molecular processes of DNA repair can help both better diagnose cancer and to progress treatment,” said Leung, an assistant professor in the UAMS College of Medicine Department of Radiation Oncology.

The grant will investigate how signaling molecules on chromatin interact with proteins that repair broken DNA during replication.

“Our DNA encounters damage every day from metabolic byproducts, toxic chemicals and ultraviolet radiation in sunlight. Unrepaired DNA damage can lead to accumulation of mutations, which can cause cancer,” Leung explained. “Our lab aims to understand how cells precisely repair DNA damage at the right place and right time. We study how the DNA damage response is initiated and the mechanism by which DNA repair proteins are brought to the DNA breaks.”

The Research Scholar grant specifically will investigate the regulatory mechanism between a signal on newly replicated DNA and how it brings a specific chromatin modifying enzyme to direct repairs at the site of DNA break at the right time by altering the damaged DNA and proteins landscape.

The new grant follows a \$1.9 million funding award in September 2020 from the National Institute of General Medical Sciences supporting Leung’s roadmap project, “Deciphering the Chromatin-based DNA Damage Response Pathway.”

UAMS is the state’s only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; hospital; a main campus in Little Rock; a Northwest Arkansas regional campus in Fayetteville; a statewide network of regional campuses; and seven 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 and Institute for Digital Health & Innovation. UAMS includes UAMS Health, a statewide health system that encompasses all of UAMS' clinical enterprise including its hospital, regional clinics and clinics it operates or staffs in cooperation with other providers. UAMS is the only adult Level 1 trauma center in the state. *U.S. News & World Report* named UAMS Medical Center the state's Best Hospital; ranked its ear, nose and throat program among the top 50 nationwide; and named six areas as high performing — COPD, colon cancer surgery, heart failure, hip replacement, knee replacement and lung cancer surgery. UAMS has 2,876 students, 898 medical residents and four dental residents. It is the state's largest public employer with more than 10,000 employees, including 1,200 physicians who provide care to patients at UAMS, its regional campuses, Arkansas Children's Hospital, the VA Medical Center and Baptist Health. Visit [www.uams.edu](http://www.uams.edu) or [www.uamshealth.com](http://www.uamshealth.com). Find us on [Facebook](#), [Twitter](#), [YouTube](#) or [Instagram](#).

Like us, we're social:    