UAMS News Bureau

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

news.uams.edu

News Release
Nov. 10, 2026

Media Contacts:
Leslie W. Taylor, 501-686-8998
Wireless phone: 501-951-7260
leslie@uams.edu

Yavonda Chase, 501-686-8994
Wireless phone: 501-416-0354
yavonda@uams.edu

UAMS Investigator Receives $2 Million to Study How Joint Injuries Contribute to Osteoarthritis

LITTLE ROCK — The National Institutes of Health recently awarded more than $2 million to the University of Arkansas for Medical Sciences (UAMS) to study how injuries to the blood vessels within the joints contribute to osteoarthritis development.

Sanja Novak, Ph.D., an assistant professor in the UAMS College of Medicine Department of Physiology and Cell Biology, is the primary investigator on the award.

“Osteoarthritis is a disease that causes progressive deterioration of the joints,” she said. “It can be initiated by overuse or trauma, and it is often seen in athletes, persons with physically demanding careers as soldiers and firefighters, the elderly, or obese individuals.”

After a joint trauma, osteoarthritis can take years to develop, pain being the first and major sign of the disease. Currently, osteoarthritis cannot be cured. Palliative treatments attempt to control the pain and maintain joint mobility. However, they only provide transient relief and do not repair the damaged joint nor stop disease progression. Severe joint pain, reduced mobility, and decreased quality of life lead to the final option: joint replacement surgery.

“We don’t really know how osteoarthritis starts,” Novak said. The goal of her lab during this five-year study is to determine whether trauma damages the blood vessels in the joint tissue.

“We will also investigate whether protecting and stabilizing these blood vessels immediately after a joint injury prevents or delays the development of osteoarthritis,” she added.

The project has three main goals: defining the behavior of blood vessels throughout the progression of osteoarthritis; determining the impact of blood vessel leakage on joint

--NEXT--

health; and examining interventions that stabilize the blood vessels while assessing the development of osteoarthritis.

“These studies are an important step towards increasing our understanding of how osteoarthritis initiates and will provide opportunities to generate new treatments to prevent or slow osteoarthritis development after a joint injury,” said Teresita Bellido, Ph.D., chair of the Department of Physiology and Cell Biology.

The grant from the National Institute of Arthritis and Musculoskeletal and Skin Diseases, a division of the NIH, provides $2,058,011 for the research study, called “Microvascular integrity and its role in osteoarthritis.”

Research reported herein was supported by the National Institute of Arthritis and Musculoskeletal and Skin Diseases of the National Institutes of Health under Award Number R01AR087964. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

UAMS is the state’s only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; hospitals in Little Rock and Bryant; an orthopaedic 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 the Institute for Community Health Innovation. UAMS includes UAMS Health, a statewide health system that encompasses all of UAMS’ clinical enterprise, including affiliated hospitals in Pine Bluff, Helena-West Helena, Mena, and Warren. UAMS is the only adult Level 1 trauma center in the state. UAMS has 3,813 students and 1,030 medical residents and fellows, and two dental residents. It is the state’s largest public employer with about 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.

Like us, we’re social: 