

**UAMS News Bureau**

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

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



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**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 Donald W. Reynolds Institute on Aging  
Receives \$1.9 Million Grant to Research  
Link Between Blood Sugar, Alzheimer’s Disease**

LITTLE ROCK — The Donald W. Reynolds Institute on Aging at the University of Arkansas for Medical Sciences (UAMS) has been awarded a five-year, \$1.9 million grant from the National Institute on Aging, a division of the National Institutes of Health.

The project, led by Steven Barger, Ph.D., will focus on glucose transporter cells and their inability to deliver glucose to the brain in patients with Alzheimer’s disease. Glucose is most commonly referred to as blood sugar.

“We were interested in determining what kind of mechanistic events might explain the lack of glucose uptake in the brain,” said Barger, a professor and holder of the Louise G. Hearn Chair in Dementia and Long-Term Care in the College of Medicine’s Department of Geriatrics. “We started looking at the amount of glucose transporters in the surface of these brain cells, and there seems to be a problem with the delivery of the Glut1 transporter into the cell surface.”

To get to the brain, glucose must travel through specific gateways located in the surface of the cells for the brain to function properly. Barger said data they’ve collected has indicated only one transporter cell in particular, Glut1, was altered in certain tissues of the brain.

In addition to Barger, College of Pharmacy associate professor Antiño Allen, Ph.D., will serve as co-investigator; others working on the project include Yang Ou, Ph.D.; Jin Hee Sung, Ph.D.; Keri Crowder; and Larissa Porter, all from the Department of Geriatrics.

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](#).

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