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**UAMS Researchers Awarded \$2.5 Million Grant  
to Create Phone App to Prevent Opioid Use Relapse**

LITTLE ROCK — A team of University of Arkansas for Medical Sciences (UAMS) research scientists has been awarded a five-year grant worth \$2.5 million from the National Institute on Drug Abuse to determine if a cell phone application can reduce the relapse rate in people with opioid use disorder.

Andrew James, Ph.D., an associate professor in the UAMS Department of Psychiatry in the College of Medicine, is the principal investigator in the study, which will develop a cell phone app to prevent relapse among people receiving medication-assisted treatment (MAT) for opioid use disorder. The app will provide study participants with daily brief interventions, such as positive messages of reinforcement, in an effort to prevent them from relapsing or returning to opioid misuse after a period of abstinence.

“While MAT is one of our best treatments for opioid use disorders, approximately half of patients relapse during the first year of treatment,” said James. “But smartphone apps that provide daily brief interventions have been shown to reduce smoking and alcohol misuse. We believe these same principles can also reduce opioid misuse among patients receiving MAT.”

Those participating in the study will continue to receive MAT. In addition, study participants will undergo magnetic resonance imaging (MRI) to understand how the brain changes during recovery from addiction.

“We know how addiction changes the brain,” said James, a neuroimaging scientist with UAMS’ Helen L. Porter and James T. Dyke Brain Imaging Research Center. “The brain’s reward centers become hyper-activated by drug cues, to the point that a person pays attention to those drug cues above all other rewards. We will study how patients’ reward and attention systems normalize during the recovery process, and how the app may facilitate that process.”

The cell phone app, which James hopes to begin using later this year, will also contain a global positioning system (GPS) component to detect when patients enter “hot spots” or

personalized areas that could potentially lead to a relapse, such as areas where they once used or purchased opioids.

“The patient will tell us where their hot spots are, and we will program the app to tell us when they go into those areas,” said James. “When they do, they will get some form of intervention, maybe it’s a phone call from a sponsor or a text from a family member. The goal is to immediately get them out of that area before they relapse.”

Clint Kilts, Ph.D., and Keith Bush, Ph.D., of the Brain Imaging Research Center are collaborating with James on the study, along with Ron Thompson, Ph.D., Mary Bollinger, Ph.D., and Michael Mancino, M.D., of the Department of Psychiatry. James Selig, Ph.D., an associate professor in UAMS’ Fay W. Boozman College of Public Health, will monitor the statistics provided by the app, which is being designed in collaboration with Deborah Hasin, Ph.D., of New York’s Columbia University.

James sees the app as a preventive measure that could benefit those in a primarily rural state like Arkansas with limited resources for those battling substance use. “We’d like to scale it out remotely to anyone in the state. We think it will be a positive form of intervention for people dealing with opioids.”

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* recognized UAMS Medical Center as a Best Hospital for 2021-22; ranked its ear, nose and throat program among the top 50 nationwide for the third year; and named five areas as high performing — colon cancer surgery, diabetes, hip replacement, knee replacement and stroke. *Forbes* magazine ranked UAMS as seventh in the nation on its Best Employers for Diversity list. UAMS also ranked in the top 30% nationwide on *Forbes*’ Best Employers for Women list and was the only Arkansas employer included. UAMS has 2,876 students, 898 medical residents and six 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, 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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