UAMS News Bureau

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

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Media Contacts:

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

Andrea Peel, 501-686-8994 Wireless phone: 501-351-7903 andrea@uams.edu

UAMS Researchers Awarded \$2.23 Million for Myeloma Precursor Study

LITTLE ROCK — Researchers at the University of Arkansas for Medical Sciences (UAMS) recently received two awards totaling \$2.23 million for UAMS' continuing examination of therapies to treat multiple myeloma.

Myeloma Center research director Fenghuang (Frank) Zhan, M.D., Ph.D., and John D. Shaughnessy Jr., Ph.D., professor of medicine, will lead projects funded by a \$1.73 million National Institutes of Health (NIH) U54 grant and a \$500,000 Myeloma Solutions Fund award. The NIH U54 grant collaborates with the Baylor College of Medicine and Duke University. The Myeloma Solutions Fund award includes a collaboration between UAMS, the University of Texas MD Anderson Cancer Center and the Houston Methodist Neal Cancer Center.

Zhan is the principal investigator of the for a project entitled "Prevention of MGUS Progression to Multiple Myeloma by Modulating the Bone Marrow Microenvironment." MGUS refers to monoclonal gammopathy of undetermined significance, a premalignant condition of antibody-producing plasma cells that can frequently progress to multiple myeloma or Waldenstrom's macroglobulinemia.

"The long-term objective is to determine the functional role of the bone marrow microenvironment in the development of MGUS and its eventual progression to myeloma," Zhan said. "The prevalence of MGUS increases with age, suggesting that risk factors associated with aging are important in MGUS development."

Shaughnessy directs the Bioinformatics Core of the U54 project.

"Our goal is to provide in-depth molecular analysis of malignant plasma cells and the cells of the bone microenvironment isolated from patients enrolled in clinical trials over the past 25 years at UAMS, with the aim of distinguishing targetable molecular events in MGUS that has progressed to multiple myeloma or Waldenstrom's macroglobulinemia from MGUS that has remained stable for many years," said Shaughnessy.

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Shaughnessy added that the results will aid in the identification and "interception" of high-risk MGUS before it converts to overt malignancy requiring intensive therapy" to be carried out through the grant awarded by the NIH's Cancer Prevention-Interception Targeted Agent Discovery Program (CAP-IT) through the National Cancer Institute.

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 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. 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.

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