UAMS Researcher Receives $2.1 Million Grant To Determine Best Nutrition for Military Combat, Training

LITTLE ROCK — University of Arkansas for Medical Sciences (UAMS) researcher Arny Ferrando, Ph.D., recently received $2.1 million from the U.S. Department of Defense to determine the best possible nutrition for military personnel engaged in combat and combat training.

“UAMS and its scientists like Arny Ferrando continue to demonstrate how the university is leading in research that promises not just to benefit Arkansas but the nation,” said UAMS Chancellor Cam Patterson, M.D. “We are grateful to the Defense Department for this grant funding and the recognition that it conveys.”

Ferrando is a researcher in the UAMS Donald W. Reynolds Institute on Aging and a professor in the UAMS College of Medicine Department of Geriatrics. The five-year grant was awarded by the U.S. Army Medical Research and Material Command in the Department of the Army within the Department of Defense.

“Maintaining the health of our military in training and in combat is vital to their wellness and effectiveness,” said Jeanne Wei, M.D., Ph.D., executive director of the Reynolds Institute. “This research by Dr. Ferrando and the UAMS Reynolds Institute on Aging will contribute greatly to understanding the best way to do that nutritionally and may have other positive applications, too.”

The first step in the study will be to determine the required essential amino acid intake under conditions often experienced by U.S. military personnel in combat or combat training. Then, researchers will look at the best delivery format, whether through food and/or supplements. The results from these studies will then be tested during a simulated training scenario and, eventually, during real-time military combat training exercises.
“There is a critical need for effective and feasible interventions that sustain and maximize warfighter health and performance during real-world operations,” Ferrando said. “The use of a combat ration item designed from this research will be used to promote recovery and increase combat effectiveness by offsetting losses of body and muscle protein.”

During combat operations, not consuming enough calories and protein often results in a loss of body and skeletal protein. Prolonged muscle and protein loss may compromise physical performance, increase injury risk and lost duty time, and diminishing readiness overall.

The results of this research could also be applied to athletes and patients in intensive care, institutional care and other settings. Developing methods for delivering the best nutrition and protein can provide “the warfighter, as well as clinical and athletic populations maximum benefit at little or no risk,” Ferrando said.

UAMS is the state’s only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; hospital; northwest Arkansas regional campus; statewide network of regional centers; and six 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 and Translational Research Institute. It is the only adult Level 1 trauma center in the state. UAMS has 2,834 students, 822 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 throughout the state, Arkansas Children’s Hospital, the VA Medical Center and Baptist Health. Visit www.uams.edu or www.uamshealth.com. Find us on Facebook, Twitter, YouTube or Instagram.

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