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News Release

USU Associate Professor Collaborates on War Fighters' Fitness Assessment

BETHESDA, Md. – A faculty member from the Uniformed Services University of the Health Sciences (USU) will be performing part of a study on how to improve the optimum fitness and performance of combat personnel.

Dr. Patricia Deuster, associate professor, Department of Military and Emergency Medicine and director of USU's Human Performance Laboratory, in conjunction with Lipomics Technologies, Inc., will be performing the second and third phases of the study, and said that it will be beneficial to combatants.

“An objective measure of our war fighters' physical and psychological well being will promote optimal military performance, avoid the deleterious consequences of fatigue, and potentially reduce the risk of injury,” Dr. Deuster said.

Phase I of the study, conducted last year, employed validated metabolomic analysis platforms to determine how metabolic profiles can predict performance, metabolic stress, fatigue, and recovery rates for individuals undergoing extreme exertion.

The second phase of the study will analyze and profile compositional and quantitative changes in plasma metabolites that may indicate tissue or metabolic changes, as well as seek evidence of physiological stress during physical activity. This is done by measuring a hormone-like substance called eicosanoids that indicate stress, inflammation and acute response to tissue damage.

Measurements of a combatant's metabolic profile will help improve training regiments, dietary guidance and therapeutic interventions to optimize their preparedness prior to and recovery after exhaustive activity.

Established by the U.S. Congress in 1972, the Uniformed Services University of the Health Sciences (www.usuhs.mil) is located on the campus of the National Naval Medical Center in Bethesda, Md., and is the nation's only federal school of medicine and graduate school of nursing.

Information for this release was obtained from Lipomics Technology. For more information, call the Office of External Affairs at (301) 295-3981.