GRECCs: VA’s Network of Aging Centers of Excellence Explores Aging, Age-related Diseases and Promising Interventions.

---what follows is a small sampling from among the hundreds of research investigations currently underway in VHA’s Geriatric Research, Education and Clinical Centers (GRECCs).

**Ann Arbor GRECC: Antipsychotic Use in Parkinson’s disease patients.** Use of antipsychotics (APs) in Parkinson’s disease (PD) is common. Noting the high rate at which persons with PD experience psychosis and dementia, investigators at the Ann Arbor GRECC hypothesized that use of APs placed patients at elevated risk for mortality. Multivariate analysis of a Veterans Health Administration database of PD patients revealed that antipsychotic users had more than twice the risk of death as observed in a matched group of non-users. The commonly used atypical antipsychotics identified during the study were olanzapine, risperidone, and quetiapine. This work highlights the need for caution when prescribing atypical antipsychotics to PD patients and the importance of always considering non-pharmacologic strategies in managing psychosis. To learn more about this research, contact Dr. Helen C. Kales at helen.kales@va.gov.

**Little Rock GRECC: Nutrient Intake and Hospitalization.** Older Veterans often become severely malnourished during hospitalization, leading to a range of complications and a higher risk of mortality. To prevent this from happening, inpatient programs need to closely monitor each patient’s nutrient intake. Yet most hospitals are not adequately staffed to do this. The Little Rock GRECC developed and studied a novel means for completing daily patient nutrient intake assessments in less than one-third the time required by traditional methods, and the new approach was found to be more accurate as well. The greater ease and improved accuracy facilitates identification of patients at elevated risk for becoming malnourished. Anyone interested in this new approach to assessing nutrient intake can contact Dennis H. Sullivan, MD at dennis.sullivan@va.gov.

**San Antonio GRECC: Proteins Block Neuronal Death.** A number of aging-related neurological diseases such as stroke, Lou Gehrig’s disease, and Alzheimer’s disease, involve the death of neurons in the brain. The San Antonio GRECC recently described ferroptosis, a previously unrecognized mechanism of neuronal death. Even more exciting, the investigators identified a protein that disrupts this mechanism. Enhancing the activity and delivery of this protein might be a new approach for supporting healthy brain aging. To find out more about this work, contact Dr. Nicolas Musi at Nicolas.musi@va.gov.

The Molecular Transducers of Physical Activity Consortium (MoTrPAC) is a national research consortium that will characterize the molecular transducers altered by physical activity in humans. The goals of MoTrPAC are to study the molecular changes that occur during and after exercise, to advance the understanding of how physical activity improves and preserves health. MoTrPAC includes 11 adult Clinical Centers that will recruit 2700 adults, aged 18+ years who are generally healthy and either sedentary (n=2400) or highly active (n=300). Clinical Centers are located at the Univ of Alabama Birmingham, Florida Hospital, Ball State Univ, Univ of Pittsburgh, Univ of Colorado Denver, Duke Univ, Wake Forest Univ, East Carolina Univ, Univ of Texas Medical Branch, University of Texas Health Sciences Center, and Pennington Biomedical Research Center. One Pediatric Center at the Univ of California Irvine will recruit 300 adolescents. All MoTrPAC participants will undergo an exercise session that includes sampling of blood, adipose tissue, and skeletal muscle. The sedentary participants will be randomized to undergo 12 weeks of exercise training or no-exercise control, and then repeat the exercise session. Parallel studies of rats will be conducted to interrogate not only blood, adipose, and muscle responses to exercise, but also those tissues that cannot be studied in humans. Biospecimens will undergo ‘omics’ analyses, including genomics, epigenomics, transcriptomics, proteomics, and metabolomics.

All data generated by MoTrPAC will be stored in a public resource that any researcher can access to investigate the molecular mechanisms for the health benefits of exercise. The plan is to have the protocol reviewed by the VA Central IRB to facilitate the inclusion of Veterans. More information about MoTrPAC can be found at MoTrPAC.org.