

# Symposium explores interaction between age-related cardiovascular dysfunction and diseases

August 14, 2017

During the "Novel Implications for Blood Flow and Vascular Dysfunction in Non-cardiovascular Related Disease" symposium at the APS Cardiovascular Aging: New Frontiers and Old Friends conference, researchers will present findings that emphasize the interaction between age-related cardiovascular dysfunction and disease whose risk increases with age.

Symposium Chair Judy Muller-Delp, PhD, professor of biomedical sciences at Florida State University College of Medicine, said the program will address disease and conditions that are "associated with cardiovascular dysfunction, independent of age." These conditions include cancer, fat tissue dysfunction and atrial fibrillation.

Cancer reduces exercise capacity and cardiovascular function, which often worsen with age. Brad Behnke, PhD, associate professor of exercise physiology at Kansas State University, will explore the relationship between cancer and cardiovascular function in aging in his talk "Implications for Blood Flow in Prostate Cancer." Behnke will also discuss how improving vascular function through exercise may be beneficial to people with cancer, including older adults.

Lisa Lesniewski, PhD, associate professor of internal medicine at the University of Utah, will discuss abnormal functioning of the blood vessel lining (endothelial dysfunction) in aged fat (adipose) tissue in her talk, "Endothelial Dysfunction in the Adipose: A Key Regulator of Age-related Metabolic Dysfunction?" Endothelial impairment may contribute to age-related metabolic and cardiovascular disease and inflammation. Lesniewski will provide insight into the cyclical relationship between vascular and metabolic diseases, focusing on the role of adipose tissue as an organ.

Daniel J. Tyrrell, PhD, postdoctoral research fellow at the University of Michigan, will explain in his talk, "Aging Enhances Atrial Fibrillation Inducibility in Atherosclerotic Hosts," how age and hardening of the arteries

(atherosclerosis) caused by a high-fat diet lead to inflammation and may increase the risk of atrial fibrillation, which is a rapid and irregular heartbeat. Tyrrell's study of atherosclerosis-prone mice found that older mice exposed to bone marrow from younger mice had a reduced risk of developing atrial fibrillation. These findings suggest that the formation of new blood cells also plays a role in the risk factors for arrhythmia.

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**Source:**

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