

November 30th, 2022 4:00 - 6:00 PM

All are invited to attend the defense. For more information please contact Graduate Coordinator at dstgerma@gmu.edu

Candidate: Kerianne Richards

Program: PhD, Bioinformatics and Computational Biology

Date: Wednesday, November 30th, 2022

Zoom Link: <https://gmu.zoom.us/j/94229845726?pwd=VTNodGZVdlNJUGhPazV4NDc4UGFVdz09>

Title: *Vibrio vulnificus* Genotypes Exhibit a “Rock-Paper-Scissors” Pattern of Integration into Marine Aggregates and Uptake into Oyster Matrices

Committee Chair: Dr. Ancha Baranova

Committee Members: Dr. Igor Efimov, Dr. Daniel Martin, Dr. Iosif Vaisman

ABSTRACT:

Primarily characterized by a physiological change in the physiology and anatomy of the cardiovascular systems, cardiomyopathy ranges in morbidity and mortality. Epicardial Adipose tissue (EAT) is functionally distinct from peripheral adipose, where it serves as a cardiovascular regulator rather than an energy repository. The molecular mechanisms by which epicardial adiposity could contribute to arrhythmogenesis remains poorly understood. This study examined the gene expression and molecular pathways in three weight categories in the epicardial adipose tissue and proximal myocardium. We anticipate that in both myocardium and epicardial adipose tissues, the transformation from a normal body mass index to obese state results in a toxic cardiac state, a transformation from a normal or obese to intermediate state results in cardiac toxicity as systemic damage. During our investigation, we determined that the positional coverage of the epicardial adipose tissue is significantly differentially regulated and can be used as a novel marker for heart disease.