**Dr. Wayne Carver** – Dr. Carver is Professor and Chair of Cell Biology and Anatomy at the University of South Carolina School of Medicine. For over two decades, his research has focused on the role of the extracellular matrix in cardiovascular development, homeostasis and disease. A central theme of these studies has been how alterations in the extracellular matrix such as in fibrosis impact cardiovascular structure and function. This research has helped to identify factors including mechanical stretch that stimulate the activation of fibroblasts into a highly synthetic myofibroblast phenotype and promote the fibrotic response. More recently, Dr. Carver’s research has focused on the role of chronic alcohol abuse in myocardial remodeling and fibrosis.

**Dr. John Eberth** – Dr. Eberth, an Assistant Professor in the Department of Cell Biology and Anatomy at the University of South School of Medicine, has a longtime interest in the effects of mechanical forces on cell, tissue and organ function. Mechanical loads, transduced from the extracellular matrix, act on intracellular signaling cascades that influence gene expression and temporal tissue structure. Dr. Eberth’s work, and that of the Translational Biomechanics Lab that he directs, is based on adapting fundamental engineering principles to understand, manipulate, and control the behavior of healthy and diseased cardiovascular tissue. This research includes several thrust areas including: vascular growth and remodeling, cardiovascular birth defects, coronary artery bypass alternatives, extracellular matrix biology and the effects of aging on the cardiovascular biomechanics.

**Dr. William Richardson** – Dr. Richardson received his PhD in Biomedical Engineering from Texas A&M and is currently an Assistant Professor in Bioengineering at Clemson University. At Clemson, Dr. Richardson directs the *Systems Mechanobiology Lab* and is involved in diverse research focused on the role in biomechanics in tissue and organ homeostasis and pathogenesis. This includes studies focused on the crosstalk between mechanical and chemical signaling in such areas as wound healing and fibrosis. Dr. Richardson’s research also includes studies centered around innovative therapeutic applications of mechanotransduction. He also applies computational modeling approaches to better understand and predict the effects of changes in tissue mechanics on cell and organ physiology.

**Dr. Matthew Stern** – Dr. Stern earned his Ph.D. from the University of Iowa and completed a postdoctoral fellowship at the Wake Forest Institute for Regenerative Medicine and Sticht Center on Aging. He is currently an Assistant Professor in the Department of Biology at Winthrop University. Dr. Stern leads an active research program that includes undergraduate and graduate students. His research broadly centers around the development of innovative culture systems to understand and direct progenitor cell differentiation. This includes projects focused on the response of adipose-derived mesenchymal stem cells to a variety of three-dimensional culture systems. The goal of this work is to learn how to improve the efficiency with which these cells differentiate into lineages such as muscle and bone and to produce novel three-dimensional culture systems that facilitate the study of stem cell differentiation.

**Dr. Derrick Swinton** – Dr. Swinton received his PhD in Analytical Chemistry from the University of Delaware and is currently Professor and Chair of Chemistry at Claflin University. Prior to entering academia, Dr. Swinton had a successful career in industry including positions at PPG Industries, Biological Detection Systems and Shire Laboratories. He has research interests that include proteomics, protein aggregation and engineering of nanoparticles. Related to the present project, Dr. Swinton is engaged in development of proteomic methods to identify and characterize biomarkers with proteomic technologies. In addition to his research, Dr. Swinton is committed to integration of educational strategies that bridge the gap between theory and practice and cultivation of critical thinking skills in the classroom. He has extensive experience in curriculum development and in recruitment of students to STEM fields.