














Mayo Clinic College of Medicine & Science

Cardiovascular Diseases Research Mentors

<p>Demilade Adedinsewo, M.B.,Ch.B., M.P.H. <i>Cardiovascular Disease</i></p> 	<p>Her research interests include: cardiovascular disease epidemiology among women and minority populations; applications of artificial intelligence tools in cardiovascular disease diagnosis and management and interventional echocardiography.</p>
<p>Joseph Blackshear, M.D. <i>Cardiovascular Disease</i></p> 	<p>His primary academic interests relate to valvular heart disease, HOCM, and the impact of high intravascular shear stress from cardiac disorders causing von Willebrand factor dysfunction and bleeding.</p>
<p>Katelyn A. Bruno, Ph.D. <i>Cardiovascular Disease</i></p> 	<p>Her research interests are focused on cardiomyopathies including viral myocarditis, dilated cardiomyopathy and animal models of cardio-oncology. Other areas of research interest include pediatric myocarditis/DCM, relationships between myocarditis and skeletal muscle myositis and connective tissue disorders like hypermobile Ehlers Danlos syndrome.</p>
<p>Leslie Cooper, M.D. <i>Cardiovascular Disease</i></p> 	<p>His research is focused on the evaluation and diagnosis of rare and undiagnosed cardiomyopathies, especially autoimmune variants of myocarditis including giant cell myocarditis. Most of Dr. Cooper's research involves prospective clinical studies.</p>

<p>Abdallah El Sabbagh, M.D. <i>Cardiovascular Disease</i></p> 	<p>He is involved in clinical research with a special focus on the diagnosis and percutaneous treatment of mitral valve disease.</p>
<p>DeLisa Fairweather, Ph.D. <i>Cardiovascular Disease</i></p> 	<p>Her research interests include translational studies of myocarditis/DCM, which she has studied for over 25 years, as well as sex differences in inflammation in cardiovascular and autoimmune diseases. New interests include mitochondrial research and hypermobile Ehlers Danlos Syndrome.</p>
<p>Michael Gharacholou, M.D. <i>Cardiovascular Disease</i></p> 	<p>His research interests include acute and chronic ischemic heart disease in the geriatric population, heart failure disease management, peripheral vascular disease, and frailty.</p>
<p>Rohan M. Goswami, M.D. <i>Transplant Medicine</i></p> 	<p>His current research interests include myocardial recovery, progressive renal disease pre- and post-LVAD/Transplant, immunotherapeutics and pharmacogenomics post heart transplant. Dr. Goswami currently has multiple active studies in various phases including general cardiology, heart failure and machine learning.</p>
<p>Fred Kusumoto, M.D. <i>Cardiovascular Disease</i></p> 	<p>His research interests include evaluation of quality of life and healthcare outcomes with electrophysiology procedures, particularly in the elderly and use of implantable cardiac devices.</p>

<p>Carolyn Landolfo, M.D. <i>Cardiovascular Disease</i></p> 	<p>Her clinical and research focus is on echocardiographic imaging, valvular heart disease, cardiotoxicity of chemotherapy, and women's heart health.</p>
<p>Melissa Lyle, M.D. <i>Cardiovascular Disease</i></p> 	<p>She is trained in advanced heart failure and transplantation, and her research interests include advanced heart failure, mechanical circulatory support, and cardiac transplantation. She also specializes in amyloid cardiomyopathy, and has a particular interest in heart transplantation in amyloidosis, with a focus on post-transplantation management of the extracardiac manifestations of amyloidosis.</p>
<p>Christopher J. McLeod, M.B., Ch.B., Ph.D. <i>Cardiovascular Disease</i></p> 	<p>As an arrhythmia specialist, Dr. McLeod has a special interest in the care of adults with congenital heart disease. His primary research focus is related to sudden death in the congenital heart disease population. He also is involved in basic and translational investigation through the development of novel techniques to map and treat ventricular fibrillation.</p>
<p>Dev Mukhopadhyay, Ph.D. <i>Biochemistry Molecular Biology</i></p> 	<p>Dev is a professor with expertise in angiogenesis, cancer, cardiovascular diseases and diabetes. His research interests include understanding the molecular mechanism of ischemic heart failure using zebrafish and mouse models. His laboratory specifically focuses on the development of different zebrafish models by utilizing CRISPR-Cas9 strategies to study cardiac remodeling and ischemic heart failure that can may be employed in clinical practice near future.</p>
<p>Pragnesh P. Parikh, M.D. <i>Cardiovascular Disease</i></p> 	<p>His primary interest is in advanced cardiovascular imaging utilizing cardiac magnetic resonance imaging and echocardiography. Dr. Parikh is intimately involved in the structural heart program and has a special interest in interventional echocardiography, particularly using 3D imaging.</p>

Parag C. Patel, M.D.
Transplant Medicine



His research interest includes outcome studies in advanced heart failure, mechanical circulatory support and cardiac transplant. He primarily is involved in clinical research trials and registry reviews.

Sabrina D. Phillips, M.D.
Cardiovascular Disease



Her research interests include heart failure during pregnancy, pregnancy in patients with cardiac conditions, congenital heart disease, and valvular heart disease.

Sherry Pinkstaff
Visiting Scientist



Among her research interests are non-invasive measurement of cardiopulmonary function such as cardiopulmonary exercise testing and endothelial function testing, as well as using exercise as an intervention in chronic disease.

Amy W. Pollak, M.D.
Cardiovascular Disease










Her research interests include women's heart disease, peripheral artery disease, and preventative cardiology.

Peter M. Pollak, M.D.
Cardiovascular Disease



His research interests include device innovation and development and the use of multi-modality imaging and 3D modeling in planning and guiding structural intervention.

<p>Jordan C. Ray, M.D. <i>Cardiovascular Disease</i></p> 	<p>Clinical Cardio-Oncology, focused on advanced cardiac imaging in the early detection of cardiotoxicity, risk for cardiovascular disease in Oncology patients, prevention of cardiovascular complications during cancer therapies, diagnosis and management of immune checkpoint myocarditis, and mechanisms behind immune checkpoint myocarditis.</p>
<p>Brian P. Shapiro, M.D. <i>Cardiovascular Disease</i></p> 	<p>He has multiple areas of interests and grant support including the use of exercise MRI to assess cardiovascular disease processes such as pulmonary hypertension. Further, he participates in research at the Sulzbacher Clinic which serves the homeless population.</p>
<p>Bryan Taylor, Ph.D <i>Cardiovascular Disease</i></p> 	<p>His research interests focus on the intricate interplay between the cardiovascular and respiratory systems and how pathophysiological changes in cardiorespiratory function contribute to exercise intolerance, especially in patients with heart failure. Particular areas of interest include the biology of exercise-induced pulmonary hypertension, and the causes and consequences of respiratory muscle dysfunction. He is also interested in the use of exercise as a therapeutic intervention in chronic disease states.</p>
<p>Henry H. Ting, M.D., M.B.A. <i>Cardiovascular Disease</i></p> 	<p>His scholarly work focuses on health services research, outcomes research, and shared decision making to improve patient outcomes and population health. He is the principal investigator of an AHRQ grant to disseminate and implement strategies to improve organizational culture, teamwork, and communication associated with lower 30-day mortality rates in patients with acute myocardial infarction.</p>
<p>Jorge F. Trejo, M.D. <i>Cardiovascular Disease</i></p> 	<p>His clinical and research career has focused on the epidemiology and prevention of cardiovascular disease in adult populations with an emphasis in atherosclerosis. He is interested in preventative cardiology and cardiac risk factors such as cardiorespiratory fitness, obesity and the role they play in both preventing and managing cardiovascular disease.</p>

<p>Steven Ung, M.D. <i>Cardiovascular Disease</i></p> 	<p>He has a special interest in population health and cardiology as well as coronary artery disease, heart failure, and valvular heart disease.</p>
<p>K.L. Venkatachalam, M.D. <i>Cardiovascular Disease</i></p> 	<p>He studies interventional approaches to managing rhythm disorders of the heart. He combines his background in electronics engineering design and clinical cardiac electrophysiology to develop catheters, electronic hardware and software to enhance safety and efficacy in the electrophysiology lab during the evaluation and ablation of arrhythmias, specifically atrial fibrillation and ventricular tachycardia. He also investigates novel drug treatments for supraventricular tachycardia.</p>
<p>Mohamad H. Yamani, M.D. <i>Cardiovascular Disease</i></p> 	<p>He specializes in heart failure and transplant. His translational science research has focused on the role of alpha-3 versus beta-3 integrins, angiotensin receptors, tissue factor, beta-myosin heavy chain, chemokines, chimerism and metalloproteinase induction system in heart failure patients as well as genomic variations in heart failure patients to explain why they respond differently to certain therapeutic strategies.</p>
<p>Daniel S. Yip, M.D. <i>Transplant Medicine</i></p> 	<p>Research interests involve clinical studies involving heart failure and cardiac transplantation. There are efforts to collaborate among all three Mayo sites to perform clinical trials.</p>
<p>Ying Wang, M.D., Ph.D. <i>Research Associate</i></p> 	<p>Her major research interest is to understand the molecular mechanism of endothelial cell dysfunction in heart failure with preserved ejection fraction. She uses cultured cells, transgenic mice as wells as mouse disease models to study how neuropilin-1, a cell membrane glycoprotein, mediates endothelial cell inflammatory response to drive heart failure with preserved ejection fraction.</p>