Mentor	Primary Academic Affiliation	Research Summary
Matthew P. Abdel, M.D.	Orthopedic Surgery	As an orthopedic clinician-scientist with broad-based training in orthopedic surgery, biomechanics and biochemistry, Matthew P. Abdel, M.D., is interested in studying clinically relevant pathologies while considering the functional impact on patients. He is recognized with distinction as the Andrew A. and Mary S. Sugg Professor of Orthopedic Research.
Michael Ackerman, M.D., Ph.D.	Cardiovascular Disease	Studies genomics and genotype-phenotype relationships in heritable cardiovascular diseases predisposing to sudden death.
Adelaide M. Arruda-Olson, M.D., Ph.D.	Cardiovascular Disease	Development and application of novel electronic tools (e-tools) using natural language processing and structured data algorithms to mine the electronic health record. This research aims to address knowledge gaps regarding predictors of cardiovascular events
Dusica Babovic-Vuksanovic, M.D.	Clinical Genomics	Dusica Babovic-Vuksanovic, M.D., include overgrowth syndromes, as well as various genetic syndromes and metabolic disorders. Her research involves several collaborative basic research studies in the field of neurofibromatosis, in conjunction with Mayo's Neuro-Oncology Program and departments of Radiology and Neurologic Surgery.
M. Fernanda Bellolio, M.D.	Emergency	M. Fernanda Bellolio, M.D., is an emergency physician

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	Medicine	and health sciences researcher dedicated to research methodology, knowledge synthesis and comparative effectiveness.
Joyce Balls-Berry, Ph.D.	Epidemiology	Dr. Balls-Berry is a psychiatric epidemiologist. Her primary research focus is evaluating the application of community-engaged research principles in diverse populations.
Suzette Bielinski, Ph.D.	Epidemiology	Suzette J. Bielinski, Ph.D., is a cardiovascular genetic epidemiologist whose research focuses on identifying molecular biomarkers of cardiovascular disease.
Ronna L. Campbell, M.D., Ph.D.	Emergency Medicine	The primary research focus of Ronna L. Campbell, M.D., Ph.D., is on the emergency management of anaphylaxis. Most recently, Dr. Campbell has studied emergency anaphylaxis care at the national population level by partnering with OptumLabs.
Karl Clark, Ph.D.	Biochemistry & Molecular Biology	The research interests of Karl J. Clark, Ph.D., focus on molecular-level interactions between the individual organism and its environment.
Alexander C. Egbe, M.B.B.S.	Cardiovascular Diseases	Hemodynamics and clinical outcomes for adults with congenital heart disease. Dr. Egbe is also studying the long-term impact of having combined aortic stenosis and aortic regurgitation (mixed aortic valve disease) in patients with acquired heart disease.
Grahn, Peter J., Ph.D.	Neurosurgery, Physical	

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	Medicine and Rehabilitation	
Leigh G. Griffiths, Ph.D., MRCVS	Cardiovascular Medicine	Since its inception, Dr. Griffiths' Cardiovascular Engineering Research Laboratory has been dedicated to bench-to-bedside translational research to improve lives of both human and animal patients. The innovations, patents and advances generated in Dr. Griffiths' laboratory are under development with commercial partners toward clinical application.
Fransoua Her M.D., Ph.D.	Anesthesiology and Perioperative Medicine	
Naureen Javeed, Ph.D.	Physiology & Biomedical Engineering	The overall research objective in the laboratory of Naureen Javeed, Ph.D., is to exploit the idea of altered cellular communication between β-cells during the pathogenesis of diabetes through studying the exchange of secretory nanovesicles called extracellular vesicles (EVs).
David Kallmes, M.D.	Radiology-Diagnostic	Advancing the minimally invasive treatment options for patients with intracranial saccular aneurysms. Dr. Kallmes' preclinical laboratory is developing and testing multiple improvements to the microcoil technology used to treat this condition.

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Zvonimir Katusic, M.D., Ph.D.	Molecular Pharmacology & Experimental Therapeutics	Human cerebral blood vessels, projects are focused on morphological, functional, and biochemical characteristics of cerebral vasculature.
Timothy L. Kline, Ph.D.	Radiology Informatics, Radiology	The research of Timothy L. Kline, Ph.D., focuses on the development of novel image acquisition and image processing techniques to study disease processes and improve patient care.
Shannon Laughlin-Tommaso, M.D.	Obstetrics & Gynecology, Surgery	Dr. Laughlin-Tommaso's primary research interest is uterine fibroids (also called leiomyomas or myomas). Fibroids are noncancerous tumors of the uterus that may cause heavy menstrual bleeding, pelvic pain, bowel and bladder problems, and interfere with pregnancy or fertility.
Lilach Lerman, M.D., Ph.D.	Biochemistry & Biomedical	Renovascular Disease Research Laboratory, which focuses on the development and application of techniques to study renal and cardiovascular physiology and pathophysiology in animal models and in humans
Andrew H. Limper, M.D.	Pulmonary and Critical Care Medicine	Andrew H. Limper, M.D., studies lung defense and elimination of fungal infections, such as pneumocystis pneumonia, in patients with impaired

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		defense systems. Dr. Limper and his team seek to find new ways beyond traditional antibiotics to prevent and fight lung infections in these individuals.
Francisco Lopez-Jimenez, M.D.	Cardiovascular Medicine	The research program of Francisco Lopez-Jimenez, M.D., studies obesity and cardiovascular disease from different angles, from physiologic studies assessing changes in myocardial mechanics and structural and hemodynamic changes following weight loss, to studies addressing the effect of physicians' diagnosis of obesity on willingness to lose weight and successful weight loss at follow-up.
Carlos Mantilla, M.D., Ph.D.	Anesthesiology and Physiology	The control of breathing in humans; long-term goal is to develop rational and effective therapies for the treatment of diseases that impair the ability to breathe independently.
Rowlens Melduni, M.D.	Cardiovascular Diseases	Diastolic dysfunction is associated with an increasing stretch in pulmonary veins due to increased left atrial pressure and is thought to be one of the pathophysiologic mechanisms for the initiation of atrial fibrillation. Our long-term goal is to explore pathophysiologic mechanisms and predictors

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		of atrial fibrillation and facilitate the development of innovative diagnostic and therapeutic approaches to atrial fibrillation.
Sanjay Misra, M.D.	Radiology	The basic research interest of Sanjay Misra, M.D., includes understanding the mechanisms of hemodialysis graft failure.
Peter A. Noseworthy, M.D.	Cardiovascular Diseases	Dr. Noseworthy's research focuses on the pathophysiology and management of atrial and ventricular arrhythmias. Dr. Noseworthy is working to identify genetic determinants of ventricular arrhythmia, develop noninvasive means for arrhythmia risk stratification, refine catheter-based ablation techniques and study health outcomes in patients undergoing cardiac ablation.
\Thomas P. Olson, M.S., Ph.D.	Cardiovascular Diseases	My research focuses on chronic heart failure (HF), a major public health concern. HF quickly becomes a systemic disease involving multiple physiologic systems. We study HF using novel methodologies to quantify the contribution of locomotor muscle afferent feedback on changes in ventilation and cardiovascular hemodynamics during exercise in HF patients.

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Gary Sieck, Ph.D.	Physiology and Biomedical Engineering	Gary C. Sieck, Ph.D., studies the cell signaling mechanisms that underlie muscle performance. In particular, he focuses on regenerative processes that can be enhanced to mitigate a variety of acute and chronic disease conditions. Dr. Sieck has developed an extensive array of state-of-the-art physiological, molecular and biomedical engineering techniques to explore cell signaling pathways.
Virend Somers, M.D., Ph.D.	Molecular Neuroscience	The research interests of Virend Somers, M.D., Ph.D., include neural and vascular mechanisms in circulatory control in health and disease.
Hector Villarraga, M.D.	Cardiovascular Ultrasound, Cardiovascular Medicine	The main research interests of Hector R. Villarraga, M.D., include evaluating myocardial function by speckle tracking echocardiography, also called strain, in cardiomyopathies with normal ejection fraction and in cardio-oncology.
Marina R. Walther-Antonio, Ph.D.	Surgery, Obstetrics & Gynecology	The research focus of Marina R. Walther-Antonio, Ph.D., is on the role of the human microbiome in women's health, in particular gynecologic cancers. Her goal is to use microbiome signatures to predict the development of malignancy and eventually intervene

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		before it materializes.
David Warner, M.D.	Pediatric Anesthesiology	The overall research goal of David O. Warner, M.D., is to improve the health of patients who need surgery and patients who have chronic pain. He also works with the Mayo Clinic Center for Clinical and Translational Sciences (CCaTS) to train the next generation of researchers who will make discoveries to improve human health.
Richard Weinshilboum, M.D.	Molecular Pharmacology & Experimental Therapeutics	Richard Weinshilboum, M.D. studies pharmacogenomics — the role of inheritance and individual variation in DNA sequence or structure in drug response. The goal is to develop safer and more effective drug therapy to treat diseases that range from cancer to depression.