

Department of Medicine faculty with current grants from R & K mechanisms as of September 2023

Investigator	Division	Project	Grant
Gerald S. Bloomfield	Cardiology	Epidemiologic Determinants of Cardiac Structure and Function in Rural Residents: RURAL ECHO	R01
Gerald S. Bloomfield	Cardiology	Pathways to cardiovascular disease prevention and impact of specialty referral in under-represented racial/ethnic minorities with HIV	R01
Gerald S. Bloomfield	Cardiology	Proteomic Profiles and Cardiac Dysfunction in Children and Adolescents with HIV	R56
Melissa A. Daubert	Cardiology	Coronary Artery Calcium in the PRagmatic Evaluation of eVENTs And Benefits of Lipid lowering in the Elderly: CAC PREVENTABLE Ancillary Study	R01
Neil J. Freedman	Cardiology	Mechanisms by which Small Nucleolar RNAs Exacerbate Atherosclerosis	R01
Christopher Granger	Cardiology	ACHIEVE	R34
Michael D. Gunn	Cardiology	Development of point-of-care testing for Lassa and other hemorrhagic fever arenaviruses	R01
Christopher Holley	Cardiology	SnoRNA-guided modifications of mRNA	R01
Christopher Holley	Cardiology	The Role of RNA Modifications in Heart Failure	R01
Larry R. Jackson	Cardiology	Shared Decision-Making to Reduce Racial Disparities in Oral Anticoagulation Use in Patients with Non-Valvular Atrial Fibrillation	K01
Ravi Karra	Cardiology	Myovascular Mechanisms of Cardiac Growth and Regeneration	R01
Christopher Kontos	Cardiology	Mechanisms Regulating Vascular Homeostasis	R01
William E. Kraus	Cardiology	Skeletal Muscle Molecular Drug Targets for Exercise-induced Cardiometabolic Health	R01
William E. Kraus	Cardiology	Exercise-induced Legacy Health Benefits on Cardiometabolic Risk Factors in Aging Adults with Prediabetes	R21
Robert J. Lefkowitz	Cardiology	Molecular Regulation of Cardiovascular 7 TM Receptors	R01
Yongmei Liu	Cardiology	Common mechanistic biomarkers of vascular and neuro-degeneration	R01
Yongmei Liu	Cardiology	Trajectories of blood-based biomarkers of AD, their determinants, and ability to predict cognitive impairment	R56
Robert W. McGarrah III	Cardiology	Mechanisms Connecting Dysregulated Branched-Chain Alpha-Ketoacid Metabolism to Cardiac Dysfunction	R01
Manesh R. Patel	Cardiology	BEST-VIVA Registry (vCLI)	R01
Sudarshan Rajagopal	Cardiology	Biasing CXCR3 Signaling to Modulate the Inflammatory Response	R01
Sudarshan Rajagopal	Cardiology	Xenon MRI in Pulmonary Hypertension	R01
Howard A. Rockman	Cardiology	Mechanisms of Maladaptation in Heart Failure	R01
Paul B. Rosenberg	Cardiology	STIM1 and metabolic flexibility	R01
Jennifer A. Rymer	Cardiology	Implementation of a Medication Adherence Instrument among Patients with Symptomatic Peripheral Artery Disease after Peripheral Vascular Intervention	K23
Senthil Selvaraj	Cardiology	Dissecting the Ketone Metabolic Axis in Heart Failure with Reduced Ejection Fraction	K23
Svati H. Shah	Cardiology	Clinical and Molecular Epidemiology of High Risk Coronary Plaque	R01
Svati H. Shah	Cardiology	Inflammatory and Metabolic Biomarkers in Cardiovascular Complications with SARS-CoV-2	R21
Svati H. Shah	Cardiology	Immunogenetic Profiling for Risk of Primary Graft Dysfunction after Heart Transplantation	R21
Sudha Shenoy	Cardiology	Regulation of Vascular Inflammatory Signaling by the Deubiquitinase USP20	R01
Sudha Shenoy	Cardiology	Regulation of myocardial GPCRs by USP20 in normal and hypertrophied heart	R01
Monique L. Starks	Cardiology	Evaluation of the Requirements and Critical Features of a Drone-Deployed AED Network to Improve Community-Level Survival after OHCA	K23
Jonathan A. Stiber	Cardiology	Anti-Atherogenic Mechanisms of Drebrin	R01
Teng Su	Cardiology	Exosome-Based Pathological Microenvironment-Responsive Nanocapsules for Targeted Heart Repair	R21
Sandeep Dave	Cell Therapy	Genetic Origins of Adverse Outcomes in African Americans with Lymphoma	R01
Sandeep Dave	Cell Therapy	Clinical and Genetic Origins of Monomorphic Epithelioid Intestinal T Cell Lymphoma	R01
Yubin Kang	Cell Therapy	Enhancing CAR T therapy in multiple myeloma	R21
Yubin Kang	Cell Therapy	Role of SLAMF7 in Racial Disparities in Myeloma	R21
Yubin Kang	Cell Therapy	Thioredoxin, a novel agent for mitigating radiation-induced hematopoietic injury	R56
Stefanie Sarantopoulos	Cell Therapy	Pathological B Cells: Novel Strategies to Prevent and Treat Chronic GVHD	R01
Dorothy Sipkins	Cell Therapy	Defining and targeting a novel pathway for central nervous system leptomeningeal metastasis	R01
Dorothy Sipkins	Cell Therapy	Novel use of PI3K inhibition to prevent recurrence of B-cell acute lymphoblastic leukemia	R21
Anthony D. Sung	Cell Therapy	Home-based Autologous Hematopoietic Stem Cell Transplantation to Improve Outcomes and Decrease Costs	R01
Anthony D. Sung	Cell Therapy	Prebiotics to Optimize the Microbiota and Improve Outcomes of Allogeneic Hematopoietic Stem Cell Transplantation	R01
Anthony D. Sung	Cell Therapy	Hematopoietic Stem Cell Transplantation Combined with CSF1 Inhibition to Attenuate the Pathogenesis of Alzheimer's Disease	R03
S. Munir Alam	DHVI	Antigen recognition and activation of B-cell receptors of HIV-1 broadly neutralizing antibodies	R01
Mihai L. Azoitte	DHVI	Novel Immunogens to Elicit Broadly Cross-reactive Antibodies That Target the Hemagglutinin Head Trimer Interface	R01
Mihai L. Azoitte	DHVI	High throughput platform to engineer light-controlled inhibitors against guanine exchange factors of the Dbp family	R01
Derek Cain	DHVI	A Mouse Model to Test the Effects of Gender-affirming Hormone Therapy on HIV Vaccine-induced Immune Responses	R21
Jonathan Campbell	Endocrinology	Mechanisms of insulin secretion mediated by alpha cells	R01
Jonathan Campbell	Endocrinology	Novel metabolic actions of GIP	R01
Rana K. Gupta	Endocrinology	Establishment and Maintenance of Healthy Adipose Tissue in Obesity	R01
Rana K. Gupta	Endocrinology	Directing Stem Cells to the Adipocyte Lineage in Infantile Hemangiomas	R21
Matthew D. Hirshey	Endocrinology	Studies on the Mechanisms by which SIRT5 Regulates Aging and Disease	R01
Matthew D. Hirshey	Endocrinology	Studies on the impact of acetyl-cysteine on metabolism	R21
Richard H. Lee	Endocrinology	Effect of Acetylcholinesterase inhibitors on Bone Metabolism and Fracture Risk Factors among older adults with mild to moderate Alzheimer's Disease	R21
Deborah Muoio	Endocrinology	Mechanisms of lipid-induced bioenergetic stress in muscle	R01
Deborah Muoio	Endocrinology	Novel roles of PDK4 in regulating mitochondrial protein phosphorylation, carbon flux and metabolic resilience	R01
Phillip J. White	Endocrinology	Mechanisms linking the Branched-Chain alpha-Keto Acid regulatory network to the pathogenesis of NASH	R01
Diego Bohorquez	Gastroenterology	Glutamatergic neurotransmission in gut neuropod cells	R01
Diego Bohorquez	Gastroenterology	Bacteria sensory transduction from gut to brain to modulate behavior	R01
Anna Mae Diehl	Gastroenterology	TNF Alpha and Recovery from Alcoholic Liver Injury	R01
Anna Mae Diehl	Gastroenterology	Hepatic Lipotoxicity, Metabolic Homeostasis and NAFLD Pathogenesis	R56
Katherine Garman	Gastroenterology	The role of gastrin in esophageal submucosal gland acinar ductal metaplasia	R01
Melanie M. Kaelberer	Gastroenterology	Efferent vagal modulation of neuropod cells in the small intestine	K01
Rodger A. Liddle	Gastroenterology	Mechanisms of mechanically-induced acute pancreatitis	R01
Rodger A. Liddle	Gastroenterology	Mechanisms of Pancreatic Fibrosis	R01
Rodger A. Liddle	Gastroenterology	Metabolic regulation of pancreatitis	R01
Jatin Roper	Gastroenterology	Ultra-bright fluorescent nanoparticles for colorectal adenoma detection	R21
Jatin Roper	Gastroenterology	Wnt signaling in obesity-associated colorectal cancer	R37
Ian A. Williamson	Gastroenterology	Quantifying Enteric Metabolism of Branched-chain Amino Acids in Relation to Other Dietary and Microbiota Nutrients	K99
Keisha Bentley-Edwards	General Internal Medicine	Religion, Spirituality and CVD Risks: A Focus on African Americans	R01
Nicole Depasquale	General Internal Medicine	Supporting Patients and Family Care Partners to Manage Chronic Kidney Disease Together	K01
Susanne B. Haga	General Internal Medicine	Summer Scholars in Genome Sciences & Medicine	R25
Nia Mitchell	General Internal Medicine	Changes in Weight and Physical Function for Older African American Women in National, Peer-Led, Community-Based Weight Loss Program	R01
Caroline Sloan	General Internal Medicine	Improving medication adherence and disease control for patients with multimorbidity: the role of price transparency tools	K23
James F. Wharam	General Internal Medicine	Impact of high deductible health plans and COVID-19 on alcohol use disorder treatment access, outcomes, and disparities	R01
Christopher B. Bowling	Geriatrics	Functional Limitations and Disability Among Middle-Aged Adults	R01
Maria J. Marquine	Geriatrics	Research and Mentoring on Neurocognitive Disparities in Aging	K24
Juliessa M. Pavon	Geriatrics	Deprescribing Central Nervous System Medications in Hospitalized Older Adults	K23
Gregory A. Taylor	Geriatrics	Role of IRGM proteins in immunity to enteric bacteria	R01
Gregory A. Taylor	Geriatrics	IRGM proteins as regulators of inflammation	R01
Gowthami Arepally	Hematology	Complement and Thrombosis in HIT	R01
Gowthami Arepally	Hematology	Comparative studies of complement responses to ICs	R21
Grace M. Lee	Hematology	Neutrophil Activation Phenotypes in Healthy Subjects and Implications for Bacterial Clearance	R21
Charity Oyediji	Hematology	Sickle Cell Disease Functional Assessment Validation and Exercise Pilot Intervention	K01
Charity Oyediji	Hematology	Characterizing Frailty in Older Adults with Sickle Cell Disease Using a Sickle Cell Frailty Index (FI-SCD)	R03
Rahima Zennadi	Hematology	The Role of RBC Reactive Oxygen Species in Regulating Thrombotic Events During Aging	R01
Rahima Zennadi	Hematology	Oxidative stress mechanisms regulating gamma-globin gene transcription in sickle cell disease	R01
Andrew Alspaugh	Infectious Diseases	Coordinated responses to host-derived stresses in C. neoformans	R01
Andrew Alspaugh	Infectious Diseases	Metal Homeostasis in Yeast	R01
Andrew Alspaugh	Infectious Diseases	Arrestin proteins mediate microbial cellular adaptation and fungal virulence	R21

Arthur W. Baker	Infectious Diseases	Combined Use of Statistical Process Control and Whole Genome Sequencing to Detect and Investigate Nontuberculous Mycobacterial Clusters and Outbreaks	K08
Maria Blasi	Infectious Diseases	Understanding the interplay between local viral infection and local inflammation in COVID-19 kidney injury	R01
Maria Blasi	Infectious Diseases	Mechanisms of HIV persistence in the kidney	R01
Vivian H. Chu	Infectious Diseases	Bridging the Gap to Enhance Clinical Research Program (BIGGER)	R25
Vance G. Fowler	Infectious Diseases	HLA Fine Mapping to Elucidate S. aureus Susceptibility	R01
Thuy Le	Infectious Diseases	Making an early diagnosis of talaromyces - an approach to reduce morbidity and mortality in advanced HIV disease in Southeast Asia	R01
Thuy Le	Infectious Diseases	Development, Clinical Validation, and Readiness for Implementation of a Novel Mp1p D4 Point of Care Test for Rapid Diagnosis of Talaromyces	R01
Thuy Le	Infectious Diseases	Mapping of the IgM and IgG antibody responses to Talaromyces marneffeii infection in mice and humans - Deciphering acute from reactivated or latent infections	R21
Stacey Maskarinec	Infectious Diseases	Staphylococcus aureus Cardiac Device Infections - From the Vascular Viewpoint	K23
Susanna Naggie	Infectious Diseases	Identification of Novel Bioactive Lipid Metabolites for Predicting Liver-related Outcomes in Persons Co-Infected with HIV and HCV	R01
Nwora L. Okeke	Infectious Diseases	Leveraging Local Health System Electronic Health Record Data to Enhance PrEP Access in Southeastern Louisiana: A Community-Informed Approach	R01
John Perfect	Infectious Diseases	Evolution of Cryptococcus neoformans Strains from Patients with HIV/AIDS	R01
Wendy A. Prudhomme - O'Meara	Infectious Diseases	Malaria diagnostic testing and conditional subsidies to target ACTs in the retail sector: the TESTsmART trial	R01
Wendy A. Prudhomme - O'Meara	Infectious Diseases	Once bitten: A longitudinal, observational study of successful malaria parasite transmission events between humans and mosquitos	R01
Wendy A. Prudhomme - O'Meara	Infectious Diseases	Once Bitten: Acquisition of Malaria Adaptive Immunity (OBAMA - Immunity)	R01
Wendy A. Prudhomme - O'Meara	Infectious Diseases	Quantifying the dual threat of Plasmodium vivax and Anopheles stephensi in a P. falciparum endemic pre-elimination setting in sub-Saharan Africa	R21
Matthew Rubach	Infectious Diseases	Sepsis Characterization in Kilimanjaro	R01
Steve Taylor	Infectious Diseases	Longitudinal cohort study of SARS-CoV2 sero-conversion in a malaria-endemic community in Western Kenya	R21
Joshua T. Thaden	Infectious Diseases	Characterization of a Novel E. coli Type III Secretion System Associated with Increased Patient Mortality	K08
Nathan M. Thielman	Infectious Diseases	Adapting and Piloting an Evidence-based Intervention to Improve Hypertension Care among Tanzanians Living with HIV	R21
L. Gayani Tillekeratne	Infectious Diseases	A randomized controlled trial of a novel, evidence-based algorithm for managing lower respiratory tract infection in a resource-limited setting	R01
L. Gayani Tillekeratne	Infectious Diseases	Host response-based diagnostics for identifying bacterial versus viral causes of lower respiratory infection in resource-limited settings	R21
Daniel Edmonston	Nephrology	Novel Mechanisms and Therapeutic Targets for Pulmonary Hypertension in End-Stage Renal Disease (K23)	K23
Rasheeda K. Hall	Nephrology	Deprescribing for Older Dialysis Patients	K76
Rasheeda K. Hall	Nephrology	Integration of Geriatric Care into Dialysis Clinics	R01
Xunrong Luo	Nephrology	Donor Kidney Resident Macrophages in Kidney Allograft Early Inflammation and Alloimmunity	R01
Opeyemi A. Olabisi	Nephrology	JAK-STAT Inhibition to Reduce Racial Disparities in Kidney Disease	R01
Tomokazu Souma	Nephrology	Targeting Renal Tubular Epithelial Progenitors in AKI to CKD transition	R01
Tomokazu Souma	Nephrology	Ferroptosis and Ferroptotic Stress in Maladaptive Renal Repair	R01
Robert F. Spurney	Nephrology	A Novel Therapeutic Approach to Treat Focal Segmental Glomerulosclerosis (FSGS)	R21
Laura P. Svetkey	Nephrology	Duke CTSA (KL2)	KL2
Crystal C. Tyson	Nephrology	Diet and Hypertension Management in Chronic Kidney Disease	K01
Myles Wolf	Nephrology	Tissue-Specific Regulation and Effects of CYP24A1	R01
Christina M. Wyatt	Nephrology	Impact of early antiretroviral therapy on kidney disease outcomes	R01
Ting Yang	Nephrology	The role of kidney epithelial cells specific EP4 receptors in blood pressure control	R01
Ting Yang	Nephrology	Role of pericytes in postoperative neurocognitive disorder during aging	R03
Andrew Armstrong	Oncology	Targeting convergent oncogenic signaling during AR inhibition to overcome metastasis and immune evasion in prostate cancer	R01
Gerard C. Blobel	Oncology	Role of ALK4 in Regulating Receptor Trafficking and Pancreatic Cancer Biology	R01
Gerard C. Blobel	Oncology	Role for TbetaRIII Shedding in the Tumor Microenvironment	R01
Gerard C. Blobel	Oncology	Duke Preparing Research Scholars in Biomedical Sciences- Post-Baccalaureate Research Education Program	R25
Brent A. Hanks	Oncology	Role of the tumor NLRP3 inflammasome in the generation of anti-PD-1 antibody immunotherapy-associated toxicities	R01
Brent A. Hanks	Oncology	Investigating the PD-L1:NLRP3 signaling axis as a tumor intrinsic mechanism of adaptive resistance to anti-PD-1 antibody immunotherapy	R37
Shiaowen D. Hsu	Oncology	Microfluidic Droplet Organoids to Decipher the Tumor Heterogeneity in CRC of African Ancestry	R21
Kevin C. Oeffinger	Oncology	Onco-primary care networking to support TEAM-based care - the ONE TEAM Study	R01
Deepshikha C. Ashana	Pulmonary	Racial disparities in shared decision making for patients with acute respiratory failure	K23
Christopher Cox	Pulmonary	PCplanner	R01
Christopher Cox	Pulmonary	LIFT2	R01
Matthew W. Foster	Pulmonary	Multimodal, mass spectrometry-based analysis of dried blood for deep phenotyping of sepsis	R21
Zachary R. Healy	Pulmonary	Characterization of CMV-specific T cell responses in immunocompromised hosts	R00
Timothy J. McMahon	Pulmonary	Red blood cell ATP export and transfusion in sepsis	R01
Christopher Mosher	Pulmonary	GEMSSTAR PERSPIRE-COPD	R03
David M. Murdoch	Pulmonary	Pathogenesis of Neuroinflammation and Neurocognitive Impairment In HIV-infected Young Adult Cannabis Users	R01
Scott M. Palmer	Pulmonary	Duke Resident Physician-Scientist Program- NIAID	R38
Loretta Que	Pulmonary	Oxidative Stress and Regional Airway Remodeling and Fibrosis in Obese Asthma	R01
Isaretta L. Riley	Pulmonary	Coping with Asthma through Life Management (CALM)	K01
Aparna C. Swaminathan	Pulmonary	Complement Pathway Activation in Idiopathic Pulmonary Fibrosis and other Progressive Fibrosing Interstitial Lung Diseases	K23
Robert M. Tighe	Pulmonary	CXCL10/CXCR3 regulation of ozone-induced epithelial permeability	R01
Robert M. Tighe	Pulmonary	Monocyte-derived alveolar macrophage drives inflammatory response to lung ozone exposure	R01
Jamie L. Todd	Pulmonary	Secondary Analyses to Support the Rational Design of Clinical Trials in Chronic Lung Allograft Dysfunction	R21
Brian Andonian	Rheumatology	Accelerated Metabolic Aging in Rheumatoid Arthritis Immune cells and Skeletal Muscle: A Pilot Study	R03
Megan E. Clowse	Rheumatology	The HOP-STEP Intervention: Improving Maternal Health in Women with Lupus through Improved Pregnancy Prevention and Planning	R01
Kim M. Huffman	Rheumatology	ENHANCING THE CALERIE NETWORK TO ADVANCE AGING BIOLOGY	R33
Virginia B. Kraus	Rheumatology	Epigenetic Mechanisms Promoting Longevity	R01
Virginia B. Kraus	Rheumatology	Extracellular Vesicle Analyses to Develop Aging and Resilience Biomarkers	R01