Name	Degree(s)	Rank	Primary Department or Program	Email	Research Interest
Adams, Drew James	PhD	Assoc Professor	Genetics & Genome Sc SOM	drew.adams@case.edu	Identification of new small molecules that modulate protein function by irreversible (covalent) attachment.
Adoro, Stanley	PhD	Asst Professor	Pathology- SOM	stanley.adoro@case.edu	Seeks to understand the mechanisms that regulate blood cell development and homeostasis with the goal of identifying cellular targets that can be harnessed to improve blood cell regeneration and to alleviate blood cancers
Ajiboye, Abidemi Bolu	PhD	Assoc Professor	Biomedical Eng SOM	abidemi.ajiboye@case.edu	Development and control of brain-computer-interface (BCI) technologies for restoring function to individuals who have experienced severely debilitating injuries to the nervous system, such as spinal cord injury and stroke.
Alberts, Jay	PhD	Asst Professor	Biomedical Eng- CCLCM	albertj@ccf.org	Brain control of skilled movements and how changes in brain function affect the movement performance; Parkinson's disease, stroke and concussion; improving movement and cognitive performance.
Apte, Suneel	MBBS, DPhil	Assoc Professor	Molecular Medicine CCLCM	aptes@ccf.org	Fundamental research on extracellular matrix (ECM) and the proteases that remodel it, and apply it to a variety of diseases. One class of proteases, the ADAMTS proteases, is a major focus of this laboratory, which studies their intrinsic properties, biological mechanisms and roles in human disease. We investigate how their mutations cause birth defects affecting the neural tube, eyes, palate, limbs, heart and blood vessels. Our research is relevant to inherited human connective tissue disorders such as Marfan syndrome and the acromelic dysplasias. We investigate acquired human disorders such as aortic aneurysms, arthritis, cancer, cardiac failure and glaucoma.
Basilion, James P	PhD	Professor	Biomedical Eng Radiology- UH	james.basilion@case.edu	Development and application of molecular imaging technologies with specific focus on designing novel tools to image molecular markers of disease, thereby increasing the sensitivity and specificity of medical imaging.
Bolen, Shari Danielle	MD	Assoc Professor	Medicine- MHMC	sbolen@metrohealth.org	Cardiovascular risk reduction, with an emphasis on improving health systems and linking clinics with community resources to improve the cardiovascular health of subpopulations.
Bonomo, Robert Anthony	MD	Professor	Medicine- VA	robert.bonomo@case.edu	Resistance to antibiotics; dissecting the genetic and amino acid sequence determinants of ß-lactamase activity: mechanisms of ß-lactamase inhibitors; how ß-lactamases hydrolyze advanced generation cephalosporins; how mutations impact ß-lactamase expression; how penicillin interacts with penicillin resistant PBPs; molecular epidemiology of extended spectrum ß-lactamases (ESBLs).

Boom, W. Henry	MD	Professor	Medicine- UH	w.boom@case.edu	CD4+, CD8+ and gamma delta T cell responses to M. tuberculosis. Characterization of mycobacterial antigens recognized by CD4+ and gamma-delta T cells; roles of cytokines such as IL-2, IL-12, IFN-gamma, IL- 10 and TGF-beta in modulating T cell responses to M. tuberculosis; functional interaction of antigen-specific T cells with macrophages infected with mycobacteria; mechanisms used by M. tuberculosis-infected macrophages to process and present antigens.
Brady-Kalna y, Susann M	PhD	Professor	Molecular Bio & Micro	susann.brady-kalnay@case.edu	Studying the role of receptor protein tyrosine phosphatases (RPTPs) in signals transduced upon cell-cell contact, and in cell growth and malignancy in cancer
Brown, Jonathan Mark	PhD	Assoc Professor	Molecular MedicineC CCM	brownm5@ccf.org	Focused on the interrelationship between lipid metabolism and the development of chronic diseases such as obesity, diabetes, and atherosclerosis.
Burgener, Adam	PhD	Professor	Pathology- SOM	adam.burgener@case.edu	Host and microbial factors at mucosal surfaces that underlie of the acquisition and pathogenesis of HIV.
Bush, William	PhD	Assoc Professor	Epid & Biostat SOM	william.s.bush2@case.edu	Pathway-based analyses and computational pipelines for high-throughput data analysis to study complex models of disease association.
Cameron, Mark	PhD	Assoc Professor	Epid & Biostat SOM	mark.cameron@case.edu	Role of interferon signaling genes and the inflammasome in regulating innate and adaptive immune responses.
Canaday, David H	MD	Professor	Medicine- UH	david.canaday@case.edu	Human immune system changes with aging; study of vaccine responses in older individuals with a focus on influenza and shingles vaccines. Also, an understanding of the mechanisms of increased pathogenesis during HIV/TB co-infection.
Capadona, Jeffrey R	PhD	Professor	Biomedical Eng	jeffrey.capadona@case.edu	Molecular understanding of the neuroinflammatory response to implantable neuromoduluator/rehabilitative devices.
Chan, Timothy A	MD PhD	Professor	Immunotherapy- CCLCM	chant2@ccf.org	Genomic basis of tumor development and treatment response using both large-scale genomic analyses and functional dissection to determine what drives oncogenesis. Development of improved diagnostic and therapeutic modalities for human cancers.
Chopra, Atul	MBBS PhD	Assoc Professor	Medicine- UH	atul.chopra@uhhospitals.org	Energy homeostasis and metabolic disease; discovery of fundamental mechanisms governing cellular function at the molecular level and developing novel therapeutic approaches to treat human disease.
Cooper, Kevin Duncan	MD	Professor	Dermatology- UH	Kevin.Cooper@uhhospitals.org	Monocyte and T cell-lineage mechanisms of skin inflammation and its regulation, and in clinical translation for photomedicine applications, psoriasis, cutaneous T cell lymphomas, dermatitis, and skin cancers
Corey, Seth	MD	Professor	Cancer Biology- CCLCM	coreys2@ccf.org	The molecular basis of inherited bone marrow failure syndromes and their transformation to myelodysplastic syndromes (MDS) and acute myeloid leukemia (AML).

Crawford, Dana	PhD	Professor	Epid & Biostat SOM	dana.crawford@case.edu	Use of epidemiologic & clinical data sets to characterize common & rare genetic variants associated with human diseases in diverse populations.
Dalton, Jarrod Elliott	PhD	Assoc Professor	Medicine- CCLCM	daltonj@ccf.org	Population health, simulation, life course modeling, health disparities, decision analysis, cardiovascular risk modeling
Damaser, Margot	PhD	Professor	Biomedical Eng- CCLCM	damasem@ccf.org	Biomedical engineering, physiology and pharmacology; development and testing of new models and devices for improvement of diagnosis, treatment and rehabilitation of female pelvic floor disorders; pudendal nerve injury models during childbirth; recovery of pelvic floor function after complex traumatic injuries
Dasarathy, Srinivasan	MBBS	Professor	Medicine- CCLCM	dasaras@ccf.org	Hepatology focusing on signaling pathways and regulatory mechanisms in skeletal and adipose tissue in models of hyperammonemia
Dell, Katherine	MD	Professor	Pediatrics- CCLCM	dellk@ccf.org	Development and application of quantitative MRI techniques to study CKD especially of ADPKD and progression in animal models and human diseases.
Derwin, Kathleen	PhD	Asst Professor	Biomedical Eng- CCLCM	derwink@ccf.org	Our research program aims to (1) develop biomaterial patches to improve healing and outcomes of soft tissue repairs such as, for example, repair of the tendons in the shoulder or hernias in the abdominal wall; (2) understand why rotator cuff muscles get fatty and smaller after rotator cuff injury and develop ways to limit or reverse this process; and (3) develop non-invasive methods to monitor the integrity and quality of healing soft tissue repairs.
Dolansky, Mary	PhD	Assoc Professor	SON	mary.dolansky@case.edu	Cardiac rehabilitation, heart failure self management and cognitive impairment
Drumm, Mitchell	PhD	Professor	Genetics & Genome Sc SOM	mitchell.drumm@case.edu	Genetics of lung inflammation during development and in disease states.
Durand, Dominique M	PhD	Professor	Biomedical Eng	dominique.durand@case.edu	Neural engineering; neural interfacing; neural prostheses; computational neuroscience; neural dynamics; neuromodulation; neurophysiology and control of epilepsy
Dweik, Raed	MBBS	Professor	Medicine- CCLCM	dweikr@ccf.org	Pulmonary hypertension, asthma, nitric oxide biology, exhaled breath analysis, biomarkers, lung matrix, hyaluronan
Eng, Charis	MD PhD	Professor	Genetics & Genome Sc SOM	engc@ccf.org	Cancer genomic medicine; heritable cancer syndromes; Cowden syndrome; microbiome; metabolome; breast cancer; thyroid cancer; endocrine cancer; pheochromocytoma; autism; PTEN.
Erzurum, Serpil	MD	Professor	Medicine- CCLCM	erzurus@ccf.org	Studies the mechanisms that initiate and perpetuate lung inflammation and remodeling, and ultimately lead to lung diseases such as asthma and pulmonary vascular disease
Exner, Agata	PhD	Professor	Radiology- UH	agata.exner@case.edu	Image-guided drug delivery; ultrasound contrast agents; interventional oncology; nanomedicine; cancer detection and therapy; molecular imaging.

Fairchild, Robert	PhD	Professor	Molecular Medicine CCLCM	fairchr@ccf.org	Neutrophil products and/or activities that lead to the recruitment of hapten- primed T cells to the site and regulation of effector functions expressed by the T cells following activation by the hapten at the site.
Field, Seth	MD PhD	Professor	Medicine- UH	seth.field@uhhospitals.org	Cell biology of cancer.
Flask, Christopher Alan	PhD	Professor	Radiology- UH	christopher.flask@case.edu	Quantitative magnetic resonance imaging; MRI physics and pulse sequence design; lung imaging: cystic fibrosis; kidney imaging: polycystic kidney disease, sickle cell disease, diabetic nephropathy; liver imaging: inflammation and fibrosis.
Freedman, Darcy	PhD	Professor	Epid & Biostat SOM	darcy.freedman@case.edu	Food access interventions; public health literacy; primary prevention of chronic disease; community-engaged research; health disparities reduction, policy; systems, and environmental interventions.
Griggs, Stephanie	PhD RN	Asst Professor	SON	stephanie.griggs@case.edu	The role of sleep and the circadian system in childhood chronic conditions; Sleep promotion in adolescents and young adults; Type 1 Diabetes; Biobehavioral technology-based interventions to support sleep self-management and sleep promotion
Gurkan, Umut A	PhD	Professor	Mechanical and Aerospace Engineering	umut.gurkan@case.edu	Developing micro/nano-scale technologies and biomanufacturing complex multiscale biological systems for blood cell research, cardiovascular medicine, orthopedics, musculoskeletal research, regenerative medicine, and advanced cell therapies.
Haines, Jonathan L	PhD	Professor	Epid & Biostat SOM	jonathan.haines@case.edu	Integrating research in population, clinical and molecular epidemiology; outcomes research; quantitative methodology development.
Hazen, Stanley L	MD PhD	Professor	Molecular Medicine CCLCM	hazens@ccf.org	Immune system contributions to heart disease and asthma; role of leukocyte myeloperoxidase in development of heart diseases; role of gut microbiome in heart disease; HDL mechanisms.
Huang, Alex Y	MD PhD	Professor	Pediatrics- UH	Alex.Huang@uhhospitals.org	Adapting intravital 2-photon laser scanning microscopy to study various aspects of in vivo immunity and pathogenesis.
lyengar, Sudha	PhD	Professor	Epid & Biostat SOM	sudha.iyengar@case.edu	Genetics of diabetic nephropathy.
Jackson, Mark Wayne	PhD	Professor	Pathology- SOM	mark.w.jackson@case.edu	Genetic events that contribute to breast hyperplasia; identification of novel transforming genetic elements; influence of tumor microenvironmental factors in cancer progression.
Jenkins, Michael W.	PhD	Assoc Professor	Biomedical Eng	michael.jenkins@case.edu	To develop enhanced infrared light technology for infrared neuromodulation to potentially treat a variety of diseases and neurodegenerative injuries
Jung, Jae U	PhD	Professor	Cancer Biology- CCLCM	jungj@ccf.org	Mechanisms of infectious agents and virus-induced cancers. Coronavirus infection, transmission, and vaccine development.
Kazura, James W	MD	Professor	Pathology- SOM	james.kazura@case.edu	Mechanisms underlying susceptibility to infection and pathogenesis of disease due to malaria and chronic worm infections endemic in tropical areas of the world.

Keri, Ruth A	PhD	Professor	Molecular Medicine CCLCM	kerir@ccf.org	Mechanisms that control mammary gland morphogenesis and the misappropriation of developmental pathways in breast cancer initiation and progression.
King, Christopher L	MD PhD	Professor	Pathology- SOM	christopher.king@case.edu	Schistosomiasis, filariasis & malaria; immuno-parasitology; immune response to prenatal parasite exposure; vaccine development.
Kirsch, Robert F	PhD	Professor	Biomedical Eng SOM	robert.kirsch@case.edu	Restoration of movement using neuroprostheses; neuroprosthesis control system design; natural control of human movements; biomechanics of movement; computer-based modeling.
Koyuturk, Mehmet	PhD	Professor	Elect Eng & Comp Sci	mehmet.koyuturk@case.edu	Bioinformatics and computational biology; computational modeling and algorithm development for systems biology; integration, mining and analysis of biological data; algorithms for distributed systems.
LaFramboise, Thomas	PhD	Professor	Genetics & Genome Sc SOM	thomas.laframboise@case.edu	Developing & applying computational tools to identify molecular variants - both inherited and somatic- that contribute to cancer & related diseases in humans
Lathia, Justin	PhD	Professor	Molecular Medicine CCLCM	lathiaj@ccf.org	Regulation of stem cell state in advanced cancers; how cancer stem cells interact with their microenvironment and one another with the goal of identifying unique pathways for therapeutic development.
Letterio, John	MD	Professor	Pediatrics- UH	John.Letterio@uhhospitals.org	Role of signaling pathways on developing immune responses in health and disease.
Levine, Alan	PhD	Professor	Molecular Bio & Micro SOM	alan.levine@case.edu	Intestinal host defense: Toggling between immune tolerance and immune protection.
Li, Xiaojuan	PhD	Professor	Biomedical Eng- CCLCM	Lix6@ccf.org	Advanced imaging and image processing techniques to improve early diagnosis and treatment for musculoskeletal diseases including osteoarthritis, inflammatory arthritis, sports injury, and osteoporosis; applying machine-learning/deep-learning techniques for novel reconstruction of accelerated MRI acquisition, automatic tissue segmentation and lesion detection; automatic diagnostic grading and prediction of patient outcomes.
Lin, Feng	PhD	Professor	Molecular Medicine CCLCM	Linf2@ccf.org	Studying complement activation and regulation in multiple sclerosis, myasthenia gravis, systemic lupus erythematosus, rheumatoid arthritis, and age-related macular degeneration, and allograft rejection, thus eventually developing novel therapies
Lu, Zheng-Rong	PhD	Professor	Biomedical Eng	zheng-rong.lu@case.edu	Molecular imaging and drug delivery using novel nanotechnology; biodegradable materials and organic nanomaterials to design and develop targeted, safe and effective imaging agents and drug delivery systems for diagnostic imaging; treatment of human diseases and image-guided therapy.
Ma, Dan	PhD	Asst Professor	Biomedical Eng	dan.ma@case.edu	Magnetic resonance imaging (MRI); magnetic resonance fingerprinting; quantitative MR; neuroimaging.

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Maciejewski, Jaroslow P	MD	Professor	Medicine- CCLCM	maciejj@ccf.org	Molecular pathogenesis of bone marrow failure syndromes; specific aspects of stem cell biology, genetics, cytogenetics and immunobiology
Markowitz, Sanford	MD PhD	Professor	Medicine- UH	sanford.markowitz@case.edu	Molecular abnormalities in colon cancer including suppressor genes and oncogenes; positive and negative regulatory growth factors; role of genomic instability in inherited and sporadic colon cancers.
Mata, Ignacio Fernandez	PhD	Asst Professor	Molecular Medicine CCLCM	matai@ccf.org	Identifying and understanding the genes that play a role in those diseases that affect the brain (neurological disorders). These include the very well- known Parkinson's disease (PD), but also other, less common, disorders, such as a form of PD that presents with severe cognitive problems/dementia (PDD) and another type of dementia called Dementia with Lewy Bodies (DLB). Identifying these genes is very important as they represent candidates for novel therapies that can help treat these disorders. We try to include patients from all ethnicities in its studies, and is privileged to coordinate the Latin American Research consortium on the Genetics of PD (LARGE-PD).
Mazanec, Susan R	PhD RN AOCN	Asst Professor	SON	susan.mazanec@case.edu	Cancer survival, Symptom distress, Family caregivers
Nagy, Laura E	PhD	Professor	Molecular Medicine CCLCM	Nagyl3@ccf.org	Understanding how chronic alcohol consumption contributes to liver disease and diabetes; how ethanol exposure injures the liver; identifying individual targets of ethanol-induced injury and the specific responses of key cell types in the liver; the integrated, organismal response to ethanol-induced injury.
O'Connor, Christine	PhD	Assoc Professor	Molecular Medicine CCLCM	oconnoc@ccf.org	Functions of HCMV-encoded GPCRs during both lytic and latent infection to understand how these proteins influence pathogenesis and disease; defining the contribution of HCMV GPCRs to lytic replication; the role of US28 during HCMV latency; the contribution of US28 to atherosclerosis.
Ontaneda, Daniel	MD	Assoc Professor	Medicine- CCLCM	ontaned@ccf.org	Development of advanced MRI measures in multiple sclerosis. Treatment strategies in relapsing remitting multiple sclerosis
Perzynski, Adam	PhD	Assoc Professor	Medicine- MHMC	adam.perzynski@case.edu	Mechanisms through which social factors influence health and clinical care over the life course. Development of novel strategies to eliminate health disparities. Outcomes measurement over the life course and mixed methods research.
Pieper, Andrew A	MD, PhD	Professor	Psychiatry- UH	Andrew.pieper@uhhospitals.org	Neurodegeneration in disease, injury, and normal aging; development of new therapies for patients suffering from currently incurable or difficult to treat neuropsychiatric disorders
Proweller, Aaron	MD PhD	Assoc Professor	Medicine- UH	Aaron.Proweller@uhhospitals.org	Intersections between signaling pathways and transcriptional programs that govern the phenotypic plasticity of vascular smooth muscle cells.
Rollins, Andrew Martin	PhD	Professor	Biomedical Eng	andrew.rollins@case.edu	Biomedical optics, optical biomedical diagnostics, novel optical methods for high-resolution

Rothberg, Michael	MD	Professor	Medicine- CCLCM	ROTHBEM@ccf.org	Quality of care and decision making for common medical conditions with emphasis on tailoring treatment to patients based on individual risk and preferences; helping physicians and patients make better healthcare decisions in order to improve outcomes and control costs.
Sahoo, Satya	PhD	Assoc Professor	Epid & Biostat SOM	satya.sahoo@case.edu	Clinical bid data, patient information capture at point of care, natural language processing techniques.
Schiemann, William	PhD	Professor	Biochemistry	William.schiemann@case.edu	Cellular and molecular defects that enable breast cancers to establish and eventually emerge from metastatic dormancy.
Schumacher, Fredrick Ray	PhD MPH	Assoc Professor	Epid & Biostat SOM	fredrick.schumacher@case.edu	Genetic determinants of cancer, mainly prostate cancer, discovered by way of genome-wide association scans or candidate-gene approaches
Smith, Jonathan D	PhD	Professor	Molecular Medicine CCLCM	Smithj4@ccf.org	Applying modern technologies including next generation sequencing to help discover mechanisms and pathways relevant to human cardiovascular disease, such as atherosclerosis, atrial fibrillation, and HDL metabolism. We hope to translate this information into new diagnostic and therapeutic regimens. Currently performing pre-clinical evaluation of a novel oxidant resistant apoAI isoform that we created.
Spilsbury, James	PhD	Assoc Professor	Epid & Biostat SOM	james.spilsbury@case.edu	Effects of social context on sleep; effects of violence on children; qualitative research methods.
Stamler, Jonathan S	MD	Professor	Medicine- UH	Jonathan.stamler@uhhospitals.org	Elucidation of the cellular mechanisms of action of S-nitrosylation; regulation of cardiac and skeletal muscle, and airway contractility; association of dysregulated S-nitrosylation with disease, ranging from heart disorders to neurological syndromes and cancer.
Stange, Kurt	MD PhD	Professor	Center for Community Health Integration SOM	kurt.stange@case.edu	Effectiveness of family practice networks, especially for care of elderly patients with multiple chronic diseases
Stappenbeck, Thaddeus	MD PhD	Clin Professor	Molecular Medicine CCLCM	stappet@ccf.org	Genetic and environmental factors that affect epithelial cell function and predispose individuals to develop active intestinal inflammation.
Stein, Catherine	PhD	Professor	Epid & Biostat SOM	catherine.stein@case.edu	Genetic susceptibility to tuberculosis (TB); immune response to TB; clinical epidemiology of TB; proteomics.
Stuehr, Dennis	PhD	Professor	Molecular Medicine CCLCM	stuehrd@ccf.org	Nitric oxide (NO) biosynthesis in mammals. NO is made by an enzyme named NO synthase, & is involved in many aspects of cell function & disease, including signal transduction in the brain, control of blood pressure & heart rate, gastric motility, oxygen delivery, immunologic destruction of tumor cells and microbes, infertility, impotence, & stroke. We study how NO biosynthesis takes place at the molecular level & how it is regulated, & also study the impact of NO synthesis on certain aspects of cells and tissues.

Subauste, Carlos	MD	Professor	Medicine- UH	Carlos.subauste@uhhospitals.org	CD40 biology in protection against pathogens (Toxoplasma, Cryptosporydium, Mycobacteria, Salmonella, Cryptococcus, etc); CD40 roles in various diseases that have an inflammatory component (atherosclerosis, inflammatory bowel disease, systemic lupus erythematosus, ischemia, graft rejection); new approaches for treatment of inflammatory disorders and infections controlled by CD40.
Tang, Wai Hong Wilson	MD	Professor	Medicine- CCLCM	tangw@ccf.org	Heart failure and transplant cardiologist; adjunct faculty at Dept of Cell Biology at Lerner Research Institute. Mechanistic understanding of cardiomyopathies and heart failure
Tesar, Paul Joseph	PhD	Professor	Genetics & Genome Sc SOM	paul.tesar@case.edu	Stem cell biology & developmental neuroscience; pluripotent stem cells in models of neurological development and disease; molecular mechanisms by which cells acquire glial fate and function and maintain functionality throughout life
Toly, Valerie A Boebel	PhD RN CPNP	Assoc Professor	SON	valerie.toly@case.edu	Mothers of chronic ill children, Family normalization
Triolo, Ronald J	PhD	Professor	Biomedical Eng	ronald.triolo@case.edu	Restore or enhance upright and seated mobility, posture and balance in individuals with neuro-musculo-skeletal disorders.
Wald, David Nathan	MD PhD	Professor	Pathology- UH	david.wald@case.edu	Identification and development of novel therapeutic strategies for cancer with a particular focus on Acute myeloid leukemia (AML).
Williams, Scott M	PhD	Professor	Epid & Biostat SOM	scott.m.williams@case.edu	The genetics of complex human diseases, including those related to the genetic risk of hypertension, cardiovascular disease, cancers and susceptibility to infection.
Wilson, David L	PhD	Professor	Biomedical Eng	david.wilson@case.edu	Minimally invasive, interventional medical imaging; cryo-imaging; biodegradable macromolecular MRI contrast agents; targeted MRI contrast agents for specific cancer imaging; image-guided minimally invasive cancer treatment; design and development of effective drug delivery systems.
Yu, Jennifer	MD PhD	Assoc Professor	Radiation Oncology, CCLCM	Yuj2@ccf.org	Elucidating the molecular mechanisms driving cancer initiation and progression to develop therapies for patients with brain tumors; translation of experimental therapeutics to clinical trials.
Zhu, Xiaofeng	PhD	Professor	Epid & Biostat SOM	xiaofeng.zhu@case.edu	Statistical genetics and genetic epidemiology; hypertension; obesity; sleep apnea; bioinformatics