

Research Advisor	Course	Department	Research Interests
Aguirre, Adan	487	PHARM	Cellular and molecular mechanisms that regulate the transition of undifferentiated neural progenitor cells (“neural stem cells”) into specialized neural cells during normal development, and how these mechanisms function in pathological situations
Airola, Michael	487	BIOCHEM	Understanding how lipid-metabolizing enzymes work at the molecular and structural level
Amarillas Gastelum, Clarisa	487	DENTAL	Digital CAD/CAM technology, dental biomaterials, and adhesive dentistry
Asare, Emmanuel	487	MICRO	The localization and migration pattern of poliovirus capsid proteins during infection
Ballas, Nurit	487	BIOCHEM	Transcriptional repressor REST and corepressor CoREST in neural development. Molecular mechanisms underlying disorder Rett Syndrome (RTT)
Benach, Jorge	487	MICRO	Pathogenesis of spirochetal infections and their host responses
Bhaduri-McIntosh, Sumita	487	MICRO / PEDIA	Pediatric infectious diseases
Bialkowska, Agnieszka	487	MEDIC	Develop, characterize, and test novel therapeutic agents that enhance the regeneration of the intestinal epithelium; investigate potential targets for pancreatic cancer treatment.
Bingham, Paul	487	BIOCHEM	Genetic control of development and gene expression in animals
Bopenhagen, Daniel	487	PHARM	Mitochondrial molecular biology
Boon, Elizabeth	487	CHEM	Understanding nitric oxide signaling in bacteria from a molecular-to a community-level and employing this knowledge to advance human health, prosperity and welfare
Bowen, Mark	487	PNB	Single molecule spectroscopy; Coordination of post-synaptic glutamate receptor signaling by the MAGUK family of scaffolds
Brink, Peter	487	PNB	Intercellular communication; Gap junctions

Brown, Deborah	487	BIOCHEM	Cholesterol/sphingolipid-rich domains in membrane signaling
Canals, Daniel	487	CANCER	Studies on bioactive lipids with initial discovery of bioactive sphingolipids
Canli, Turhan	487	PSYCH	Neural and genetic basis of personality and emotion
Carino, Patricia	487	PATHOL	Evolution of molecular and cellular changes during development of colorectal and breast cancer.
Carrico, Isaac	487	CHEM	Modification of viral surfaces; Protein pharmaceutical stabilization; Tracking PTMs as a function of cell physiology
Carrion, Julio	487	ORAL BIO	Periodontology
Chan, Chia-Hsin	487	PHARM	Delineate the network of metabolic reprogramming in tumor initiation and progression; explore regulatory machinery orchestrating EMT-driven cancer stemness and drug resistance; development of small molecule inhibitors targeting glycolysis or EMT as new therapeutic interventions
Chan, Mei Lin	487	BME	Bone adaptation, mechanotransduction and osteoimmunology in normal and pathological conditions.
Chen, Jiang	487	PATHOL	Using the skin and hair follicles as model systems to understand signaling pathways involved in epithelial development, homeostasis and cancer
Chowdhury, Saikat	487	BIOCHEM	
Chung, Jun	487	PATHOL	Understanding the mechanism of cancer invasion and metastasis, focusing on Triple Negative Breast Cancer.
Citovsky, Vitaly	487	BIOCHEM	Intercellular transport, genetic transformation, and chromatin remodeling in plants
Clark, Richard	487	BME	
Clarke, Christopher	487	CANCER	Studies on bioactive lipids with initial discovery of bioactive sphingolipids
Collier, Jackie	487	MAR SCI	Phytoplankton physiological ecology; Biocomplexity and microbial diversity; Planktonic ecosystem processes

Cognato, Holly	487	PHARM	Extracellular matrix in the brain: roles during development and during neurodegeneration
Coutsias, Evangelos	487	AMS	
de Oliveira, Ana Carolina	487	DENTAL	Enamel and dentin bonding, physical properties of dental materials
Dean, Neta	487	BIOCHEM	Protein glycosylation
Del Poeta, Maurizio	487	MICRO	Sphingolipid metabolism and signaling in fungal and mammalian cells to identify new markers for early diagnosis and specific microbial enzymes/molecules essential to cause infection in the attempt to develop new antifungal targets
Delgado-Ruiz, Rafael	487	DENTAL	Dental Implants (surfaces, designs, immediate loading, crestal-subcrestal position, zirconia dental implants), Implant Prosthodontics, Bone Substitutes, Synthesis and Evaluation, Bone Regeneration, Thermograph Analysis of Drilling processes (Bone, teeth and materials), Optical Scanners
Demple, Bruce	487	PHARM	Cellular systems to counteract oxidative damage
Deutsch, Dale	487	BIOCHEM	Uptake of endocannabinoids and neurobiochemistry/cell biology of enzymes involved in their metabolism
Dheilly, Nolwenn	487	MAR SCI	Studies the underlying principles of host-parasite co-evolution
Erezyilmaz, Deniz	487	BIOCHEM	Genetic changes that facilitate divergence between species. Use high throughput genomics to identify evolved genes and molecular genetics to learn how these genes contribute to separation of species.
Erster, Susan	487	BIOCHEM	Cancer biology; Genomics
Estrada, Chelsea	487	MEDIC	Focuses on identifying mechanisms involved in the progression of chronic kidney disease. Specifically, we investigate the mechanisms that regulate proliferation and differentiation of epithelial cells in the kidney.

Fabus, Renee	487	HEALTH TECH	Investigating the neurological underpinnings of many communication disorders specifically to help develop better means of assessment and intervention
Ferguson, Fred	487	DENTAL	Oral health concerns for pediatric and special needs patients, development of training protocols for health professionals
Fleit, Howard	487	PATHOL	Leukocyte Fc receptors; granulocyte/macrophage growth and differentiation
French, Jarrod	487	BIOCHEM	Characterization of multifunctional proteins involved in purine and pyrimidine biosynthesis in eukaryotes
Fries, Bettina	487	MEDIC	Infectious Diseases
Frohman, Michael	487	PHARM	Lipid Signaling: Roles in mitochondrial biology, spermatogenesis, diabetes, immune function, the CNS, platelet activation, and cancer; - Imaging Pancreatic β -cells using metabolomics and MRI
Furie, Martha	487	PATHOL	Molecular mechanisms controlling the movement of leukocytes across the vessel wall, particularly in the context of bacterial infections. two bacterial illnesses, Lyme disease and tularemia
Garcia-Diaz, Miguel	487	PHARM	DNA damage repair, mitochondrial biology, consortium for interdisciplinary environmental research
Gergen, John Peter	487	BIOCHEM	Regulation of gene expression during Drosophila development
Ghebrehiwet, Berhane	487	MEDIC	Biochemistry and molecular biology of the complement system with particular emphasis on the C1q receptors
Glynn, Steven	487	BIOCHEM	Structure and mechanism of protein-unfolding machines in mitochondria
Grollman, Arthur	487	PHARM	Molecular Carcinogenesis: Mechanisms of DNA Repair and Mutagenesis in Mammalian Cells
Gu, Ying	487	DENTAL	Study the Link between the oral and systemic diseases.

Halegoua, Simon	487	NEURO	Neuronal Growth Factor Signaling and the Control of Phenotype and Survival
Haley, John	487	PATHOL	Defining and exploiting mechanisms for overcoming anti-cancer drug resistance and cancer metastasis
Hamik, Anne	487	CARDIO	
Hannun, Yusuf	487	BIOCHEM	Delineating specific functions of individual pathways of sphingolipid metabolism, with a specific focus on cancer biology and therapeutics.
Hayman, Michael	487	MICRO	Understand the regulatory mechanisms that control the proliferation, differentiation and apoptosis of cell sand how oncoproteins subvert these mechanisms to cause cancer
Hearing, Patrick	487	MICRO	Human CNA tumor virus, adenovirus (Ad). Regulation of cell proliferation, gene expression, and host responses to virus infection
Holdener, Bernadette	487	BIOCHEM	Role of MESD in embryonic development and trafficking the low-density lipoprotein receptor family
Hollingsworth, Nancy	487	BIOCHEM	Chromosome behavior in yeast meiosis
Honey, Sangeet	487	MICRO	Molecular and Clinical Microbiology
Hsiao, Benjamin	487	CHEM	Developing new nanostructured materials, such as nanocellulose, for water purification.
Jonas, Flaminia	487	PATHOL	
Ju, Jingfang	487	PATHOL	Mechanism of translational control mediated by non-coding RNAs in cancer
Kaczocha, Martin	487	ANESTH	Fatty acid binding proteins and endocannabinoid transport; Mechanisms of pain
Kalogeropoulos, Andreas	487	MEDIC	
Karzai, A.	487	BIOCHEM	Structure and function of RNA-binding proteins and biochemical studies of the SmpB•tmRNA quality control system
Kernan, Maurice	487	NEURO	Combines <i>Drosophila</i> genetics, molecular biology and electrophysiology to investigate the cellular and molecular basis for the

			mechanical sense: touch, hearing and proprioception
Kew, Richard	487	PATHOL	Leukocyte chemotaxis; inflammation; pulmonary immunopathology
Kim, Hyungjin	487	PHARM	Genome instability, Ubiquitin/SUMO signaling, cancer pathogenesis-regulation of DNA repair in cancer susceptibility pathways
Konopka, James	487	MICRO	Molecular mechanisms regulating cell growth and development in yeast. In particular, the pathways that regulate the fungal pathogen <i>Candida albicans</i> during infection. Also comparative studies on the regulation of mating of the budding yeast <i>Saccharomyces cerevisiae</i>
Krug, Laurie	487	MICRO	Molecular virology. Virus pathogens. Virus-host interactions. Herpesvirus latency. Innate & adaptive immunity
Kumar, Pawan	487	MICRO	Understand how IL-17A and IL-22 regulates intestinal and extra intestinal host defense, with the ultimate goals of revealing effective approaches to treat IBD and autoimmune inflammation
Kumari, Sindhu	487	PNB	Biochemical and molecular characterization of gap junction channels and sodium pumps
Lerner, Matthew	487	PSYCH	Elucidating novel models of and processes underlying social functioning in youth
Levine, Joel	487	NEURO	The biology and functions of a unique class of glial cells known as oligodendrocyte precursor cells (OPCs), NG2-glia, or polydendrocytes
Li, Ellen	487	MEDIC	Gastroenterology
Li, Feng-Qian	487	PHARM	Function of signaling regulators involved in cell growth regulation and cancer biology
Lin, Richard	487	PNB	The physiological functions and pathological roles of PI3K in the development of pancreatic cancer, and in regulating the function of cardiac ion channels.
Liu, Chang-Jun	487	BNL	Understanding of phenylpropanoid-lignin biosynthesis and the related

			regulatory mechanisms by which the plants employ to control biosynthetic activity
London, Erwin	487	BIOCHEM	Membrane protein structure and function
London, Lucille	487	ORAL BIO	Pulmonary Fibrotic diseases; Immunity generated at mucosal surfaces; Inflammatory periodontal disease
Lu, Weiqin	487	MEDIC	Reactive oxidative species (ROS) stress and altered metabolism, two common metabolic abnormalities in human cancer.
Luberto, Chiara	487	PNB	Sphingolipid metabolism and signaling
Luk, Edward	487	BIOCHEM	Chromosome biology and genome regulation
Ma, Yupo	487	PATHOL	Leukemic stem cells; stem cell therapy and tissue repair
MacCarthy, Thomas	487	AMS	Computational modeling to study fundamental biological questions in both immunology and evolutionary biology
Mackenzie, Gerardo	487	MEDIC	Evaluating novel targets and mechanism-based pharmacological agents for the management of colon and pancreatic cancer, having achieved remarkable anticancer efficacies in preliminary studies
Mackow, Erich	487	MICRO	Viral pathogenesis and regulation of innate immunity; hantavirus pathogenic mechanisms and regulation of innate immunity; Dengue virus
Malbon, Craig	487	PHARM	Signal transduction in differentiation and development: Roles of molecular scaffold molecules (e.G., AKAPs and Dishevelleds)
Mallipattu, Sandeep	487	MEDIC	Identifying mechanisms involved in the progression of chronic kidney disease
Mao, Cungui	487	MEDIC	The metabolism and signaling functions of bioactive lipids, sphingolipids in particular, in different species, such as yeast, insects, and mammals.

Marchenko, Natalia	487	PATHOL	Cancer Biology
Marshall, Nancy	487	MICRO	Cytokines and viral defense
Martin, Benjamin	487	BIOCHEM	Stem cell maintenance and differentiation, developmental mechanisms of cancer pathogenesis
Matmati, Nabil	487	CANCER	Cell regulation and sphingolipid biology; stroke and vascular neurology
Matus, David	487	BIOCHEM	Cell, developmental and evolutionary biological approaches to understanding cell invasion
McKinnon, David	487	NEURO	How cellular electrophysiological systems evolve; to what extent homeostatic regulation control ion channel expression in the adult
McMahon (Frame), Mary	487	BME	Integrating signal transduction events with physical properties of blood flow at the microvascular level.
Meliker, Jaymie	487	PREV MED	Environmental Health, Environmental Epidemiology, Epidemiologic Methods, Human Exposure Assessment, Health Geography, Environmental Sustainability, Environmental Justice, Geographic Information Science, Chronic Disease Epidemiology, and History of Public Health
Meng, Yizhi	487	MATER SCI	Study new approaches to developing bio-inspired materials and strategies for tissue engineering
Miller, Todd	487	PNB	Structure and function of enzymes involved in signal transduction
Moll, Ute	487	PATHOL	Tumor suppressor genes, the role of the p53/p73/p63 gene family in human cancer, transcription-independent mitochondrial apoptosis program of p53
Moloney, Daniel	487	BIOCHEM	Biotechnology; Molecular Biology and Biochemistry of model systems; Science Teacher Education
Montrose, David	487	PATHOL	Understanding and modulating host intrinsic and extrinsic factors in the GI tract to prevent and treat colorectal cancer (CRC) and inflammatory bowel disease (IBD).

Morrison, Sidonie	487	MEDIC	Mechanisms of AIDS pathogenesis, including how host factors normally involved in the inflammatory response modulate infection of cells by HIV-1
Neiman, Aaron	487	BIOCHEM	The cell biology of sporulation in yeast
O'Neal, Marvin	487	UG BIO	Director of Introductory Laboratories in Undergraduate Biology
Obeid, Lina	487	CANCER	Bioactive lipid signaling in cancer biology
Ojima, Iwao	487	CHEM	Discovery and development of new and potent anticancer agents, antibacterial agents, anti-inflammatory agents, and various enzyme inhibitors
Parikh, Puja	487	CARDIO	Angioplasty, Cardiac Catherization, Peripheral Vascular Disease, etc
Penna, James	487	ORTHO	Orthopaedics-Sports Medicine
Piret, Sian	487	NEPHROLOGY	Identifying mechanisms involved in the progression of chronic kidney disease, specifically the mechanisms that regulate proliferation and differentiation of epithelial cells in the kidney
Pochron, Sharon	487	SUSTAIN	Runs the Earthworm Ecotoxicology Lab, investigates the role of environmental toxins and fertilizer on earthworms and soil microbes
Prives, Joav	487	PHARM	Regulation of surface receptors in muscle cells
Rafailovich, Miriam	487	MAT SCI	Surface and interface properties of polymer thin films, nanocomposite materials, phase segregation in polymer blends
Raleigh, Daniel	487	CHEM	Protein folding, protein structure and the mechanism of amyloid formation
Rigas, Basil	487	MEDIC	Mechanisms of carcinogenesis and cancer control with pharmacological agents
Roemer, Elizabeth	487	OBST/GYN	Research coordinator for OB/GYN
Rosebrock, Adam	487	PATHOL	Regulation of central carbon metabolism underlying cell growth and division

Rubenstein, Wei Yin	487	BME	Cardiovascular dynamics and computational fluid dynamics; Platelet and endothelial cell functions under physiological and pathological flow conditions; Cardiovascular disease related inflammatory responses, especially complement activation; Effects of secondhand smoke on the development of cardiovascular diseases; Biomarker identification in cardiovascular diseases; Biomedical applications of aerogels
Sampson, Nicole	487	CHEM	Relationship between protein structure and protein function and synthesizing chemical tools to probe and control biological function
Sawicka, Katarzyna	487	DERMATOLOGY	Developed Immuno-Matrix skin patch, which can deliver vaccines and other medications intradermally without a needle
Seeliger, Jessica	487	PHARM	Membrane biosynthesis, structure and behavior in bacterial pathogenesis
Seeliger, Markus	487	PHARM	Molecular mechanisms of protein kinase and ubiquitin ligase signaling in cancer and aging
Senkal, Can	487	CANCER	Regulation of de novo ceramide generation by pro-apoptotic Bcl-2 protein family members.
Sheridan, Brian	487	MICRO	Elucidating the processes regulating immunologic memory in intestinal tissues using oral Listeria infection of mice
Shroyer, Kenneth	487	PATHOL	Cancer (ovarian, cervical); Tumors; Translational Research; Ob/Gyn; Oncology; Bioimaging; Cytopathology; Biomarkers
Simmerling, Carlos	487	CHEM	Computational Structural Biology
Simon, Marcia	487	ORAL BIO	Development and production of cell based therapies for the treatment of partial and full thickness injury to oral, cutaneous and ocular surfaces; regulation of epithelial differentiation; retinoid and non-retinoid lipid metabolism in epithelial and mesenchymal cells

Simon, Sanford	487	BIOCHEM	Extracellular degradation by neutrophil proteases
Singer, Adam	487	EMER MED	Cutaneous wound healing, burns, tissue adhesives, pain management, and cardiovascular disease.
Smith, Steven	487	BIOCHEM	Structure and function of membrane proteins
Snider, Ashley	487	MEDIC	The role and regulation of sphingolipid metabolizing enzymes and their lipid products in the pathobiology of inflammation.
Souza, Joanne	487	BIOCHEM	The effects of positive and negative stress and social fear to human health, education, and welfare
Spector, Ilan	487	PNB	Electrophysiology of nerve and muscle cell lines; ion channels; neurotoxins
Speer, Esther	487	MEDIC	Neonatal/Perinatal
Spitzer, Eric	487	PATHOL	Molecular biology of microbial pathogens
Steigbigel, Roy	487	MEDIC	Mononuclear and polymorphonuclear phagocyte functions; macrophage function in human immunodeficiency virus (HIV) infection
Stessin, Alexander	487	RAD ONCOLOGY	Stereotactic Body Radiation Therapy for pancreatic and liver cancers
Swaminathan, S.	487	BNL	Understanding the structure-function relationship in macromolecules, especially bacterial toxins, via x-ray crystallography. Research projects include structural work on <i>Staphylococcus aureus</i> enterotoxins, <i>Clostridium botulinum</i> neurotoxins, <i>Clostridium perfringens</i> enterotoxin, outer surface proteins of <i>Borrelia burgdorferi</i> , <i>Shewanella putrefaciens</i> proteins involved in metal reduction, etc
Takemaru, Ken-Ichi	487	PHARM	Cell signaling and ciliogenesis in mammalian development, health and disease
Tan, Dongyan	487	PHARM	Structure and function of macromolecules in epigenetic regulation

Tannenbaum, Rina	487	MATER SCI	Soft condensed matter and complex fluids, biomaterials for bone implants and tissue engineering, bioadhesion and cell biomechanics
Taylor, Gordon	487	MAR SCI	Marine molecular microbiology
Thanassi, David	487	MICRO	Understanding mechanisms of virulence protein secretion by bacteria and the functions of secreted virulence factors within the host
Thomsen, Gerald	487	BIOCHEM	Mechanisms of cell fate determination and embryonic development
Tonge, Peter	487	CHEM	How proteins control and modulate the properties of small molecule ligands
Tsirka, Styliani-Anna	487	PHARM	Neuro-immune interactions: Cross-talk between the nervous and immune systems in health and disease
van der Velden, Adrianus	487	MICRO	The mammalian T cell response to Salmonella enterica serovar Typhimurium
Venkatasatya, Myneni	487	DENTAL	Periodontal Immunology, Host Modulation, Tissue Engineering & Regeneration
Viboud, Gloria	487	MICRO	Molecular aspects of the interaction between Yersinia pseudotuberculosis and the host cell
Walker, Stephen	487	ORAL BIO	The cell surface of Gram-negative oral bacteria with an emphasis on the lipopolysaccharide and outer membrane proteins; Attachment of oral bacteria to host cells; anthrax and bio-terrorism; microbial diagnostics
White, Thomas	487	PNB	Gap junction functions defined by genetic diseases and gene knockouts
Williams, Jennie	487	PREV MED	Investigate the use of gene therapy in the prevention of AIDS, with extensive work on NO-SNAIDs. Currently defining the mechanistic role of NF-kB in colon cancer prevention in response to novel chemopreventive agents
Wilson, Paul	487	BNL	Effects of LET ionizing radiation; Links between cellular

			<p>radiosensitivity, individual cancer predisposition, and genetics; Developing radiation biodosimetry assays using techniques such as combinatorial immunocytochemistry, molecular cytogenetics, and novel DNA sensing/amplification technologies; validating new radiation biodosimetry assays against “gold-standard” radiobiological assays; Assessing population-level functional variation in biological responses to ionizing radiation given our inherently large degree of genetic diversity</p>
Wimmer, Eckard	487	MICRO	<p>RNA viruses, particularly picornaviruses, whose prototype is poliovirus</p>
Xu, Changcheng	487	BNL	<p>Dissecting the regulatory network governing lipid biosynthesis and storage by a combination of molecular genetic, cell biological and biochemical approaches</p>
Yang, Ning	487	PATHOL	