Summary Credentials of Mentors Available to Trainees in the M.D./Ph.D. Program

2023 – 2024 Academic Year

Saint Louis University School of Medicine

Participating Faculty Mentors for the Saint Louis University M.D./Ph.D. Program

Name, Degree(s)	Rank	Primary Appointment; Secondary Appointment	Research Interests
Biochemistry & Molecular Biology			
Antony, Edwin, Ph.D.	Professor	Biochemistry & Molecular Biology	Molecular basis of DNA repair, recombination, and genomic instability; Molecular mechanisms of electron transfer in large enzyme complexes
Ayala, Yuna M., Ph.D.	Associate Professor & Vice Chair	Biochemistry & Molecular Biology	RNA binding protein function and link to neurodegeneration, including movement disorders and dementia
Baldán, Ángel, Ph.D.	Professor	Biochemistry & Molecular Biology	Control of sterol and lipoprotein homeostasis by non-coding RNAs; Control of hepatic and intestinal triglyceride metabolism
Dai, Gucan "Gabriel", Ph.D.	Assistant Professor	Biochemistry & Molecular Biology	Biophysical and structural mechanisms of ion channels, principles of bioelectricity, and the biochemistry of excitable membranes
Dastvan, Reza, Ph.D.	Assistant Professor	Biochemistry & Molecular Biology	Mechanistic principles of membrane transport and kinase release in neoplastic and neurodegenerative diseases
Di Cera, Enrico, M.D.	Professor & Chairman	Biochemistry & Molecular Biology	Structure, function, and engineering of coagulation factors
Fleming, Robert E., M.D.	Professor	Pediatrics; Biochemistry & Molecular Biology	Processes regulating cellular iron transport
Ford, David A., Ph.D.	Professor	Biochemistry & Molecular Biology	Biomolecule discovery of mediators and prognostic indicators of sepsis, inflammation and cardiovascular disease
Gonzalo-Hervas, Susana, Ph.D.	Professor	Biochemistry & Molecular Biology	Mechanisms contributing to genomic instability in cancer and aging: nuclear architecture, chromatin structure, and DNA repair.

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Korolev, Sergey, Ph.D.	Associate Professor	Biochemistry & Molecular Biology	Mechanism of tumor suppressors in cancer Inhibition of 1) DNA repair pathways for cancer treatment and 2) membrane receptors in pain management
McCommis, Kyle, Ph.D.	Assistant Professor	Biochemistry & Molecular Biology	Importance of mitochondrial function in the pathogenesis and treatment of heart failure, diabetes, and nonalcoholic fatty liver disease
Montaño, Adriana, Ph.D.	Professor	Pediatrics; Biochemistry & Molecular Biology	Newborn screening of mucopolysaccharidoses; Morquio A disease Treatments for Lysosomal Storage Disorders; Cardiovascular effects of glycosaminoglycan accumulation; Oral tolerance Molecular mechanisms of the disease
Pozzi, Nicola, Ph.D.	Associate Professor	Biochemistry & Molecular Biology	Mechanisms of thrombosis and immunothrombosis, thrombophilias, autoimmunity, Antiphospholipid Syndrome (APS)
Sverdrup, Fran M., Ph.D.	Associate Professor	Biochemistry & Molecular Biology	Drug discovery; transcriptional regulation, chemical biology, epigenetic regulation of gene expression in facioscapulohumeral muscular dystrophy (FSHD)
Molecular, Microbiology & Immunology			
Abate, Getahun, M.D., Ph.D.	Assistant Professor	Internal Medicine; Molec. Micro. & Immunol.	Mycobacteriology; development of new therapeutics (drugs and immunotherapy) and vaccines for tuberculosis and nontuberculous mycobacteria.
Alspach, Elise, Ph.D.	Assistant Professor	Molec. Micro. & Immunol.	"Sex disparities, cancer immunoediting, tumor-specific T cell responses and immunotherapies".
Aurora, Rajeev, Ph.D.	Associate Professor	Molec. Micro. & Immunol.	1) Molecular mechanisms leading to chronic inflammation, including diet, microbiota and hormones. 2) Mechanisms that resolve inflammation. 3) Crosstalk between immune and skeletal systems.

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DiPaolo, Richard J., Ph.D.	Professor	Molec. Micro. & Immunol.	Project 1: Understanding how to regulate inflammation to prevent/treat autoimmunity and cancer Project 2: Understanding immune responses to infectious agents and vaccines to optimize responses
Ferris, Stephen, Ph.D.	Assistant professor	Molec. Micro & Immunology	Understanding the fundamental processes that drive immune responses in the context of self-antigens. We specifically research how an immune response is generated against cancer self "neoantigens" and why these immune responses fail to reject tumors in many patients, as well as investigating aberrant immune responses generated during autoimmune conditions such as Type 1 Diabetes.
George, Sarah L., M.D.	Associate Professor	Internal Medicine; Mole. Micro. & Immunol.	Vaccine development and measurement of cellular (T and B cells) and innate immunity after vaccination, particularly flaviviruses (dengue, Zika, yellow fever, etc). Human vaccine clinical trials.
Hawiger, Daniel, M.D., Ph.D.	Associate Professor	Molec. Micro. & Immunol.	Regulation of T cell differentiation and functions by Dendritic cells to prevent autoimmune diseases and cancer.
Hoft, Daniel F., M.D., Ph.D.	Professor & Division Director	Internal Medicine; Molec. Micro. & Immunol.	Molecular immunologic studies of mucosally invasive intracellular pathogens.
Liu, Jianguo, M.D., Ph.D.	Professor	Internal Medicine; Molec. Micro. & Immunol.,	Molecular mechanisms of cytokine gene expression and their immunological activities in autoimmune, tumor and infectious diseases.
Ray, Ranjit, Ph.D.	Professor	Internal Medicine; Molec. Micro. & Immunol.	Virology; immunology; pathogenesis of hepatitis; virus-host interaction; molecular mechanisms of disease.
Tavis, John E., Ph.D.	Professor & Institute Director	Molec. Micro. & Immunol.	Hepatitis B virus reverse transcription; Hepatitis B virus polymerase biochemistry; Hepatitis B virus drug discovery.
Teague, Ryan M., Ph.D.	Professor	Molec. Micro. & Immunol.	T cell biology, tumor immunology & cancer immunotherapy.
Tse, Long Ping Victor, Ph.D.	Assistant Professor	Molec. Micro. & Immunol.	Viral pathogenesis and transmission at the

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			molecular level to develop new guidelines, vaccines, and antivirals for public health measures. Engineering of pathogenic viruses into harmless nanoparticles for medical use in gene therapy and vaccine development.
Pharmacology & Physiology			
Butler, Andrew A.,Ph.D.	Professor	Pharmacology & Physiology	Regulation of carbohydrate & lipid metabolism in relation to the diseases of obesity & aging.
Chakraborty, Anutosh, Ph.D.	Associate Professor	Pharmacology and Physiology	Understand the mechanisms that cause metabolism diseases to identify and validate novel therapeutic target
Cifarelli, Vincenza,Ph.D.	Assistant Professor	Pharmacology & Physiology	Role of the vascular and lymphatic endothelium in inflammation, tissue remodeling and metabolic health in preclinical models of diseases (obesity, inflammatory bowel diseases and aging) and in human.
de Vera, Ian Mitchelle, Ph.D.	Assistant Professor	Pharmacology & Physiology	Research Interests: Molecular mechanisms of pluripotency; drug discovery targeting orphan nuclear receptors; biomolecular NMR; X-ray crystallography; HIV/AIDS and COVID-19 drug discovery
Farr, Susan, Ph.D.	Professor	Internal Med; Geriatrics; Pharmacology & Physiology	Age-related dementia. Investigating mechanisms, potential treatments, & risk factors such as TBI & diabetes
Nguyen, Andrew, Ph.D.	Assistant Professor	Internal Medicine; Pharmacology & Physiology	Frontotemporal dementia; lysosome biology; lipid metabolism; nucleic acid-based therapeutics
Macarthur, Heather, Ph.D.	Professor	Pharmacology & Physiology	Vascular Control and Dysfunction in Hypertension and other Disease States. Role of Oxidative Stress in Disease States. Neurodegeneration.
Moutal, Aubin, Ph.D.	Assistant Professor	Pharmacology & Physiology	Mechanisms of autoimmune neuropathy and chronic pain, ion channel trafficking, molecular targeting, CRISPR

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Salvemini, Daniela, Ph.D.	Professor & Chair	Pharmacology & Physiology; Internal Medicine	Molecular mechanisms of chronic neuropathic pain and opioid-unwanted actions. Drug discovery and development of novel non-narcotic analgesics.
Walker, John K., Ph.D.	Assistant Professor	Pharmacology & Physiology	Application of synthetic & medicinal chemistry to drug discovery and the development of new small molecule drug therapies.
Yosten, Gina L.C., Ph.D.	Associate Professor	Pharmacology & Physiology	Role of G protein-coupled receptors in diabetes- and obesity-associated cardiovascular disease; deorphanization of orphan GPCRs.
Zhang, Jinsong, Ph.D.	Associate Professor	Pharmacology & Physiology	Epigenetic, transcriptional and signaling regulation of gene expression; leukemia fusion proteins; nuclear receptors in diabetes & cancer.
Health Care Ethics			
Bishop, Jeffrey, M.D., Ph.D.	Professor	Health Care Ethics	Historical, political, and philosophical underpinnings of various medical and scientific practices.
Cargill, Stephanie, Ph.D. MSPH	Associate Profesor	Health Care Ethics	Research ethics, qualitative research with research participants, informed consent, research with underserved communities.
Ebrel, Jason, Ph.D.	Professor	Health Car Ethics	Ethical issues in clinical medicine, including issues at the beginning and end of life, health care allocation and biotechnology.
Karches, Kyle, Ph.D.	Associate Professor	Health Care Ethics; Internal Medicine	My research interests include philosophy of medicine, end-of-life care ethics, technology in medicine, and Catholic health care ethics.
Salter, Erica K., Ph.D.	Associate Professor	Health Care Ethics; Pediatrics	Clinical ethics consultation; pediatric clinical ethics; standards of medical decision-making.
Health & Clinical Outcomes Research			
Buchanan, Paula M., Ph.D.	Associate Professor	Health & Clinical Outcomes Research	Clinical and economic health outcomes in transplantation, diabetes, and cancer.

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Grucza, Richard, Ph.D.	Professor	Family and Community Medicine ; Health & Clinical Outcomes Research	"Epidemiology of substance use disorders (addiction) and policy influences: 1.) OUD treatment outcomes; 2.) Adolescent trends in substance use and conduct problems; 3.) Alcohol-related morbidity and mortality among older adults."
Hinyard, Leslie J., Ph.D., MSW	Associate Professor, Chair, Dept. Health & Clinical Outcomes Research; Director AHEAD Institute	Health & Clinical Outcomes Research	Health outcomes, disparities & equity in oncology care; interprofessional collaboration; palliative care and health outcomes.
Submramaniam, Divya, Ph.D.	Assistant Professor	Health & Clinical Outcomes Research	Survey design & analysis; vaccine hesitancy; health outcomes measurement