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

2025 – 2026 Academic Year

Saint Louis University School of Medicine

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

Biochemistry & Molecular Biology

Name, Degree(s)	Rank	Primary Appointment; Secondary Appointment	Research Interests
Adolf, Madison, Ph.D.	Assistant Professor	Biochemistry & Molecular Biology	Mechanisms of DNA binding proteins in maintaining genome stability; DNA repair and replication
Antony, Edwin, Ph.D.	Professor	Biochemistry & Molecular Biology	Mechanisms of genome integrity maintenance and mRNA fate in oncogenesis.
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.	Associate 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.
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

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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)
Xu, Tinghai, Ph.D.	Assistant Professor	Biochemistry & Molecular Biology	My lab focuses on the mechanistic understanding of DNA methylation, histone modification, and chromatin remodeling. Our research focuses on three important topics: 1. DNA methyltransferase and nucleosome complexes 2. Remodeler-mediated DNA methylation on chromatin 3. Chromatin-associated protein complexes
Molecular, Microbiology & Immunology			
Alspach, Elise, Ph.D.	Assistant Professor	Molecular, Microbiology & Immunology	"Sex disparities, cancer immunoediting, tumor-specific T cell responses and immunotherapies".
Berrien-Elliott, Melissa, Ph.D.	Assistant Professor	Molecular, Microbiology & Immunology	NK cell biology, NK cell therapy for treating cancer and viral infections, translational immunology.
DiPaolo, Richard J., Ph.D.	Professor	Molecular, Microbiology & Immunology	We understand how inflammation causes autoimmunity and cancer and develop therapeutic strategies to treat autoimmunity and prevent cancer.

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Ferris, Stephen, Ph.D.	Assistant professor	Molecular, Microbiology & 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.
Hawiger, Daniel, M.D., Ph.D.	Professor	Molecular, Microbiology & Immunology	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; Molecular, Microbiology & Immunology	Molecular immunologic studies of mucosally invasive intracellular pathogens.
Liu, Jianguo, M.D., Ph.D.	Professor	Internal Medicine; Molecular, Microbiology & Immunology	Molecular mechanisms of cytokine gene expression and their immunological activities in autoimmune, tumor and infectious diseases.
Teague, Ryan M., Ph.D.	Professor	Molecular, Microbiology & Immunology	T cell biology, tumor immunology & cancer immunotherapy.
Tse, Long Ping Victor, Ph.D.	Assistant Professor	Molecular, Microbiology & Immunology	Viral pathogenesis and transmission at the 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.
Ungerleider, Nathan, Ph.D	Assistant Professor	Molecular, Microbiology & Immunology	Lymphoma initiation, progression, and the role of the Epstein Barr virus.
Pharmacology & Physiology			
Butler, Andrew A.,Ph.D.	Professor	Pharmacology & Physiology	Regulation of carbohydrate & lipid metabolism in relation to the diseases of obesity & aging.

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Cifarelli, Vincenza,Ph.D.	Assistant Professor	Pharmacology & Physiology	Mechanisms of vascular and lymphatic remodeling in inflammation and obesity. Confocal microscopy, rodents, molecular targets, clinical research (human obesity/lipedema)
Farr, Susan, Ph.D.	Professor	Internal Med; Geriatrics; Pharmacology & Physiology	Age-related dementia. Investigating mechanisms, potential treatments, & risk factors such as TBI & diabetes
Francois-Moutal, Liberty, Ph.D.	Assistant Professor	Pharmacology & Physiology	Regulation of synaptic transcriptome in chronic pain, from transport to translation; Discovery of new therapeutic target and drug discovery campaigns
Nguyen, Andrew, Ph.D.	Assistant Professor	Internal Medicine; Pharmacology & Physiology	Frontotemporal dementia; aging and longevity; nucleic acid-based therapeutics; neuroinflammation; lysosome biology
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
Navia Pelaez, Juliana, Ph.D.	Assistant Professor	Pharmacology & Physiology	Immuno-metabolic alterations and transcriptional regulation underlying chronic pain development. Discovery of new mechanisms and therapeutic targets for safe treatments of chronic pain.
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.	Associate Professor	Pharmacology & Physiology; Chemistry	Application of synthetic & medicinal chemistry to drug discovery and the development of new small molecule drug therapies.

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Health & Clinical Outcomes Research			
Buchanan, Paula M., Ph.D. MPH	Professor, Associate Director of Academic Affairs	Health & Clinical Outcomes Research	Clinical And Economic Health Outcomes in Transplantation, Diabetes, And Cancer.
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	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.	Associate Professor and Director of Curriculum Development & Strategic Outreach	Health & Clinical Outcomes Research	Sexual and Reproductive Health, Vaccination Uptake and Behavior, Preventive Services Utilization
Rahmani, Bahareh, Ph.D., MS	Associate Professor	Health & Clinical Outcomes Research	Health Artificial Intelligence, Bioinformatics, Machine Learning, Deep Learning, Health Data Science