# Faculty Mentors

Below is the list of research mentors identified for IMPRS.

If you know of a researcher that wants to be considered a research mentor for the program, please have them complete the [Prospective Faculty Mentors form](https://redcap.uits.iu.edu/surveys/?s=X8W9RL7F8ACKP8C8).

| **Faculty Mentor** | **Area of Interest** | **Research Interest** |
| --- | --- | --- |
| [Matthew Aalsma, PhD](https://medicine.iu.edu/faculty/2683/aalsma-matthew/) Campus: IN Dept: Pediatrics | Pediatrics | Dr. Aalsma focuses his research on improving the identification of behavioral health care needs and access and utilization of behavioral health services for adolescents. His research projects are rooted in a community-based participatory framework and include both local and statewide pragmatic implementation trials. Students working with Dr. Aalsma would participate in gathering community-based survey and interview data for an on-going implementation trial to improve substance use screening and evidence-based behavioral health interventions for justice-involved adolescents. |
| [Joshua Adkinson, MD](https://medicine.iu.edu/faculty/27171/adkinson-joshua/) Campus: IN Dept: Surgery | Surgery | Outcomes research in hand surgery. |
| [Matthew Allen, PhD](https://medicine.iu.edu/faculty-labs/allen) Campus: IN Dept: Anatomy and Cell Biology | Bone Biology and Skeletal Disorders | Our laboratory studies the tissue-level mechanisms responsible for musculoskeletal integrity in health and disease. We utilize numerous in vivo model systems to understand how disease and pharmaceutical intervention influence bone structure, cellular activity, tissue-level properties (such as mineralization, microdamage, collagen, hydration), and biomechanical properties. |
| [Nathan Alves, PhD](https://medicine.iu.edu/faculty/22606/alves-nathan/) Campus: IN Dept: Emergency Medicine | Biomedical Engineering | development of clot lysis therapeutics, in vitro whole clot lysis models, pulmonary embolism |
| [Elliot Androphy, MD](https://cm.medicine.iu.edu/faculty/20638/androphy-elliot) Campus: IN Dept: Dermatology | Dermatology | Mechanism of human papillomavirus induced malignancies. Development of novel antiviral drugs. Mechanism of p53 tumor suppression. Gene expression, DNA replication, RNA splicing. Pathogenesis of spinal muscular atrophy and development of therapy for SMA |
| [Lionel Apetoh, PhD](https://medicine.iu.edu/faculty/62491/apetoh-lionel) Campus: IN Dept: Immunology and Microbiology | Immunology and Microbiology |  |
| [Gustavo Arrizabalaga, PhD](https://medicine.iu.edu/faculty-labs/arrizabalaga) Campus: IN Dept: Microbiology and Immunology | Microbiology and Immunology | Toxoplasma gondii is one of the most widespread protozoan parasites of warm-blooded animals and causes devastating diseases in immun0compromised humans and during congenital infections. Central to the survival and pathogenesis of this obligate intracellular parasite is its ability to move from cell to cell and to quickly adapt to different environments as it propagates throughout the infected organism. One of the goals of my research program is to elucidate the mechanisms by which the parasite exits its host cell and becomes motile as to invade new ones. In addition, we are investigating how the parasite responds to drug treatments as to uncover new ways to treat this important human pathogen. |
| [Tarek Ashkar, MD](https://medicine.iu.edu/faculty/5040/ashkar-elachkar-tarek) Campus: IN Dept: Medicine-Nephrology |  | Kidney- Imaging- Omics- Precision medicine |
| [Titto Augustine, PhD](https://medicine.iu.edu/faculty/61236/augustine-titto) Campus: IN Dept: Medicine | Oncology | γδTcells: origin and fate, subsets, diseases and immunotherapy (CARTcells) |
| [Niranjan Awasthi, PhD](https://medicine.iu.edu/education/campuses/south-bend/faculty/22632/awasthi-niranjan/) Campus: IUSM-SB Dept: Surgery | Cancer Biology | Experimental therapeutics in upper GI cancers |
| [Taeok Bae, PhD](https://www.researchgate.net/profile/Taeok_Bae) Campus: IUSM-NW Dept: Microbiology and Immunology | Microbiology and Immunology | Bacterial genetics; Staphylococcus aureus |
| [Matthew Bair, MD, MS](http://medicine.iupui.edu/faculty-profile/mbair/Bair-Matthew) Campus: IN Dept: Medicine/General Internal Medicine and Geriatrics | Medical Informatics and Regenstrief Institute | Improving pain management in primary care |
| [Mariju Baluyot, MD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Clinical Emergency Medicine | Medical Education | The focus of my research is medical simulation, mostly for educational purposes and testing devices. Ongoing projects: Pediatric Resuscitation Simulations with EM Residents; Testing a |
| [Rave Bamba, MD](https://medicine.iu.edu/faculty/42417/bamba-ravi) Campus: IN Dept: Division of Plastic Surgery | Plastic Surgery | plastic surgery, specifically breast reconstruction, transgender surgery, and plastic surgery education |
| [David Basile, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/%C2%B7%20https:/medicine.iu.edu/faculty/5054/basile-david) Campus: IN Dept: Cellular and Integrative Physiology | Cellular and Integrative Physiology | Renal pathophysiology and the role of vascular and immune dysfunction in acute and chronic kidney disease |
| [Sandeep Batra, MD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Pediatrics |  | Oncology |
| [Heidi Beidinger,](http://biology.nd.edu/people/heidi-beidinger-burnett/) Campus: IUSM-SB Dept: Biological Sciences | Global Health Program | My unique blend of education and experiences has culminated into a lifelong passion and sense of urgency to improving the quality of life for individuals who may not have a voice or the resources they need to be successful in life. The primary focus is on the students of the Master in Science of Global Health program. This program is preparing the next generation of leaders in global health to think critically and analytically in order to solve problems around the globe. Although there are more leaders being trained in Global Health, the research suggests that the industry is still lacking qualified leaders. Fortunately, here at Notre Dame, we have the opportunity to train and develop students to be effective and passionate leaders. |
| [William Bennett, MD](https://medicine.iu.edu/faculty/21176/bennett-william) Campus: IN Dept: Pediatrics | IBD; Gastrointestinal Infections; QI; Bioinformatics | My clinical and research interests lie in the complex interaction of clinical medicine, informatics and genomics. Our research focuses on automated decision analysis in pediatric subspecialty care. |
| [Helen Bernie, DO, MPH](https://medicine.iu.edu/faculty/44787/bernie-helen) Campus: IN Dept: Urology | Men’s Health, Andrology, Sexual Health, Cancer Survivorship, Male Infertility, Fertility Preservation, Outcomes based research, Quality improvement, Erectile Dysfunction, Peyronie's, Microsurgery training, Sperm parameters and Hormone levels, Prostate cancer and ED, ED and relationship of Cardiovascular health, ED and Diabetes, Gender disparities in Surgery, Public Health | Dr. Bernie's research interests include testosterone replacement and prostate cancer, sexual medicine and male fertility. Her clinical practice includes treatment of men's health, erectile dysfunction, infertility, cancer survivorship and more. |
| [Ashay Bhatwadekar, PhD](https://medicine.iu.edu/departments/ophthalmology/faculty/22571/bhatwadekar-ashay/) Campus: IN Dept: Ophthalmology | Ophthalmology | Ophthalmology |
| [Joe Bidwell, PhD](https://medicine.iu.edu/faculty/13608/bidwell-joseph/) Campus: IN Dept: Anatomy and Cell Biology | Bone Biology | The Bidwell laboratory has an active program in elucidating the cellular and molecular mechanisms that underlie the skeleton’s response to anabolic stimuli, including parathyroid hormone (PTH), a potent osteoanabolic used to treat osteoporosis. A current primary focus of the laboratory is the identification of the mechanisms responsible for limiting PTH clinical efficacy or its anabolic window. Multiple approaches are brought to bear on this problem including the use of genetically modified mice, primary cell culture of mesenchymal stem cells, osteoprogenitors, and mature osteoblasts. Skeletal phenotypes are analyzed using DXA, uCT, and bone histomorphometry. The molecular methodologies utilized for identifying signal transduction, transcription, and translation pathways activated during the closing of the anabolic window include ChIP-seq, qRT-PCR, Western blotting, immunoprecipitations, mass spectrometry, and cell transfection/immortalization. Students participating in the Bidwell lab are trained to identify and develop an original and significant research question/hypothesis related to the overarching program. |
| [Dharam Bir, PostDoc](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: Dept: Brown Center for Immunotherapy | Immunology |  |
| [Michele Block, PhD](https://microgliaresearch.org/) Campus: IN Dept: Anatomy and Cell Biology | Neuroscience | Microglia are the resident innate immune cells in the brain that serve as central nervous system sentinels, quickly detecting and responding to diverse stimuli. Excessive and chronic activation has been linked to neuron damage and the progressive nature of neurodegenerative diseases (Block et al., 2007, Nature Reviews Neuroscience). Our current research focuses on: 1) identifying triggers (environmental and endogenous) that initiate deleterious microglial activation, 2) revealing the redox mechanisms through which microglia cause neurotoxicity, and 3) applying these findings towards halting the progression of neurological diseases, such as Parkinson’s disease, Alzheimer’s disease, and Gulf War Illness. |
| [Bradley Bohnstedt, MD](https://medicine.iu.edu/faculty/15335/bohnstedt-bradley) Campus: IN Dept: Neurosurgery | Neurovascular and neurosurgery |  |
| [Lynda Bonewald, PhD](https://medicine.iu.edu/faculty/26803/bonewald-lynda/) Campus: IN Dept: Orthopaedic Surgery | Bone Biology | Dr. Bonewald’s research focuses on the biology and function of the osteocyte. At present there are two major focus areas, the first is on crosstalk between osteocyte and muscle and the second focus of the lab is the role of the osteocyte in calcium homeostasis under calcium demanding conditions such as during pregnancy. |
| [David Boone, PhD](https://medicine.iu.edu/faculty/22710/boone-david/) Campus: IN Dept: Microbiology and Immunology | Microbiology and Immunology | Inflammatory bowel diseases and mucosal immunology. |
| [Gregory Borschel, MD](https://medicine.iu.edu/faculty/59586/borschel-gregory) Campus: IN Dept: Surgery | Nerve regeneration, corneal neurotization, diabetes |  |
| [Tia Brodeur, MD, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: OB/GYN | Autoimmune/OB-GYN |  |
| [Allen Brier, MD](https://medicine.iu.edu/faculty/13597/breier-alan)) Campus: IN Dept: Chief, IUSM Psychotic Disorders Program | Psychiatry | Early phases of psychosis, novel therapeutics development for schizophrenia |
| [Randy Brutkiewicz, PhD](https://medicine.iu.edu/faculty/14633/brutkiewicz-randy) Campus: IN Dept: Microbiology and Immunology | Immunology of Alzheimer's disease and CNS injuries | The Brutkiewicz laboratory studies immune evasion by viruses and tumors, as well as the regulation of antigen presentation by various signal transduction pathways in both innate and adaptive immune responses. |
| [Angela Bruzzaniti, PhD](https://medicine.iu.edu/faculty/3887/bruzzaniti-angela/) Campus: IN Dept: Biomedical and Applied Sciences | Biomedical and Applied Sciences |  |
| [Leonard Buller, MD](https://medicine.iu.edu/departments/orthopaedic-surgery/faculty/44741/buller-leonard/) Campus: IN Dept: Orthopaedic Surgery | Bone Biology | Orthopaedic Surgery Clinical Research |
| [Sarah Burgin, MD](https://medicine.iu.edu/faculty/9344/burgin-sarah) Campus: IN Dept: Otolaryngology-Head and Neck Surgery | Otology/Neurotology, Cochlear Implant |  |
| [Ramzy Burns, MD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Urology | Women's Sexual Health |  |
| [Mike Bushey, MD, PhD](https://medicine.iu.edu/faculty/42950/bushey-michael) Campus: IN Dept: Psychiatry | Chronic pain; Addiction | I'm involved in developing and testing interventions to treat chronic pain and addiction. In addition to clinical trials, we are developing databases from real-world treatment to foster a learning-health-system environment in our clinics. |
| [Andrew Cale, MS, PhD](https://medicine.iu.edu/faculty/44839/cale-andrew) Campus: IN Dept: Anatomy and Cell Biology | Education | anatomy education, metacognition in both students, educators, and clinicians, educator development, and science communication. |
| [Ricky Camplain, MSPH, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: Bloomington Dept: Epidemiology |  | Although my research is not biomedical in nature, I believe community-based research with diverse, underserved populations is imperative for medical students. The objective of the research is to develop and test the feasibility and preliminary impact of a robust physical activity program among individuals incarcerated at the Monroe County Jail. The research team will work with me on developing focus group and interview material, conducting focus groups and interviews, developing and distributing questionnaires, data analysis, and intervention development. If a student is interested in a longer-term research opportunity, the team will conduct a randomized control trial to test the program's feasibility, acceptability, and preliminary impact. |
| [Scott Canfield, PhD](https://medicine.iu.edu/education/campuses/terre-haute/faculty/38775/canfield-scott/) Campus: IUSM-TH Dept: Physiology | Cellular and Integrative Physiology | Stem Cell-Derived BBB Model, Anesthetic Toxicity |
| [Louis Cantor, MD](https://medicine.iu.edu/faculty/10187/cantor-louis) Campus: IN Dept: Ophthalmology | Glaucoma | Dr. Cantor's research interests include glaucoma laser therapy; glaucoma surgical therapy; glaucoma pharmaceutical and biomedical research; anterior segment surgery; and cataract surgery. |
| [James Chmiel, MD, MPH](https://medicine.iu.edu/faculty/43283/chmiel-james/) Campus: IN Dept: Pediatrics | Pediatric Pulmonology, Allergy and Sleep Medicine | Dr. Chmiel’s research involves understanding the inflammatory response of the lung, particularly as it relates to CF and asthma, and the impact of anti-inflammatory therapeutics upon that response. He has published several papers in both areas. In addition to investigator-initiated studies, Dr. Chmiel has participated in several clinical trials networks including AsthmaNet, SARP 3, Inner City Asthma Consortium I, and the CF Foundation’s Therapeutics Development Network. Dr. Chmiel focuses primarily clinical trials. Students working with him will participate in all aspects of the studies, including interacting with study participants and collecting data. |
| [Brian Christie, MD, MPH](https://medicine.iu.edu/faculty/52124/christie-brian) Campus: IN Dept: Surgery | Hand Surgery |  |
| [Thomas Ciulla, MD, MBA](https://medicine.iu.edu/faculty/24921/ciulla-thomas) Campus: IN Dept: Ophthalmology | Retina, Ocular Angiogenesis, Retinal Gene Therapy, Ocular Drug Delivery |  |
| [Wade Clapp, MD](https://medicine.iu.edu/faculty/9949/clapp-d) Campus: IN Dept: Pediatrics | Microbiology and Immunology; Biochemistry and Molecular Biology | Our laboratory focuses on the molecular pathogenesis of neurofibromatosis type 1 and neurofibromatosis type 2. Neurofibromatosis type 1 is the most common genetic disease with a predisposition to cancer and one of a series of developmental disorders called RASopathies that have a range of malignant, neurodevelopmental and other non-malignant disease manifestations. A major effort in the laboratory is understanding the genetic, biochemical and cell-cell interactions that lead to the genesis and progression of plexiform neurofibromas that are often congenital in origin and become clinically apparent in babies and young children. |
| [Matthias Clauss, PhD](https://medicine.iu.edu/faculty-labs/clauss) Campus: IN Dept: Cellular and Integrative Physiology | Vascular Biology | Endothelial activation in angiogenesis and cardiopulmonary diseases |
| [David Clemmer, PhD](https://www.chem.indiana.edu/faculty/david-clemmer/) Campus: Bloomington Dept: Chemistry | Exosome Analysis |  |
| [Erica Clinkenbeard, PhD](https://medicine.iu.edu/faculty-labs/clinkenbeard) Campus: IN Dept: Medical and Molecular Genetics | Bone health in Chronic Kidney Disease | The Clinkenbeard lab led by Erica Clinkenbeard, PhD, is focused on understanding the molecular mechanism driving bone loss in chronic kidney disease – mineral and bone disorder (CKD-MBD). Dovetailed studies in animal models of CKD and tissue culture work to identify novel targets for therapeutic interventions. |
| [Christopher Collier, MD](https://www.lab.indianaorthotumor.com/people) Campus: IN Dept: Orthopaedic Surgery | Orthopaedics and Cancer | https://www.lab.indianaorthotumor.com |
| [Erin Conboy, MD](https://medicine.iu.edu/departments/genetics/faculty/42028/conboy-erin/) Campus: IN Dept: Medical and Molecular Genetics | Undiagnosed Rare Disease Research |  |
| [Robert Considine, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/%C2%B7%20https:/medicine.iu.edu/faculty/4921/considine-robert) Campus: IN Dept: Medicine and Endocrinology | Cellular and Integrative Physiology | Research in the Considine lab is focused on three areas:  1) understanding adipose tissue biology under normal and pathologic conditions; 2) ingestive behavior including measurement of gut peptides and the central neural response to food cues (taste and smell), and 3) changes in insulin sensitivity and whole-body metabolism following bariatric surgery.  We utilize cell culture, animal models and human biopsy material. |
| [Joan Cook-Mills, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Pediatrics, Wells Ctr. for Pediatric Research | Immunology, Allergic Inflammation, Neuroimmunology |  |
| [Duangnapa Cuddy, DO, FACOS, RPVI](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: Bloomington Dept: Vascular Surgery |  | Academic Peer Review Article Clinical trial in regenerative medicine |
| [Sara Custer, PhD](https://medicine.iu.edu/faculty/21088/custer-sara) Campus: IN Dept: Dermatology | Dermatology |  |
| [Pierre Dagher, MD](http://medicine.iupui.edu/faculty-profile/pdaghe2/pierre-c-dagher-md/) Campus: IN Dept: Nephrology | Renal | My lab investigates the mechanisms of acute kidney injury (AKI) in animal models of renal ischemia- reperfusion and sepsis. In particular, we study the interplay between tubular apoptosis, inflammation, metabolism and innate immunity in shaping the renal response to injury and therapy. We have identified guanine nucleotides, p53, macrophage subsets and Toll-like receptors as major modulators of the injury process, metabolism and tubular crosstalk as well as the post injury outcome and response to therapy. |
| [Richard Dahl, PhD](http://biology.nd.edu/people/richard-dahl/) Campus: IUSM-SB Dept: Microbiology and Immunology | Cancer Biology | Dr. Dahl investigates how genes are turned on and off during the development of blood cells and how this normal process becomes disrupted in leukemia cells. |
| [Pankja Dangle, MD, MCh](https://medicine.iu.edu/faculty/61020/dangle-pankaj) Campus: IN Dept: Urology-Pediatric Urology | Urology |  |
| [Arupratan Das, PhD](https://medicine.iu.edu/faculty/47579/das-arupratan) Campus: IN Dept: Ophthalmology | Glaucoma; neurodegeneration | Dr. Das focuses on understanding neurodegeneration mechanisms using human stem cell derived neurons in the area of optic neuropathies, particularly glaucoma. In particular, understanding mitochondrial quality control pathway in stem cell derived retinal ganglion cells (RGCs) and associated abnormalities in the mutant cells. |
| [Dibyadyuti Datta, MS, PhD](https://medicine.iu.edu/faculty/23230/datta-dibyadyuti/) Campus: IN Dept: Pediatrics | Parasitology. Malaria immunology, biochemistry, and molecular biology. | global health, infectious diseases, malaria, sickle cell anemia, acute brain injury, long-term outcomes |
| [Utpal Dave, MD](https://cancer.iu.edu/about/members/bio/19425) Campus: IN Dept: Medicine; Microbiology and Immunology | Cancer Biology | We are committed to understanding basic aspects of oncogene function, which should lead to novel therapeutic approaches for difficult-to-treat cancers. |
| [Michael Davis, PhD](https://medicine.iu.edu/faculty/44579/davis-michael/) Campus: IN Dept: Pediatrics | Pediatric | Dr. Davis received his PhD degree from the Medical College of Virginia at VCU in Physiology and Biophysics, specializing in airway physiology, and is also a registered respiratory therapist. His research focuses on non-invasive biomarkers of airway disease and on complex airway cell culture. His projects currently primarily focus on primary ciliary dyskinesia, cystic fibrosis, and asthma. Students who rotate with him will be able to observe, assist, and participate in all aspects of his research, including collecting clinical breath and airway samples, culturing airway biopsies into differentiated airway epithelial models, and conducting bench research. |
| [Alexander Dent, PhD](https://micro.medicine.iu.edu/faculty/primary-faculty/alexander-l-dent-ph-d/) Campus: IN Dept: Microbiology and Immunology | Microbiology and Immunology | Immunology, T-cells, Inflammation |
| [Marsha DeSmet, PhD](https://medicine.iu.edu/faculty/21938/desmet-marsha) Campus: IN Dept: Dermatology | HPV oral cancer |  |
| [Linda DiMeglio, MD, MPH](https://medicine.iu.edu/faculty/1595/dimeglio-linda) Campus: IN Dept: Endocrinology | Diabetes | My areas of interest in my clinical practice include metabolic bone and calcium disorders and type 1 diabetes treatment and prevention. |
| [Brian Dixon, MPA, PhD, FHIMSS](https://www.regenstrief.org/person/brian-e-dixon/) Campus: IN Dept: Epidemiology | Informatics | My research focus is on the use of information and computing systems to improve public health practice and clinical outcomes. This research has included the development, testing, and implementation of measures that leverage secondary data captured from electronic health records. |
| [Kenneth Dunn, PhD](http://medicine.iupui.edu/faculty-profile/kwdunn/dunn-kenneth/) Campus: IN Dept: Nephrology | Renal | Our laboratory studies endocytic membrane transport in polarized epithelial cells. The function of an epithelium depends upon the polar distribution of transporters and receptors on either the luminal or basal side of the monolayer. |
| [Matthew Durbin, MD, MS](https://medicine.iu.edu/faculty/26744/durbin-matthew) Campus: IN Dept: Pediatrics | Cardiovascular Genetics and Development | Dr. Durbin is using genomics, gene editing, animal models, and cell culture models to elucidate the developmental pathways and molecular mechanisms altered in structural heart disease. He is currently exploring the role of a gene called SHROOM3 in structural heart disease. He is also exploring the optimal clinical evaluation for newborns with heart disease in the ICU, including diagnostic testing using next generation sequencing, and whole exome sequencing. |
| [Michael Eadon, MD](http://medicine.iupui.edu/faculty-profile/MEADON/Eadon-Michael/) Campus: IN Dept: Nephrology | Pharmacogenomics | My primary research efforts focus on the translation and implementation of pharmacogenomics into clinical practice as well as the identification of novel predictors of renal injury from large genomic, transcriptomic, and proteomic datasets. Major focus areas include the evaluation of renal disease expression patterns and identifying genetic variants that affect this expression (expression quantitative trait loci). A second focus is translating genetic determinants of anti-hypertensive drug response and progression of kidney disease into clinical practice. |
| [Christine Eckel, PhD](https://medicine.iu.edu/campuses/gary/faculty/42692/eckel-christine/) Campus: IUSM\_NW Dept: anatomy and Cell Biology | Anatomy, Cell Biology and Physiology |  |
| [Michael Econs, MD](https://medicine.iu.edu/faculty/4904/econs-michael/) Campus: IN Dept: Endocrinology and Metabolism | Bone Biology | My general area of interest is the genetic aspects of metabolic bone disease. In this regard, I have performed clinical and basic studies of metabolic bone disorders. Much of my effort has focused on using positional cloning techniques to locate and clone genes that are responsible for these disorders. These efforts have led to the recent cloning of the PEX gene, which is responsible for X-linked hypophosphatemic rickets. Studies are currently underway to map and clone the genes responsible for autosomal dominant hypophosphatemic rickets and osteoporosis. We are also performing studies that focus on finding genes that play a role in determining peak bone mineral density. |
| [Burcin Ekser, MD, PhD](https://medicine.iu.edu/departments/surgery/faculty/21995/ekser-burcin/) Campus: IN Dept: Surgery | Surgery/Transplant | I have special interests in solid organ xenotransplantation and bridging options for liver xenotransplantation. I am trained transplant surgeon with doctoral degree in transplant immunology and xenotransplantation. I have investigated the feasibility of genetically engineered pig liver xenotransplantation in nonhuman primates together with coagulation dysregulation. I have identified thrombocytopenia and potential factors for thrombocytopenia post genetically engineered pig liver xenotransplantation. I have also studied the impact of different co-stimulation blockade agents in artery-patch, kidney, and heart xenotransplantation models in nonhuman primates. |
| [Christopher Emery, M.D.](https://medicine.iu.edu/faculty/27663/emery-christopher) Campus: IN Dept: Pathology and Laboratory Medicine | Clinical Microbiology |  |
| [Jill Fehrenbacher, PhD](https://medicine.iu.edu/faculty/11378/fehrenbacher-jill) Campus: IN Dept: Pharmacology and Toxicology | Sensory neuroscience; pain | The long-term goal of Dr. Fehrenbacher research is to understand how diseases and drugs can modulate the function of peripheral sensory neurons to underlie clinical neuronal dysfunction. In addition, she is interested in how sensory neuron function can alter cancer growth and metastasis. Her research spans a wide scope of science, from systems biology to reductionist studies to examine the function of sensory neurons to single-cell RNAseq studies to identify the effects of diseases and drugs on the transcriptome of individual sensory neurons. |
| [Jamie Felton, PhD](https://medicine.iu.edu/faculty/43384/felton-jamie) Campus: IN Dept: Pediatrics | type 1 diabetes immunology |  |
| [Loren Field, PhD](https://medicine.iu.edu/faculty/4906/field-loren;%20https:/medicine.iu.edu/faculty-labs/field) Campus: IN Dept: Pediatrics | Heart Disease | Dr. Field's lab has a long-standing interest in developing strategies to induce regenerative growth and developing strategies to promote cardio protection. |
| [Melissa Fishel, PhD](https://medicine.iu.edu/faculty-labs/fishel;%20https:/medicine.iu.edu/faculty/12126/fishel-melissa) Campus: IN Dept: Pharmacology and Toxicology | Cancer Biology | Melissa L. Fishel, PhD is a tumor cell biologist who has been interested in using more relevant in vitro and ex vivo models of cancer including 3-dimensional co-cultures of tumor cells and relevant cells from the microenvironment. The importance of not only targeting the tumor is clear, therefore, novel approaches that target the tumor microenvironment in addition to signaling pathways within the tumor may offer the most promising method against cancer. Her lab’s interests have been in exploring rationale molecular targets in difficult-to-treat, refractive cancers such as pancreatic cancer as well as glioblastoma and pediatric leukemia. My research goals are focused on the identification and preclinical validation of cancer-specific therapies. |
| [John Foley, PhD](https://medicine.iu.edu/faculty/26607/foley-john/) Campus: IUSM-BL Dept: Anatomy and Cell Biology | Cancer Biology | Lab studies the epithelial-mesenchyme interactions in the repair and regeneration of specialized skin of the nipple. Information gained from basic studies are directed toward developing a cell-based regeneration nipple strategy for mastectomy patients. |
| [Monica Forbes-Amrhein, MD, PhD](https://medicine.iu.edu/departments/radiology/faculty/8775/forbes-amrhein-monica/) Campus: IN Dept: Radiology and Imaging Sciences | Pediatric and Fetal Radiology | Advanced ultrasound imaging of the brain in neonatal hydrocephalus; Costochondral junction fractures; Skull radiographs in skeletal surveys; Prenatal MRI findings in patients with hypoplastic left heart syndrome |
| [Wayne Forrester, PhD](https://medicine.iu.edu/faculty/26604/forrester-wayne/) Campus: IUSM-BL Dept: Medical and Molecular Genetics | Cancer Biology | Lab studies directed cell migration during metazoan development. Abnormal cell migration can lead to the spread of cancer cells. Investigators apply genetic, molecular and genomic approaches to the study cell migration, using the small, experimentally tractable nematode C. elegans. |
| [Nicole Fowler, PhD, MHSA](https://medicine.iu.edu/faculty/5180/fowler-nicole/) Campus: IN Dept: Medicine | Aging clinical and translational research |  |
| [Mark Fox, MD, PhD, MPH](https://medicine.iu.edu/faculty/4780/fox-mark) Campus: IUSM\_SB Dept: Medicine and Pediatrics | Ethics, health equity, community health, public health, scarce resources, under-resourced populations | Oversee the Health Equity, Epidemiology and Data unit at the county health department as well as my work in medical ethics, so can accommodate a range of interests. |
| [Larry Fromm, PhD](https://medicine.iu.edu/faculty/24958/fromm-larry) Campus: Muncie Dept: | Molecular Biology | The research in Dr. Fromm's lab focuses on the mechanisms by which innervation controls gene expression in skeletal muscle. Skeletal muscle is innervated by two distinct types of neurons: motor neurons that control movement and sensory neurons that detect length. Contact of each type of neuron with developing muscle induces formation where nerves and muscles connect of specialized structures, whose formation involves transcriptional induction in muscle of specific genes in response to nerve-derived signals. Dr. Fromm's lab studies the mechanisms by which these genes are induced by identifying the transcription factors that facilitate responsiveness to nerve-derived signals and determining how intracellular signaling relays target these transcription factors. Understanding the signaling interactions that control formation of nerve-muscle synapses and of mechanosensory structures might suggest regenerative approaches for treating certain neuromuscular disorders and sensory neuropathies. |
| [Benjamin Gaston, Md](https://medicine.iu.edu/faculty/43800/gaston-benjamin/) Campus: IN Dept: Pediatrics | Pediatric Pulmonary | Dr. Gaston studies specific signaling reactions as they relate to new drug development in childhood respiratory disease. Specific projects are related to severe asthma, cystic fibrosis, primary ciliary dyskinesia, apnea and bronchopulmonary dysplasia. Expertise includes general chemistry, biochemistry, cell and molecular biology, and preclinical and clinical new drug development. |
| [Millie Georgiadis, PhD](https://medicine.iu.edu/faculty/10591/georgiadis-millie) Campus: IN Dept: Biochemistry and Molecular Biology | Biochemistry | X-ray crystallographic, biochemical, and thermodynamic studies of protein-nucleic acid interactions involved in replication, nuclear export, and temporal gene expression. |
| [Andrew Gonzalez, MD, JD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Division of Vascular Surgery | Healthcare AI | Dr. Gonzalez is conducting projects in the realm of healthcare artificial intelligence and machine learning. The series of computer vision projects uses deep learning to perform automatic segmentation, stenosis, identification, and characterization using angiogram data. The natural language processing projects use large language models to perform disease, specific information extraction, using retrieval augmented generation (RAG) pipelines. An ideal student candidate would be somebody with an interest and basic understanding of AI/ML. This may not be gained through formal coursework. Students with a background and python and spark, are highly encouraged to apply. However, there are ample "low code/no code" opportunities in our lab. |
| [Brett Graham, MD, PhD](https://medicine.iu.edu/departments/genetics/faculty/38482/graham-brett/) Campus: IN Dept: Medical and Molecular Genetics | Mitochondrial biology and disease, metabolism, mouse and Drosophila genetics | Our laboratory is interested in studying the genetics of metabolic function and disease through the manipulation of genetic model systems, particularly the mouse and the fruit fly, Drosophila melanogaster. Specifically, we are interested in the function of the mitochondrion in normal cellular biology and disease. By taking advantage of the strengths of each model system, we intend to dissect the pathophysiology of mitochondrial dysfunction to progress towards the ultimate goal of developing novel therapeutic strategies for diseases that exhibit mitochondrial dysfunction. |
| [Brian Gray, MD](https://medicine.iu.edu/faculty/22902/gray-brian) Campus: IN Dept: Department of Surgery, Section of Pediatric Surgery | Pediatric Surgery | Clinical Outcomes Research. I am interested in patient centered outcomes in all areas of pediatric surgery, but I concentrate on extracorporeal support (ECMO) and congenital lesions found in neonates. I am also interested in resident education and wellness and hospital process improvement. |
| [Alison Greene, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: Bloomington Dept: Applied Health Science | sexual health; substance use; community-engaged research | assisting with evidence-based intervention development; exploring funding opportunities; training development and implementation; assisting with manuscript |
| [Ed Greenfield, PhD](https://cancer.iu.edu/research-trials/member-bio.shtml?name=edward-greenfield&id=25223) Campus: IN Dept: Orthopaedic Surgery | bone turnover/bone loss/bone repair |  |
| [Richard Griffith, MHA, FACHE](https://fsph.iupui.edu/about/directory/griffith-richard.html) Campus: IN Dept: Health Policy and Management | Heath Research Outcomes; Health Administration |  |
| [Natalie Guerrero, MD, PhD](https://medicine.iu.edu/faculty/62215/guerrero-natalie) Campus: IN Dept: Adolescent Medicine Division | Public health; health disparities; mental health | The project is to understand how family support buffers the negative impact of racial discrimination on mental health |
| [Richard Gunderman, MD PhD](https://medicine.iu.edu/faculty/6855/gunderman-richard) Campus: IN Dept: Radiology and Pediatrics |  | Ethics, Public Policy, Professionalism |
| [Dipika Gupta, PhD](https://medicine.iu.edu/education/campuses/gary/faculty/26544/gupta-dipika/) Campus: IUSM-NW Dept: Biochemistry and Molecular Biology | Biochemistry | Dr. Gupta's research is focused on elucidating the molecular mechanisms by which innate immunity proteins regulate the microbiota and sensitivity to inflammatory diseases. |
| [Samir Gupta, MD, MS](https://medicine.iu.edu/faculty/4848/gupta-samir) Campus: IN Dept: Infectious Diseases | Intersection of mood disorders and HIV-related cardiometabolic disease | Pilot trial of insomnia therapy on systemic inflammation in HIV –data analysis, possibly new biomarker evaluations in this population; Associations between monocyte activation and mental health disorders in HIV-positive people in Kenya –data analysis; Commercial trials of new antiretroviral therapies for HIV. |
| [David Haas, MD](https://medicine.iu.edu/faculty/6505/haas-david/) Campus: IN Dept: Medicine | Ob/Gyn | Mostly focused on obstetrics, his research encompasses many areas with particular interest in medications in pregnancy and biobanks. All of these are focused on improving obstetric outcomes. |
| [Anita Haggstrom, MD](https://medicine.iu.edu/faculty/18083/haggstrom-anita) Campus: IN Dept: Dermatology | Infantile Hemangioma; PHACE Syndrome |  |
| [David Haggstrom, MD, MAS](http://www.regenstrief.org/person/david-haggstrom/) Campus: IN Dept: Medicine; Regenstrief Institute | Health Research Outcomes | I am a cancer health services researcher broadly interested in the measurement and improvement of the quality of health care delivery across the cancer continuum. In addition to implementation science, I have a special interest in medical informatics, including personal health records and health information exchange. |
| [Kathryn Haider, MD](https://medicine.iu.edu/faculty/18577/haider-kathryn) Campus: IN Dept: Ophthalmology | Retinopathy of prematurity |  |
| [David Hains, MD](https://medicine.iu.edu/faculty/27629/hains-david) Campus: IN Dept: Pediatrics, Micro/Immuno, Med and Molecular Genetics | Innate Immunity, Nephrology |  |
| [Stacey Halum, MD](https://medicine.iu.edu/faculty/17430/halum-stacey) Campus: IN Dept: Otolaryngology-Head and Neck Surgery | Laryngology |  |
| [Laura Haneline, MD](https://medicine.iu.edu/faculty/6477/haneline-laura) Campus: IN Dept: Pediatrics | Diabetes | Diabetes, vascular disease, bone marrow, failure, leukemia, Fanconi anemia |
| [Nasser Hanna, BA, MD](https://medicine.iu.edu/faculty/5014/hanna-nasser) Campus: IN Dept: Medicine |  | lung cancer |
| [Eri Hashino, PhD](https://medicine.iu.edu/research/faculty-labs/hashino/) Campus: Dept: Otolaryngology | Stem cell biology |  |
| [Al Hassanein, MD, MMS](https://medicine.iu.edu/departments/surgery/faculty/38741/hassanein-al/) Campus: IN Dept: Surgery/Division of Plastic Surgery | Surgery | plastic surgery, lymphedema, breast reconstruction, breast implants |
| [Hawkins Misty, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: Bloomington Dept: Health and Wellness Design | Obesity, Neurocognition, Cancer, Multimorbidity | I have two pilot studies in nutritional science and also in obesity-cancer multimorbidity. The obesity-cancer study will be in Indianapolis so options for working on our team there. |
| [Quyen Hoang, PhD](https://medicine.iu.edu/faculty/20178/hoang-quyen) Campus: IN Dept: Biochemistry and Molecular Biology | Neuroscience | Our research focuses on unraveling the molecular etiology of the disease and development of therapeutics. Our goals are to understand the biochemical functions of the disease associated proteins and the biological pathways in which they function. In parallel, are investigating ways to interfere the pathological function of these proteins with pharmacological agents as therapeutic strategies for people affected by Parkinson Disease. |
| [Harm Hogenesch, DVM, PhD](https://engineering.purdue.edu/Engr/People/ptProfile?resource_id=57916) Campus: IUSM-WL Dept: Purdue University School of Veterinary Medicine | Microbiology and Immunology | Immunology |
| [Peter Hollenhorst, PhD](https://medicine.iu.edu/faculty/26675/hollenhorst-peter/) Campus: IUSM-BL Dept: Biochemistry and Molecular Biology | Cancer Biology | Researchers in this lab use genomics and bioinformatics approaches to study the mechanisms that ETS family transcription factors use to interact with the genome in an effort to delineate both normal and oncogenic functions of these proteins. |
| [Emily Holmes, MD, MPH](https://medicine.iu.edu/faculty/39113/holmes-emily) Campus: IN Dept: Clinical Psychiatry |  | My research focuses on clinical ethics topics as they relate to psychiatry. Most of my projects involve chart reviews. Ongoing Projects: Racial disparities in requests for decision-making capacity; Against medical advice discharges; Psychiatric presentations associated with ethics consultation. |
| [Tieying Hou, MD, PhD](https://medicine.iu.edu/faculty/51949/hou-tieying) Campus: IN Dept: Pathology and Laboratory Medicine | Pathology | Head and neck pathology, endocrine pathology, cytopathology |
| [Heather Hundley, PhD](https://biology.indiana.edu/about/faculty/hundley-heather.html) Campus: IUSM-BL Dept: Biochemistry and Molecular Biology | Biochemistry and Molecular Biology | Lab team is interested in post-transcriptional regulation of gene expression and utilizes a combination of biochemistry, genomics and molecular biology to identify the molecular mechanisms that regulate RNA editing and the consequences of aberrant editing on gene expression. |
| [Thomas Hurley, PhD](https://medicine.iu.edu/faculty/9738/hurley-thomas) Campus: IN Dept: Biochemistry and Molecular Biology | Biochemistry | X-ray crystallography of enzymes; probing enzyme function through mutagenesis and small molecule discovery; kinetic analysis of enzyme - ligand interactions. |
| [Polly Husmann, PhD](https://medicine.iu.edu/education/campuses/bloomington/faculty/26659/husmann-polly/) Campus: IUSM-BL Dept: Anatomy and Cell Biology | Educational Research | Dr. Husmann's research interests focus on educational research such as factors that affect student learning. |
| [Gary Hutchins, PhD](https://medicine.iu.edu/departments/radiology/faculty/4984/hutchins-gary/) Campus: IU Dept: Radiology and Imaging Sciences | Quantitative in-vivo imaging |  |
| [Yoshikazu Imanishi, PhD](https://medicine.iu.edu/faculty/48163/imanishi-yoshikazu) Campus: IN Dept: Ophthalmology | Biology of photoreceptor neurons | he major goal of the Imanishi lab is to understand the molecular basis of protein transport and membrane morphogenesis in photoreceptor neurons. |
| [Erik Imel, MD](https://medicine.iu.edu/faculty/5039/imel-erik/) Campus: IN Dept: Medicine | Bone Biology | Metabolic bone diseases in adults and children, including osteoporosis, osteogenesis imperfecta, calcium and phosphorus disorders, including X-linked hypophosphatemia and related disorders |
| [Tom Imperiale, MD](https://medicine.iu.edu/faculty/4908/imperiale-thomas) Campus: IN Dept: Gastroenterology and Hepatology | Gastroenterology and Hepatology; Health Research Outcomes | My interests include tailoring screening for colorectal cancer based on individual patient risk and using quantitative research methods in studying prevention of cirrhosis complications. Secondary research interests encompass prognosis and management of acute upper gastrointestinal hemorrhage, and assessment of new technologies to the application of digestive diseases. |
| [Mircea Ivan, MD, PhD](https://medicine.iu.edu/faculty/5103/ivan-mircea) Campus: IN Dept: Medicine, Division of Hematology and Oncology | Cancer Biology | We aim to understand the role of specific microRNAs in the hypoxia response and in the progression of breast cancer. The current focus is on miR-210. We have demonstrated that miR-210 is a direct target of Hypoxia Inducible Factors (HIFs), master regulators of the response to low oxygen, with critical roles in tumor formation. Importantly, miR-210 was found by multiple studies to be overexpressed in breast cancer, and its upregulation was recently associated with adverse prognosis and metastatic potential in breast cancer. We aim to mechanistically dissect the role of miR-210 in cell survival under stress, to identify critical miR-210 gene targets and develop animal models of breast cancer with altered level of miR-210. |
| [Seethal Jacob, MD, MS, FAAP](https://medicine.iu.edu/faculty/17300/jacob-seethal) Campus: IN Dept: Pediatric and Adolescent Comparative Effectiveness Research (PACER) & Division of Hematology/Oncology | Department of Pediatrics | Developing and evaluating interventions, such as telehealth, to improve access to and the quality of care for children living with sickle cell disease. | Dr. Jacob’s primary area of research is focused on the use of telemedicine as a means of improving access to care for children in medically underserved areas. Additionally, she has received state funding for establishment of a formal transition program from adolescents with sickle cell disease, as well as serves on a collaborative state grant that implements a community educational program for parents of young children with sickle cell disease as well as adolescents. |
| [Hasnaa Jalou, MD](https://medicine.iu.edu/faculty/18025/jalou-hasnaa) Campus: IN Dept: Clinical Pediatrics | Pediatrics; Sleep Disorder | Studying sleep disorders in children and adolescents. Current project involves collecting data from Cerner in patients with obesity and obstructive sleep apnea and entering data in the Redcap and helping with the writing/analysis. This can be virtual. |
| [Danielle Janosevic, DO, MS](https://medicine.iu.edu/faculty/8864/janosevic-danielle) Campus: IN Dept: Nephrology | Acute kidney injury, sepsis, diabetes |  |
| [Travis Jerde, PhD](http://cancer.iu.edu/research-trials/member-bio.shtml?name=travis-jerde&id=7941) Campus: IN Dept: Pharmacology and Toxicology | Microbiology and Immunology | Dr. Jerde's lab has three main specific projects: The role of IGF-1 in inflammation-induced epithelial survival and proliferation; 2, investigating small heat-shock chaperones that promote apoptotic or autophagic escape during inflammatory reactive hyperplasia in the prostate; 3 investigating how androgen and IL-1 cooperatively promote prostatic growth by STAT-3 dependent IGF-1 signaling. |
| [Taeho Jo, PhD](https://medicine.iu.edu/departments/radiology/faculty/41882/jo-taeho/) Campus: IN Dept: Radiology and Imaging Sciences | MRI and PET | Improved accuracy of MRI-based classification of Alzheimer’s disease by incorporating genetic information in deep learning; Multimodal and multiscale deep learning for the early diagnosis of Alzheimer’s Disease using structural MRI and PET images. |
| [Chandy John, MD](https://medicine.iu.edu/faculty/7418/john-chandy) Campus: IN Dept: Pediatrics/Medicine/Microbiology and Immunology | Microbiology and Immunology | Dr. John’s lab investigates malaria immunoepidemiology, the pathogenesis of severe malaria, and interactions between malaria and other disease states like iron deficiency and sickle cell disease. |
| [Denis Jusufbegovic, MD](https://medicine.iu.edu/faculty/26964/jusufbegovic-denis) Campus: IN Dept: Ophthalmology | Retinal Diseases | Retinal imaging; Diabetic retinopathy; Macular degeneration |
| [Melissa Kacena, PhD](https://medicine.iu.edu/faculty/18628/kacena-melissa) Campus: IN Dept: Orthopaedic Surgery | Bone Biology and Skeletal Disorders | My laboratory’s overall research goal is to improve the understanding of the interaction of the bone and hematopoietic systems, thereby potentially improving the treatment of metabolic bone disease, hematopoietic disorders, and fracture healing. |
| [Mark Kaplan, PhD](https://medicine.iu.edu/faculty/906/kaplan-mark) Campus: IN Dept: Pediatrics/Microbiology and Immunology | Microbiology and Immunology | The overall focus of Dr. Kaplan's laboratory over the last 16 years has been on understanding the transcriptional regulation of T helper cells as they regulate inflammatory immunity. |
| [Rueben Kapur, PhD](https://medicine.iu.edu/faculty/13517/kapur-reuben) Campus: IN Dept: Biochemistry and Molecular Biology | Biochemistry | My laboratory focuses on understanding the signaling pathways involved in regulating normal and abnormal hematopoiesis. Specifically, we are interested in understanding how PI3Kinase and its downstream targets including members of the Rho family GTPases including Rho associated kinase (ROCK) and Rap1 contribute to stem and progenitor cell functions and leukemia initiating cell functions. In the context of leukemogenesis, we are also interested in understanding the role of oncogenic forms of KIT and FLT3 receptors in regulating MPNs as well as AML, with the intent of defining novel therapeutic targets. |
| [David Kareken, PhD](https://medicine.iu.edu/faculty/1901/kareken-david) Campus: IN Dept: Neurology | Neuroimaging, alcohol use disorder, reward | Dr. Kareken’s laboratory uses functional neuroimaging to understand the human brain’s reward system as it relates to alcohol use disorders, natural rewards (food) and other drugs of abuse. The lab’s work is targeted toward understanding the brain and genetic vulnerabilities that predispose individuals to alcoholism and obesity. |
| [Mark Kelley, BS, MS, PhD](https://medicine.iu.edu/faculty/13975/kelley-mark) Campus: IN Dept: Pediatrics | DNA repair, redox signaling, drug development | Dr. Kelley's work has focused on translational research in DNA damage and repair, specifically, to determine how those activities can be exploited therapeutically to treat cancers and protect normal cells from oxidative and DNA base damage. |
| [Brian Kennedy, PhD](https://medicine.iu.edu/education/campuses/gary/faculty/26514/kennedy-brian/) Campus: IUSM-NW Dept: Cellular and Integrative Physiology | Cellular and Integrative Physiology | Dr. Kennedy’s research focuses on metabolic regulation and ion transport in the retinal pigment epithelium (RPE). |
| [Kyle Kercher, PhD, MS](https://publichealth.indiana.edu/research/faculty-directory/profile.html?user=kylkerch) Campus: Bloomington Dept: School of Public Health-Bloomington |  |  |
| [Alka Khaitan, MD](https://medicine.iu.edu/faculty/43672/khaitan-alka) Campus: IN Dept: Pediatric Infectious Diseases | pediatric HIV, immunology, global health | Research interests include pediatric HIV, immunopathogenesis of pediatric infectious diseases, translational research and global health. Primary research activities focus on: • The role of inflammation in pediatric HIV pathogenesis and long-term outcomes • T cell exhaustion in perinatal HIV • Immune biomarkers of clinical outcomes in perinatal HIV exposure and infection |
| [Jungsu Kim, PhD](https://medicine.iu.edu/departments/genetics/faculty/41977/kim-jungsu/) Campus: IN Dept: Medical and Molecular Genetics | Alzheimer's Disease | The main interest of Kim lab is to understand the pathogenic mechanisms of Alzheimer’s disease and other neurodegenerative diseases (Parkinson's disease, Frontotemporal dementia, Huntington's disease, and Amyotrophic Lateral Sclerosis) and to identify novel therapeutic targets. |
| [Lindsay Kirkpatrick, DO, PhD](https://medicine.iu.edu/faculty/16970/kirkpatrick-lindsey) Campus: IN Dept: Pediatrics, Pediatric Infectious Diseases | Pediatrics ID | Diagnostic methodology development and evaluation, clinical pharmacology |
| [Kirsten Kloepfer, MD, MS](https://medicine.iu.edu/faculty/22419/kloepfer-kirsten/) Campus: IN Dept: Pediatrics | Pulmonary Diseases (Asthma) | Dr. Kloepfer's research is investigating the early airway microbiome from birth through 12 months of age. |
| [Tyler Knight, MD](https://medicine.iu.edu/faculty/40130/knight-tyler) Campus: IN Dept: Ophthalmology | Pediatric Ophthalmology |  |
| [Heiko Konig, MD, PhD](https://medicine.iu.edu/faculty/5164/konig-heiko) Campus: IN Dept: Hematology/Oncology | Cancer Biology |  |
| [Tatiana Kostrominova, PhD](https://medicine.iu.edu/education/campuses/gary/faculty/26662/kostrominova-tatiana/) Campus: IUSM-NW Dept: Anatomy and Cell Biology | Anatomy and Cell Biology |  |
| [Kurt Kroenke, MD](https://medicine.iu.edu/faculty/4992/kroenke-kurt/) Campus: IN Dept: Medicine | clinical trials, depression, anxiety, pain, fatigue | Chronic pain and the impact of treating depression and anxiety on pain. |
| [William Kronenberger, PhD](https://medicine.iu.edu/faculty/13615/kronenberger-william) Campus: IN Dept: Psychiatry (Primary) and OHNS (Adjunct) | Neurocognitive and Spoken Language Functioning in Children with Hearing Loss | Dr. Kronenberger’s research addresses psychological, biological, and environmental influences on the development of executive functioning, memory and learning. |
| [Lim Kua, MD](https://medicine.iu.edu/faculty/27011/kua-kok) Campus: IN Dept: Pediatrics | Developmental Programming of Adult Diseases, Neonate, Offspring of Obese/Diabetic Mothers, Islet insulin secretion | Focus of the Lab: The lab aims to understand mechanisms contributing to metabolic dysfunction in high-risk children (offspring born to mothers with diabetes/obesity, preterm infants). Ongoing Projects: Defining role of Reg3g and heparan sulfate glycosaminoglycan in βcell dysfunction in offspring of obese mice; Defining role of hematopoietic stem and progenitor cell dysfunction in regulating glucose metabolism; Role of miRNA and plasma proteome as biomarker for gestational diabetes. |
| [Kaice LaFavers, PhD, MPH](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Anatomy, Cell Biology and Physiology |  |  |
| [Debomoy Lahiri, PhD](https://medicine.iu.edu/faculty/13390/lahiri-debomoy) Campus: IN Dept: Psychiatry, Neurobiology and Medical and Molecular Genetics | Neuroscience | Research in my laboratory aims to understand cellular, genetic and molecular pathways of neurodegenerative diseases (e.g. Alzheimer’s disease-AD) and neurodevelopmental disorders (e.g., Autism, Fragile X). Particularly, we study the neurobiological function of synaptic proteins, the β-amyloid precursor protein (APP) and its metabolites, and other AD-related proteins. |
| [Bruce Lamb, PhD](https://medicine.iu.edu/faculty/23627/lamb-bruce) Campus: IN Dept: Medical and Molecular Genetics | Neuroscience | Dr. Lamb’s laboratory works on the basic science of Alzheimer’s disease, with a focus on: 1) genetic modifiers identified from both mouse and human studies, 2) microglia and neuronal-microglial communication in the development and progression of AD pathologies; and 3) traumatic brain injury as an environmental modifier for the development of AD pathologies. In addition, Dr. Lamb is actively involved in advocacy for increased research funding for the disease. |
| [Mathew Landman, MD](https://medicine.iu.edu/faculty/23524/landman-matthew/) Campus: IN Dept: Surgery | Pediatric Surgery, | My research includes all areas of clinical outcomes research in pediatric surgery including pediatric colorectal surgery, intussusception, ECMO and general quality improvement projects. |
| [Tim Lautenschlaeger, MD](https://medicine.iu.edu/faculty/23591/lautenschlaeger-tim/) Campus: IN Dept: Radiation Oncology | Cancer Biology | Radiation therapy outcome prediction; Radiation biology |
| [Gregory Lewis, PhD](https://luddy.indiana.edu/contact/profile/?profile_id=550) Campus: BL Dept: Intelligent Systems Engineering | bioengineering, psychophysiology, traumatic stress | Dr. Lewis' research involves building statistical models of dynamic neurophysiological systems in order to explain complex processes including cognitive, developmental, and psychological changes. |
| [Ping Li, PhD](https://medicine.iu.edu/departments/surgery/faculty/14237/li-ping/) Campus: IN Dept: Surgery | Surgery/Transplant | xenotransplantation, immune tolerance |
| [John Lind, MD, MS](https://medicine.iu.edu/faculty/44611/lind-john) Campus: IN Dept: Ophthalmology | Glaucoma |  |
| [Debra Litzelman, MD](https://medicine.iu.edu/faculty/5024/litzelman-debra/) Campus: IN Dept: Medicine; Regenstrief Institute | Health Research Outcomes and Global Health Education | I am a Senior Research Scientist in the Regenstrief Institute and with research interests in interprofessional education and practice, innovative health care system’s workforce development, and patient-centered behavioral change strategies. |
| [Yunlong Liu, PhD](https://medicine.iu.edu/departments/genetics/faculty/196/liu-yunlong/) Campus: IN Dept: Medical and Molecular Genetics | Genomics and Bioinformatics | The Liu Laboratory (Laboratory for Computational Genomics) uses systems biology approaches to understand regulatory mechanisms of gene expression, including transcriptional regulation, post-transcriptional regulation, and epigenetic regulation. This area involves several interdisciplinary components, including functional genomics, genetics, computational and statistical modeling, computer science/engineering, and data management. |
| [Yao-Ying Ma, MD, PhD](https://medicine.iu.edu/faculty/42394/ma-yao-ying) Campus: IN Dept: Pharmacology and Toxicology |  | The Ma Lab explores neuronal communications under different mood or neurological conditions, including drug/alcohol use disorders, Alzheimer's disease, Huntington Disease, etc. The Ma lab utilizes electrophysiological, optogenetic, chemo-genetic, molecular, biochemical, anatomical, and behavioral approaches, as well as in vivo Calcium imaging, to elucidate neuroadaptations in diverse neuropsychiatric disorders. One of the exciting new research directions is that we are applying Artificial Intelligence (AI) to neurobiological explorations. By combining these techniques, we expect to revolutionize our knowledge of brain-related function and dysfunction. |
| [Meena Madhur, MD, PhD](https://medicine.iu.edu/faculty/64030/madhur-meena) Campus: IN Dept: Medicine, Division of Hematology and Oncology | CVD; Clinical Pharmacology; Microbiology/Immunology; Vascular biology | My lab works on immune mechanisms of hypertension and heart failure. We have a range of projects to choose from in the following areas: Rock2 signaling in hypertension and cardiomyopathy, T-cell targeted nanoparticle development, understanding common immune mechanisms that link atherosclerosis and hypertension, and immune mechanisms that contribute to the cardiac remodeling observed in heart failure with preserved ejection fraction. |
| [Jessica Maiers, PhD](https://medicine.iu.edu/faculty/59824/maiers-jessica) Campus: IN Dept: Medicine; Division of Gastroenterology and Hepatology | Chronic liver disease | The lab's focus is understanding the pathological mechanisms of chronic liver disease. |
| [Richard Mangus, MD, MS, FACS](https://surgery.medicine.iu.edu/faculty/transplant-surgery/clinicians/richard-s-mangus/) Campus: IN Dept: Surgery | Transplant | Clinical Research Interests: Pediatric and adult liver, intestine and multi-visceral transplantation; Basic Research Interests: Pathophysiology of deceased donor organs and organ preservation, surgical technique in transplantation, and post-transplant outcomes |
| [Weiming Mao, PhD](https://medicine.iu.edu/faculty/42708/mao-weiming) Campus: IN Dept: Ophthalmology | Glaucoma | Glaucoma |
| [Troy Markel, MD](https://medicine.iu.edu/faculty/16381/markel-troy/) Campus: IN Dept: Surgery | Stem Cell Biology | I have interest in basic science research and has a laboratory dedicated to stem cell biology and its applications for treating necrotizing enterocolitis. My clinical interests include neonatal surgery, short bowel syndrome, and extracorporeal circulatory support. |
| [Larry Markham, MD](https://medicine.iu.edu/faculty/41814/markham-larry) Campus: IN Dept: Pediatrics | Cardiology |  |
| [Amy McCutchan, MD](https://medicine.iu.edu/faculty/11885/mccutchan-amy) Campus: IN Dept: Anesthesia | Perioperative Care and Enhanced Recovery After Surgery |  |
| [Brenna McDonald, Psy.D.](https://medicine.iu.edu/departments/radiology/faculty/7297/mcdonald-brenna/) Campus: IN Dept: Radiology and Imaging Sciences | Structural and functional MRI in human clinical populations | Studies of cognitive function in children and adults after traumatic brain injury and cancer treatment, functional MRI for surgical applications |
| [Alexandria McDow, MD](https://medicine.iu.edu/faculty/43683/mcdow-alexandria) Campus: IN Dept: Surgery | Endocrine Surgery and Endocrinology; Surgical education research; rural and global surgery | Assessing Disparities in Surgical Referral and Treatment of Patients with Primary Hyperparathyroidism; Examining the Impact of Corticosteroids on Thyroidectomy Outcomes in Autoimmune Thyroid Disease –Randomized Control Trial; Exploring Clinical Outcomes in Thyroid Disease; POCUS (Point of Care Ultrasound) Curriculum Development |
| [Megan McHenry, MD, MS](https://medicine.iu.edu/faculty/16185/mchenry-megan/) Campus: IN Dept: Pediatrics | Global Health | Dr. McHenry is a global health services researcher and leads a research team within IU and Moi University's AMPATH partnership in western Kenya. Her work is focused on neurodevelopment in children born to HIV-infected mothers. Students working with her will engage in studies measuring neurodevelopment in young Kenyan children and evaluating an intervention to support children with neurodevelopmental delays. Work may be performed in Indiana or Kenya. |
| [Todd McKinley, MD](https://medicine.iu.edu/faculty/22257/mckinley-todd/) Campus: IN Dept: Orthopaedic Surgery | Bone Biology | Dr. McKinley is an orthopaedic surgeon that has a lineage of trauma research with experiments that have investigated foundational response of cartilage to injury. In addition, he has been involved in developing new experimental treatments for acutely damaged cartilage. These investigations explore the core of mechanobiology in osteochondral tissue and have been conducted at the cellular, tissue, small animal and pre-clinical levels. |
| [Rebecca McNally Keehn, PhD](https://medicine.iu.edu/faculty/23179/mcnally-keehn-rebecca) Campus: IN Dept: Pediatrics | Autism Spectrum Disorder (diagnosis) | Dr. McNally Keehn’s research interests are focused on improving evidence-based diagnostic and intervention practices for children with autism spectrum and other neurodevelopmental disabilities. |
| [Ashley Meagher, MD, MPH](https://medicine.iu.edu/faculty/43232/meagher-ashley) Campus: IN Dept: Surgery | trauma outcomes, disparities, surgical workforce | Dr. Meagher's primary research interests are in health disparities pertaining to the general surgical and trauma populations. This includes examining the effect insurance status and race have on utilization of post-acute care services, including rehabilitation. |
| [Marc Mendonca, PhD](http://radonc.medicine.iu.edu/faculty/marc-mendonca-ph-d/) Campus: IN Dept: Radiation Oncology | Cancer Biology | Radiation carcinogenesis; Genomic instability; Apoptosis; Tumor suppressor genes |
| [Christopher Mernitz, MD, MBA](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: OB/GYN |  | I am a Laborist Physician (OBGYN) at Riley Maternity Tower with a keen interest in exploring the application of remote vitals and fetal monitoring devices in maternal care. My primary focus areas are patients with diabetes and preeclampsia, but I'm open to including low-risk pregnancies in the study. I am seeking motivated students who are interested in conducting research to assess the potential benefits of this innovative technology on various fronts, including clinical outcomes, patient satisfaction, provider satisfaction, timely intervention, and cost-effectiveness within healthcare systems. I have access to the necessary devices and telemedicine platforms and am willing to collaborate with students to design studies tailored to their specific interests. Additionally, I'm open to collaborating with ongoing research projects in this field. |
| [Kristen Metzler-Wilson, PT, PhD](https://medicine.iu.edu/faculty/26246/metzler-wilson-kristen) Campus: IN Dept: Physical Therapy | neuropharmacology, autonomics, dermatology, translational |  |
| [Jason Meyer, PhD](https://medicine.iu.edu/faculty/25526/meyer-jason/) Campus: IN Dept: Medical and Molecular Genetics | Neuroscience | Induced pluripotent stem (iPS) cells are derived through the genetic reprogramming of somatic cells to yield a population of stem cells capable of giving rise to all cell types of the body. As such, they can be utilized to study some of the earliest events underlying the generation of specific cell types of the nervous system. Current research in the lab focuses upon the differentiation of iPS cells into retinal neurons, with important implications for the study of blinding neurodegenerative diseases. Through the derivation of iPS cells from the somatic cells of patients with known genetic mutations underlying neurodegenerative diseases, it is possible to study the onset and progression of these diseases in the particular cell types affected by the disorder. Such an approach also allows for the development of personalized medicine approaches to treating diseases, as well as pharmacological screening with the goal of identifying novel compounds capable of treating these diseases. |
| [Edward Miech, EdD](http://iuchsor.medicine.iu.edu/people/faculty/edward-miech/) Campus: IN Dept: Emergency Medicine | Health Research Outcomes | I have a doctorate in education from Harvard University with expertise in program evaluation, assessment, educational theory, and mixed methods. I have been a co-investigator on several VA HSR&D studies and is now principal investigator on a three-year, mixed methods study of the impact of context on the efforts of twelve VA sites to improve inpatient stroke care. |
| [Anirban Mitra, PhD](https://medicine.iu.edu/faculty/26686/mitra-anirban/) Campus: IUSM-BL Dept: Medical and Molecular Genetics | Cancer Biology | This lab seeks to understand the paracrine and juxtracrine interactions between cancer cells and their microenvironment that regulate metastatic colonization in ovarian cancer with a specific interest in the regulation of key microRNAs and transcription factors. |
| [Sharon Moe, MD](http://medicine.iupui.edu/faculty-profile/smoe/sharon-m-moe-md/) Campus: IN Dept: Nephrology | Renal | My research investigates the relationship of kidney disease, vascular calcification, bone, and disorders of mineral metabolism known as CKD-Mineral Bone Disorder (CKD-MBD). Our research is funded by the NIH, Veterans Administration, Food and Drug Administration, and industry and utilizes in vivo, ex vivo and in vitro techniques to investigate the pathophysiology of arterial medial calcification and bone disease. |
| [Bruce Molitoris, MD](http://medicine.iupui.edu/faculty-profile/bmolitor/molitoris-bruce/) Campus: IN Dept: Nephrology | Renal | For the past thirty years I have dedicated my laboratory toward the study of acute kidney injury (AKI) from both ischemic and nephrotoxic compounds, primarily secondary to aminoglycosides. We have helped to understand mechanistically, and developed therapeutically, many potential approaches for acute kidney injury. We have also spent the last ten years developing non-linear microscopy to quantify dynamic cellular and subcellular processes in vivo. |
| [Jean Molleston, MD](https://medicine.iu.edu/faculty/6495/molleston-jean) Campus: IN Dept: Pediatric Gastroenterology, Hepatology and Nutrition | Pediatric Gastroenterology, Hepatology, and Nutrition | Fatty liver (NAFLD), cholestatic liver diseases of children (biliary atresia, Alagille's, alpha1antitrypsin deficiency, PFIC Progressive Familial Intrahepatic Cholestasis, cirrhosis and portal hypertension in children, CF Cystic Fibrosis liver disease, metabolic liver disease, and medical education. |
| [Raghu Motagana, MD](https://medicine.iu.edu/faculty/19930/motaganahalli-raghu) Campus: IN Dept: Surgery |  | The Division of Vascular Surgery is currently working on a large project to create a number of databases on vascular pathologies to encompass perhaps the largest institutional database of vascular disease with unmatched long term follow up. This will create high impact publications and an opportunity for students to be involved in important literature in the field of Vascular Surgery. |
| [Sarah Morgan, MD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: OB/GYN | Obstetrics and Gynecology | Current areas of interest: standardization of care in obstetrics, induction of labor |
| [Nuria Morral, PhD](https://medicine.iu.edu/faculty/15503/morral-nuria) Campus: IN Dept: Medical & Molecular Genetics and Biochemistry & Molecular Biology | Diabetes | Liver, diabetes using gene transfer approaches with gutless adenovirus vectors, in addition to generating transgenic animals. |
| [Christine Motzkus, MPH, MD, PhD](https://medicine.iu.edu/faculty/44157/motzkus-christine) Campus: Bloomington Dept: Clinical Emergency Medicine | Medical Education | Potential project related to EM residency program; reviewing implementation EM graduate program in rural settings and looking at outcomes to retain physician in community. |
| [Hiba Mustafa, MD](https://medicine.iu.edu/faculty/62070/mustafa-hiba) Campus: IN Dept: Clinical Obstetrics and Gynecology | OB/GYN | Research focuses: fetal intervention and surgery for complicated monochorionic twin pregnancies, spina bifida, congenital diaphragmatic hernia, lower urinary tract anomalies and other fetal structural anomalies |
| [Harikrishna Nakshatri, PhD](https://medicine.iu.edu/faculty/13331/nakshatri-harikrishna/) Campus: IN Dept: Breast Cancer Research | Cancer Biology |  |
| [Richard Nass, PhD](https://medicine.iu.edu/faculty/18992/nass-richard) Campus: IN Dept: Pharmacology and Toxicology | Pharmacology and Toxicology | Molecular mechanisms involved in Parkinson's disease and dopamine neurodegeneration; identification of novel therapeutic targets and compounds that can protect against dopamine neuron degeneration. |
| [Chemen Neal, MD](https://medicine.iu.edu/faculty/17959/neal-chemen) Campus: IN Dept: Center for Inclusive Excellence | Educational Research | This would be a short-term special project in the Dean's Office. Through literature review, we would like to create a bibliography of health equity research for leaders and other school stakeholders. The project would end in a summary presentation of the curated list and could be turned into a poster presentation if desired. |
| [Rick Nelson, MD, PhD](https://medicine.iu.edu/departments/otolaryngology/faculty/23096/nelson-rick/) Campus: IN Dept: Otolaryngology-Head and Neck Surgery | Otolaryngology-Head and Neck Surgery | My lab uses stem cell derived inner ear sensory tissue to study hair cell degeneration and model diseases of the inner ear. |
| [Kenneth Nephew, PhD](https://medicine.iu.edu/faculty/26559/nephew-kenneth/) Campus: IUSM-BL Dept: Cellular and Integrative Physiology | Cancer Biology | Investigators in this lab are using next generation sequencing technology and computational models to explore the role of epigenetics in ovarian cancer cells, cancer stem cells and resistance to chemotherapy. The team also studies breast cancer, estrogen receptor biology and endocrine resistance. |
| [Christopher Newman, MD, PhD](https://medicine.iu.edu/faculty/19277/newman-christopher) Campus: IN Dept: Radiology and Imaging Sciences | Pediatric Musculoskeletal Imaging; Imaging and Mechanisms of Pediatric Fractures; Predicting Ped Fractures with Imaging | Ongoing Projects: Quantitative bone ultrasound; Animal models of bone quality; Child abuse imaging; Animal models of child abuse fractures; Imaging of bone marrow development |
| [Alexander Niculescu, MD, PhD](https://medicine.iu.edu/faculty/16295/niculescu-alexander) Campus: IN Dept: Stark Neurosciences Research Institute; Psychiatry | Neurosciences and Molecular Genetics of Psychiatric Disorder | Molecular genetics of bipolar disorder |
| [Allison Norlander, PhD](https://medicine.iu.edu/faculty/62383/norlander-allison) Campus: IN Dept: Anatomy, Cell Biolong and Physiology | Allergy; ID; CVD; Microbiology/Immunology; Vascular Biology |  |
| [Kelly Nudelman, PhD](https://medicine.iu.edu/departments/radiology/faculty/6527/nudelman-kelly/) Campus: IN Dept: Medical and Molecular Genetics | Genetics of age-related disease and cognitive dysfunction | Dr. Nudelman’s research focuses on understanding the genetic underpinnings of comorbid diseases of aging and how they impact brain structure and function. Dr. Nudelman is also interested in how multi-omics data can be leveraged, particularly using methods from network science, to increase our understanding of neurodegenerative disease etiology and progression. |
| [Thomas O'Connell, PhD](https://medicine.iu.edu/faculty/26797/oconnell-thomas) Campus: IN Dept: Otolaryngology-Head and Neck Surgery |  | His research program focuses on the application of advanced metabolic profiling technologies to understand the metabolic drivers of cancer associated cachexia and other wasting conditions. |
| [Timothy O'Donnell, MD](https://medicine.iu.edu/faculty/38981/odonnell-timothy) Campus: WL Dept: IUSM-WL | Wellness and Diversity |  |
| [Healther O'Hagan, PhD](https://medicine.iu.edu/faculty/26689/ohagan-heather/) Campus: IUSM-BL Dept: Medical and Molecular Genetics | Cancer Biology | Lab studies the role of oxidative DNA damage in initiating cancer-specific epigenetic changes. Investigators here examine chromatin changes that occur acutely during DNA repair and how the persistence of these changes may lead to heritable changes in gene expression. |
| [Valerie O'Loughlin, PhD](https://medicine.iu.edu/faculty/26393/oloughlin-valerie) Campus: IUSM-BL Dept: Anatomy | Anatomy & Medical Education research - Scholarship of Teaching and Learning |  |
| [Adrian Oblak, PhD](https://medicine.iu.edu/faculty/22184/oblak-adrian) Campus: IN Dept: Radiology and Imaging Sciences | Alzheimer's Disease and Related Dementias | Neurodegenerative diseases |
| [Alexander Obukhov, PhD](https://medicine.iu.edu/faculty/17979/obukhov-alexander) Campus: IN Dept: Anatomy, Cell Biology & Physiology | physiology | His laboratory currently focuses on establishing the role of TRPC channels in the metabolic syndrome-associated atherosclerosis using the Ossabaw pig model. The other projects investigate the mechanisms regulating the contractility of the uterus, the mechanisms underlying endothelial dysfunction in a mouse aorta model, traumatic brain injury-associated vascular dysfunction, diabetic neuropathy, catecholamine secretion regulation in adrenal chromaffin cells, and the function of SLC4A11 transporters in the corneal endothelium. |
| [Jason Organ, PhD](https://medicine.iu.edu/faculty/22115/organ-jason) Campus: IN Dept: Anatomy and Cell Biology | Bone Biology and Skeletal Disorders | The Organ Lab at IUSM studies the relationship between bone and muscle mechanics at the whole-organ level, and how tissue-level mechanisms influence whole-organ function. We utilize numerous in vivo model systems to understand how disease, exercise, and pharmaceutical intervention influence bone and muscle structure, cellular activity, and biomechanical properties. We study these properties in the context of chronic kidney disease, osteogenesis imperfecta, and normal postnatal ontogeny, using a variety of techniques: imaging (CT, DXA, X-ray), histology (static and dynamic histomorphometry), muscle electrophysiology (in vivo ankle torque, in vitro whole muscle contractility), and bone mechanical testing (bending, compression, reference point indentation). The Organ Lab is funded by the NIH and IUSM/Showalter Research Trust. |
| [Christie Orschell, MD](http://medicine.iupui.edu/faculty-profile/CORSCHEL/Orschell-Christie/) Campus: IN Dept: Medicine/Hematology/Oncology | Hematopoiesis-Stem Cell Biology | Radiation mitigators, stem cell transplantation, hematopoietic reconstitution |
| [Felix Pabón-Rodríguez, PhD, MS](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Center for Inclusive Excellence | Biostatistics (Longitudinal and Survival Data Analysis) |  |
| [Matthew Pease, MD](https://medicine.iu.edu/faculty/65063/pease-matthew) Campus: IN Dept: Neurological Surgery | Applying data science techniques, with a focus on imaging analysis and signal processing, to prognosticate neurosurgical patient populations. Specifically, I work with neurotrauma, epilepsy, and neuro-oncology. | Social determinants of health in post-traumatic epilepsy; Multi-modal models predicting post-traumatic epilepsy; Outcomes prediction in neuro-trauma; Financial toxicity of neuro-oncology |
| [Sean Pfaff, MD](https://medicine.iu.edu/faculty/38887/pfaff-sean) Campus: IN Dept: Radiology | Radiology/Imaging Sciences | Current project: comparing bleeding outcome in pts with solid organ biopsies who get tract embolization vs those who do not |
| [Melissa Pangelinan, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: Bloomington Dept: Kinesiology | Developmental disabilities; Lifestyle (exercise) interventions | I am currently recruiting students for two programs to determine the acute and chronic effects of aerobic exercise on neurocognitive function, physical health, and mental health in adolescents and adults with intellectual and developmental disabilities (e.g., Autism, Down syndrome, Intellectual disabilities). Students will have opportunities to conduct literature reviews, data collection, data analysis, and manuscript development. |
| [Padmanabhan Pattabiraman, PhD](https://medicine.iu.edu/faculty/44800/pattabiraman-padmanabhan) Campus: IN Dept: Ophthalmology | Glaucoma |  |
| [Matthew Pease, MD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Neurological Surgery | I have several projects related to using data science methods for prognosticating outcomes in neurosurgical patient populations. |  |
| [Jeffrey Peipert, MD, PhD](https://medicine.iu.edu/faculty/23687/peipert-jeffrey) Campus: IN Dept: OBGYN |  | Epidemiology, women's health, family planning |
| [Fabrizio Pin, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Anatomy, Cell Biology and Physiology |  | My main research interest is focused on understanding the effects of cancer in muscle and bone, with the goal of identifying therapeutic strategies aimed at reducing musculoskeletal deterioration associated with cancer burden. We utilize in vivo models of head and neck, ovarian and colorectal cancer in association or not with chemotherapies; in vitro culture of myotubes and osteocytes exposed to cancer cells; and human samples such as muscle, bone, and plasma derived from cancer patients. At present, there are two major areas of interest with high translational relevance: DKK1 as a new target for the treatment of musculoskeletal abnormalities in Ovarian Cancer. We hypothesize that the anti-DKK1 treatment will maintain a healthy musculoskeletal system in OvCa and will prolong survival in OvCa patients. Characterization of the Cellular-specific Transcriptome in Skeletal Muscle and Bone from Patients with Head and Neck Cancer. Our hypothesis is that the accumulation of senescence cells contributes to driving musculoskeletal deterioration in head and neck cancer patients. |
| [Lilian Plotkin, PhD](https://medicine.iu.edu/faculty/19291/plotkin-lilian) Campus: IN Dept: Anatomy and Cell Biology | Bone Biology and Skeletal Disorders | Focus of the Lab: the lab focuses on understanding the musculoskeletal system and how mutations associated with Alzheimer’s disease, aging, and sex/gender affect bone and muscle mass and strength. Ongoing Projects: Consequence of mutations of the TREM2 gene that increase risk of developing Alzheimer’s disease on the musculoskeletal system; Role of chromosomal versus gonadal sex with skeletal development, maturation, and aging using novel animal models. |
| [Karen Pollok, PhD](https://medicine.iu.edu/faculty/13544/pollok-karen) Campus: IN Dept: Director, In Vivo Therapeutic Core | Pharmacology and Toxicology | Building upon standard of care therapy for glioblastoma and neuroblastoma by modulation of dysregulated signaling networks. |
| [Jenifer Prosperi, PhD](https://medicine.iu.edu/faculty/21752/prosperi-jeni) Campus: IUSM-SB Dept: Biochemistry and Molecular Biology | Biochemistry | My laboratory focuses on a tumor suppressor called Adenomatous Polyposis Coli (APC) in the development and progression of cancer. We are particularly interested in the function of APC that is independent of its role in regulation of the Wnt/β-catenin signaling pathway. We have found that down-regulation of APC results in activation of the focal adhesion kinase (FAK) pathway, Src kinase, the STAT3 transcription factor, and epithelial membrane protein 2 (EMP2). Consistent with this, there are two broad over-arching themes in my laboratory. |
| [Syril Keena Que, MD, MPH](https://medicine.iu.edu/faculty/43475/que-syril-keena) Campus: IN Dept: Dermatology | Melanoma, skin cancer, public health |  |
| [Sara Quinney, PhD](https://medicine.iu.edu/faculty/1072/quinney-sara/) Campus: IN Dept: Obstetrics and Gynecology | Clinical Pharmacology | My primary focus is the optimization of drug therapy using quantitative models of drug disposition (pharmacokinetics) and action (pharmacodynamics). use pharmacokinetic/pharmacodynamic models, including physiologically based pharmacokinetic models, to integrate in vitro and in vivo data, leading to better understanding of drug disposition and effect. Patient-specific variables including demographic and pharmacogenetic factors are incorporated into the models to identify individuals most likely to respond to drug therapy or who are at most risk of experiencing an adverse event. Also use physiologically based pharmacokinetic models to examine changes in drug metabolism and disposition in various populations, including pregnant women and children. In addition to pharmacometric analyses, my lab performs both wet lab analyses using a variety of research techniques to evaluate drug metabolism and drug interactions. |
| [Raheleh Rahimi, MD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Anesthesiology, Interventional Pain Mgmt | Pain interventions, neuromodulation |  |
| [Sahand Rahnama, MD, MS](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Dermatology | Socio-geographic mapping of Hidradenitis Suppurativa | Socio-geographic mapping of Hidradenitis Suppurativa |
| [Rupa Radhakrishman, MD, MS](https://medicine.iu.edu/departments/radiology/faculty/38670/radhakrishnan-rupa/) Campus: IN Dept: Radiology and Imaging Sciences | Pediatric magnetic resonance imaging | Functional/Structural brain connectivity on MRI in infants exposed to opioids/ neonatal abstinence syndrome; Cerebral perfusion in preterm infants in preeclampsia; Ultrasound Elastography to assess brain tissue stiffness and brain injury in neonatal hydrocephalus |
| [Vijay Ramakrishnan, MD](https://medicine.iu.edu/faculty/61167/ramakrishnan-vijay) Campus: IN Dept: Otolaryngology-Head and Neck Surgery | Rhinologic Diseases |  |
| [Harish Rao, MD](https://medicine.iu.edu/faculty/47925/rao-harish) Campus: IN Dept: Pediatric Pulmonology, Allergy and Sleep Medicine |  |  |
| [HongXia Ren, PhD](https://medicine.iu.edu/faculty/26336/ren-hongxia) Campus: IN Dept: Pediatrics | Diabetes | The overarching goal of my research is to understand the molecular and genetic mechanisms of the neuroendocrine regulatory roles in feeding and glucose metabolism. My studies lie at the interface of neuroscience and metabolism, aiming to elucidate the pathophysiology of metabolic and neurological diseases with a combination of cutting-edge neuroscience, cellular, molecular, and genetic methodologies. |
| [Steven Rhodes, MD, PhD](https://medicine.iu.edu/faculty/18330/rhodes-steven) Campus: IN Dept: Pediatrics, Division of Hematology-Oncology | NF1 associated peripheral nerve sheath tumors | The Rhodes laboratory focuses on the understanding of the cellular and molecular mechanisms that govern the progression of plexiform (PNF) and atypical neurofibroma (ANF) precursor tumors to a deadly form of sarcoma called malignant peripheral nerve sheath tumor (MPNST), the leading cause of death in persons with neurofibromatosis type 1 (NF1). |
| [Angela Richardson, MD, PhD](https://medicine.iu.edu/faculty/60708/richardson-angela) Campus: IN Dept: Neurosurgery | Brain tumors -- clinical projects including outcomes research, basic science looking at viral vectors for therapy; diversity and equity in neurosurgery | She will soon create an independent research laboratory focusing on gene therapy and oncolytic virotherapy strategies for the treatment of adult and pediatric brain tumors. |
| [Austin Robinson, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: Bloomington Dept: Kinesiology | Vascular Biology | My research focuses on the influence of health behaviors such as sleep, physical activity, and diet/hydration on applied cardiovascular physiology measures in humans. Current funded projects are focused on racial health disparities and the effects of dietary salt on cardiovascular measures other than resting blood pressure, such as endothelial function, kidney blood flow regulation, and blood pressure responses to stressors. |
| [Chris Robinson, PhD](https://medicine.iu.edu/faculty/38121/robinson-christopher) Campus: IN Dept: Microbiology and Immunology | My laboratory focuses on enteric virus pathogenesis. Specifically, we study the role of the microbiome and the immune system in shaping enteric virus infection. | Microbiome: Investigating how specific bacteria enhance enteric virus infectivity; Immune System: Understanding the impact of the T cell response in influencing the sex bias in Coxsackievirus infections. |
| [Alex Robling, PhD](https://medicine.iu.edu/faculty/10972/robling-alexander/) Campus: IN Dept: Anatomy, Cell Biology and Physiology | Bone Biology and Skeletal Disorders | The Robling laboratory focuses on anabolic pathways for bone tissue, including discovery of the molecular mechanisms by which bone tissue senses mechanical loading. Dr. Robling studies how proteins involved in the Wnt signaling cascade affect bone accumulation, and how signal transduction originating from mechanical stimulation is altered by this pathway. Trainees coming through the Robling lab will participate in all aspects of mechanobiology methods, including in vitroresponses to mechanical stimulation (e.g., shear stress) and in vivo adaptation to mechanical loading (e.g., tibial and ulnar loading, disuse models). In addition, trainees will be trained in all of the techniques used in the lab for assessing anabolic and catabolic responses in bone tissue and cell culture, including molecular (e.g., RNA extraction, qPCR, western blotting, serum/media ELISAs), radiographic (e.g., DEXA, pQCT, microCT, planar radiography), histologic (e.g., thin and thick sectioning, staining, IHC, fluorochrome histomorphometry), and biomechanical (e.g., whole bone mechanical properties). |
| [Mark Rodefeld, MD](https://medicine.iu.edu/faculty/10376/rodefeld-mark) Campus: IN Dept: Surgery | Thoracic Surgery Pediatric Cardio-Thoracic Surgery |  |
| [David Rodgers, EdD](https://medicine.iu.edu/faculty/61084/rodgers-david) Campus: Bloomington Dept: Medicine | Education, Curriculum Design, Teaching Methods |  |
| [David Roodman, MD, PhD](https://medicine.iu.edu/faculty/5147/roodman-g-david/) Campus: IN Dept: Biochemistry and Molecular Biology | Biochemistry and Molecular Biology | Research focuses on osteoclasts and osteoblast activity in both normal and pathological states including Paget’s disease and Multiple Myeloma. |
| [David Rosmarin, MD](https://medicine.iu.edu/faculty/63308/rosmarin-david) Campus: IN Dept: Dermatology | Inflammatory disorders |  |
| [Michael Ross, MD, MS](https://medicine.iu.edu/faculty/21250/ross-michael) Campus: IN Dept: Pediatrics | Pediatric Cardiology/Interventional Cardiology |  |
| [Courtney Rowan, MD](https://medicine.iu.edu/faculty/12025/rowan-courtney) Campus: IN Dept: Pediatrics | Pediatrics | Dr. Rowan is an emerging national leader in respiratory failure research, particularly in the immunocompromised child. She is actively involved and is leading multicenter database investigating respiratory support modalities in the pediatric hematopoietic cell transplant patient. Students working with her will work on a research project investigating respiratory failure in a subset of critically ill children. |
| [Charles Rudick, PhD](https://medicine.iu.edu/campuses/gary/faculty/23210/rudick-charles/) Campus: Bloomington Dept: Pharmacology and Toxicology | Human Sexuality and Health Scholarly Concentration | Human Sexuality and Health Scholarly Concentration |
| [Tammy Sajdyk, PhD, MS](https://medicine.iu.edu/faculty/10335/sajdyk-tammy/) Campus: IN Dept: Pediatrics | Pediatrics | Dr. Sajdyk is an expert in neuronal plasticity research and is co-leading a program examining the impact of a one-on-one personalized prescription exercise program on psychosocial development and memory in adolescent and young adult (AYA) cancer survivors. Students working with her will collaborate on an ongoing research project examining the impact of personalized exercise on quality of life and cognitive measures in the AYA cancer survivor population. |
| [Don Sanders, MD, MS](https://medicine.iu.edu/faculty/23685/sanders-don) Campus: IN Dept: Pediatrics | Cystic Fibrosis |  |
| [Uma Sankar, PhD](https://medicine.iu.edu/faculty/23070/sankar-uma) Campus: IN Dept: Anatomy and Cell Biology | Bone Biology and Skeletal Disorders | The Sankar lab focuses on the role of calcium/calmodulin dependent protein kinase (CaMK) signaling in mammalian development and disease. We recently discovered novel roles for calcium/calmodulin dependent protein kinase kinase 2 (CaMKK2) in both the anabolic and catabolic pathways of bone remodeling and are actively pursuing projects investigating osteoblast and osteoclast differentiation, survival and function. Our long-term objective is to understand how theCaMKK2CaMK signaling cascade integrates with the endocrine and paracrine mechanisms regulating skeletal homeostasis with the goal of identifying bone anabolic therapeutics in combating age and malignancy induced osteoporosis. Recently, we were funded by the DoD to develop the pharmacological inhibition of CaMKK2 as anefficacious bone anabolic therapeutic strategy in fracture healing. Further, through an American Cancer Society funded project, we are investigating CaMKK2 inhibition as a “dual hit” strategy to control cancer cell growth while protecting bone from androgen deprivation therapy mediated osteoporosis in patients with advanced stage prostate cancer. As CaMKK2 inhibition has a growth restricting effect on prostate cancer itself, its inhibition could be developed as a therapy that will prevent therapy induced bone loss and devastating fractures while restricting tumor burden, addressing two key issues in the “palliative care and symptom management” of patients with advanced Stage prostate cancer. Trainees will be trained in several in vitro and in vivo techniques. These include primary cell isolation from mice, cell culture, biochemistry, molecular and cell biology techniques as well as kinase assays, enzyme kinetics, retro and lentivirus mediated genetic manipulations, mitochondrial assays, flowcytometry, histochemistry, small molecule screening, assessment of tumor burden by live imaging techniques, etc. |
| [Alan Sawchuk, MD, MSEE, BSEE](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Surgery | AI | artificial intelligence, blood flow hemodynamics |
| [Andrew Saykin, Psy.D.](https://medicine.iu.edu/faculty/6962/saykin-andrew) Campus: IN Dept: Radiology and Imaging Sciences | Neuroscience | Our research program focuses on the structural, functional and molecular substrates of cognitive deficits in Alzheimer’s disease (AD) and memory, as well in cancer, traumatic brain injury, schizophrenia and other disorders. |
| [Molly Scheel, PhD](https://medicine.iu.edu/education/campuses/south-bend/faculty/7391/duman-scheel-molly/) Campus: IUSM-SB Dept: Medical and Molecular Genetics | Developmental Biology | Dr. Scheel's laboratory focuses on the mosquito developmental genetics to promote the elucidation of tools to target mosquitoes before they are disease-transmitting adults. |
| [Zac Schlader, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: Bloomington Dept: Kinesiology | Human physiology, exercise physiology, environmental physiology |  |
| [Stephen Schlecht, PhD](https://medicine.iu.edu/faculty/44486/schlecht-stephen) Campus: IU Dept: Orthopaedic Surgery | Sports medicine | My lab studies the anterior cruciate ligament (ACL), including its development, function and response to loading. These studies use a basic, translational, and clinical research approach. Long-term goals of this research are to improve preventative injury diagnostics while also improving ACL reconstruction outcomes in the young. |
| [Titus Schleyer, DMD, PhD](https://medicine.iu.edu/faculty/5163/schleyer-titus) Campus: Regenstrief; IN Dept: Center for Biomedical Informatics | Biomedical Informatics | Dr. Titus Schleyer is a Research Scientist at the Center for Biomedical Informatics of the Regenstrief Institute and Professor of Biomedical Informatics at the Indiana University School of Medicine. He leads the Indiana Learning Health Systems Initiative, which is focused on using everyday patient care data to improve the health of and healthcare for people in Indiana. Dr. Schleyer is also focused on making information from various sources more accessible and useful to clinicians. One of his award-winning projects provides emergency department physicians with highly relevant information about their patients from Indiana’s major health information exchange directly in the electronic health record. Dr. Schleyer is also active in big data analytics for population health management. He and his team are currently analyzing opioid overdose death data in Marion County to find out which patient and other variables are particularly predictive of overdoses and deaths. |
| [C. Max Schmidt, MD, PhD](https://medicine.iu.edu/faculty/13948/schmidt-c-max) Campus: IN Dept: Surgery | Surgical oncology; General surgery | Dr. Schmidt performs clinical trials and translational research directed at discovering novel biomarkers and targeted treatments of patients with pancreatic neoplasia. |
| [Nathan Schmidt, PhD](https://medicine.iu.edu/faculty/12491/schmidt-nathan) Campus: IN Dept: Pediatrics | Malaria immunology/pathogenesis and gut microbiota | Dr. Schmidt’s research is focused on malaria, which is a parasitic disease caused by infection with Plasmodium species. |
| [Bryan Schneider, MD](http://medicine.iupui.edu/faculty-profile/BPSCHNEI/Schneider-Bryan/) Campus: IN Dept: Medical and Molecular Genetics | Cancer Biology | My major research goal is translational in nature. I hope to identify critical genetic and pharmacogenetic differences that predict for etiology, aggressiveness, and therapeutic responsiveness as it relates to cancer. My current research focus is primarily involved with polymorphisms of angiogenesis as it relates to breast cancer. I also wish to participate in multiple clinical trials testing therapies in breast cancer. |
| [Linda Schutzman, MD](https://medicine.iu.edu/faculty/63014/schutzman-linda) Campus: IN Dept: Surgery |  | Gun Violence Prevention in the aging population at risk for Dementia. This is an IRB-approved prospective survey study of patients over the age of 60 who lived in a gun-containing household. This study will explore current storage practices as well as plans and concerns regarding firearm management if given a diagnosis of dementia. (i.e: plan already in place, would they be willing to discuss a plan in the future, etc.) |
| [Tae-Hwi Schwantes-An, MS, PhD](https://medicine.iu.edu/departments/genetics/faculty/27085/schwantes-an-tae-hwi/) Campus: IN Dept: Medical and Molecular Genetics | Genetic Epidemiology, Chronic Kidney Disease, Alcoholic Liver Disease, Pulmonary Arterial Hypertension | Dr. Schwantes-An’s research focuses on understanding the genetic underpinnings of complex diseases such as substance use disorders and neuro-developmental/behavioral diseases. Dr. Schwantes-An is also interested in developing new statistical/analytical methods to identify genetic variants that are involved in diseases. |
| [Margaret Schwarz, MD](https://medicine.iu.edu/faculty/22541/schwarz-margaret) Campus: IN Dept: Mike and Josie Harper Cancer Research Institute | Vascular Biology | The Schwarz lab uses transgenic mice, three-dimensional cell culture, in vivo tumor, and lung developmental models to determine mechanisms by which the vasculature regulates cancer progression and alveolar formation. |
| [Christina Scifres, MD](https://medicine.iu.edu/faculty/42737/scifres-christina) Campus: IN Dept: Obstetrics and Gynecology |  | Diabetes and pregnancy |
| [Catherine Sears, MD](https://medicine.iu.edu/faculty/4855/sears-catherine/) Campus: IN Dept: Medicine | Cancer Biology | I am a physician scientist with a focus on lung cancer. Our laboratory focuses on the impact of DNA damage and repair on the development of smoking related lung cancers and to treatment response. Our overall goal is to determine the key mechanisms involved in early smoking related lung cancer development which can be used to identify prognosis and/or targeted with therapeutics to prevent progression. My laboratory is currently focusing on how impaired DNA repair impacts cigarette smoke-induced lung cancer development, genomic instability and mechanisms of cell death, including apoptosis, senescence and autophagy. Along with collaborating scientists, our lab investigates targeting of DNA repair proteins and mechanisms to augment lung cancer treatment response (with Dr. John Turchi, Indiana University – Oncology), the impact of DNA repair and cigarette smoke on pulmonary cell fate and emphysema (with Dr. Irina Petrache, National Jewish Health), effects of inflammation and HIV infection on DNA damage and repair (with Dr. Homer Twigg, IU – Pulmonary) and mechanisms of EMAP II on lung cancer pathology (with Dr. Matthias Clauss, IU - Cellular & Integrative Physiology). |
| [Anne Sereno, BS Biology, BS Math, PhD Psychology](https://engineering.purdue.edu/SerenoLab) Campus: WL Dept: Psychological Sciences & Biomedical Engr | instrumentation, eye movements, attention, memory | The objective of Dr. Sereno's research is to understand and characterize the physiological mechanisms of attention, short-term memory, and the programming of eye movements, in order to help in the diagnosis, treatment, and etiology of various diseases and disorders involving the disruption of these functions. |
| [Reza Shahbazi, PhD](https://medicine.iu.edu/faculty/59877/shahbazi-reza) Campus: IN Dept: Medicine | Oncology | Single cell multiomics RNA sequencing analysis of the cancer cell/T cell interaction and developing CRISPR gene editing nanofomulations for therapeutic purposes. |
| [Anthony Shanks, MD, MS, MEd](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: OB/Gyn |  | To assess if choice of specialty is influenced by timing of medical clerkship in the third year of medical school. |
| [Tasneem Sharma, PhD](https://medicine.iu.edu/faculty/52014/sharma-tasneem) Campus: IN Dept: Ophthalmology | Glaucoma and stem cells | Her research focuses on understanding intraocular and intracranial pressure associated pathogenesis in glaucoma and Spaceflight Associated Neuro-ocular Syndrome, generation of patient specific neuronal cells, disease modeling of central nervous system diseases, and neuroprotection/regeneration therapeutics. |
| [Catherine Sherwood-Laughlin, BS, MA, MPH, HSD (Doctorate)](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: Bloomington Dept: Applied Health Science, School of Public Health-Bloomington | Sexual and Reproductive Health. Sexuality Education | Assist with the Sexual Health EQUITY Project which focuses on supporting the implementation of sexuality education in school-based settings, specifically working with teachers, administrators, parents/guardians and students with Intellectual and Developmental Disabilities (IDD). This may include exploring funding opportunities to support this project, following up with the teachers who attended a training in 2021 regarding their experiences post-training, developing additional training sessions based on the follow up results and a literature review on the topics that are critical for students with IDD. |
| [Kosali Simon, PhD](https://oneill.indiana.edu/faculty-research/directory/profiles/faculty/full-time/simon-kosali.html) Campus: BL Dept: O’Neill School of Public and Environmental Affairs | Health economic policy and healthcare data analytics | Health economics and policy, The impact of state and federal regulations attempting to ease the availability of private and public health insurance for vulnerable populations, Health and labor market outcomes |
| [Mithun Sinha, PhD](https://medicine.iu.edu/faculty/42909/sinha-mithun) Campus: IN Dept: Surgery | Sinha laboratories studies host-biofilm interactions. We focus on two areas; One being, bacterial biofilm associated complications with surgical implants. Two-biofilm mediated delay in wound healing. | NIH/NIAID supported projects (through R01 and R21 grants) which investigate the role of bacterial biofilm in long term surgical implants associated immunological complications; non-funded project which investigates bacterial biofilm and associated complications with wound healing. |
| [Todd Skaar, PhD](http://medicine.iupui.edu/faculty-profile/TSKAAR/Skaar-Todd/) Campus: IN Dept: Medicine/Clinical Pharmacology | Cancer Biology | Identification of mechanisms in breast cancer cells and patients that alter their responsiveness to endocrine therapies. |
| [Brenda Smith, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Ob/Gyn | Women's health; musculoskeletal; nutrition | Dr. Smith's lab studies the mechanisms of how nutrition influences immune function and the implications on the musculoskeletal system and women's health. Our translational approach utilizes cell culture systems, animal models and clinical studies. Ongoing projects are investigating how prebiotics influence the gut microbiome-bone axis and how postbiotics alter osteocytes and their function. |
| [Lester Smith, PhD](https://medicine.iu.edu/departments/radiology/faculty/8906/smith-lester/) Campus: IN Dept: Radiology and Imaging Sciences | Bioprinting; biofabrication; tissue engineering; bioreactor development | Comprehensive biofabrication platform (bioprinting, bioreactor culture, analysis); automated and high output methods; bioprinted tissue metabolism; tissue perfusion: computational fluid dynamics analysis |
| [Margie Snyder, PharmD, MPH](https://medicine.iu.edu/faculty/6439/snyder-margie;%20https:/www.phpr.purdue.edu/directory/snyderme) Campus: WL Dept: Pharmacy | Health Research Outcomes | My research is focused on the delivery of medication therapy management services by community pharmacists. |
| [Kevin Sonn, MD](https://medicine.iu.edu/faculty/40436/sonn-kevin) Campus: IN Dept: Orthopaedic Surgery | Hip and Knee Replacement |  |
| [Jason Spaeth, PhD](https://medicine.iu.edu/faculty/43265/spaeth-jason) Campus: IN Dept: Pediatrics | Diabetes | The Spaeth Lab focuses on the pathogenesis of diabetes mellitus and islet cell function, with emphasis on understanding how coregulators modulate the activities of islet-enriched transcription factors under normal and pathophysiological settings of Type 1 and Type 2 diabetes. Specifically, the lab is interested in the Pancreas and Duodenal Homeobox 1 (Pdx1) transcription factor, previously shown to be essential for pancreatogenesis, islet beta cell development and function. |
| [Dan Spandau, PhD](https://medicine.iu.edu/faculty/10137/spandau-dan) Campus: IN Dept: Dermatology | Dermatology | The goal of our laboratory is to define the mechanism by which geriatric keratinocytes fail to respond to UVB-irradiation and to link this aberrant response to the incidence of skin cancer in the elderly. |
| [Stanley Spinola, MD](https://medicine.iu.edu/faculty/6484/spinola-stanley) Campus: IN Dept: Medicine/Infectious Diseases and Dept. of Microbiology and Immunology | Microbiology and Immunology | Discovery of the cause of cutaneous ulcers in children who live in the tropics by microbiome analysis; determination of an interaction network between the skin pathogen Haemophilus ducreyi and the host in experimentally infected human volunteers. |
| [Michelle Starr, MD](https://medicine.iu.edu/faculty/44360/starr-michelle) Campus: IN Dept: Pediatric Nephrology and Pediatric & Adolescent Comparative Effectiveness Research | improving the kidney-related outcomes of children born prematurely, with a particular focus on acute kidney injury in the Neonatal Intensive Care Unit. | Dr. Starr’s clinical and research interests lie in improving the kidney-related outcomes of children born prematurely, with a particular focus on acute kidney injury in the Neonatal Intensive Care Unit. |
| [Demitrios Stefanidis, MD, PhD](https://medicine.iu.edu/faculty/26941/stefanidis-dimitrios/) Campus: IN Dept: Department of Surgery | Surgery |  |
| [Lauren Stewart, MD](https://medicine.iu.edu/faculty/18211/stewart-lauren) Campus: IN Dept: Emergency Medicine | Emergency medicine | The Department of Emergency Medicine has a wide variety of clinical research projects open for student participation. Examples of ongoing faculty areas of research include cardiovascular research, cancer research, ultrasound, EMS, medical education, healthcare disparities, and public health. |
| [Bill Sullivan, PhD](https://medicine.iu.edu/faculty/13502/sullivan-william) Campus: IN Dept: Microbiology and Immunology | Microbiology and Immunology | We study the regulation of gene expression in a protozoan parasite called Toxoplasma gondii. Toxoplasma, a relative of the malaria parasite, causes congenital birth defects, as well as opportunistic infection in AIDS, cancer chemotherapy, and organ transplant patients. |
| [Jignesh Tailor, BMBCH, PhD](https://medicine.iu.edu/faculty/60715/tailor-jignesh) Campus: IN Dept: Neurological Surgery | The Tailor lab studies early steps of brain tumorigenesis in neural stem cells. Currently, our focus is NF1and NF2genes and its role in the aberrations of neuro-glia differentiation and the development of CNS tumors. On the clinical side, the goal of the lab is to advance the neurosurgical care of children with pediatric CNS tumors through innovation and quality improvement. | Development of a neuroepithelial stem (NES) cell model of gliomagenesisin NF1; Recapitulating the development of spinal ependymoma with NF2 mutant neuroepithelial stem (NES) cells |
| [Steven Templeton, PhD](https://medicine.iu.edu/education/campuses/terre-haute/faculty/21147/templeton-steven/) Campus: IUSM-TH Dept: Biology and Immunology | Fungal Immunology | Fungal Immunology |
| [Robert Tepper, MD, PhD](https://medicine.iu.edu/faculty/13357/tepper-robert) Campus: IN Dept: Pediatrics/Pulmonary and Critical Care | Pulmonary Diseases | Dr. Tepper's laboratory focuses upon lung structure and function as it relates to airway hyper-reactivity, as well as lung growth and maturation; the effects of chronic mechanical strain upon the mechanical properties of the lung; the effects of lung injury early in life upon lung growth and airway reactivity. |
| [Paul Territo, PhD](https://medicine.iu.edu/departments/radiology/faculty/6529/territo-paul/) Campus: IN Dept: Radiology and Imaging Sciences | Development of translational imaging biomarkers for the assessment of disease progression and therapeutic response. | Tracer Development and Validation Projects; Image and Data Analysis; Preclinical Imaging; and Clinical Imaging Projects |
| [William Thompson, DPT, PhD](https://cancer.iu.edu/research-trials/member-bio.shtml?name=william-thompson&id=17343) Campus: IN Dept: Physical Therapy | Physical Therapy |  |
| [Emma Tillman, PharmD, PhD](https://medicine.iu.edu/faculty/43224/tillman-emma) Campus: IN Dept: Clinical Pharmacology | pediatric pharmacogenomics | Dr. Tillman has been a part of several small studies to evaluate drug dosing and efficacy in pediatric patients and other special populations. She has worked as a Pediatric Clinical Pharmacy Specialist in the area of nutrition support at Le Boneheur Children’s Hospital and most recently in the Pediatric Intensive Care Unit at Riley Children’s Hospital at Indiana University Health. Dr. Tillman will use her background in both clinical pharmacy and research to develop a new research agenda focused on the implementation of pharmacogenomics. |
| [Natasha Tilston-Lunel, PhD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Microbiology and Immunology |  |  |
| [Tuan Tran, MD, PhD](https://medicine.iu.edu/faculty/5188/tran-tuan) Campus: IN Dept: Medicine/Pediatrics | Microbiology and Immunology | The focus of our lab is to define mechanisms of host immunity to malaria and identify immune correlates of protection from Plasmodium falciparum infection by studying naturally acquired immunity in individuals living in malaria-endemic communities using systems biology approaches. |
| [Bill Truitt, PhD](https://medicine.iu.edu/faculty/15720/truitt-william) Campus: IN Dept: Anatomy and Cell Biology | Neuroscience | My overall research objective is to understand the neural circuitry that regulates anxiety and how manipulations of this circuit leads to pathological anxiety and panic. It is my hope that findings from these types of experiments will lead to novel treatments for anxiety and panic disorders. My lab utilizes behavioral pharmacology coupled with neuroanatomy and molecular biology to elucidate the functional circuits of anxiety behaviors. Of particular interest to me is how the interneurons of the basolateral amygdala interact with the projections neurons of this nucleus to induce or suppress anxiety-like behaviors. In doing so I hope to understand the mechanism by which subtle manipulations to this system can produce chronic anxiety-like symptoms. This systems approach to research leads to highly detailed understanding of these circuit as well as produce insights to the mechanisms of the behavioral outcomes. |
| [Brownsyne Tucker Edmonds, MD, MPH](https://medicine.iu.edu/faculty/21349/tucker-edmonds-brownsyne/) Campus: IN Dept: OB/Gyn | Shared Decision-Making; Patient-Provider Communication; Health Disparities; Clinical Ethics; Reproductive Justice | Patient-provider communication and shared decision-making in the setting of uncertainty, such as in the case of periviable (very premature) deliveries. Additionally, understanding the impact of race, class and culture on patient preferences and risk perceptions; physician decision-making and counseling; and ultimately, variations in treatment provision and service delivery. |
| [Matthew Turner, MD, PhD](https://medicine.iu.edu/faculty/20852/turner-matthew/) Campus: IN Dept: Dermatology | Dermatology | Dr. Turner is also a scientist whose research efforts are focused on better understanding how and why atopic dermatitis (i.e. atopic eczema) develops and identifying ways to improve treatment for this disease. |
| [Homer Twigg, MD](http://medicine.iupui.edu/faculty-profile/htwig/Twigg-Homer) Campus: IN Dept: Medicine/Pulmonary Allergy, Critical Care and Occupational Medicine | Pulmonary Diseases | Pulmonary disease in HIV infection |
| [Tracy Vargo-Gogola, PhD](https://medicine.iu.edu/faculty/18990/vargo-gogola-tracy) Campus: IUSM-SB Dept: Biochemistry and Molecular Biology | Cancer Biology | Breast Cancer |
| [Urs von Holzen, MD, MBA](https://medicine.iu.edu/faculty/26026/von-holzen-urs) Campus: IUSM-SB Dept: Surgery |  | Esophageal Cancer |
| [Claire Walczak, PhD](https://medicine.iu.edu/faculty/26533/walczak-claire/) Campus: IUSM-BL Dept: Biochemistry and Molecular Biology | Cancer Biology | Lab is interested in the molecular mechanisms that govern mitotic spindle assembly and chromosome segregation in both normal and tumor-derived cells. Researchers in this group are developing screening assays to identify new drugs that target microtubule assembly. |
| [Joseph Wallace, PhD](https://medicine.iu.edu/faculty/25560/wallace-joseph/) Campus: IN Dept: Engineering and Technology | Bone Biology | Dr. Wallace's laboratory (Bone Biology and Mechanics Laboratory, BBML) is focused on understand how exogenous mechanical stimulation models impact cellular output, tissue quality, bone mass and fracture resistance as a function of age and disease state. They study how bone changes under different matrix-based disease states (e.g. osteogenesis imperfecta, osteoporosis, osteolathyrism), and use mechanical stimulation as a means to compensate for these changes. Trainees in the BBML will take a materials science approach towards studying the mechanical properties of bone at multiple hierarchical length scales, from the nanoscale structure of collagen and mineral to the whole bone at the macroscale. In vitro studies (fluid flow, substrate bending) compliment in vivo models of mechanical loading (treadmill running, tibial loading). Techniques including cell culture, qPCR, atomic force microscopy, microCT, Raman spectroscopy nanoindentation whole bone mechanical testing are routinely used. |
| [Mark Walsh, MD](https://medicine.iu.edu/faculty/5755/walsh-mark) Campus: In Dept: MMGE | Bioinformatics, translational science | The project for this summer's group concerns a review that will be centered around the determination of reliable markers of futile resuscitation in traumatic hemorrhage. Our group has published widely in the area of trauma-induced coagulopathy with a particular emphasis on thromboelastic monitoring of hemostatic competence in severely bleeding trauma patients. Our students will continue in this area with a review concerning the use of laboratory and clinical markers to define futile resuscitation in massive transfusion. |
| [Meijing Wang, MD](https://medicine.iu.edu/faculty/11316/wang-meijing) Campus: IN Dept: Surgery | Surgical Implant Associated Complications |  |
| [Nian Wang, PhD](https://medicine.iu.edu/faculty/48212/wang-nian) Campus: IN Dept: Radiology and IMaging Sciences | Neuroimaging | Dr. Wang’s interests include developing novel MRI acquisition and reconstruction methods for various brain diseases and musculoskeletal disorders. |
| [Sophia Wang, MD, MS](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Psychiatry | Alzheimer's disease, COVID-19, critical care medicine | My work focuses on diverse recruitment in Alzheimer's disease neuroimaging studies, as well as understanding the mechanisms connecting critical illness and neurodegeneration, including COVID-19 ICU survivors. |
| [Y. Alan Wang, PhD](https://medicine.iu.edu/faculty/62382/wang-yaoqi) Campus: IN Dept: Medicine | Cancer genetics; Epigenetics; Immunotherapy; Tumor microenvironment | Dr. Wang's lab is interested in elucidating the immune suppressive tumor microenvironment to identify novel combination immunotherapeutic approaches to glioblastoma and GI mastases as well as in using synthetic lethality and novel immune therapeutic agents. |
| [Ying Wang, MD, PhD](https://medicine.iu.edu/faculty/51903/wang-ying) Campus: IN Dept: Anesthesia | Anesthesia | Integrative and Complementary Medicine, Pain, Neuroimaging |
| [Stuart Warden, PhD](https://medicine.iu.edu/faculty/4955/warden-stuart/) Campus: IN Dept: Physical Therapy | Bone Biology | His research interests focus on the form and function of the musculoskeletal system and, in particular, the lifelong contribution of physical activity to skeletal health. |
| [Stephanie Ware, MD, PhD](https://medicine.iu.edu/faculty/22816/ware-stephanie) Campus: IN Dept: Pediatrics/Medical and Molecular Genetics | Heart Disease | Stephanie M. Ware, MD, PhD is a clinical geneticist who has research programs that focus on the genetic and developmental basis of pediatric heart disease. The two main areas of interest are disorders of cardiac function (cardiomyopathies) and structure (congenital heart disease). The laboratory utilizes animal models to investigate the developmental mechanisms and pathobiology of these disorders. The lab is specifically interested in developmental pathways important for normal left-right patterning and cardiac looping during embryogenesis. |
| [Andrew Watters, MD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: BL Dept: Emergency Medicine | Emergency Medicine |  |
| [Erin Weber, MD, PhD](https://medicine.iu.edu/faculty/52148/weber-erin) Campus: IN Dept: Surgery | Plastic surgery | Her interests include hair follicle regeneration and nerve regeneration. |
| [Lei Wei, PhD](https://medicine.iu.edu/faculty/16912/wei-lei) Campus: IN Dept: Pediatrics/Cellular and Integrative Physiology | Heart Disease | Dr. Wei's research is focused on understanding the molecular basis of cardiomyocyte death and cardiac fibrosis associated with cardiac injury and heart failure. Ongoing projects investigate role of Rho/Rho kinase signaling cascade in cardiac development and cardio protection. Work is focused on establishing the molecular mechanisms by which the two Rho kinase isoforms, ROCK1 and ROCK2 regulate pro-apoptosis or pro-survival signaling cascades in cardiomyocytes subjected to congenital or acquired injury, with the notion of validating the therapeutic potential of ROCK chemical inhibitors. The goal is to identify new therapeutic targets for disease prevention and treatment, especially, for heart failure in both developing and adult hearts. |
| [Ronald Wek, PhD](https://medicine.iu.edu/faculty/15110/wek-ronald) Campus: IN Dept: Biochemistry and Molecular Biology | Microbiology and Immunology | Our research is focused on how cells recognize stress and induce gene expression pathways to alleviate damage. Central to these stress adaptation processes is translational control through phosphorylation of a translation factor eIF2, which is involved in delivery of initiator tRNA to the ribosome machinery. Protein misfolding and nutrient deficiencies are critical triggers of translational control, which rapidly repress global translation coincident with preferential translation of key stress response genes. We use biochemistry, molecular and cellular biology, genetic, and bioinformatics approaches for determining the mechanisms for these stress response pathways and their roles in the progression and treatment of diabetes and related metabolic diseases, cancer, and neuropathologies. |
| [Steven Welc, PhD](https://medicine.iu.edu/faculty/44668/welc-steven) Campus: IN Dept: Anatomy, Cell Biology & Physiology | Muscle pathophysiology and regeneration | Research in the Welc Lab focuses on understanding the molecular mechanisms that determine muscle homeostasis, regeneration, and remodeling. The focus of the investigations is on the regulatory interactions of myogenic and non-myogenic cells that determine skeletal and cardiac muscle health. They have a specific interest in the central role that the immune system plays in regulating muscle pathophysiology. |
| [Clark Wells, PhD](https://medicine.iu.edu/faculty/18078/wells-clark) Campus: IN Dept: Biochemistry and Molecular Biology | Cancer Biology | Causal relationships between differentiation and growth control in Breast Cancer Development; Crosstalk between Cell polarity, HIPPO/YAP dependent transcription and ErbB/MAPK signaling. |
| [Greg Westin, MD, MAS](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Surgery | Vascular Surgery | I am a vascular surgeon and director of the Indiana University Comprehensive Wound Center at Methodist Hospital. My primary interest is in lower extremity wounds and wound healing, including diabetic foot wounds, wounds related to poor blood flow (mostly due to smoking, diabetes, and/or kidney disease), and wounds related to venous disease. With Dr. Mithun Sinha, I work on projects that study the biology of wound healing including through biopsies of these wounds. |
| [Kenneth White, PhD](https://medicine.iu.edu/faculty/1931/white-kenneth) Campus: IN Dept: Medical and Molecular Genetics | Bone Biology and Skeletal Disorders | Dr. White's laboratory is primarily interested in the molecular genetics of metabolic bone diseases. Dr. White played an instrumental role in the positional cloning of the fibroblast growth factor-23 (FGF23) gene and determining that missense mutations in FGF23 are responsible for the human phosphate wasting disorder autosomal dominant hypophosphatemic rickets (ADHR). FGF23 is a novel secreted hormone that may have direct effects on kidney and on bone. We have discovered that recessive, inactivating mutations in FGF23 are responsible for familial tumoral calcinosis (TC), a disorder with a reciprocal phenotype to ADHR. In addition, our group collaboratively determined that mutations in fibroblast growth factor receptor-1 (FGFR1) are responsible for osteoglophonic dysplasia (OGD). |
| [Fletcher White, PhD](https://medicine.iu.edu/faculty/20353/white-fletcher) Campus: IN Dept: Pharmacology and Toxicology | Neuroscience | Work in my laboratory is directed at the role of tissue-derived factors during development or following either disease or nerve injury on primary afferent neurons as a model system. Sensory neurons are unique in elaborating a peripheral axon to both peripheral target tissues and a central axon projecting in the spinal cord. The primary focus of the pre-clinical and clinical investigations in my laboratory includes the degree to which inflammatory products, receptors and ion channels contribute to the dysfunction in the injured or diseased peripheral and central nervous system with regard to mechanisms of chronic pain (inflammatory and neuropathic). |
| [Linda Williams, MD](https://medicine.iu.edu/faculty/10669/williams-linda) Campus: IN Dept: Neurology |  | stroke outcomes and health services research, healthcare quality |
| [John Wolfe, MD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Anesthesiology | Anesthesiology and acute pain management |  |
| [Kara Wools-Kaloustian, MD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Internal Medicine |  | I do global health research so my "lab" is in Kenya however there are opportunities to work on projects from the U.S. |
| [James Wood, MD, MSCI](https://medicine.iu.edu/faculty/38442/wood-james) Campus: IN Dept: Ryan White Center for Pediatric Infectious Diseases & Global Health & Pediatric and Adolescent Comparative Effectiveness Research | Pediatric infectious diseases, Staphylococcus aureus and MRSA infections, Kawasaki disease. | Dr. Wood's research is focused on the immune response, epidemiology and clinical care of children with Staphylococcus aureus infections, including MRSA. He is interested in improving clinical care of patients with bone and join infections as well as the development and implementation of novel diagnostic, therapeutic and vaccine targets. He is also interested in the pathogenesis and treatment of Kawaski Disease. |
| [Yu-Chien Wu, MD, PhD](https://medicine.iu.edu/faculty/7079/wu-yu-chien/) Campus: IN Dept: Radiology and Imaging Sciences | To understand diffusion physics in biological systems and utilize diffusion MRI to elucidate disease mechanisms, facilitate early diagnoses, and identify optimal treatments. | The goal of my research is to understand diffusion physics in biological systems and utilize diffusion MRI to elucidate disease mechanisms, facilitate early diagnoses, and identify optimal treatments. To achieve this goal, my research program focuses on developing quantitative microstructure imaging techniques, assessing the sensitivities of these microstructural measurements in neurologic disorders of the human brain, and validating their specificities with histological analysis of animal models and human post-mortem tissue. The significance of my research is applicable to any disorder in which alterations of diffusion play an important role in detecting the underlying pathophysiologic mechanisms. |
| [Amol Yadav, PhD](https://medicine.iu.edu/faculty/59597/yadav-amol) Campus: IN Dept: Neurological Surgery | Neural engineering, Neuroscience | The Yadav lab develops novel neuroengineering technologies such as brain-spine-machine interfaces and closed-loop neuromodulation techniques to restore the disrupted brain-spine connection. |
| [Frank Yang, PhD](https://medicine.iu.edu/faculty-labs/yang) Campus: IN Dept: Microbiology and Immunology | Lyme Disease | Dr. Yang’s laboratory investigates the pathogenesis of Bacterial infection, with the focus of two groups of pathogens, the spirochetal pathogens (the causative agents of Lyme disease, Syphilis, and Leptospirosis) and the vector-borne pathogens. |
| [Charles Yates, MD](https://medicine.iu.edu/faculty/12192/yates-charles) Campus: IN Dept: Otolaryngology-Head and Neck Surgery | Otology/Neurotology, Cochlear Implant | Dr. Yates pursues research interests in Neurofibromatosis type 2. The goal of this research is to find a medical treatment for patients with tumors of the skull base, especially in order to preserve hearing, balance, and facial nerve function. The research involves understanding the cellular machinery that changes normal cells into tumors and how changes in these conditions may be able to shrink tumors. |
| [Samantha Yeap, MD](https://medicine.iu.edu/faculty/17136/yeap-yar-luan) Campus: IN Dept: Anesthesia | Clinical research with focus around perioperative pain management |  |
| [Elizabeth Yeh, PhD](https://medicine.iu.edu/faculty/43871/yeh-elizabeth) Campus: IN Dept: Pharmacology and Toxicology | Breast cancer, kinases | research in the Yeh Lab focuses on the study of a protein kinase called HUNK, which stands for Hormonally Upregulated Neu-associated Kinase. |
| [Karmen Yoder, PhD](https://medicine.iu.edu/faculty/6553/yoder-karmen) Campus: IN Dept: Radiology and Imaging Sciences | Neuroscience | Dr. Yoder's work focuses on using quantitative PET techniques to study in vivo neurochemical processes in humans and in animal models of abnormal brain function. |
| [Hiroki Yokata, PhD](https://medicine.iu.edu/faculty/24590/yokota-hiroki/) Campus: IN Dept: Biomedical Engineering | Bone Biology | The Yoneda lab focuses on the bone tumor microenvironment, with a particular interest in crosstalk between bone and breast cancer cells in bony metastases. They are also interested in the pathophysiology of cancer-associated bone pain, and the role of microenvironment pH in that process. The Yoneda lab’s third area of interest is in the role of numerous transcription factors in chondrogenesis. Dr. Yoneda has a unique track record in training young scientists who are interested in studying bone biology. He trained 18 postdocs from all over the world since 1997 and has trained 28 dental graduate students in a DDS/PhD program. Many of them are currently working in the bone field as faculty member in academic institutes in Japan. Trainees that come into the Yoneda lab will learn experimental techniques associated with osteoclast biology, tumor cell culture, analysis and quantification of bone and breast neoplasms, in vitro chondrocyte culture and analysis, and methods to study signal transduction. |
| [Andy "Qigui" Yu, MD, PhD](https://medicine.iu.edu/faculty/6507/yu-andy) Campus: IN Dept: Microbiology and Immunology | Microbiology and Immunology | Microbiology and immunology |
| [Desta Zeruesenay, PhD](http://medicine.iupui.edu/faculty-profile/zdesta/Desta-Zeruesenay) Campus: IN Dept: Medicine/Pharmacology and Toxicology | Drug Metabolism | our research focuses on identifying factors that contribute to variable drug disposition. Completed and ongoing bench and clinical studies in our laboratory address the impact of altered drug metabolizing enzymes and drug transporters due to genetic polymorphisms and nongenetic factors (e.g., DDIs) on exposure of drugs and (active) metabolites. Our research activities include: developing new analytical tools to measure drugs and their metabolites; profiling of drug metabolites; identification of rate limiting metabolic pathways and the specific enzymes involved; developing and validating novel molecular and clinical tools to study drug disposition and DDIs; assessing the impact of genetic variants and DDIs as well as interplay of them on drug exposure and effect; and developing mathematical models (e.g. static models, PBPK and popPK) to allow mechanistic understanding and quantitative prediction of clinical drug exposure and DDIs from in vitro data. |
| [Jie Zhang, PhD](https://medicine.iu.edu/departments/genetics/faculty/38859/zhang-jie/) Campus: IN Dept: Medical and Molecular Genetics | Bioinformatics; Translational Science | Our lab is focused on developing and applying translational bioinformatics and system biology methods to identify disease genes, pathways, and biomarkers with applications in cancers, neurological diseases, and other types of diseases. |
| [Bo Zhao, PhD](https://medicine.iu.edu/faculty/27145/zhao-bo) Campus: IN Dept: Otolaryngology-Head and Neck Surgery | Molecular Mechanisms of Auditory Perception and Deafness | Dr. Zhao is most interested to identify novel molecules and pathways required for auditory perceptions. His research goal is to develop new therapeutic treatment for some forms of sensorineural hearing loss, caused by defects in cochlear hair cells. |
| [Qi-Huang Zheng, PhD](https://medicine.iu.edu/departments/radiology/faculty/4969/zheng-qi-huang/) Campus: IN Dept: Radiology and Imaging Sciences | Radiochemistry | PET radiotracer development and production/design, synthesis and biological evaluation of new radiopharmaceuticals for use in the biomedical/molecular imaging technique positron emission tomography (PET) to study cancer, neuroscience and cardiovascular diseases. |
| [Baohua Zhou, PhD](https://medicine.iu.edu/faculty/18402/zhou-baohua) Campus: IN Dept: Pediatrics/Microbiology and Immunology | Microbiology and Immunology | Research in the lab focuses on understanding the pathophysiology of allergic airway inflammation. In the past, we demonstrated that thymic stromal lymphopoietin (TSLP) plays an important role in the development of allergic inflammation. |
| [Anthony Shanks, MD, MS, MEd](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: OBGYN | Education | To assess if choice of specialty is influenced by timing of medical clerkship in the third year of medical school. |
| [Cheman Neal, MD](https://md.mednet.iu.edu/research/imprs/faculty-mentors/) Campus: IN Dept: Center for Inclusive Excellence | Education | This would be a short-term special project in the Dean's Office. Through literature review, we would like to create a bibliography of health equity research for leaders and other school stakeholders. The project would end in a summary presentation of the curated list and could be turned into a poster presentation if desired. |