

DIRECTORY 2022-2023



Firoz Abdoel Wahid, M.D., Ph.D.

fza3@pitt.edu

Research Description: I am Assistant Professor at the EOH Department of the School of Public Health. I am a native from Suriname where I graduated as a family physician in 2005, and as Master's in Public Health in 2012. I have over 15-year experience in public health, the last eight of which in environmental health. My public health career started in 2005 as the clinical coordinator of the National AIDS Program in Suriname. I pursued my doctorate in environmental health in 2018 at Tulane University, New Orleans. I am part of the Caribbean Consortium for Research in Environmental and Occupational Health that is focused on the impact of chemical and non-chemical stressors on birth outcomes. I have a long-standing history of teaching and have trained and mentored frontline healthcare workers in Suriname, as well as medical, physical therapy and public health students. My areas of expertise include global environmental health research, research training, and climate and health impact on vulnerable populations.

Keywords: environmental health; population health; dietary surveys; climate and health; maternal and child health

Publications: <https://www.sph.pitt.edu/directory/firoz-abdoel-wahid>



Kalil Abdullah, M.D., M.Sc.

abdullahkg@upmc.edu

Research Focus: The Laboratory for Translational Neuro-Oncology at the UPMC Hillman Cancer Center, under the direction of Kalil Abdullah, MD, is focused on developing novel clinical models of glioma and identifying druggable targets to facilitate early phase clinical trials.

Description: [Translational Neuro Oncology Lab | University of Pittsburgh](#)

Keywords: translational oncology, organoids, metabolism, glioblastoma, glioma

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=kalil+abdullah&sort=date>

Social: <https://www.linkedin.com/in/kalilabdullah/>



Ümit Akbey, Ph.D.

umitakbey@pitt.edu

Research Description: Structural Biology of Pathological and Functional Amyloid Fibrils by NMR Spectroscopy

Keywords: Alzheimer, Parkinson, neurodegeneration, antimicrobial resistance, NMR, solid state NMR, biofilms, functional and pathological amyloids

Publications: <https://scholar.google.com/citations?hl=en&user=T5N5ARYAAAAJ>



Martina Anto-Ocrah, M.D., MPH, Ph.D., MT (ASCP)

maa509@pitt.edu

Research Description: www.drmartinaphd.com

Keywords: epidemiology, data analyses, mixed methods research (qualitative & quantitative), study design, global health, reproductive epidemiology

Publications: https://scholar.google.com/scholar?hl=en&as_sdt=0%2C33&q=Martina+Anto-Ocrah&btnG=

Social: @drmartinaphd (Twitter), dr_martina__phd (Instagram), Martina Anto-Ocrah (Linked In)



Rachel Bachrach, M.S., Ph.D.

Rachel.Bachrach2@va.gov

Research Focus: https://profiles.dom.pitt.edu/faculty_info.aspx/Bachrach7353

Description: Dr. Bachrach's program of research emphasizes the study of unhealthy alcohol use and its comorbidities, as well as its determinants, consequences, understanding factors that influence receipt of evidence-based alcohol care, and implementing strategies to improve equitable access to evidence-based care. Her research uses both quantitative and qualitative methods to investigate questions of interest.

Keywords: Longitudinal survey design; Qualitative Methods for Implementation Science; Implementation science theory and frameworks

Publications: https://scholar.google.com/citations?user=h_V-q2gAAAJ&hl=en&oi=ao

Social: @RachelLBachrach



Kelly Bailey, M.D., Ph.D.

Kelly.Bailey@chp.edu

Research Focus: The intersection of DNA damage and immunobiology in Ewing sarcoma

Keywords: humanized mice, DNA damage, immunobiology, pathogenic germline variants

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/kelly.bailey.1/bibliography/public/>

Social: @KMBaileylab



Mariana Bezamat Chappel, DDS, Ph.D.

mb129@pitt.edu

Research Focus: Dr. Bezamat's projects focus on defining oral disease patterns that are associated with specific genomic and phenomic profiles. She is interested in the field of phenomics, an area of biology concerned with the measurement of phenomes, a set of physical and biochemical traits belonging to a given organism as they change in response to genetic mutation and environmental influences. Her studies focus on the impact of oral health phenotypes and genetic variants on overall health comorbidities.

Description: <https://www.dental.pitt.edu/people/mariana-bezamat-dds>

Keywords: Genome-wide and phenome-wide association studies, candidate gene approaches, gene-environment interactions.

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/mariana.bezamat.1/bibliography/public/>



Hari Bharadwaj, Ph.D.

hari.bharadwaj@pitt.edu

Research Focus: Systems neuroscience of complex auditory perception

Description: <https://www.shrs.pitt.edu/people/hari-bharadwaj>

Keywords: Psychoacoustics; Human Neuroimaging; Otoacoustic emissions; Sensorineural hearing loss; Neural coding of complex sounds; Computational modeling of auditory physiology; Aging; Autism spectrum disorders; Signal processing

Publications: <https://scholar.google.com/citations?user=Ay6wT1MAAAA>

Social: @Hari_Bharadwaj, <https://www.linkedin.com/in/hari-bharadwaj-27853910>



Yurun Cai, Ph.D.

yuc199@pitt.edu

Research Focus: Mobility and physical activity with cognitive impairment and Alzheimer's disease

Description: Dr. Cai's research focus is aging, chronic musculoskeletal pain, accelerometer measured physical activity, mobility, and falls in community-dwelling older adults. She has led several projects exploring the mechanisms underlying the relationships between chronic pain, cognition, and falls. She was also involved in National Institute on Aging R01-funded research projects examining the associations of sensorimotor function with mobility, physical activity, and cognitive impairment. She also has experience in analyzing large-scale longitudinal datasets using SAS and Mplus software. Dr. Cai has demonstrated a record of productive research publications in aging research. Her ultimate research goal is to help older adults enhance mobility and cognition and maintain functional independence. Dr. Cai earned her BSN from Peking University Health Science Center and PhD in Nursing – Population Health track from the University of Massachusetts Boston in 2019. Her dissertation focused on the longitudinal association between chronic musculoskeletal pain and risk of injurious falls and circumstances of falls in older adults enrolled in the MOBILIZE Boston study. In 2021, Dr. Cai completed her 2-year postdoctoral training in the Department of Epidemiology at the Johns Hopkins Bloomberg School of Public Health. Dr. Cai has presented her research in national and international research conferences. She is a member of the Gerontological Society of America, Eastern Nursing Research Society, and Sigma Theta Tau International Honor Society of Nursing. She has served as a reviewer in several peer-reviewed journals (BMC Public Health, BMC Geriatrics, American Journal of Alzheimer's Disease and Other Dementias, etc.) and an abstract reviewer for the annual meeting of the Gerontological Society of America.

Keywords: accelerometer measurement, fall prevention, structural equation modeling, gait analysis

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=Yurun+Cai>

Social: @CaiYurun



Joni Carroll, PharmD

joni.carroll@pitt.edu

Research Focus: <https://www.pharmacy.pitt.edu/directory/profile.php?profile=1735>

Description: <https://www.pharmacy.pitt.edu/directory/profile.php?profile=1735>

Keywords: Longitudinal survey design; Qualitative Methods for Implementation Science; Implementation science theory and frameworks

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1hugZa5-96cQr/bibliography/public/>



Lujia Chen, M.S., Ph.D.

luc17@pitt.edu

Research Focus: Dr. Chen's research concentrates on developing machine learning methods, especially deep learning models (DLMs) (e.g. Deep Neural Networks, Boltzmann Machine, and topic modeling), to study cancer cell signaling systems, disease mechanisms and cancer pharmacogenomics. Dr. Chen uses the concise representations learned from the DLM with the causal inference to guide the identification of molecular signatures/biomarkers and predicts the clinical outcomes including drug sensitivity and patient survival. Based on Dr. Chen's strong research background in bioinformatics, biomedical informatics, biology and machine learning, she successfully develops comprehensive AI models that precisely represent the state of signaling systems in cancer cells and use such information to improve the tumor-specific precision medicine (precision oncology).

Description: <https://www.dbmi.pitt.edu/directory/name/lujia-chen/>

Keywords: machine learning, deep learning, single-cell, signaling pathway, causal discovery, precision medicine, drug prediction

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/lujia.chen.1/bibliography/public/>



Yu-Chiao (Chris) Chiu, Ph.D.

yuc250@pitt.edu

Research Focus: Deep learning of cancer genomics and pharmacogenomics

Description: Yu-Chiao (Chris) Chiu, PhD, is an Assistant Professor in the Department of Medicine, Division of Hematology/Oncology and the UPMC Hillman Cancer Center. Dr. Chiu's research interests include bioinformatics, machine learning, cancer genomics, and pharmacogenomics. The goal of his laboratory is to systematically model genomics and pharmacogenomics to better understand cancer biology and improve cancer therapy. He is the recipient of a NIH/NCI K99/R00 Pathway to Independence Award for his work to develop deep learning methods that extract multi-omic signatures to predict the responses of pediatric cancer cells to chemical and genetic perturbations. He has also received grants from the Fund for Innovation in Cancer Informatics (ICI) and the San Antonio Life Sciences Institute. Dr. Chiu has published nearly 50 research articles in clinical and computational journals, which are well-recognized by the broad cancer and bioinformatics communities, including the latest publications in Science Advances (highlighted by @NCIgenomics as the #1 favorite paper of 2021), BMC Medical Genomics (>100 citations and selected as Springer Nature Research Highlights in Genetics of 2019), and Briefings in Bioinformatics. He has presented his work at many conferences and has been an active member of the academic enterprise, teaching and mentoring others. He has also received patents for his work to predict prognosis of patients with acute myeloid leukemia. At Pitt, Dr. Chiu is actively expanding his collaborations with clinical, translational, and basic cancer scientists in order to bridge cutting-edge computational algorithms to unmet needs in precision oncology.

Keywords: Bioinformatics; Cancer Genomics; Pharmacogenomics; Machine and Deep Learning

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1H1qawr9zjuwzp/bibliography/55248771/public/>

Social: <https://chiu-lab.org/>



Joseph Church, M.D.

churchjt@upmc.edu

Research Focus: Novel therapies for Congenital Diaphragmatic Hernia

Description: Congenital diaphragmatic hernia affects one in 2,500 newborns and results from incomplete development of one or both hemidiaphragms. It is characterized by pulmonary hypertension and hypoplasia. Postnatal intervention includes mechanical ventilation and surgical repair of the diaphragmatic defect; approximately 30% of patients will also require extracorporeal membrane oxygenation (ECMO). Despite advances in postnatal care, mortality remains 20-30%, and morbidity in survivors is high. The focus of our lab, therefore, is to develop novel therapies and interventions to improve survival in CDH.

Keywords: Extracorporeal membrane oxygenation (ECMO); lung development; fetal intervention

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=church+jt&sort=date>



Daniel Clark, DDS, M.S., Ph.D.

daniel.clark@pitt.edu

Research Description: <https://www.dental.pitt.edu/people/daniel-clark-dds-ms-phd>

Keywords: osteoimmunology, aging biology, periodontal disease, bone regeneration, mouse models, macrophage

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/daniel.clark.3/bibliography/public/>



Malamo Countouris, M.D., M.S.

countourisme@upmc.edu

Research Focus: My research focuses on studying pregnancy complications such as hypertensive disorders of pregnancy and the link with cardiovascular disease in later life. My research incorporates a multidisciplinary collaborative approach bridging the fields of cardiology, obstetrics and gynecology, and community health to improve cardiovascular outcomes and prevention among women.

Description: https://profiles.dom.pitt.edu/faculty_info.aspx/Countouris7161

Keywords: cardiac imaging, cohort studies, database development

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1P9t7nhcmqI59/bibliography/public/>

Social: @malamo512



Peter Coyle, Ph.D.

pcc12@pitt.edu

Research Focus: Health Services Rehabilitation Research in Aging Populations with Limitations in Physical Function

Description: <https://www.shrs.pitt.edu/people/peter-coyle>

Keywords: Aging; low back pain; stroke; observational; physical rehabilitation intervention; quasi-experimental

Publications: <https://www-ncbi-nlm-nih.gov.pitt.idm.oclc.org/myncbi/peter.coyle.1/bibliography/public/>



Aaron Devanathan, PharmD, PhD

asd129@pitt.edu

Research Focus: The main research focus of the Devanathan laboratory includes the clinical pharmacology of antiretrovirals and their disposition into cells, body fluids, and tissues. Our goal is to understand how inflammatory processes associated with comorbidities affect their pharmacology. Furthermore, we will examine how modulators of the immune system affect antiretroviral pharmacology due to inflammatory responses. To achieve the long-range goal of our research program to understand this important clinical pharmacology intersection, we utilize novel quantitative analytical techniques, sophisticated multi-omics methods, and pharmacometrics analyses. This multipronged approach will help us holistically understand these area and help vulnerable populations in Pittsburgh and beyond.

Description: <http://www.pharmacy.pitt.edu/directory/profile.php?profile=2594&type=Faculty>

Keywords: HIV; antiretrovirals; inflammation; clinical pharmacology; drugs of abuse; tissue pharmacology; quantitative proteomics; biomarkers; pharmacokinetics and pharmacodynamics; pharmacometrics; drug transporters; drug metabolizing enzymes

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/aaron.devanathan.1/bibliography/public/>

Social: www.linkedin.com/in/aaronsdevanathan



Ikenna Ebuenyi, MBBS, MPH, Ph.D.

ikenna.ebuenyi@pitt.edu

Research Description: <https://www.shrs.pitt.edu/people/ikenna-ebuenyi>

Keywords: Global Mental Health; Disability Inclusion; Psychosocial Rehabilitation; Health System Research; Health Policy; Public health; Global Health; Occupational Health; Action research, participatory research, Mixed methods; HIV research

Publications: <https://scholar.google.com/citations?user=3XaY1cMAAAAJ&hl=en&oi=ao>

Social: @desiyke



Kristen Eckstrand, M.D., Ph.D.

eckstrandkl@upmc.edu

Research Focus: Dr. Eckstrand is an Assistant Professor of Psychiatry at the University of Pittsburgh. Their research focuses on the neuropsychiatric underpinnings of trauma and resilience in adolescents, with an emphasis on minoritized communities and vulnerable populations. Their K award is focused on examining the impact of emotional abuse on neural circuitry in sexual minority youth. Dr. Eckstrand's research has been published in top-tier journals such as JAMA Psychiatry and Biological Psychiatry, and has been recognized by Honorary Membership in the World Psychiatric Association and awards from the American Academy of Child & Adolescent Psychiatry, American Psychiatric Association, and Society for Biological Psychiatry. Dr. Eckstrand has also published four textbooks on the mental and physical health needs of LGBTQ+ communities, including the training of healthcare professionals to provide affirming and responsible care to LGBTQ+ individuals. They are board-certified child & adolescent psychiatrist and internationally recognized for their leadership supporting the health of LGBTQ+ communities. Dr. Eckstrand founded the Vanderbilt Program for LGBTQ Health, the

second LGBTQ-focused program at an academic health center in the country, co-directs the University of Pittsburgh School of Medicine's LGBTQ Health elective, and speaks nationally on the importance of diversity and identity in health. Dr. Eckstrand's commitment to diversity has been recognized through awards from the American Medical Association, American Medical Student Association, the Association of American Medical Colleges, and the Tennessee Medical Association.

Description: <https://www.psychiatry.pitt.edu/about-us/our-people/faculty/kristen-l-eckstrand-md-phd>

Keywords: trauma-related neural systems; fMRI; LGBTQ+ health; adolescent neurodevelopment and resilience; organizational health equity capacity-building

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=eckstrand+k&sort=pubdate>

Social: @EckstrandK



Asim Ejaz, Ph.D.

ejaza@upmc.edu

Description: <https://plasticsurgery.pitt.edu/portfolio-items/asim-ejaz-phd/>

Keywords: Adipose stem isolation, differentiation, radiation fibrosis mouse models, skin perfusion models, chemical wounds, radiations wounds, flow cytometry, bariatric surgery mouse models, high fat diet mouse model,

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=ejaz+asim&sort=date>



Jackie Ellison, Ph.D.

jellison@pitt.edu

Research Description: Jackie is a reproductive health services researcher with interests at the intersections of health care policy, financing, gender, and equity. She primarily uses quasi-experimental methods to evaluate the effects of health care policies on sexual and reproductive health service access, outcomes, and inequities. Another focus of their work is leveraging real-world data to understand the clinical value and iatrogenic harms of invasive gynecologic screenings.

Keywords: Quasi-experimental design; administrative data analyses; claims-based algorithms; policy evaluation; person-centered care; reproductive autonomy

Publications: <https://scholar.google.com/citations?user=5uJE1OsAAAAJ&hl=en>

Social: @JackieEllison



Julie Faieta, Ph.D., MOT, OTR/L

juf52@pitt.edu

Research Focus: I am a rehabilitation science researcher and a licensed clinical occupational therapist. At present, my primary area of research is in the development and evaluation of assistive and pervasive technology-based interventions to address health span and quality of life in neurodegenerative and caregiver populations. With a specific interest in Alzheimer's disease and technology mediated disease management, I am working to develop interventions that can be effectively implemented with those at risk of disease development, and across each stage of the disease progression. During my doctoral studies I completed a minor in

neuroscience to facilitate enhanced understanding of the underlying neural mechanisms and disease pathologies associated with neurodegenerative conditions in order to support my research goals. I have been able to develop a diverse network of collaborators that represent both clinical and engineering field expertise. In addition to my academic pursuits, I have also maintained active involvement in the American Congress of Rehabilitative Medicine's Neurodegenerative Networking Group as the chair of the Alzheimer's Disease Task Force and as the Social Media Officer.

Description: <https://www.shrs.pitt.edu/people/julie-faieta>

Keywords: Assistive Technology; Alzheimer's; Caregivers; Cognitive Impairment; Technology Assessment; Rehabilitation

Publications: <https://scholar.google.com/citations?hl=en&user=HrX7iikAAAAJ>

Social: @julie_faieta (Twitter)



Peng Gao, Ph.D.

peg47@pitt.edu

Research Description: <https://publichealth.pitt.edu/home/directory/peng-gao>

Keywords: Environmental health sciences, environmental chemistry and toxicology, analytical chemistry, and metagenomics.

Publications: <https://scholar.google.com/citations?user=hKvN8hcAAAAJ&hl=en>

Social: @penggaos, <https://penggaolab.github.io/>



Lina Ghaloul Gonzalez, M.D.

lina.gonzalez@chp.edu

Research Description: <https://www.pediatrics.pitt.edu/people/lina-ghaloul-gonzalez-md>

Keywords: Amish and Mennonites, Exome and Genome sequencing, segregation studies, mitochondrial function, mitochondrial disorders, Skin fibroblasts, TANGO2 related disorder, Seahorse XFe96 Extracellular Flux Analyzer to measure oxygen consumption rate (OCR) and ATP rate, ATPlite bioluminescence assay, mitochondrial morphology and dynamics using immunofluorescence of TOMM20, digital droplet PCR and western blotting.

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1BsesVwMmmQ9Fj/bibliography/public/>



Mert Gur, Ph.D.

gurmert@gmail.com

Research Focus: My research focus to solve problems at the interface of medicine, biology and engineering by applying computational modeling and statistical thermodynamics methods.

Description: <http://gurlab.itu.edu.tr/en/homepage>

Keywords: Molecular dynamics simulations, statistical thermodynamics, motor proteins, dynein, microtubules, nanobody, membrane proteins, SARS-CoV-2 Spike protein

Publications: https://scholar.google.com/citations?hl=en&user=ZSCUfX0AAAAJ&view_op=list_works&sortby=pubdate

Social: <https://twitter.com/itugurlab>



Sophia Herbert, PharmD

sophia.herbert@pitt.edu

Research Focus: Community Pharmacy Patient Care Services

Description: Sophia Herbert, PharmD is passionate about supporting community pharmacists by providing them with the evidence and tools they need to transform community pharmacy practice into a sustainable, patient-centered healthcare model. Dr. Herbert focuses on the development, implementation, and evaluation of community pharmacy-based patient care services, including the University-wide vaccination and wellness efforts. Dr. Herbert is a leader in technology development, workflow design, and documentation for community pharmacy practice. As a proponent of the pharmacist eCare Plan technology, Dr. Herbert has worked collaboratively with faculty across courses to implement and utilize eCare Plan software, combining community pharmacy patient care services with medication dispensing— a first for community pharmacy and for PittPharmacy. Dr. Herbert has a growing national reputation for her leadership in community pharmacy practice transformation through the national Community Pharmacy Enhanced Services Network (CPESN® USA). Dr. Herbert also focuses on expanding and evaluating interprofessional education through PharmD coursework and her work at the Pitt Vaccination and Health Connection Hub.

Keywords: implementation science, implementation research, qualitative study design, community engaged scholarship, key informant interviews, rapid qualitative analysis

Publications: <https://orcid.org/0000-0002-3044-4142>

Social: @sophiaherbertrx



Meredith Hughes, J.D., MPH

mlh203@pitt.edu

Research Description: Meredith Hughes, JD, MPH, is a Visiting Assistant Professor in the Graduate School of Public Health and the Health Policy Institute at the University of Pittsburgh. Her previous experience includes working as a consultant at Sellers Dorsey, where she supported the implementation and ongoing operations of Pennsylvania's new mandatory managed LTSS program, Community HealthChoices, and working as a Policy Analyst at the Bipartisan Policy Center (BPC), where she co-authored a series of reports on health care spending growth and cost containment and helped advise the BPC Governors' Council on Medicaid policy issues. Her research focuses on Medicaid managed LTSS, home and community based services (HCBS) waiver authorities, aging and disability, family caregivers, and long-term care.

Keywords: policy scan, regulatory and legislative review

Publications: <https://orcid.org/0000-0003-0040-5641>

Social: <https://www.linkedin.com/in/meredith-hughes-4423a81b/>



Karen Jakubowski, M.S., Ph.D.

jakubowskik@upmc.edu

Research Focus: Interpersonal violence, sleep, and cardiovascular disease

Description: My program of research is focused on identifying modifiable risk factors linking trauma and cardiovascular disease (CVD) across the lifespan, with an emphasis on women's

cardiovascular health and sleep. I am Principal Investigator of a five-year Career Development Award from NIH/NHLBI (1K23HL159293) which aims to investigate the relationship between intimate partner violence and carotid atherosclerosis in midlife women and explore whether poor sleep is an underlying mechanism.

Keywords: Trauma; violence; cardiovascular disease; sleep; actigraphy; ecological momentary assessment; community-engaged research; health disparities; women's health; mixed methods research

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1-m2TCmGRyyIKm/bibliography/public/>

Social: @DrKarenJak



Anna Jasinska, M.Sc., Ph.D.

AJJ59@pitt.edu

Research Focus: Systems biology of infectious diseases, aging and stress

Description: My research focuses on functional genomics and systems biology studies of phenotypic traits related to common chronic illnesses, affecting brain, neurobehavior, and metabolism, and diseases caused by stress and infections with viral pathogens (SIV/HIV). Many of them manifest in chronic inflammation and accelerated aging. I am developing non-human primate (NHP) models for translational studies of mechanisms underlying such aging and inflammation-related phenotypes. I implement a combination of genomic, transcriptomic and epigenetic approaches to unravel underlying mechanisms and identify targets for therapy.

Keywords: neurobehavior, stress responses, natural SIV hosts, aging, epigenetic clock, DNA methylation, transcriptomics, non-human primate models, AGM, vervet monkey

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1dOyd7OfXjAAw/bibliography/public/>



Max Joffe, Ph.D.

joffeme@upmc.edu

Research Focus: GPCR modulation of prefrontal cortex circuits

Description: The laboratory's goal is to identify, scrutinize, and validate novel druggable targets for the treatment of alcohol use disorders (AUDs), mood disorders, and other diseases. While the advent of optogenetics and sophisticated gene editing technology provides exciting opportunities for the development of next-generation psychiatric treatments, pharmacological approaches retain theoretical and practical advantages for the rapid delivery of new therapies. Our laboratory therefore aims to leverage contemporary neuroscience techniques to investigate how G protein-coupled receptors (GPCRs) regulate discrete prefrontal cortex circuits.

Researchers in our laboratory ask: (1) How do GPCRs regulate neuronal activity, synaptic plasticity, and animal behavior? (2) How do disease-relevant experiences usurp, impair, or modify synaptic plasticity mechanisms? (3) How can we leverage this information to identify new psychiatric treatments? Our research approaches these questions from several angles.

Graduate students in the laboratory will have opportunities to train extensively in whole-cell patch-clamp electrophysiology, optogenetics-assisted circuit mapping, in vivo biosensor-based imaging, and rodent behavioral techniques.

Keywords: whole-cell patch clamp electrophysiology, transgenic mice, alcohol models, stress

models, rodent behavior, prefrontal cortex, GPCRs, metabotropic glutamate receptors

Publications: <https://scholar.google.com/citations?user=4PdvKg0AAAAJ&hl=en>

Social: @joffeme (Twitter)



Paul Joudrey, M.D., MPH

pjoudrey@pitt.edu

Research Focus: Expanding access to methadone for opioid use disorder across rural and urban communities

Description: <https://www.gim-crhc.pitt.edu/people/paul-j-joudrey-md-mph>

Keywords: Methadone; access; GIS; opioid use disorder; medications for opioid use disorder; rural; spatial epidemiology; alcohol use disorder; implementation science

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/paul.joudrey.2/bibliography/public/>

Social: Twitter - @PaulJoudreyMD Mastodon - @PaulJoudrey@mastadone.sdf.org



Velvet Journigan, Ph.D.

vea22@pitt.edu

Research Focus: Drug discovery for TRP channels

Description: <https://journiganlab.squarespace.com/>

Keywords: synthetic medicinal chemistry, drug discovery, organic synthesis, molecular docking, computational, TRP channels

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1ZaNtAqxxqk5-/bibliography/public/>

Social: @JourniganVelvet



Kyle Ketchesin, Ph.D.

ketchesinkd@upmc.edu

Research Focus: Role of circadian rhythms in mood disorders

Description: <https://www.psychiatry.pitt.edu/about-us/our-people/faculty/kyle-d-ketchesin-phd>

Keywords: Circadian rhythms; Mood disorders; Schizophrenia; Epigenetics; RNA-Seq; Transcriptomics; Human Postmortem

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=ketchesin+kd&sort=date>

Social: @KyleKetchesin



Jihui Lee, M.S., Ph.D.

leej58@upmc.edu

Research Focus: My main research interests revolve around analyzing data that are multi-modal, time-dependent, and high-dimensional. I am particularly interested in exploring densely observed data and modeling temporally heterogeneous pattern using functional data analysis. I am also interested in analyzing relational data (e.g. brain connectivity) and modeling how these connections are evolving over time.

Description: <https://www.psychiatry.pitt.edu/about-us/our-people/faculty/jihui-lee-phd>

Keywords: ecological momentary assessment; smartphone and wearable devices

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/jihui.lee.1/bibliography/public/>



Matthew Lehrer, M.S., Ph.D.

lehrerhm@upmc.edu

Research Focus: I study the impact of long-term sleep and circadian rhythm disruption on cognitive and biological aging. Current areas of focus include night shift work, Alzheimer's disease, and mitochondrial function.

Description: <https://www.psychiatry.pitt.edu/about-us/our-people/faculty/h-matthew-lehrer-phd>

Keywords: Sleep studies; sleep diaries; actigraphy; polysomnography; circadian rhythm assessment

Publications: <https://scholar.google.com/citations?user=WfdW-gkAAAAJ&hl=en&oi=ao>

Social: @hmlehrer



Vladimir Liarski, M.D., M.Sc.

vliarski@pitt.edu

Research Focus: https://profiles.dom.pitt.edu/faculty_info.aspx/Liarski7351

Description: <https://orcid.org/my-orcid?orcid=0000-0001-7533-0491>

Keywords: idiopathic inflammatory myopathy, myositis, inclusion body myositis, dermatomyositis, polymyositis, antisynthetase syndrome, lupus nephritis, tubulointerstitial inflammation, cell distance mapping

Publications: https://www.ncbi.nlm.nih.gov/sites/myncbi/16lrxwyAR_M56/bibliography/50017695/public/?sort=date&direction=descending



Nicoletta Machin, D.O.

machinn2@upmc.edu

Research Description: Clinical research in inherited bleeding disorders (also more broadly benign hematology)

Keywords: von willebrand disease, hemophilia

Publications: <https://scholar.google.com/citations?hl=en&user=sQyKY90AAAAJ>

Social: @MachinNicoletta



Michelle Manni, Ph.D.

mlm45@pitt.edu

Research Focus: Immune mediators of severe asthma

Description: The goal of Manni's current research is to better understand aberrant immune responses in severe asthma, a subset of disease that is poorly responsive to standard therapies and represents a significant source of morbidity and mortality in the western world. While substantial strides have been made in understanding the type 2-high subset of severe asthmatics, a significant proportion of patients still fail to achieve asthma control and there is an unmet need to identify and characterize non-type 2 immune mechanisms of disease. Manni's research has suggested that T helper 17 (Th17) cells may be critical for pathogenesis of severe asthma, promoting steroid resistant disease characterized by the accumulation of neutrophils in the lungs. In addition to defining severe phenotypes in asthmatics, her work indicates that

distinct molecular pathways may regulate each characteristic asthma endpoint (inflammation, mucus metaplasia, airway hyperresponsiveness). In addition to understanding type 2 low, and non-type 2 mechanisms of severe asthma, she is interested in the disconnect between the degree of inflammation and airway hyperresponsiveness in the asthmatic lung and also defining inflammation-independent drivers of airway hyperresponsiveness. Overall, Manni's research broadly focuses on T cell immunity, epithelial cell biology, and lung physiology in severe asthma and acute exacerbations. Understanding the pathophysiological mechanisms underlying disease in the less studied clinical subsets of severe asthma is of great interest to her group. Her long-term goal is to improve our scientific knowledge on the different underlying causes of severe asthma to aid in the development and design of more targeted and effective asthma therapies.

Keywords: Type 17 immune responses in severe asthma; Th17 cells and Type 17 cytokines; Pulmonary Immunity; Airway hyperresponsiveness and Inflammation; Obesity and asthma; Asthma exacerbations; Airway remodeling and repair

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/michelle.manni.1/bibliography/public/>

Social: @DrMichelleManni



Megan Marron, Ph.D.

mmm133@pitt.edu

Research Description: Dr. Marron is an epidemiologist in the field of aging, physical disability, and frailty with a focus on understanding the metabolic etiologies of aging and aging-related disorders. In addition to epidemiology, she has expertise in biostatistics and the biology of aging. Her research involves coupling -omics technologies with epidemiologic and biostatistics methods to identify novel determinants of healthy aging, free from disease and physical disability among population-based cohorts of older adults. She is also interested in investigating racial differences in aging-related health outcomes to determine modifiable factors that explain health disparities and can be targeted to promote health equity with aging.

Keywords: aging research; epidemiology; metabolomics

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1j1Zl9oL55t5w/bibliography/public/>



Julia Matzenbacher dos Santos, Ph.D.

jum150@pitt.edu

Research Focus: Dr. Santos has a background in physiology and molecular biology and a specific focus on physical exercise interventions for individuals with metabolic diseases such as metabolic syndrome and diabetes. Her research interest lies in acute and regular exercise's role in preventing diseases, focusing on epigenetic modification and mitochondria dysfunction. In addition, Dr. Santos studies the effect of endocrine disrupting compounds, such as environmental estrogen, in the development of insulin resistance. Dr. Santos received her both BS/BA in Exercise Science and Physical Education from Methodist University (Porto Alegre, Brazil) and her Ph.D. from the University of Porto/ Sports Faculty (Porto, Portugal). Dr. Lee also was a post-doctoral fellow at Wayne State University/School of Medicine (Detroit, MI), trained in anatomy and cell biology, focusing on Diabetic Retinopathy. At the University of Pittsburgh, Dr. Santos teaches Anatomy and Physiology to students in the School of Nursing. Dr. Santos has been serving as a member of national/international committees such as the Research

Committee of the Mid-Atlantic Regional Chapter of the American College of Sports Medicine (MARC ACSM). In addition, as principal investigator, Dr. Santos has received research grants from organizations such as NASA West Virginia Space Grant Consortium, Brazilian National Council for Science and Eye and Vision Program, and Midwest Eye Bank.

Description: <https://www.nursing.pitt.edu/person/ant-1>

Keywords: Insulin resistance, exercise, diabetes, environmental estrogen, mitochondria

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/julia%20m.santos.1/bibliography/public/>



Brendan McNeish, M.D.

mcneishbl@upmc.edu

Research Focus: how neuromuscular and cognitive capacities change with cancer and treatment and how they are associated with changes in balance, gait, falls, and quality of life.

Description: <https://www.rehabmedicine.pitt.edu/people/ant-146>

Keywords: clinical research

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=mcneish%2C+b&sort=date>

Social: @BMcNeishMD



Christina Megli, M.D., Ph.D.

meglicj@mwri.magee.edu

Research Focus: Innate immunity during pregnancy

Description: Maternal infections are the second leading cause of maternal morbidity and severe maternal mortality, and both the rate and severity are underestimated with contemporary surveillance systems. Maternal infectious morbidity has significant sequelae to both the maternal and fetal hosts with short- and long-lasting consequences. These include maternal hemorrhage, maternal and neonatal sepsis, stillbirth and prematurity. Moreover, there remains fundamental knowledge gaps in the understanding of infectious and inflammatory pathogenesis in human pregnancy. My clinical (Reproductive Infectious Diseases and Maternal Fetal Medicine) and graduate training on host-pathogen interactions has given me the research training to both identify key knowledge gaps that contribute to maternal morbidity and to design clinically relevant, hypothesis driven experiments to address the underlying pathophysiology. I have undertaken a translational, multifactorial approach to understanding of innate immune regulation and microbial pathogenesis during pregnancy. Specifically, I am generating clinical data repositories and employing rigorous, creative techniques at the bench to query the mechanisms of host-pathogen interactions during pregnancy. My work is focused in the following areas: 1. Determining the function and pathogen response of placental macrophages during pregnancy 2. Defining virulence mechanisms and innate immune responses to important obstetric bacterial pathogens (Group B Streptococcus, Listeria monocytogenes and E. coli) 3. Defining clinical characteristics that predict severe maternal and neonatal mortality secondary to infections.

Keywords: macrophage, primary immune cells, placenta, pregnancy, infection, GBS, reproductive infectious diseases

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=megli%2C+c>

Social: @ChristinaMegli



Antony MichealRaj, Ph.D.

micheala@pitt.edu

Research Focus: Brain Tumor Metabolism and Functional Cancer Genomics Laboratory

Description: Laboratory of brain tumor metabolism and functional cancer genomics laboratory is established and directed by Dr. Antony MichealRaj since September 2021 at the Department of Neurological Surgery, University of Pittsburgh School of Medicine. We are focused on exploring the underlying disease mechanism of pediatric brain tumors, with a specific interest in pediatric cancer stem cells- brain tumor metabolism and epigenetics and post transcriptional and translational regulation. Our team is investigating following major themes in pediatric ependymomas and gliomas; 1) Functional cancer genomics using in vivo and In vitro CRISPR screens 2) Metabolic dependencies and epigenetic regulation in primary and recurrent tumors 3) Unraveling the crosstalk between cell signaling and epigenetics 4) mRNA regulation and translational control Our team using patient-derived disease models (Cell lines, Xenografts) and transgenic mouse models and cutting edge next-generation genomic technologies (Bulk and single cell sequencing, ChIP seq, long read sequencing), metabolomics (total and targeted), genetic engineering tools (Genome-wide and focused CRISPR screen) to advance our existing knowledge on pediatric brain tumors and probe novel therapeutic options.

Keywords: Pediatric brain tumors, Metabolism, Epigenetics, mRNA regulation/Epitranscriptomics, Functional genomics

Publications:[https://pubmed.ncbi.nlm.nih.gov/?term=\(\(\(Michealraj%20KA%5BAuthor%5D\)%20OR%20\(Michaelraj%20KA%5BAuthor%5D\)\)%20OR%20\(Michealraj%20C%20Antony%5BAuthor%5D\)\)%20OR%20\(MICHEAL%20A%5BAuthor%5D\)&sort=date](https://pubmed.ncbi.nlm.nih.gov/?term=(((Michealraj%20KA%5BAuthor%5D)%20OR%20(Michaelraj%20KA%5BAuthor%5D))%20OR%20(Michealraj%20C%20Antony%5BAuthor%5D))%20OR%20(MICHEAL%20A%5BAuthor%5D)&sort=date)

Social: @michealrajlab



Abby Overacre, Ph.D.

overacre@pitt.edu

Research Focus: harnessing immunity in cancer through innovative modulation of the microbiota

Description: www.overacrelab.com

Keywords: cancer immunology, immunotherapy, microbiome, T cells, regulatory T cells, mouse models

Publications: <https://orcid.org/0000-0003-4027-3487>

Social: @OveracreLab



Tae Woo (Ted) Park, M.D., M.Sc.

parkt4@upmc.edu

Research Focus: Benzodiazepines in people who use opioids and treatment of co-occurring mental and substance use disorder

Description: My research expertise is focused on two areas: 1) overdose in patients using opioids, particularly involving concurrent benzodiazepine use and 2) addiction treatment in general medical settings. These areas of interest originated from my clinical experiences as an addiction psychiatrist working in specialty and primary care settings with a focus on treating co-

occurring opioid use and mental disorders. I have expertise in observational research methods, including utilization of cohort and case-cohort study designs.

Keywords: Cohort/case-cohort study designs using administrative databases;
pharmacoepidemiology

Publications: <http://www.ncbi.nlm.nih.gov/sites/myncbi/1NUibbuqInpAa/bibliography/41433606/public/?sort=date&direction=ascending>



Shaohua Pi, Ph.D.

shaohua@pitt.edu

Research Focus: Development of Optical Coherence Tomography (OCT) for Applications in Ophthalmology

Description: <http://ophthalmology.pitt.edu/people/shaohua-pi-phd>

Keywords: Optical Coherence Tomography; Ophthalmic Imaging; Angiography, Oxygen Saturation; Retina; Glaucoma; Diabetic Retinopathy

Publications: <https://scholar.google.com/citations?user=NvBsQN4AAAAJ&hl=en>

Social: Twitter @ShaohuaPi



Aimee Pickering, M.D., M.S.

pickeringan@upmc.edu

Research Focus: My research focuses on characterizing and reducing low-value care and subsequent care cascades and deprescribing low-value medications in older adults. I am particularly interested in applying implementation science principles to develop strategies to support deprescribing and in the de-implementation of other low-value practices.

Description: <https://www.gim-crhc.pitt.edu/people/aimee-pickering-md-ms>

Keywords: Medication deprescribing; low-value care cascades; dual-healthcare system use; qualitative methods; administrative claims-based studies

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/aimee.pickering.1/bibliography/public/>



Federico Pineda, Ph.D.

fdp9@pitt.edu

Research Focus: Breast cancer detection and diagnosis with MRI

Description: Developing and validating novel techniques for the acquisition, reconstruction, and analysis of breast magnetic resonance images. The goals of my research are to provide early detection of breast cancer, better characterization of breast tumors, and methods that predict patients' response to therapies.

Keywords: Imaging trials; magnetic resonance imaging; perfusion imaging; image analysis; quantitative imaging

Publications: <https://orcid.org/0000-0002-9073-4379>



Elvira Pirondini, Ph.D.

elvirap@pitt.edu

Research Focus: Neural Mechanisms of Post-stroke Recovery and New Therapies

Description: <https://www.rehabmedicine.pitt.edu/people/ant-104>

Keywords: Stroke, motor control, speech, deep brain stimulation, neuromodulation, proprioception, robotics, functional magnetic resonance imaging (fMRI), electroencephalography (EEG), biomarkers

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=elvira+pirondini>

Social: @ElviraPirondini



Deirdre Quinn, M.Sc., Ph.D.

deirdre.quinn@va.gov

Research Focus: Improving access and equity in Veterans' sexual and reproductive health

Description: Dr. Quinn's research broadly explores individual-, family-, and community-level influences on sexual and reproductive health. Since joining the VA, Dr. Quinn has focused her research lens on advancing the quality and equity of reproductive health and healthcare for women Veterans, with the goals of (1) identifying modifiable factors that contribute to disparities in care and outcomes and (2) designing policies, programs, and prevention strategies that promote quality and equity in sexual and reproductive health and healthcare and support reproductive autonomy across the life course. Currently Dr. Quinn is a Core Investigator in the Center for Health Equity Research and Promotion (CHERP) at VA Pittsburgh. She is studying links between prepregnancy health and social risks and adverse maternal outcomes among Veterans. Her other research interests include contraceptive access and equity and abortion rights.

Keywords: implementation science, family science, patient-centered care, contraceptive equity

Publications: <https://www.ncbi.nlm.nih.gov/sites/myncbi/1hkYRaeb7b15b/bibliography/57761194/public/?sort=date&direction=ascending>

Social: @MsContraception



Franziska Rosser, M.D., MPH

franziska.rosser2@chp.edu

Research Focus: Chronic outdoor air pollution and childhood asthma

Description: <https://www.pediatrics.pitt.edu/people/franziska-j-rosser-md-mph>

Keywords: childhood asthma epidemiology; outdoor air pollution

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=rosser+f&sort=pubdate&size=200>



Anum Saeed, M.D.

saeeda2@upmc.edu

Research Focus: Mechanisms of Association between Cardiovascular Disease and Alzheimer's Disease

Description: https://profiles.dom.pitt.edu/faculty_info.aspx/Saeed7359

Keywords: lipidomics, lipidology, atherosclerosis, cardiovascular diseases, cardiovascular disease prevention

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=anum+saeed&sort=date>

Social: @AnumSaeedMD



Amrita Sahu, Ph.D.

ams519@pitt.edu

Research Focus: Dr. Amrita Sahu is an Assistant Professor in the Department of Physical Medicine and Rehabilitation at the University of Pittsburgh School of Medicine. Dr. Sahu is also the Scientific Program Coordinator at the Alliance for Regenerative Rehabilitation Research and Training. Her current research focuses on developing targeted rehabilitation strategies for enhancing age-related deficits in skeletal muscle and cognitive functional capacity. Research Interests: aging, skeletal muscle physiology, cognition, skeletal muscle-brain axis, extracellular vesicles, tissue engineering, regenerative medicine, quantum biology, and rehabilitation sciences.

Description: <https://www.rehabmedicine.pitt.edu/people/ant-119>

Keywords: Aging, Regenerative Rehabilitation, Skeletal muscle physiology, Extracellular vesicles, Stem cells, Mitochondria biology

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=sahu%20amrita>



Didem Saygin, M.D.

saygind@pitt.edu

Research Focus: Clinical research in myositis and myositis associated complications

Description: In general terms, Dr. Saygin's research focuses on improving the quality of life and longevity of individuals with inflammatory myopathies. Dr. Saygin has validated numerous myositis outcome measures including objective tools and patient-reported outcome measures in order to optimize the assessment of muscle strength and other disease related symptoms such as fatigue, pain, and physical function in both clinical practice and therapeutic trials. She has a particular interest in clinical trials, relationship between cancer and myositis, myositis associated interstitial lung disease, and immune checkpoint inhibitor induced myositis.

Keywords: outcome measure, measurement science, psychometrics research

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=saygin+didem&page=3&sort=date>

Social: My Twitter handle is @didemsayginmd



Daniella Schwartz, M.D.

Daniella.Schwartz@pitt.edu

Research Focus: The regulation and roles of allergy-associated cytokines in rheumatic diseases

Description: <https://schwartzlab.pitt.edu>

Keywords: T helper cells, epigenetics, flow cytometry, sequencing, monogenic disorders of immune dysregulation

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/16qUdnxjfsmAh/bibliography/public/>

Social: @SchwartzLab9



Kelsey Schweiberger, M.D.

schweibergerka@upmc.edu

Research Focus: Dr. Kelsey Schweiberger

Description: Dr. Schweiberger is a general pediatrician, health services researcher and clinical informatician. Her research program aims to integrate health services research, quality improvement and clinical informatics to improve child health outcomes and health communication through equitable and appropriate application of technology in pediatric healthcare.

Keywords: Pediatrics; Health Services Research; Telemedicine; Clinical Informatics

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/16GcctWsMasga8/bibliography/public/>

Social: @K_Schweiberger



Imam Shaik, Ph.D.

ih4@pitt.edu

Keywords: Drug Metabolism, Pharmacokinetics, Transplantation, Maternal-Fetal Pharmacology

Publications: <https://pubmed.ncbi.nlm.nih.gov/?term=shaik+IH&sort=date&size=100>



Valerie Shuman, DPT

valerie.shuman@pitt.edu

Research Focus: Optimizing physical therapy mobility interventions for older adults

Description: <https://www.shrs.pitt.edu/people/valerie-shuman>

Keywords: Older adults, mobility limitations, complex intervention mechanisms of action

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1JS7RvcobAj5C/bibliography/public/>



Alfredo Sklar, M.D., Ph.D.

sklaral@upmc.edu

Research Focus: Visual processing deficits in early psychosis

Description: <https://www.psychiatry.pitt.edu/alfredo-l-sklar-md-phd>

Keywords: First episode psychosis; visual processing; selective attention; neurophysiology; magnetoencephalography

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1xeawd92kta5XO/bibliography/public/>



Wayne Stallaert, Ph.D.

stallaert@pitt.edu

Research Focus: Cell cycle plasticity

Description: <http://stallaertlab.com>

Keywords: cell cycle, fluorescence microscopy, single-cell biology, cell signaling, time-lapse imaging, biosensors, cell fate

Publications: <https://scholar.google.com/citations?user=uRUVDVUAAAAJ&hl=en>

Social: @stallaertlab



Stella Sun, Ph.D.

stellasun@pitt.edu

Research Focus: Elucidating the structure and function of an extraordinary cellular machine in human parasites

Description: <https://sunlab.structbio.pitt.edu/>

Keywords: Trypanosoma brucei, Plasmodium falciparum, cryogenic electron microscopy, cryogenic electron tomography, cryogenic focus ion beam and scanning electron microscopy, molecular genetics, fluorescence microscopy, biochemistry

Publications: <https://sunlab.structbio.pitt.edu/index.php/publications-2/>

Social: Stella (Ying) Sun @StellaYingSun1



Ahmad P. Tafti, Ph.D.

tafti.ahmad@pitt.edu

Research Description: <https://aptafti.github.io>

Keywords: AI-powered models, deep learning, deep learning medical image analysis, health informatics, computational health informatics, computer vision, health data science, digital health sciences, computational orthopedics

Publications: <https://scholar.google.com/citations?user=NxeXUqwAAAAJ&hl=en>

Social: <https://www.linkedin.com/in/ahmadtafti/>



Jay Tan, Ph.D.

jay.tan@pitt.edu

Research Description: We study core principles of cell biology in aging, with particular interest in basic molecular mechanisms underlying cellular homeostasis and stress response. Organelle stress and damages are common risk factors in aging and diseases. A major goal of our lab is elucidating the molecular mechanisms underlying the sensing, repairing, and clearance of damaged organelles in mammalian cells. We search for essential, unifying principles behind complex stress responses through unbiased approaches, and dissect underlying mechanisms with multidisciplinary methods including molecular biology, biochemistry, cell biology, and genetics. Current research topics include lysosomal quality control in aging and neurodegeneration, inter-organelle communications in cell homeostasis, and lysosomal stress in innate immunity and age-related inflammation. For more info: jaytanlab.org

Keywords: Aging, Lysosome, lysosomal quality control, protein trafficking, lipid transport, cellular stress response, phosphoinositide, CRISPR, cell imaging

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1zOHcXAAwiDk-/bibliography/public/>

Social: @JayXiaoJunTan, jaytanlab.org, [linkedin.com/in/xiaojuntan/](https://www.linkedin.com/in/xiaojuntan/)



Risa Wong, M.D.

wongr1@upmc.edu

Research Description: Dr. Wong performs outcomes and symptom management research for patients with genitourinary malignancies. She is particularly interested in depression and distress in men with prostate cancer, and the impact of androgen deprivation therapy on quality of life.

Keywords: outcomes; symptom management; health care delivery; patient-reported outcomes; patient-centered research

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/risa.wong.1/bibliography/public/>

Social: @RisaWongMD



Julia Xu, M.D., M.Sc.

xuj2@upmc.edu

Research Focus: My research is focused on identifying optimal pharmacological approaches to and biomarkers for treating anemia in sickle cell disease.

Description: <https://vmi.pitt.edu/people/faculty/xu-julia/>

Keywords: early-phase clinical trials, red cell rheology and whole blood viscosity, cross-sectional, retrospective, and longitudinal designs

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1T1gadyhsk9YPQ/bibliography/public/>

Social: @JuliaXuMD



Ye Ye, M.D., M.P.H., Ph.D.

yey5@pitt.edu

Research Description: <https://www.dbmi.pitt.edu/directory/name/ye-ye/>

Keywords: infectious disease, surveillance, public health, disease detection, predictive modeling, clinical decision support, transfer learning

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1FSOeA7Qk37gAD/bibliography/public/>

Social: @yeye_yeyewy



Lianghui Zhang, M.D., Ph.D.

lh Zhang@pitt.edu

Research Description: My laboratory studies lung vascular biology and immuno-pathogenesis of acute lung injury. Our research focuses on the mechanism of respiratory viral-induced lung vascular injury and signals between endothelial cells and immune cells during the innate and adaptive immune response. The SARS-CoV-2 and H1N1-induced acute lung injury models are two major animal models used in the laboratory. We are also interested in lung vascular regeneration and mechanisms of transcriptional regulation in the vasculature. By understanding the mechanisms which regulate the balance between inflammatory injury and regeneration in viral acute lung injury, we will be able to develop new therapies that minimize inflammatory injury, maximize tissue repair and reduce patient mortality.

Keywords: Viral lung Injury, vascular biology, and innate & adaptive immunity.

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/1d3keqahzC15z/bibliography/public/>

Faculty Advisors



Arjumand Ghazi, Ph.D.

Arjumand.Ghazi@chp.edu

Research Description: <http://www.chp.edu/CHP/ghazilab>

Keywords: Aging, Geroscience, C. elegans, Immunity, Metabolism, Reproduction, Germline, Lifespan, Healthspan, Reproductive Aging, Proteostasis

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/arjumand.ghazi.2/bibliography/public/>



Oliver Lindhiem, Ph.D.

lindhiemoj@upmc.edu

Research Focus: <https://www.psychiatry.pitt.edu/about-us/meet-our-faculty-staff/faculty/oliver-j-lindhiem-phd>

Description: <https://www.pediatrics.pitt.edu/people/oliver-lindhiem-phd>

Keywords: clinical psychology; clinical trials; early intervention; evidence-based assessment; parenting; attachment; foster care; mHealth; app development; methodology; statistics

Publications: <https://scholar.google.com/citations?user=Girm-eEAAAJ&hl=en>

Social: @lindhiem



Jared Magnani, M.D., M.S.c.

magnanij@pitt.edu

Research Focus: The Magnani Lab focuses on social determinants of health and cardiovascular disease and outcomes. There is tremendous evidence that social factors significantly influence health care access and outcomes. Identifying social determinants of health can provide avenues for community-based interventions and insight regarding the etiologies for disparities. To this end, our lab's principal research agenda consists in (1) identification of the intersection of social determinants (household income and composition; educational attainment; health literacy) with health-related risk factors and outcomes; and (2) development of strategic interventions to reduce or address cardiovascular risk in disadvantaged individuals. We have two on-going clinical trials which provide patient-centered interventions to patients with chronic cardiovascular disease, specifically atrial fibrillation. Our projects enroll rural and metropolitan individuals who face the multiple disadvantages of geographic isolation and limited social resources. Our team has further continued extensive health services research using administrative data. Dr. Magnani maintains active involvement in the American Heart Association (AHA), having chaired the writing group on health literacy and cardiovascular disease and serving as member of the EPI Statistics Committee and the Social Determinants Committee.

Description: https://profiles.dom.pitt.edu/faculty_info.aspx/Magnani6662

Keywords: health services research; patient-centered care; adherence; social determinants; health literacy

Publications: <https://www.ncbi.nlm.nih.gov/myncbi/jared.magnani.3/bibliography/public/>

Social: @jared_w_magnani



Arohan Subramanya, M.D.

ars129@pitt.edu

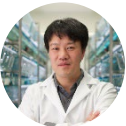
Research Focus: Regulation of Potassium, Cell Volume, and Blood Pressure Homeostasis

Description: My research program is devoted to understanding how the renal tubule controls electrolyte homeostasis. We have discovered novel molecular mechanisms that allow the distal nephron to coordinate blood pressure, volume, and potassium balance. To test our hypotheses, we employ a molecule-to-organism approach that integrates in vitro observations in the test tube and in cell culture with whole animal studies in genetically modified mice. We readily embrace the rapid pace of technological advances that accompany modern science, and rationally apply breakthroughs in gene editing, microscopy, and proteomics to close critical gaps in our understanding of renal epithelial physiology, both in health and in human disease.

Keywords: Molecular biology; Confocal microscopy; Live cell imaging; Gene editing; Mouse models; Metabolic cage studies; Proteomics; Epithelial transport

Publications: <http://www.ncbi.nlm.nih.gov/sites/myncbi/arohan.subramanya.1/bibliography/46091910/public/?sort=date&direction=ascending>

Social: www.subramanyalab.org ; @arohan_s



Michael Tsang, Ph.D.

tsang@pitt.edu

Research Focus: Cellular signaling in heart development and regeneration

Description: <https://www.devbio.pitt.edu/people/michael-tsang-phd>

Keywords: Zebrafish; heart development; heart regeneration; genome editing; cell biology; RNAseq; Signaling; Cardiomyocyte

Publications: <https://pubmed.ncbi.nlm.nih.gov/collections/61907157/?sort=pubdate>



Judith Yanowitz, Ph.D.

yanowitzjl@mwri.magee.edu

Research Focus: The work in my laboratory focuses on mechanisms of genome integrity in the germ line, including meiosis crossover formation, double-strand break repair pathway choice, telomere maintenance, and replicative repair. Meiotic crossover formation and DNA damage repair are intimately linked both mechanistically and in the process of germ cell development. Defects in both processes can result in miscarriage and birth defects, loss of ovarian reserves, and cancer. Our work is directed in revealing conserved mechanisms that maintain genome integrity with the hope that it will inform our understanding of the dysfunction that leads to cancer, aging, and infertility.

Description: www.yanoworm.org

Keywords: C. elegans; meiosis; DNA repair; germ cells; oocyte development; etiology of infertility; crossover recombination; ovarian aging; genetics

Publications: <http://www.ncbi.nlm.nih.gov/sites/myncbi/judith.yanowitz.1/bibliography/47568648/public/?sort=date&direction=ascending>.