

Faculty Research SYNERGY Event

Tuesday, December 13, 2022 6:00—9:00 PM Audubon Tea Room



During tonight's 13th Annual Faculty Research Synergy event, you are encouraged to engage and discover shared or synergistic research interests and explore concepts. Throughout the evening, you are strongly encouraged to network and engage in discussion.

This "faculty research resource book" is a compilation of faculty research interests and expertise. Please feel free to use it for notes, contact information, etc.

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Asim Abdel-Mageed Solange Abdulnour-Nakhoul Julie Albert **Eckhard Alt** Muralidharan Anbalagan Amanda Anderson Hans C. Andersson Tiong Gim Aw Pyone Aye Courtney Baker Kate Baker Pedro Barata Henry Bart, Jr. Vecihi Batuman Carolyn Bayer Victoria Belancio James Bennett Rhea Bhargava Charles Billings Jacob Bitoun Greaory Bix Diane Blake Ron Blanton David E. Blask Rudolf "Skip" Bohm Christine Bojanowski Patrick Bordnick Stephen Braun Angela Breckenridge Heddwen Brooks

J. Quincy Brown Joseph Bull Nathalie Busschaert Matthew F Burow David Busiia John Carlson Jorge Castorena-Gonzalez David Chae Partha Chandra Jing Chen YiPing Chen Doug Chrisey Ron Clisham Bridgette Collins-Burow Paul Colombo **Ricardo Cortez** Lorelei Cropley David Crosslin Malwina Czarny-Ratajczak Jill Daniel Srikanta Dash Prasun Datta Susan Davies **Benjamin Deen** Prescott Deininger Patrice Delafontaine Hong-Wen Deng Wu-Min Dena Joshua Denson Andrei Derbenev

Georgina Dobek Chancellor Donald Yan Dong Arnaud Drouin Stacv Drurv Juan Duchesne Eric Dumonteil Laurie R Farls Melanie Fhrlich Samir El-Dahr Elizabeth Engler-Chiurazzi Youssef Frrami Matthew Escarra Jonathan Fadok Jia Fan **Emily Farrer** Lisa Fauci **Regardt Ferreira** Kathleen Ferris Paul Fidel Mark J Fink **Tracy Fischer** Vivian Fonseca Robin Forman Kimberly Foster Hannah Frank Lucy C. Freytag Paul Friedlander Dahlene Fusco Joseph Fuselier

Anastasia Gage Robert Galagan Maria Galazo Cecilia Gambala Donald Gaver Ryan Gelfand Bruce C. Gibb Loren Gragert Scott Grayson Chrissy Guidry Alex Gunderson Jeanette Gustat Lee Hamm Jeff Han Cynthia Hanemann Tonya Hansel **Emily Harville** Susan Hassig Gary Haynes Hua He Jiang He Fenglei He Charles Hemenway Robert Hendel Katie Hering-Smith Yusuke Higashi David Hinkle Michael Hoerger Clarissa Hoff Kerstin Honer zu Bentrup

Robert Hoover Tony Hu Chiung-Kuei Huang Hai Huang Mac Hyman M. Matias Iberico Suttira Intapad Saifudeen Ismael Joe Iwanaga Reza Izadpanah Colin Jackson James Jackson Neal Jackson Olan Jackson-Weaver Shanker Japa Janarthanan Jayawickramajah S. Michal Jazwinski Hoonbae Jeon Jun-Yuan Ji Vijay T. John Colleen Johnson **Fmad Kandil** Jordan Karlitz Jordan Karubian Peter Kastl Prasad Katakam Amitinder Kaur Tanika Kellv **Bilon Khambu** Damir Khismatullin

Irang Kim Patty Kissinger Myra A. Kleinpeter Ross Klingsberg Jay Kolls L. Spencer Krane "Tonette" Krousel-Wood Michelle Lacey Samuel J. Landry Joseph Lasky Thomas LaVeist Alvssa Lederer Sean B. Lee Jean-Pyo Lee Sylvia Ley Changwei Li Chenzhong Li Shitao Li Xiao Li 7hen I in Sarah Lindsev Yao-Zhong Liu Ning Liu Hong Liu Hongbing Liu Xiaowen "Kevin" Liu Hualu Alfred Luk Arthur J. Lustia Heather Machado

Andrew MacLean Dewan Syed Abdul Majid Nicholas Maness Jennifer Manuzak Demetrius Maraganore Julie Markant Preston A. Marx Franck Mauvais-Jarvis Janet McCombs Roberta McDuffie Patrick McGrew Catherine McKinley James B. McLachlan Stryder Meadows Geraldine Menard Ramgopal Mettu Howard Mielke Charles A. Miller Anil Mishra Kenneth D. Mitchell **Brian Mitchell** Martin Moehlen Matthew Montemore Michael Moore Krishnarao Moparty Lisa Morici Gil Morris Lina Moses **Ricardo Mostany** JC Mudd

Mary Mulcahey David A. Mullin Andrea Murina Damian R. Murray David Mushatt Nazih Nakhoul Amber Naresh Bonnie K. Nastasi Luis Gabriel Navar Bo Ning Tianhua Niu Flizabeth B. Norton Mairi Noverr **Richard Oberhelman** Bapi Pahar Amitabh Pandey Kailash Pandey Antonio "Nito" Panganiban Anil Paramesh Kislay Parvatiyar Noshir Pesika Giovanni Piedimonte Derek Pociask Connie Porretta Minolfa Prieto Xuebin Qin Felicia Rabito Joe W. Ramos Jay Rappaport Katherine Raymond

James Robinson Randolph Roig **Jeffrey Rouse** Namita Rout Brian Rowan Chad Roy Igor Rubtsov Ibolya Rutkai Nakhle Saba Shigeki Saito Leia Saltzman Mimi Sammarco Fernando L. Sanchez Nicholas Sandoval Oliver Sartor **Ryosuke Sato** Adrienne Savant Suzana Savkovic Felix Savoie Patricia Scaraffia Michael S. Scheeringa John Schieffelin Laura Schrader Rebecca Schroll Manesh Kumar Panner Selvam Natalya Semiletova Michael Serou Hui Shen Lizheng Shi Qingbo Shu

Suresh Sikka Margarita Silio Fric Simon George Singletary Chelsea Singleton Isis Smith Sudesh K. Srivastav Chad Steele Kristefer Stojanovski Jeni Stolow Sergiv Sukhanov Brian Summa Sharven Taghavi Jeffrey Tasker Federico Teran Juan Terré Raju Thomas Aiguo Tian Eman Toraih Vicki Traina-Dorge Kiana Andrew Treare R Shane Tubbs Monica Vaccari Ronald Veazey **Brigham Walker** Cedric Walker Yu-Ping Wang Shusheng Wang Xiaolei Wang Xiaoying Wang

Carola Wenk Jennifer Whitten Mark Wilson **Thomas Cooper Woods** Hongju Wu Tong Wu Huanbin Xu Shengmin Yan Xiao-Ming Yin Ihor V. Yosypiv Charles Zeanah Shelya Zeng Qiuyang "Lisa" Zhang **Crystal Zheng** Zizhan Zheng Jia Zhuo Andrea Zsombok

AGING



Jorge Castorena-Gonzalez, PhD

Assistant Professor, Pharmacology, SOM castorenagonzalez@tulane.edu My research focuses on understanding mechanisms leading to

dysfunction of the lymphatic system and assess how a dysfunctional lymphatic system contributes to the onset and development of cardiovascular diseases. Current research interests include the study of

the connection between obesity, diabetes, aging, and lymphatic dysfunction. My lab also seeks to develop novel techniques in physiology and software tools for the automated processing and analysis of data/images. Other Research Interests Include: Imaging, Lymphatic System and Cardiovascular Diseases

Malwina Czarny-Ratajczak, PhD

Assistant Professor, Center for Biomedical Informatics & Genomics mczarnyr@tulane.edu

I currently focus on identification of novel genetic and epigenetic factors contributing to development of primary osteoarthritis (OA). I employ a next-generation sequencing approach to study exome, transcriptome and exosomal miRNAs of patients with osteoarthritis. Current projects: contribution of dysfunctional telomeres and components of exosomal cargo (proteins and miRNAs) to primary

osteoarthritis. Other Research Interests include: Molecular Genetics, Skeletal Disorders



S. Michal Jazwinski, PhD

Professor, Dept. of Medicine, Center for Aging - SOM sjazwins@tulane.edu

My research includes measures and determinants of biological age and healthy aging. I am particularly interested in individual phenotypic variability of lifespan and health span. I focus on mitochondrial

mechanisms of aging and compensatory processes for age-related mitochondrial dysfunction. Other Research Interests include: Genetics



Prasad Katakam, MD, PhD

Associate Professor, Pharmacology - SOM <u>pkatakam@tulane.edu</u>

My research investigates the role of cellular energetics and mitochondria in the regulation of cerebral microvasculature. We study the role of microvascular mitochondrial dysfunction in the

context of aging, stroke, diabetes, and Alzheimer's disease. In addition, we study sexdependent differences in cerebral microvascular bioenergetics. Other Research Interests include: Aging, Cardiology, Neurosciences, Women's Health

AGING



Hong Liu, PhD

Assistant Professor, Biochemistry and Molecular Biology - SOM <u>hliu22@tulane.edu</u>

My research seeks to understand how genetic information is properly transmitted through generations and also apply the knowledge to understand the causes of human diseases, such as cancer. Other Research Interests include: Cancer/ Hematology



Ibolya Rutkai, PhD

Assistant Professor, Pharmacology - SOM <u>irutkai@tulane.edu</u> My research interest includes the role of mitochondria in the cerebral

circulation. I am particularly interested in the mitochondrial mechanisms of vascular aging.



Sergiy Sukhanov, PhD

Associate Professor, Medicine, Cardiology – SOM ssukhano@tulane.edu

My research focuses on studying mechanisms of atherosclerosis. I am interesting in role of DNA damage in disease progression. Supported by NIH R01 funds, I study anti-atherosclerotic effects of glyceraldehyde-3-phosphate dehydrogenase, and classical glycolytic enzyme with

multiple novel glycolysis-unrelated functions, including involvement in maintenance of DNA integrity under oxidative stress. Other Research Interests include: Peptides Chemistry, Oxidative stress, apoptosis, protein-protein interactions



Qinyan Yin, PhD

Assistant Professor, Medicine – Pulmonary Diseases - SOM gyin@tulane.edu

I study the function of RNA splicing and virus in lung biology, aging and tumorigenesis. Other Research Interests include: Cancer/Hematology, Lung



Courtney Baker, PhD

Associate Professor, Psychology - SSE <u>cnbaker@tulane.edu</u>

My primary research interests include dissemination and implementation research, prevention and early intervention, mental health, violence prevention, early childhood, underserved populations, and community-based participatory research.



Kate Baker, PhD

Professor, Veterinary Medicine – TNPRC <u>kbaker1@tulane.edu</u>

I research behavioral biology of nonhuman primates, with my areas of concentration including social behavior, infant development, and behavioral pathology, as well as the application of behavioral

observation and testing in support of various disease models such as HIV, Zika virus, globoid cell leukodystrophy and amyotrophic lateral sclerosis. Other Research Interests include: Behavioral Biology



Angela Breckenridge, PhD

Assistant Professor, Social, Behavioral, and Population Science <u>abrecken@tulane.edu</u>

I serve as the Director of Curriculum, Program Assessment, and Strategic Planning in the School of Public Health and Tropical Medicine.



Patrick Bordnick, PhD

Dean, School of Social Work - SW bordnick@tulane.edu

I have over twenty years of experience in clinical and laboratory research on cocaine, marijuana, alcohol, amphetamine, heroin, and nicotine addiction. My research interest areas include clinical medication trials, treatment development, human laboratory studies,

behavioral disorders, health/behavioral health, virtual reality, and mobile data collection. Other Research Interests include: Virtual Reality Treatment of Addiction



Lorelei Dickey Cropley, Dr.PH

Associate Professor, Social, Behavioral, and Population Sciences – SPHTM

lcropley@bltulane.edu

I study the efficacy of Short Term Brigades, and Iron deficiency anemia behavioral interventions using iron cookware, as well as Chagas

Disease KAP studies. Other Research Interests include: Medical Education, Best Practices for Short Term Brigades



Regardt Ferreira, PhD Associate Professor, Social Work – SSW

rferrei@tulane.edu

My main research interest is at the intersection of disaster, climate change, resilience and behavioral health; with work conducted in Europe, Africa, North America, the Caribbean and South Asia.

Jeanette Gustat, PhD, MPH

Associate Professor, Epidemiology – SPHTM <u>gustat@tulane.edu</u> My interests include social and environmental

My interests include social and environmental determinants of health including aspects of our surrounding built and natural environments that contribute to inactivity and obesity. Interests include physical activity, obesity, blight, psychosocial factors and cognitive function and

how these factors play a role in cancer and cardiovascular disease outcomes. Other Research Interests include: Environmental determinants of physical activity and health.



Tonya Hansel, PhD

Associate Professor, Social Work – SSW

tcross1@tulane.edu

My research efforts center on evaluation of general trauma services, disaster response work in the aftermath of Hurricane Katrina, and towards a better understanding of technological disaster following the Deepwater Horizon Gulf Oil Spill. I focus on measuring traumatic

experiences and implementing systematic recovery initiatives that are effective at reducing negative symptoms, but also at emphasizing the importance of individual and community strengths that contribute to recovery.



M.A. "Tonette" Krousel-Wood, MD, MSPH

Professor of Medicine and Epidemiology, Associate Provost for the Health Sciences; Senior Associate Dean for Faculty Affairs-SOM; Associate Dean for Public Health & Medical Education-SPHTM and SOM

mawood@tulane.edu

I study aging and Cardiovascular Disease with a special emphasis on adherence. Other Research Interests include: Aging, Women's Health, medication adherence, hypertension, cardiovascular disease, older adults, implementation research



Thomas LaVeist, PhD

Dean, School of Public Health and Tropical Medicine Professor - SPHTM <u>tal@tulane.edu</u>

My research and writing has focused on three broad thematic research questions: 1) What are the social and behavioral factors that

predict the timing of various related health outcomes (e.g., access and utilization of health services, mortality, entrance into nursing home? 2) What are the social and behavioral factors that explain race differences in health outcomes?; and 3) What has been the impact of social policy on the health and quality of life of African Americans? My work includes both qualitative and quantitative analysis. I seek to develop an orienting framework in the development of policy and interventions to address race disparities in health-related outcomes. Specific areas of expertise include: U.S. health and social policy, the role of race in health research, social factors contributing to mortality, longevity and life expectancy, quantitative and demographic analysis and access, and utilization of health services.



Michael Hoerger, PhD

Associate Professor, Psychology, Psychiatry, Oncology - SSE <u>mhoerger@tulane.edu</u>

I conduct research in psycho-oncology. Using a translational perspective, I draw upon fundamental behavioral science to anticipate, prevent, and alleviate the stress of cancer. Other

Research Interests include: Aging, Bioinformatics/Statistics, Cancer/Hematology, Lung, Medical Education, Men's Health, Women's Health



Damian R. Murray, PhD

Associate Professor, Psychology – SSE <u>dmurray4@tulane.edu</u>

My research investigates the implications of real and perceived disease threat for social behavior, personality, and cross-cultural differences. I also investigate the relationships between genetic markers of

vulnerability to disease and disease-avoidant behavior. Other Research Interests include: Genetics, Infectious Diseases



Leia Saltzman, PhD

Assistant Professor, School of Social Work - SSW Isaltzman@tulane.edu

My research explores the impact of psychological trauma on mental and physical health outcomes. I am particularly interested in sex differences over time. Other Research Interests include: Women's Health, Psychological Trauma and Traumatic Grief



Michael S. Scheeringa, MD, MPH

Professor, Psychiatry - SOM mscheer@tulane.edu

My research interests include: psychopathology in infant and preschool children; autonomic heart period control; electroencephalography; cortisol regulation; parent-child relationship quality; treatment for young children. Other Research Interests include: Neurosciences

Chelsea Singleton, PhD



Assistant Professor – Social, Behavioral and Population Sciences – SPHTM

Csingle1@tulane.edu

My research examines structural barriers to healthy eating in lowincome communities and communities of color. I use epidemiological, geo-spatial, and community-based participatory research methods to study social and environmental factors that influence healthy food access, purchasing, and consumption.



Susan Davies, PhD

Associate Dean for Research, Professor – SSW sdavies2@tulane.edu

My research focuses on reducing HIV/STI's and unintended pregnancy among adolescents, and promoting maternal mental health, particularly among those living in poverty.



George Singletary, MD, MPH

Assistant Professor, Psychiatry - SOM gsinglet@tulane.edu

I am currently working with Department of Global Health on applications for funding for relapse prevention studies utilizing smart phone technology. I am interested in speaking with other faculty that might want to collaborate

on research in the field of Addiction.



Jeni Stolow, PhD, MPH

Assistant Professor, Social, Behavioral, & Population Sciences - SPHTM <u>istolow@tulane.edu</u>

I am a social and behavioral scientist who works at the intersection of medical anthropology, public health, and infectious disease outbreak response. My recent work includes a deployment to Central/Eastern

Europe responding to the Ukraine Emergency as a World Health Organization (WHO) Risk Communication and Community Engagement (RCCE) officer, as well as infectious disease and post-disaster work in Brazil and Sierra Leone.



Kiana Andrew Tregre, MD, MPH Assistant Professor, Psychiatry – SOM <u>kandrew@tulane.edu</u> My research Interests include: Women's Health, Juvenile and Forensics



Charles H. Zeanah, MD Professor, Psychiatry and Pediatrics - SOM <u>czeanah@tulane.edu</u>

My research has focused on children coping with extremes of caregiving adversity and their outcomes across a range of behavioral, brain and cognitive outcomes. In particular, I have focused on the effects of excessive unwanted input (i.e., trauma) and the effects of inadequate

expected input (i.e., deprivation and neglect). I have studied early childhood disorders, especially posttraumatic stress and attachment disorders in children who have been maltreated or raised in conditions of deprivation.



David Crosslin, PhD

Associate Professor, Biomedical Informatics and Genomics crosslin@tulane.edu

My research interests include applied bioinformatics, applied statistics, clinical decision support, etiology of complex diseases, human genetics and genomics, informatics, large scale statistical

genetic analyses, systems integration, and implementation science.



Hong-Wen Deng, PhD

Professor, Medicine – Medicine, Center For Biomedical Informatics And Genomics - SOM

hdeng2@tulane.edu

Research interests include: omics studies, aging, osteoporosis, sarcopenia, obesity, and other complex disorders. Other Research

Interests Include: Aging, Endocrine/Bone, Genetics, Imaging, Men's Health, Women's Health



Emily Farrer, PhD

Assistant Professor, Ecology and Evolutionary Biology – SSE <u>efarrer@tulane.edu</u>

I am a community ecologist whose research examines the interactions that structure plant and microbial communities in space and time, and how climate change and invasive species alter these interactions with consequences for biodiversity and ecosystem function. I use field surveys, experiments, and a combination of

statistical modeling, population modeling, genomics, and GIS techniques. I work in wetlands, grasslands, and alpine ecosystems.



Loren Gragert, PhD

Assistant Professor, Pathology and Laboratory Medicine - SOM <u>lgragert@tulane.edu</u>

My lab focuses on population genetics and informatics in transplantation. Our main project involves translating datasets and tools originally developed for bone marrow transplant matching into the field of solid organ transplantation. We also develop statistical genetics

methodologies for disease association and evolutionary biology studies, focusing on the highly polymorphic HLA and KIR immune gene systems. Other Research Interests include: Cancer/Hematology, Genetics, Immunology/Allergy/Skin, Kidney-Hypertension, Stem Cell Research



Hua He, PhD

Associate Professor, Epidemiology – SPHTM <u>hhe2@tulane.edu</u>

My research involves using statistical methodology, and particularly longitudinal data analysis, latent class analysis, causal inference, ROC analysis, etc., to facilitate impactful health research.

David M. Hinkle, MD

Professor and Chair, Ophthalmology – SOM <u>dhinkle@tulane.edu</u>

My research interests include understanding the mechanisms of drug and vaccine induced ocular inflammatory disease and big data analytics in ophthalmology. I received NIH funding for development of machine learning algorithms to assist in histopathologic

identification of giant cell arteritis. Other Research Interests include: Imaging, Immunology/Allergy/Skin, Infectious Diseases.



Michelle Lacey, PhD

Associate Professor, Mathematics – SSE

mlacey1@tulane.edu

My primary research interest is in the modeling and analysis of methylation profiles, and I also have extensive experience in bioinformatics and genomics. Other Research Interests include:

Genetics, Epigenetics



Xiaowen "Kevin" Liu, PhD

Associate Professor, Medicine – Bioinformatics and Genomics – SOM xwliu@tulane.edu

My research focuses on computational proteomics, especially mass spectrometry-based top-down proteomics, which can identify various proteoforms with alterations in biological samples. Our lab has

designed innovative algorithms and developed an open-source software suite for topdown MS-based proteoform identification, characterization, & quantification, which has been used by hundreds of universities and research institutes.

Other Research Interests included Proteomics



Yao-Zhong Liu, PhD

Associate Professor, Biostatistics and Data Science – SPHTM <u>yliu8@tulane.edu</u>

My research is focused on RNA-seq and other genomics data analysis. My recent research involves RNA-seq analysis of lung epithelial cells for toxicological effects of oil spill products. I'm now extending this

research to mouse models. I'm also collaborating with other investigators in RNA-seq based research, such as virus interactome with humans, transcriptomic analysis of Trypanosoma cruzi (the parasite causing Chagas disease) and RNA-seq of stem cells for their survival outcome. Other Research Interests include: Endocrine/Bone, Genetics, Lung.



Ramgopal Mettu, PhD

Associate Professor, Computer Science – SSE <u>rmettu@tulane.edu</u>

My work is at the intersection of algorithms, machine learning and computational biology. Applications of my work include protein structure prediction and determination, protein-protein interactions, compound screening, as well as problems in high-

throughput sequencing and proteomics. Other Research Interests include: Genetics, Immunology/Allergy/Skin



Brian Summa, PhD

Assistant Professor, Computer Science – SSE <u>bsumma@tulane.edu</u>

My research focuses on the design of scalable algorithms for the interactive exploration, visualization, segmentation, and analysis of large data. Recent medical applications of my work include: the

visualization and registration of large 2-photon, electron, and confocal microscopy scans; automatic and semi-automatic neural pathway tracing; understanding and quantifying the uncertainty in medical image segmentation; and visualization and analysis of large digital pathology slides. Other Research Interests include: Cancer/Hematology, Neurosciences



Sudesh K. Srivastav, PhD

Professor, Biostatistics and Data Science – SPHTM ssrivas@tulane.edu

My work utilizes biostatistics and quantitative bioinformatics to analyze biological and public health data. I assist other investigators with various data-related needs, including troubleshooting design issues (including sample and power analysis) and performing statistical

analysis for their projects. Other Research Interests include: Genetics



Eman Toraih, MD, MSc, PhD, DBio

Assistant Professor

My current research is focused on the discovery of biomarkers for clones driving thyroid cancer metastasis through spatial transcriptomics and single-cell multi-omics. Identifying trajectory time needed for nodal metastasis and development of prognostic nomogram will provide valuable information to help clinicians choose between surveillance and surgical intervention.

Brigham Walker, MsC, PhD



Assistant Professor, Health Policy and Management - SPHTM bwalker6@tulane.edu

My research generally focuses on how providers, payers, and patients behave in response to new information or incentives. He is also interested in discrimination and equity topics generally. Other

Research Interests include: Cancer/Hematology.



Yu-Ping Wang, PhD

Professor, Biomedical Engineering – SSE wyp@tulane.edu

My research involves integration of multiscale and multimodal imaging and genomic data, as well as biomedical image processing, statistical and computational modeling, and analysis of biomedical data. Other

Research Interests include: Genetics, Neurosciences, Behavioral Health



Carola Wenk, PhD

Professor, Computer Science – SSE <u>cwenk@tulane.edu</u>

My research area is in computational geometry, with a focus on analyzing discrete geometric shapes. I have strong interests in interdisciplinary applications including biology and medicine. I am

interested in learning about the potential to collaborate on geometric data analysis problems for biomedical data, including medical imaging data. One of my current projects involves developing topological descriptors that capture architectural features of prostate glands in pathology images. Other Research Interests include: Imaging, Algorithms

BIOPHARMA MANUFACTURING



Vijay T. John, PhD Professor, Chemical and Biomolecular Engineering – SSE vi@tulane.edu

A major project that I am now working on is in the exploitation of lipid self-assembly to induce transcutaneous vaccine delivery Biological lipids and synthetic surfactants) is essential in technologies as

mundane as consumer detergent products, and technologies of the future as in the development of structured, responsive nanomaterials. Biological membranes are ubiquitous examples of lipid-self assembly that impacts the entire function of a cell. Other Research Interests include: Cancer/Hematology, Infectious Diseases, Medical Devices



Roberta McDuffie, CNS, BC, CDE, BSBA

Instructor, Medicine – Endocrinology; Director, Tulane Clinical Translational Unit - SOM

rmcduffi@tulane.edu

Roberta McDuffie is Director of the Tulane Clinical Translational Unit. Other Research Interests include: Cardiology, Endocrine/Bone



Nicholas Sandoval, PhD

Assistant Professor, Chemical and Biomolecular Engineering - SSE <u>nsandova@tulane.edu</u>

My lab works on the development and application of advanced synthetic biology tools for model and non-model microbes for the purpose of sustainable fuel and chemical production. This includes the

efficient use of directed evolution to engineer such microbes from the gene to genome level as well as high throughput tools for analysis and engineering such as DNA synthesis, next generation sequencing, and cell sorting.



Asim Abdel-Mageed, DVM, PhD

Professor, Urology - SOM amageed@tulane.edu

My research interest focuses on identifying molecular determinants of prostate cancer progression, with special emphasis on health disparity. One approach involves genetic engineering and selective delivery of stem cells to target "intracrine" production of androgens at metastatic

sites. Other Research Interests include: Stem Cell Research, Exosomes and Therapy, Molecular Determinants, Biomarkers and Therapeutic Targeting of Prostate Cancer



Muralidharan Anbalagan, PhD

Assistant Professor, Structural and Cellular Biology - SOM manbalag@tulane.edu

My research focuses on breast cancer, circadian disruption by artificial light at night, and bone metastasis. Other Research Interests include: Endocrine/Bone, Women's Health



Pedro Barata, MD, MSc

Assistant Professor, Medicine – Hematology/Medical Oncology - SOM

pbarata@tulane.edu

I am a medical oncologist and physician researcher in with a special interest in genitourinary tumors (prostate, kidney and bladder

cancers) and clinical trials



Diane Blake, PhD

Professor, Biochemistry and Molecular Biology – SOM Do-Director, Graduate Program in Biomedical Sciences - SOM <u>blake@tulane.edu</u>

My laboratory has expertise in antibody engineering and the development of new antibodies with novel binding activities for use as diagnostics and therapeutics. We also work with an

interdisciplinary team to develop biodegradable drug delivery devices for treatment of glioblastoma and for control of fibrosis during the wound healing process.



David E. Blask, MD, PhD

Professor, Structural and Cellular Biology - SOM <u>dblask@tulane.edu</u>

My research interest is in the circadian/melatonin regulation and circadian disruption by light at night of cancer growth and metabolism.



J. Quincy Brown, PhD

Associate Professor, Biomedical Engineering - SSE jqbrown@tulane.edu

My research focuses on the application and clinical translation of quantitative optical spectroscopy and imaging tools for the improvement of cancer management. We develop translatable optical methods to

directly address gaps in clinical care, and carry those through to clinical validation in humans alongside our interdisciplinary collaborators. A major theme in this work is the use of novel imaging devices (and computational analysis tools) to improve patient outcomes in surgical tumor removal in organs such as the breast, prostate, & kidney. We also develop tools & strategies using optics to answer interesting biological questions in cell and animal models. To achieve these goals, we leverage new & existing photonic technologies across multiple spatial scales such as quantitative diffuse reflectance spectroscopy and imaging (DRS, DRI), fluorescence lifetime imaging, structured-illumination microscopy (SIM), and light sheet microscopy (LSM).



Matthew E. Burow, PhD

Associate Professor, Medicine – Hematology/Medical Oncology - SOM mburow@tulane.edu

My research focuses on the estrogen receptor, cell signaling and cancer systems. One of our goals is to elucidate the altered activation of signaling cascades which target estrogen receptor mediating gene

expression which ultimately leads to a hormone independent and endurance therapy resistant phenotype. We are collaborating with other laboratories to study natural and artificial phytochemicals as novel anti-estrogenic and anti-resistance agents through coordinate targeting of ER-activity, cell signaling and coactivator function. We have begun to study the role played by microRNAs (miRNA) in estrogen receptor biology and the specific regulation of gene expression by steroid hormone receptors.



Bridgette Collins-Burow, MD, PhD

Associate Professor, Medicine – Hematology/ Oncology - SOM <u>bcollin1@tulane.edu</u>

The long-term objectives of my research include 1) identifying molecular mechanisms of breast cancer resistance and metastasis, 2) implementing novel therapeutic strategies that can target and

overcome altered gene networks involved in controlling breast cancer progression; and 3) driving the translation of the laboratory science to the clinical patient setting. More recently we have focused on the role of novel experimental agents and epigenetic therapy in the regulation of microRNA expression in breast cancer with specific interest in triplenegative or basal phenotype breast cancer.



Wu-Min Deng, PhD

Professor, Biochemistry and Molecular Biology - SOM wdeng7@tulane.edu

The research in my laboratory bridges genetics, cancer biology and developmental biology. Using the genetically tractable Drosophila model, we seek to understand how cell growth, proliferation and

polarity are regulated during development, and how their deregulation may result in uncontrolled growth, loss of tissue integrity, and neoplastic tumor transformation. Currently, we focus on the following research projects: I. Characterization of "tumor hotspots", the tissue microenvironment for tumorigenesis. II. A transition zone model for oncogenic Notch induced neoplastic-tumorigenesis. III. Drosophila model for pediatric malignant rhabdoid tumors. IV. Tissue homeostasis through cell competition and compensatory cellular hypertrophy. Other Research Interests include: Genetics

Chancellor Donald, MD

Assistant Professor, Medicine – Hematology and Medical Oncology -SOM

cdonald@tulane.edu



Yan Dong, PhD

Professor, Structural & Cellular Biology - SOM vdong@tulane.edu

Our research is focused on prostate cancer, particularly in altered androgen receptor signaling in castration-resistant prostate cancer and mechanisms and efficacies of candidate prostate cancer interventions, hormone therapy, and increased chemotherapeutic efficacy for triple-

negative breast cancer. I am also interested in studying the mechanism of resistance of prostate cancer to hormone therapy as well as the mechanism of prostate cancer progression induced by circadian disruption.

Youssef Errami, PhD

Assistant Professor, Surgery – SOM <u>verrami@tulane.edu</u>

I explore cancer resistance to therapies and the metastic process using gene-editing technologies including CRISPR. Other Research Interests include: Genetics, Immunology/Allergy/Skin



Mark J. Fink, PhD Professor, Chemistry – SSE fink@tulane.edu

I study the synthesis and properties of semiconductor nanoparticles. Our group, in collaboration with Brian Mitchell (Chemical Engineering), is active in the synthesis of silicon nanoparticles and

quantum dots. Silicon nanoparticles have great potential as non-toxic luminescent biomarkers and multimodal drug delivery agents. Other Research Interests include: Immunology/Allergy/Skin



Paul Friedlander, MD

Professor and Chair, Otolaryngology - SOM <u>pfriedla@tulane.edu</u>

I study racial disparities in healthcare, as well as tumor growth and wound healing as well as outcome analysis for at risk populations for head and neck cancer.



Scott Grayson, PhD

Professor, Chemistry - SSE

sgrayson@tulane.edu

We investigate the role of polymer carrier architecture in optimizing physical (and hence pharmacokinetic) properties. We have projects which target aqueous soluble, bloodborne carriers, transdermal

carriers, and gene transfection carriers. Other Research Interests include: Immunology/Allergy/Skin



Jeff Han, MD, PhD

Associate Professor, Biochemistry and Molecular Biology - SOM jhan5@tulane.edu

My research studies the role of germ line L1s in fertility, including the loss of transposon control pathways by mutation which is associated with massive L1 expression, germ cell death, and sterility.

We have identified genetic pathways important for the activity of L1 and are also screening small drug-like compounds for inhibitory activity against L1. We hope to use these finding to assess the effects of blocking L1 activity genetically or with drugs on infertile mouse models that over express L1. We also would like to examine whether elevated L1 expression is overrepresented in human patients with infertility of unknown etiology. Other Research Interests include: Aging, Genetics, Men's Health, Women's Health



Charles Hemenway, MD

Professor of Clinical Pediatrics – LSU chemen@lsuhsc.edu

I will be serving as a liaison to clinical research at Children's Hospital. I most recently served as Director of the combined MD/PhD program at the Stritch School of Medicine at Loyola University Chicago, and have worked in the field of pediatric hematology/oncology—including

research, clinical care, and teaching-for over 35 years.



Reza Izadpanah, DVM, PhD Assistant Professor, Medicine-Cardiology - SOM rizadpan@tulane.edu

My work focuses on unraveling the molecular mechanisms involved in the pathobiology of cancer. My goal is to identify novel therapeutic targets in cancer. My investigations involve both cancer and stem cell biology and utilize in vitro and in vivo studies. Other Research Interests include: Aging, Cardiology, Genetics, Regenerative Medicine/Tissue Engineering,

Stem Cell Research



James Jackson, PhD

Assistant Professor, Biochemistry and Molecular Biology - SOM jjacks8@tulane.edu

My lab is interested in the therapeutic response of breast cancers. Specifically, we aim to determine why some tumors relapse more quickly than others and also what cells in a heterogeneous tumor eventually

proliferate to cause the relapse. We are investigating the role of p53 mediated cellular senescence in driving relapse. We use transgenic mouse models, ex vivo lentiviral infection, orthoptopic transplantation in syngeneic mice, and tissue culture model systems. Other Research Interests include: Aging, Mouse Models



Janarthanan Jayawickramarajah, PhD

Professor, Chemistry – SSE jananj@tulane.edu

My research focuses on the synthesis of designer molecules and nanoparticles that have the unique ability to undergo specific selfassembly and molecular recognition events. In particular, we are using these systems to generate protein inhibitors that are activated by

endogenous biomarkers (including over-expressed microRNAs and enzymes).



Shanker Japa, PhD

Associate Professor, Medicine – SOM Director, CTC Core Laboratory japashan@tulane.edu My research focuses on coenzyme-O

My research focuses on coenzyme-Q10 as an adjunct to standard therapies in elderly patients with chronic heart failure and type 2 diabetes. Other Research Interests include: Cardiology, Infectious Diseases



Emad Kandil, MD

Professor, Surgery - SOM ekandil@tulane.edu

Therapeutic Targeting of the MAP Kinase and PI3K Pathways in Thyroid Cancer. Other Research Interests include: Endocrine/Bone



Damir Khismatullin, PhD

Associate Professor, Biomedical Engineering – SSE damir@tulane.edu

My laboratory focuses on understanding the mechanical and transport properties of biological systems at cellular and tissue levels. Using experimental and theoretical approaches, we study the interactions of

blood cells (leukocytes, platelets, red blood cells), tissue resident cells (macrophages, mast cells), and circulating tumor cells with vascular and lymphatic endothelium under pathophysiological conditions such as inflammation, atherosclerosis, thrombosis, sickle cell disease, and cancer metastasis. Another aspect of our research is the development of medical ultrasound technologies for cancer treatment, blood coagulation monitoring, and nerve regeneration. We also develop novel methods for rheological characterization of living cells and tissues and use our state-of-the-art computational fluid dynamics models to predict blood flow in vessels with complex geometry. Other Research Interests include: Immunology/Allergy/Skin, Neurosciences



L. Spencer Krane, MD

Assistant Professor, Urology - SOM <u>lkrane1@tulane.edu</u>

I am currently focused on biomarker development, particularly in Kidney cancer. We are also interested in prostate cancer treatment and outcomes and other urologic malignancies. Other Research Interests

include: Genetics, Kidney/Hypertension, Medical Education, Men's Health



Sean B. Lee, PhD

Associate Professor, Pathology and Laboratory Medicine - SOM <u>slee30@tulane.edu</u>

My research interests are in cancer and development. Specifically, we study cancers that involve EWS (Ewing sarcoma) gene as an oncogenic translocation gene product using knock-in mice. We are

also interested in studying the functions of EWS in development. We have recently uncovered a novel role for EWS in determining brown fat lineage during development. We are planning to further study the role of EWS in metabolism (e.g., diabetes and obesity). Other Research Interests include: Endocrine/Bone, Metabolism



Zhen Lin, MD, PhD

Associate Professor, Pathology - SOM <u>zlin@tulane.edu</u>

My research mainly focuses on non-coding RNA during host-pathogen interaction. His lab utilizes genome-wide molecular, biochemical, and bioinformatics-based approaches to identify and characterize factors and cell signaling pathways that are regulated by viral and cellular

RNAs during the course of human herpesvirus and papillomavirus infection and associated pathogenesis. Other Research Interests include: Bioinformatics/Statistics, Genetics, Infectious Diseases, Lung



Hua Lu, MB, PhD

Professor and Chair, Biochemistry and Molecular Biology - SOM <u>hlu2@tulane.edu</u>

I research molecular dissection and translational research of the p53 and c-myc networks in controlling cell growth, senescence, death, differentiation, and tumorigenesis as well as anti-cancer drug discovery.



Heather Machado, PhD

Associate Professor, Biochemistry and Molecular Biology - SOM <u>hmachado@tulane.edu</u>

My laboratory focuses on understanding how infiltrating macrophages promote breast cancer initiation and progression. Other Research Interests include: Stem Cell Research, Women's Health



Charles A. Miller, PhD

Professor and Chair, Environmental Health Sciences - SPHTM rellim@tulane.edu

I study adverse effects of chemicals in molecular, cellular, and animal model systems. I am particularly interested in chemicals that interact with the aryl hydrocarbon receptor signaling pathway.



Krishnarao Moparty, MD

Professor Emeritus, Urology - SOM kmopart@tulane.edu

My research has been in the field of prostate cancer, especially molecular biology and active surveillance. Other Research Interests include: Men's Health



Zachary Pursell, PhD

Associate Professor, Biochemistry and Molecular Biology - SOM zpursell@tulane.edu

My research focuses on the regulation of DNA replication and how it relates to genome instability and human diseases, in particular the development of cancer.



Joe W. Ramos

Director and CEO – Louisiana Cancer Research Center jwramos@lacancerresearch.org

My research interests are in cancer invasion and metastasis. My lab's mission is to determine the underlying mechanisms that control cancer cell survival and invasion and to exploit this knowledge in drug development. Currently we are examining the dysregulation of cell

signaling in glioblastoma, skin cancer, and kidney cancer and developing drugs to block growth and invasion of these tumors.



Nakhle Saba, MD

Associate Professor, Medicine – Hematology/Oncology - SOM <u>nsaba@tulane.edu</u>

I conduct translational research in chronic lymphocytic leukemia and mantle cell lymphoma, focusing on disease biology and novel therapies.



Oliver Sartor, MD

Professor, Medicine - Hematology & Medical Oncology – SOM Director, Tulane Cancer Center <u>osartor@tulane.edu</u> My current research interests include clinical trials in advanced

prostate cancer with novel agents and novel combinations of agents. My collaborative projects include novel concepts in prostate stem cells

and germ line assessment of prostate cancer risk. Other Research Interests include: Men's Health



Natalya Semiletova, PhD

Assistant Professor, Medicine – Hematology & Medical Oncology – SOM

nsemiletova@tulane.edu

My research interests are in the field of medical oncology and translational research to move knowledge about mechanisms of

solid and hematological cancer therapy and prevention to real medical practice. I am responsible for the growth and quality of the clinical trials program at Tulane Cancer Center. In addition, I am responsible for all aspects of clinical trial conduct and management within the Tulane Cancer Center. Other Research Interests include: Genetics, Lung, Men's and Women's Health



Aiguo Tian, PhD

Assistant Professor, Biochemistry and Molecular Biology - SOM atian@tulane.edu

Our research uses the Drosophila model to understand how intestinal dysplasia is regulated in response to tissue injury or aging and how tumor growth patterns are regulated in follicular epithelial cells. Other

research interests include: Developmental biology and Cell Biology, Stem Cell Research



Tong Wu, MD, PhD

Professor, Pathology and Laboratory Medicine - SOM twu@tulane.edu

My research centers on the molecular mechanisms of inflammation and carcinogenesis, with a special emphasis on the pathogenesis of liver cancer and inflammatory liver diseases. My additional research interests include mechanisms of liver injuries, regulation of

hepatobiliary epithelial cell growth and clinical/translational research on human liver cancer and liver diseases. Other Research Interests include: Gastroenterology



Shelya Zeng, MD

Professor, Biochemistry and Molecular Biology - SOM szeng@tulane.edu I study molecular dissection and conduct translational research of the

p73 and c-myc networks in controlling cell growth, senescence, death, differentiation, and tumorigenesis. Other Research Interests include: Cancer Biology and Drug Discover

Qiuyang (Lisa) Zhang, PhD



Assistant Professor, Structural & Cellular Biology - SOM gzhang3@tulane.edu

I am interested in inflammaging (both aging and inflammation) and cancer, with a focus on Th17 cytokines and prostate cancer in the aging process. I am using genetically engineered mouse models to address the role of Th17 cytokines in the aging process. Also of

interest is the role that Th17 cytokines play in the development of prostate cancer. Other Research Interests include: Aging, Immunology/Allergy/Skin

CARDIOVASCULAR



Patrice Delafontaine, MD

Professor, Medicine, Pharmacology and Physiology and Executive Dean – SOM

pdelafon@tulane.edu

Our research program focuses on the field of Insulin-Like Growth Factor (IGF-1) biology, atherosclerosis, and skeletal muscle wasting. Recent

work demonstrates that monocyte-macrophage IGF-1 signaling is anti-inflammatory and promotes plaque stability. Current projects include testing IGF-1 as an anti-atherosclerotic therapy in a large animal model to understand mechanisms underlying plaque-stabilizing effects of IGF-1, and determining the effects of IGF-1 on cellular senescence and studying endothelial cell, macrophage and smooth muscle specific effects of IGF-1. Other Research Interests include: Aging, Kidney/Hypertension, Neurosciences, Regenerative Medicine/Tissue Engineering



Jiang He, MD, PhD

Professor and Chair, Epidemiology – SPHTM jhe@tulane.edu

My work combines -omics, clinical, and epidemiological research in cardiometabolic diseases. Other Research Interests include: Genetics, Kidney / Hypertension



Robert Hendel, MD

Professor, Medicine – Cardiology - SOM rhendel@tulane.edu

My personal research has been in cardiac imaging (nuclear cardiology and cardiac CT), as well as the appropriate use of cardiovascular technology. Our section has interest in population health, obesity, and medical devices. Other Research Interests include: Imaging, Medical

Education



Yusuke Higashi, PhD

Associate Professor, Medicine – Cardiology – SOM <u>yhigashi@tulane.edu</u>

My research focuses on hormonal/growth factors' regulation of vascular cells and inflammatory cells that are involved in atherosclerosis, with an emphasis on translation of findings on a bench to a bedside. Other Research Interests include: Aging, Endocrine/Bone, Imaging, Lung

CARDIOVASCULAR



Colleen Johnson, MD

Associate Professor, Medicine – Cardiology – SOM cjohnson@tulane.edu

My research is currently investigating clinical approach to cardiac devices such as cardiac resynchronization therapy, conduction system pacing and left atrial appendage closure devices. Inherited cardiomyopathies as well as infiltrative cardiomyopathies such as ARVC

and sarcoid are an area of active research as well. Other Research Interests include: Imaging, Medical Devices, Women's Health



Stryder Meadows, PhD

Associate Professor, Cell and Molecular Biology - SSE <u>smeadows@tulane.edu</u>

My lab is focused on understanding the genetic pathways involved in regulating embryonic and retinal blood vessel development. In particular, we are interested in blood vessel fusion and artery-

vein identity. Other Research Interests include: Genetics

Amitabh Pandey, MD

Assistant Professor, Medicine – Cardiology – SOM <u>apandey@tulane.edu</u>

We aim to evaluate the role of genomics in the pathogenesis of atherosclerosis and the larger context of cardiovascular diseases. Using single cell techniques, understanding the molecular mechanisms that predispose individuals to atherosclerosis will allow for better understanding and therapeutics for cardiovascular disease states.



Xuebin Qin, MD, PhD

Professor, Immunology - TNPRC xqin2@tulane.edu

My research focuses on defining the role of innate immunity including complement system and monocyte activation in the pathogenesis of human diseases, such as HIV infection, HIV-associated

cardiovascular diseases, and on developing a novel cell ablation research tool for broad scientific applications. I have extensive expertise in immunology, monocyte & macrophage biology, complement, HIV-1 therapy, atherosclerosis, and cancer biology. Other Research Interests include: Aging, Immunology/Allergy/Skin, Infectious Diseases, Regenerative Medicine/Tissue Engineering, Complement and T Cell biology

CARDIOVASCULAR



Juan Terré, MD

Associate Professor, Medicine – Cardiology – SOM <u>iterre2@tulane.edu</u> My areas of focus include complex coronary interventions (3 V CAD, Low ejection fraction and LV support devices),

Transcatheter minimally invasive interventions for acquired structural heart disease (TAVR, TMVR, TTVR, PVL Closure), congenital heart disease (TTVR, TPVR, ASD Closure, VSD Closure) and stroke prevention interventions (PFO/LAAO).



Thomas Cooper Woods, PhD

Associate Professor, Physiology twoods3@tulane.edu

I study vascular biology, intimal thickening, atherosclerosis, and the cardiovascular complications of diabetes.

ENDOCRINE / BONE



Charles Billings, MD Assistant Professor, Orthopaedics - SOM <u>cbillin1@tulane.edu</u> I research topical use of tranexamic acid to reduce blood loss in total joint replacements



Vivian Fonseca, MD

Professor, Medicine - Endocrinology and Metabolism- SOM vfonseca@tulane.edu

My work focuses upon the prevention and treatment of diabetic complications and risk factor reduction in cardiovascular disease. I serve as the site PI for the NIH-funded All of Us and RECOVER studies, and as the Director of the LA CaTS Clinical Research

Resources Core. I also conduct clinical trials in diabetic nephropathy and evaluating biosimilar insulins. Other Research Interests include: Cardiovascular Risk



Sylvia Ley, PhD

Assistant Professor – Epidemiology – TPHTM <u>sley@tulane.edu</u>

My research focuses on developing strategies to prevent and manage chronic diseases and investigating earlier life risk factors for diabetes and cardiovascular disease over the life-course. I currently lead NIH and NSF funded research projects on life-course and omics

approaches to cardiometabolic disease prevention and on COVID-19 and maternal and infant health. Other Research Interests include: Aging, Cardiology, Women's Health



Lizheng Shi, PhD

Professor and Chair, Health Policy and Management - SPHTM <u>Ishi1@tulane.edu</u>

My areas of interest include: pharmaceutical and health care economics; pharmacoepidemiology; health care quality, access, and evaluation. Other Research Interests include: Aging, Bioinformatics/Statistics, Cardiology, Kidney/ Hypertension.

ENDOCRINE / BONE



Franck Mauvais-Jarvis, MD, PhD

Professor, Medicine - Endocrinology and Metabolism - SOM <u>fmauvais@tulane.edu</u>

We are interested in novel mechanisms and/or therapeutic perspectives for diabetes and of obesity especially as it relates to the role of estrogen and androgen in metabolic diseases. We seek to find novels ways to modulate estrogen and androgen actions in a tissue-

and sex-specific manner to prevent/improve diabetes and metabolic dysfunction.



Brian G. Rowan, PhD

Associate Professor and Chair, Structural & Cellular Biology - SOM browan@tulane.edu

My research centers on the following areas: 1. Estrogen receptor phosphorylation: understanding the role of estrogen receptor alpha (ERa) phosphorylation in regulating receptor function in normal and cancer tissue. 2. Experimental therapeutics for breast cancer: using

peptidomimetic Src inhibitor in combination with endocrine and chemotherapy for breast cancer; novel bone targeted parathyroid hormone antagonists for bone metastatic breast cancer. 3. Circadian regulation of estrogen receptor function: understanding the reciprocal regulation of the circadian rhythm and estrogen receptor in physiologic processes. 4. Adipocyte tissue-derived stromal/stem in reconstructive surgery and soft tissue repair: understanding the mechanisms by which ASCs promote head/neck cancer metastasis; the impact of ASCs in a low oxygen environment on fibrosis and immunomodulation. Other Research Interests include: Cancer/Hematology, Women's Health



Fernando L. Sanchez, MD

Associate Professor, Orthopaedics - SOM <u>fsanchez@tulane.edu</u>

My area of research interest includes orthopaedic clinical outcomes especially total joint and adult reconstruction. I am currently interested in doing further research in wear debris associated with bone loss and osteoarthritis.



Robert Galagan, MD

Assistant Professor – Medicine – Endocrine and Metabolism - SOM rgalagan@tulane.edu

My research interests include hospital treatment of diabetes mellitus, transitioning in-patients with diabetes to outpatient care, and the treatment of diabetic peripheral neuropathy.
ENDOCRINE / BONE



Felix Savoie, MD

Professor and Chair, Orthopaedics - SOM <u>fsavoie@tulane.edu</u>

My research interests include chondrolysis in articular cartilage, advances in arthroscopy of the upper extremity, improvements in arthroscopic and open repair techniques of the upper extremity, and sports medicine. I have been co-PI on a series of studies investigating

the interrelationship of time, temperature and intra-articular anesthetic injections in chondrolysis. Other Research Interests include: Aging



Michael Serou, MD, PhD

Assistant Professor, Radiology - SOM <u>mserou2@tulane.edu</u>

I have a general interest in applying advanced imaging to medical research. Current projects include quantitative CT assessment of bone mineral density in an evaluation of epigenomic contributions to male

osteoporosis. Other Research Interests include: Endocrine/Bone



Zongbing You, MD, PhD

Professor, Structural & Cellular Biology - SOM zyou@tulane.edu or you.zongbing@gmail.com

I primarily study inflammation/immune responses in prostate cancer and lung cancer, focusing on interleukin-17. Secondarily, I study tissue engineering of articular cartilage using adipose tissue-derived stem cells transfected with doublecortin gene (DCX). Other Interests

include: Cancer / Hematology, Immunology / Allergy / Skin, Regenerative Medicine / Tissue Engineering, Stem Cell Research



Hongju Wu, PhD

Associate Professor, Medicine - Endocrinology & Metabolism - SOM <u>hwu3@tulane.edu</u>

My research has been focused on exploring novel strategies for diabetes treatment and investigating the underlying mechanisms. We have two major projects: 1) To explore novel strategies to protect and

to regenerate the insulin-producing β -cells; and 2) To investigate the role of GLP-1/GLP-1 receptor in regulating glucagon secretion. Other Research Interests include: Imaging, Kidney/Hypertension, Regenerative Medicine/Tissue Engineering

GASTROENTEROLOGY / LIVER



Solange Abdulnour-Nakhoul, PhD

Associate Professor, Medicine – Gastroenterology - SOM solange@tulane.edu

My research is in physiology and biology of the esophagus (stratified squamous epithelium and glands), Reflux disease, and Eosinophilic Esophagitis. Other Research Interests include: Kidney/Hypertension



Chiung-Kuei Huang, PhD

Professor, Medicine – Gastroenterology – SOM chuang17@tulane.edu

My research primarily focuses on clarifying the underlying mechanisms by which methylcytosine dioxygenases modulate progression of Alcoholic Liver Disease, and to evaluate TET1 as a potential therapeutic target. I also research the role of aspartate betahydroxylase (ASPH) and investigate the therapeutic potential of targeting ASPH in cholangiocarcinoma.



Hoonbae Jeon, MD

Professor and Chief, Abdominal Transplant - Surgery - SOM <u>hjeon@tulane.edu</u>

I study hepatobiliary malignancy and liver transplant outcomes. Other Research Interests include: Kidney/Hypertension, Medical Education



Bilon Khambu, MsC, PhD

Assistant Professor, Pathology and Laboratory Medicine – SOM <u>bkhambu@tulane.edu</u>

My research areas of focus include clinical Liver disease models related to Non-alcoholic fatty liver disease (NAFLD), (Alcoholic liver disease (ALD), proteinopathy, autophagy - acute and chronic liver

injury, inflammation, repair, Liver fibrosis, cirrhosis, hepatocellular carcinoma(HCC), and cancer stem cell. Using transgenic mouse models, isolated primary hepatic cells or cell lines, we try to tease out how liver injury and associated hepatic inflammation, fibrosis, ductular reaction, and tumor development occurs. We are also interested in understanding the mechanism of liver regeneration in the context of injury. Particularly we are interested to identify various hepatic factors(e.g., HMGB1, DEK, Hepatokines, DAMPS, etc.) responsible for executing these pathological events.

GASTROENTEROLOGY / LIVER



Jordan Karlitz, MD

Associate Professor, Medicine – Gastroenterology - SOM jkarlitz@tulane.edu

I am interested in Lynch syndrome screening practices by tumor analysis for microsatellite instability (MSI) and immunohistochemistry (IHC) testing in young colorectal cancer patients. I am also interested

in surgical practices in young colorectal cancer patients (extent of colonic resection). Finally, I am interested in colorectal cancer risk in the Cajun population. We recently demonstrated that the Acadian parishes of Louisiana have one of the highest rates of colorectal cancer in the U.S. I am currently the PI on a LA CaTS pilot grant that focuses on performing MSI and IHC testing on banked tumor specimens in Cajun patients to look for evidence of Lynch syndrome (founder effect in Cajun population). Other Research Interests include: Colorectal Cancer, Genetics



Martin Moehlen, MD, MPH

Assistant Professor, Medicine - Gastroenterology & Hepatology mmoehle@tulane.edu

I am specifically interested in using the VA database to answer clinically relevant questions within hepatology: descriptive analysis of viral hepatitis (treatment of monoinfected hepatitis C and hepatitis

C-HIV coinfection in VA versus "real world"); hepatocellular carcinoma - treatment practices and access to care. The inter-relationship between treatment of hepatitis C with newly available direct antiviral agents and effect on diabetes related outcomes.



Anil Paramesh, MD

Professor, Surgery – Kidney and Pancreas Transplant – SOM <u>aparamesh@tulane.edu</u> Other Research Interests include: Immunology/Allergy/Skin



Suzana Savkovic, PhD Associate Professor, Pathology – SOM <u>ssavkovi@tulane.edu</u> Research Interests include: Immunology, Metabolic Remodeling

GASTROENTEROLOGY / LIVER



Shengmin Yan, PhD Instructor, Pathology – SOM

syan2@tulane.edu

My current research interests include 1) cholestasis and ALD; 2) the role of autophagy in liver pathophysiology; 3) the formation and physiological functions of protein condensates in liver

diseases; and 4) the impact of immunometabolism on the progression of NAFLD/NASH.



Xiao-Ming Yin, MD, PhD

Professor and Chair, Pathology and Laboratory Medicine xmyin@tulane.edu

Our interests of research are liver biology and liver diseases. We are particularly interested in the study of alcohol and non-alcohol induced fatty liver diseases. More recently we have been studying the role of autophagy in normal hepatic physiology and structure, the impact on liver pathophysiology and the implication in human liver diseases. Other Research Interests include:

Cancer/Hematology.



Hans C. Andersson, MD

Professor and Director, Hayward Genetics Center – SOM <u>handers@tulane.edu</u>

The Hayward Genetics Center follows the majority of inherited metabolic patients in the Gulf South Region (>200pts) which diseases are rare and have a poor evidence base. Our efforts have been to characterize the natural history and responses to therapy for these

metabolic disorders. We have described the first long-term treatment outcomes for cobalamin C disease and pediatric Gaucher Disease. We are currently trying to understand the neurologic basis for changes in behavior and executive function in phenylketonuria patients treated with tetrahydrobiopterin. Through a regional genetics collaborative, we are developing a strategic plan for emergency preparedness as a model for genetics centers and genetic laboratories to follow.



Victoria Belancio, PhD

Associate Professor, Structural and Cellular Biology – SOM <u>vperepe@tulane.edu</u>

My longstanding interest has been in understanding molecular mechanisms of transposable elements interaction with their host and the impact these transposons have on human health through their contribution to genomic instability. My multidisciplinary research has

over the years involved studies of DNA, RNA and protein biogenesis, cell signaling, DNA damage response, genomic instability, epigenetics, senescence, circadian disruption, and age-associated diseases such as cancer and Alzheimer's Disease. Other Research Interests include: Aging; Neurodegeneration



YiPing Chen, PhD

Professor and Chair, Cell and Molecular Biology - SSE <u>ychen@tulane.edu</u>

My research focuses on genetic regulation of organ formation and pathogenesis, particularly in craniofacial and cardiac development using transgenic/knockout mouse models. Other Research Interests include: Cardiology, Endocrinology/Bone



Prescott Deininger, PhD

Professor, Director, Tulane Cancer Center - SOM pdeinin@tulane.edu

I am interested in the role that mobile elements play in mutagenesis within the human genome. This involves studies of their mutational capabilities, toxicity and the cellular response to their expression. Many studies involve DNA repair pathways, including nucleotide excision

repair, mismatch repair and recombination. My laboratory specializes in high throughput molecular genetics techniques and applications. Other research interests include: Cancer/Hematology



Stacy Drury, MD, PHD

Associate Professor, Psychiatry and Behavioral Sciences - SOM <u>sdrury@tulane.edu</u>

I am interested in the interaction of genetic and epigenetic factors with early experience and how this interaction shapes neurodevelopment and long term outcomes in children. My research focuses on improving outcomes in medically ill children through providing a greater

understanding of the impact of psychological distress, neurocognitive development and family functioning in these children. Other Research Interests include: Aging, Behavioral Health, Neurosciences, Telemore Biology



Samir S. El-Dahr, MD

Professor and Chair, Pediatrics - SOM seldahr@tulane.edu

My research focus is on genetic and epigenetic control of renal development. Other Research Interests include Stem Cell Research



Laurie R. Earls, PhD

Assistant Professor, Cell and Molecular Biology - SSE learls@tulane.edu

I am interested in how the molecular pathways that modulate synaptic plasticity change with age, and how this confers selective vulnerability to disease onset. For example, we have previously shown that

microRNAs that do not target calcium stores early in development are critical for modulation of the SERCA calcium pump in early adulthood. This results in age-dependent alterations in synaptic plasticity in models of the 22q11 Deletion Syndrome, the major genetic risk factor for schizophrenia. Additionally, we have discovered a novel peptide encoded in the 22q11DS disease-critical region that affects synaptic plasticity in an agedependent manner. We use genetics, molecular biology, and electrophysiology to study the effects of these pathways on neural function with age. Other Research Interests include: Aging, Neurosciences



Melanie Ehrlich, PhD

Professor, Human Genetics Program – SOM <u>ehrlich@tulane.edu</u> My lab is using epigenomics and epigenetics to elucidate differentiation

of the skeletal muscle, bone, and cardiovascular lineages and abnormal changes in epigenetics associated with disease, especially cancer,

muscle disease, osteoporosis, and heart disease studies of normal tissue, we are particularly interested in how the skeletal muscle-specific and brain-specific epigenetics fine tunes transcription. Other Research Interests include: Bioinformatics / Statistics, Cancer



Kathleen Ferris, PhD

Assistant Professor, Ecology & Evolutionary Biology - SSE <u>kferris@tulane.edu</u>

I am an Assistant Professor in the Department of Ecology & Evolutionary Biology at Tulane University. I study the genetic and phenotypic basis of adaptation and speciation. I use quantitative and

population genetics, genomics, and ecological field studies to examine these questions in the Mimulus guttatus species complex. Other Research Interests include: Evolutionary Biology



Fenglei He, PhD

Assistant Professor, Cell and Molecular Biology – SSE <u>fhe@tulane.edu</u>

Neural crest cells comprise a transient, highly migratory and multipotent population. Arising at early stage of embryo development, they play essential roles in organ morphogenesis and homeostasis. My research interest lies in understanding fundamental mechanisms of

neural crest cell development and related diseases using mouse models. Our current projects focus on dissecting the role of growth factor signaling and downstream pathways in development of cranial neural crest cells and their skeletal derivatives. Other Research Interests include: Developmental Biology, Craniofacial Biology, Kidney/Hypertension, Regenerative Medicine/Tissue Engineering



Jun-yuan Ji, PhD

Professor, Biochemistry and Molecular Biology – SOM My research focuses on transcriptional regulation of lipid metabolism in Drosophila and cultured mammalian cells. Other Research Interests include: Cancer/Hematology, Endocrinology/ Bone, Infectious Diseases, Men's Health; Stem Cell Research



Tanika Kelly, MPH, PhD

Professor, Epidemiology – SPHTM <u>tkelly@tulane.edu</u>

My research focuses on identifying multi-omics mechanisms underlying cardiometabolic diseases. Furthermore, my work aims to integrate multi-omics information using systems biology approaches to better elucidate biological pathways underlying

these conditions. Other Research Interests include: Bioinformatics/Statistics, Kidney/Hypertension



Changwei Li, MD, PhD

Assistant Professor, Epidemiology - SPHTM <u>cli8@tulane.edu</u>

I am an epidemiologist with expertise in medicine, multi-omics, GXE interactions, cardiovascular disease and chronic kidney disease. My current research programs focus on assessing risk alleles for

monogenic non-insulin dependent diabetes mellitus disorders in the general population, and delineating mechanisms underlying progression of chronic kidney disease. Prior to joining the faculty at Tulane, I was a tenure track Assistant Professor of Epidemiology at the University of Georgia at Athens. I received my PhD in Genetic Epidemiology from Tulane University, MPH in Global Health from Emory University, and medical degree in Preventive Medicine from Peking University.



Arthur J. Lustig, PhD

Professor, Biochemistry and Molecular Biology – SOM <u>alustig@tulane.edu</u>

We are studying the multiple chromatin structures that lead to heritable telomere states. We are also interested in applying our new insights into telomere chromatin to rapidly diagnose telomere diseases. Other Research Interests include: Aging, Cancer/Hematology



Tianhua (Tim) Niu, PhD

Assistant Professor, Biochemistry and Molecular Biology – SOM tniu@tulane.edu

My long-term research interests mainly consist of four areas: (1) biostatistical methodology (e.g., Bayesian statistics and machine learning), (2) statistical genetics (e.g., Bayesian haplotype inference and

computational molecular evolution), (3) transcriptome analysis (e.g., differential expressions of mRNAs and non-coding RNAs) and bioinformatics (e.g., software design, development, and application for integrative analysis of genomics, transcriptomics and proteomics data using a variety of pathway and network software tools, e.g., R & Bioconductor packages), and (4) clinical trials (clinical trial design, development of clinical trial protocol, conduct, data management, and data analysis). Other Research Interests include: Bioinformatics/Statistics



Hui Shen, PhD

Professor, Biomedical Informatics and Genomics Hshen3@tulane.edu

My research interests focus mainly on identifying and characterizing genetic and epigenetic variation that affects susceptibility to complex human disorders, such as osteoporosis and sarcopenia.



Shusheng Wang, PhD, MBA

Professor, Cell and Molecular Biology – SSE

swang1@tulane.edu

Noncoding RNAs in vascular development and diseases. Vascular abnormalities underlie the pathogenesis of many ocular diseases. Our research focus in the lab is to understand the role of

noncoding RNAs, including microRNAs and long non-coding RNAs, in vascular biology and vascular retinopathies. We also study cell death mechanism with hope to develop new therapeutic solutions for Age-related Macular Degeneration, a leading blinding disease in the elderly. Other Research Interests include: Aging

IMAGING



Carolyn Bayer, PhD

Assistant Professor, Biomedical Engineering – SSE <u>carolynb@tulane.edu</u>

The research in our laboratory develops novel medical imaging methods to study the dynamics of molecular expression and physiological function by integrating ultrasound and contrast-

enhanced photoacoustic imaging systems. A key focus of our imaging technology is the functional and molecular environment during compromised pregnancies which lead to the development of birth defects. Other Research Interests include: Cardiology, Kidney/Hypertension, Women's Health



Joseph Bull, PhD

Professor and Associate Dean, Biomedical Engineering - SSE jbull@tulane.edu

My research program is focused on ultrasound and biofluid mechanics, with an interest in fundamental understanding that enables new clinical therapies or diagnostics. An example is our novel therapeutic approach,

termed gas embolotherapy that involves injecting encapsulated perfluorocarbon liquid droplets into the bloodstream and then selectively vaporizing them with focused ultrasound to form gas bubbles for occlusion of blood flow to tumors and/or localized drug delivery.



Jeremy Nguyen, MD

Professor, Radiology - SOM jnguye2@tulane.edu

I perform diagnostic radiology with a focus in gastrointestinal tract, cardiopulmonary and neuroimaging. I am particularly interested in all aspects of liver imaging, and pancreatic-biliary disease. Neuroimaging

includes functional magnetic resonance (MR) including spectroscopy and diffusion tensor imaging. I am also interested in mathematical aspects of medical image processing. Other Research Interests include: Bioinformatics/Statistics, Cancer/Hematology, Lung, Medical Education, Men's Health, Advanced MR Imaging, Artificial Intelligence

IMMUNOLOGY / ALLERGY / SKIN



John Carlson, MD, PhD Associate Professor, Pediatrics – Allergy/Immunology - SOM <u>icarlso@tulane.edu</u> Environmental exposures and asthma



Lucy C. Freytag, PhD

Associate Professor, Microbiology and Immunology - SOM Irreyta@tulane.edu

I study the immune responses that occur in animals/humans as a result of infection or vaccination. We are interested in developing needle-free vaccines delivered in the right formulation (i.e., with

adjuvants and/or nanocarriers) to induce immunity. We have worked on potential vaccines against fungal (i.e., Candida, Cryptococcus), bacterial (i.e., B. anthracis, Salmonella) and viral (i.e., influenza) infections. Other Research Interests include: Infectious Diseases



Jay Kolls, MD

Professor, Medicine - SOM jkolls1@tulane.edu

The major goal of my research is to investigate mechanisms of mucosal host defenses in the lung in normal and immunocompromised using genetic models. Presently, my lab is investigating how IL-23, and IL-17,

and IL-22 regulate host defense against extracellular pathogens and epigenetic regulation of macrophage function. Additionally, I research host susceptibility to opportunistic infection such as Pneumocystis and is developing novel therapies against this pathogen. Other Research Interests include: Infectious Diseases, Lung; Single cell RNA sequencing



Samuel J. Landry, PhD

Professor, Biochemistry - SOM landry@tulane.edu

We combine biophysical and immunological approaches in vaccine design, with particular emphasis on the relationship of CD4+ T-cell epitope dominance to antigen structure, especially for HIV/AIDS. Other

Research Interests include: Cancer/Hematology



James B. McLachlan, PhD

Associate Professor, Microbiology and Immunology - SOM jmclachl@tulane.edu

I am currently studying the role of the adaptive immune response to persistent bacterial pathogens in order to design better vaccines. Other Research Interests include: Infectious Diseases

IMMUNOLOGY / ALLERGY / SKIN



Andrea Murina, MD

Associate Professor, Dermatology - SOM amurina@tulane.edu

My current education-based research projects include online adaptive learning modules for performance improvement, physical examination using virtual reality. In dermatology, I have interests in melanoma, vulvar

diseases, hidradenitis suppurativa, and other chronic inflammatory diseases of the skin. Other Research Interests include: Medical Education



Elizabeth B. Norton, MPH, PhD

Assistant Professor, Microbiology and Immunology - SOM enorton@tulane.edu

My research focuses on promoting a healthy immune system through animal model and primary human cell analyses. Ongoing areas of research include (1) how inflammation alters age-related immunity and vaccine efficacy, (2) how to best protect mucosal surfaces from

respiratory infections (flu, TB) and bacterial diarrheal diseases (ETEC), and (3) how derivatives from a unique bacterial toxin can act as vaccine adjuvants or anti-inflammatory therapies for gastrointestinal disease. Other Research Interests include: Aging, Gastroenterology, Infectious Diseases



Connie Porretta, BS, I, SCYM (ASCP),

Instructor and Director, Flow Cytometry and Cell Sorting (FCCS), Microbiology and Immunology - SOM <u>cporretta@tulane.edu</u>

My role is to provide state-of-the-art flow cytometry education, training and service to researchers within the Tulane community. Applications

include immune profiling, sorting of immune subsets and fluorescent reporter expressing cells, DNA content/cell cycle analysis, multi-plex bead assays and functional assays.



Felicia Rabito, PhD

Associate Professor, Epidemiology – SPHTM <u>rabito@tulane.edu</u>

My research interests are in asthma epidemiology, specifically the indoor environment. I am currently investigating factors associated with asthma outcome disparities and the influence of environmental (biologic and non-biologic) and social factors. I am interested in new

methods of exposure assessment in particular monitoring techniques to measure indoor air pollution and respiratory and cardiovascular health, and novel methods to measure medication adherence in populations with chronic diseases. Other Research Interests include: Asthma, Behavioral Health, Metals exposure, Pesticide

IMMUNOLOGY / ALLERGY / SKIN



Chad Steele, PhD

Professor and Chair, Microbiology and Immunology - SOM csteele4@tulane.edu

The current goals of my research are to better understand lung immune responses during acute vs. chronic exposure to the opportunistic fungal pathogen Aspergillus fumigatus. Specifically, we investigate pathways that positively and negatively regulate IL-22

production as well as the antifungal immune pathways induced by IL-22. Themes include common γ-chain cytokines, innate lymphocytes and eicosanoid biology. An important shift in my lab over the last several years has been focused on the identification of inflammatory biomarkers, immune cells and pathways in human diseases that correlate with lung function decline, and bringing these observations back to experimental animal models to provide mechanistic insight. During chronic exposure, which is a model of severe asthma with fungal sensitization as well as chronic fungal exposure during diseases such as cystic fibrosis, our major focus is on various inflammatory mediators we have identified in human subjects. Themes include various IL-1 family members, unique chemokines and chitinase-like proteins. Other Research Interests include: Infectious Disease, Lung



Pyone Pyone Aye, PhD, BVS

Associate Professor, Comparative Pathology – TNPRC paye@tulane.edu

My research interest is in cellular immune responses, pathogenesis of infectious diseases and substances, drugs, and vaccine effects on HIV/SIV pathogenesis and immunity. Other Research Interests include:

Infectious Diseases



Jacob Bitoun, PhD

Assistant Professor, Microbiology and Immunology - SOM jbitoun@tulane.edu

The long-term goal of my laboratory is aimed at developing a safe and effective ST-toxoid vaccine candidate. Since ST is small, it is not immunogenic. We are pursuing conjugation chemistry and other

delivery systems to make ST and ST-toxoids immunogenic for inclusion into current pipeline ETEC vaccines.



Ron Blanton, MD, MsC

Professor and Chair, Prevention of Tropical Medicine – SPHTM rblanton1@tulane.edu

My lab has 2 main lines of investigation, the application of population genetics of schistosomes for public health and the role of sanitation in persistence and distribution of antimicrobial resistance in enteric

bacteria. We employ microbial source tracking, microsatellite genotyping and whole genome sequencing (proposed). Other Research Interests include: Parasites, antimicrobial resistance, sanitation



Rudolf (Skip) Bohm, DVM

Professor and Associate Director of Veterinary Resources, Veterinary Medicine – TNPRC

bohm@tulane.edu

My overall interest is in the development of nonhuman primate models to support a variety of research programs with emphasis on infectious

disease studies. As the Chair of the Division of Veterinary Medicine, I provide oversight for the provision of veterinary medical care for the nonhuman primate breeding colonies and support for research programs utilizing nonhuman primates. We use the rhesus monkey breeding colony for population studies in infectious disease, behavior, and genetics. I direct the Tulane University Laboratory Animal Medicine Training Program which is an American College of Laboratory Animal Medicine recognized residency program. The program prepares veterinarians for board certification in the specialty of laboratory animal medicine.



Nathalie Busschaert, PhD

Assistant Professor, Chemistry – SSE <u>nbusschaert@tulane.edu</u>

My research focuses on small molecules that can either transport anion across biological membranes, or bind to the headgroups of lipids in the membrane. These molecules can find applications as antibiotics and as therapeutics for other diseases.



Partha Chandra, PhD

Assistant Professor, Pharmacology - SOM <u>Pchandr1@tulane.edu</u> I am investigating the role of exosomes released by HIV-1 infected cells in the development of neuropa

HIV-1 infected cells in the development of neuropathogenesis in brain microvasculature. I am exploring the sex-dependent differential expression of mitochondria and its related genes and proteins in cerebral microvessels using both RNA-Seq and LC-MS/MS-based proteomic approaches. I am also engaged to study the mesenchymal stem-cell based gene therapy for latent HIV-1 eradication by "shock and kill" approach. Other Research Interests include: Aging, Neurosciences, Stem Cell Research



Srikanta Dash, PhD

Professor, Pathology and Laboratory Medicine - SOM <u>sdash@tulane.edu</u>

I study the role that endoplasmic reticulum (ER-stress)/ unfolded protein response plays in various forms of liver diseases related to viral and non-viral etiologies. My laboratory investigates basic mechanism how ER-stress/UPR stress response in the liver improves

cell survival pathway by inhibiting cellular apoptosis and cellular autophagy that leads to development of hepatocellular carcinoma and exosome release. We are using this exosome based platform to measure stress exosomes as a serum biomarker for early prediction of liver cancer (hepatocellular carcinomas) among patients with liver cirrhosis. Other Research Interests include: Cancer, Cardiology



Prasun K. Datta, PhD

Associate Professor, Comparative Pathology and Microbiology & Immunology – TNPRC pdatta@tulane.edu

Our research interest is in elucidating the role of metabolism in HIV-1 biogenesis and survival in latent CNS reservoirs such as

macrophage and microglia, and the effects of HIV-1 induced neuroinflammatory cytokines and small extracellular vesicles released from HIV-1 infected macrophage and microglia on the regulation of astrocyte glutamate transporter, EAAT2, and neurodegeneration. We are also interested in assessing the impact of substances of abuse such as opiate and cocaine on the cross-talk between cellular metabolism and epigenetics in HIV-1 biogenesis in macrophage and microglia, and astrocyte EAAT2 and non-coding RNA regulation. With the emergence of SARS-CoV-2, we are interested in assessing the longterm effects of SARS-COV-2 in lung and kidney injury in mice and non-human primates. Other Research Interests include: Kidney/Hypertension, Lung, Neurosciences



Arnaud Drouin, MD

Assistant Professor, Medicine – Gastroenterology - SOM adrouin@tulane.edu

I study the expression of mu opiate receptor and microRNA in various models of irritable bowel disease in rat/mouse by dual immunohistochemistry and in situ hybridization on frozen sections in colon/spinal cord. A serum-based platelet activation assay to evaluate

risk of severe secondary dengue infection. Other Research Interests include: Cancer/Hematology, Cardiology, Immunology/Allergy/Skin



Eric Dumonteil, PhD

Associate Professor, Tropical Medicine – SPHTM edumonte@tulane.edu

I am carrying out multidisciplinary studies for the development of new control tools for neglected tropical diseases, ranging from diagnostics, drugs and vaccines, to community based vector control interventions. Other Research Interests include: Bioinformatics / Statistics, Immunology / Allergy / Skin



Paul Fidel, PhD

Associate Professor, Microbiology and Immunology – LSU pfidel@lsuhsc.edu

We are studying the role of trained innate immunity against sepsis. Specifically, we use live attenuated fungal isolates as a vaccine that induces myeloid-derived suppressor cells as a form of trained innate

immunity, and protects against a lethal fungal/bacterial challenge. The studies are currently being conducted in a mouse model with the aim of uncovering the mechanisms of the trained innate response in the bone marrow.



Hannah Frank

Assistant Professor, Ecology and Evolutionary Biology - SSE <u>hkfrank@tulane.edu</u>

I study disease ecology and host-pathogen coevolution in bats using a mix of field work, molecular infection screening, host genomics and statistical modeling. I also research the genomic basis of adaptive

immunity in bats and other non-model organisms as well as the adaptive immune response to rabies infection in bats. Other Research Interests include: Genetics, Immunology/Allergy/Skin



Dahlene Fusco, MD, PhD

Assistant Professor, Medicine – Infectious Diseases - SOM <u>dfusco@tulane.edu</u>

My laboratory is focused on the mechanism through which type I interferon suppresses RNA viruses, including dengue and Zika virus. We have used functional genetics to identify 56 genes required for IFN-mediated suppression of dengue. We are now evaluating the multi-viral

impact and mechanism of action of a subset of these genes, aiming to apply this data toward identification of biomarkers/leads for antiviral development. Other Research Interests include: Innate Immunity; Bone Development



Robert Garry, PhD

Professor, Microbiology and Immunology - SOM rfgarry@tulane.edu

My research involves development of modern immunoassays for Lassa fever and diseases caused by other highly pathogenic viruses. We are also developing entry inhibitors for various enveloped viruses, including influenza virus.



Susan Hassig, DrPH, MPH

Associate Professor, Epidemiology – SPHTM shassig@tulane.edu

I have been a faculty member of the Epidemiology Department since 1996, after more than a decade of work in HIV research, surveillance, and intervention programs in the U.S. and around the globe. I have also served in the Peace Corps, where she worked to improve disease

diagnosis methods and blood transfusion safety in Thailand.



Tony Hu, PhD

Professor, Biochemistry and Molecular Biology - SOM <u>yhu16@tulane.edu</u>

My research focuses on the development of nanomaterial platforms and proteomic approaches that are designed to enrich biomarker capture from microbial pathogens, or enhance biomarker signal, to

improve the detection sensitivity, specificity, or quantitation of pathogen-derived soluble or extracellular vesicle (EV)-associated factors in complex biological samples. My research differs from conventional biomarker discovery and detection research for clinical microbiology in that it employs the special properties of nanomaterials to improve assay performance and reproducibility. I have made significant contributions to microbial diagnostics for critical global health initiatives, including a serum/plasma assay for all forms of tuberculosis and a mass spectrometry-based approach to differentiate closely related mycobacterium and Ebolavirus species. Other Research Interests include: Cancer/Hematology, Medical Devices, Peptides Chemistry



Mac Hyman, PhD

Professor, Mathematics – SSE <u>mhyman@tulane.edu</u>

My research is the development and application of mathematical models based on the underlying disease transmission mechanisms to help the medical/scientific community understand and anticipate

the spread of an epidemic and evaluate the potential effectiveness of different approaches for bringing the epidemic under control. My current research is focused on vector-borne diseases, such as dengue fever, malaria, chikungunya, and West Nile Virus. Other Research Interests include: Bioinformatics/Statistics



Amitinder "Miti" Kaur, MD

Professor, Microbiology and Immunology – TNPRC <u>akaur@tulane.edu</u> My laboratory is currently pursuing projects on mechanisms of

protection against AIDS in natural hosts of SIV infection, natural killer T cells as adjuvants and modulators of immune activation, immune

protection against congenital CMV in rhesus macaques, and the early host response to vaccines and SIV infection in nonhuman primate models of AIDS. Other Research Interests include: Immunology/Allergy/Skin, Women's Health



Patty Kissinger, BSN, MPH, PhD

Professor, Epidemiology; Associate Dean for Faculty Affairs - SPHTM kissing@tulane.edu

I have worked in HIV and other sexually transmitted infections for over 30 years. My work has been in Chlamydia trachomatis and Trichomonas vaginalis control. I also serve as Associate Editor of the journal Sex Transm Dis and was a member of the NASEM committee

to examine why STIs are increasing in the US. I currently focus on COVID-19 research and have been the PI/co-PI of 4 grants in COVID. Other Research Interests include: Behavioral Health, Men's Health, Women's Health, Substance Use, STIs



Shitao Li, PhD

Associate Professor, Microbiology and Immunology - SOM <u>sli38@tulane.edu</u>

Using a proteomics approach, our laboratory mapped the protein interaction networks of RIG-I and cGAS, which consist of many novel binding factors. The current research goal of our team is to elucidate

how these factors regulate RIG-I or/and cGAS signaling pathways. We adopt various omics, molecular approaches, and genetics to investigate their roles in nucleic acidmediated innate immunity. We also extend these studies to elucidate the role of innate immunity in autoimmune diseases and cancers using several mouse models established in the laboratory. Another interest in our laboratory is to study the interactions between influenza A virus and host, and how these interactions modulate host defense and viral infection. We have established comparative influenza-host protein interaction networks. From the pilot screening of a small pool of our network, we found several novel anti-flu host factors. We will continue the screening and investigate the role of new host factors in influenza pathogenesis.



Alfred Luk, MD

Assistant Professor, Medicine – Infectious Diseases – SOM aluk@tulane.edu

My focus is in Transplant Infectious Diseases & Immunocompromised Hosts. I have interests in clinical trials and advanced clinical diagnostics such as the use of a commercial next-generation

sequencing assay in the diagnosis of pneumonia in immunocompromised hosts and other biomarker research in HIV positive-to-positive kidney transplantation.



Jennifer Manuzak, PhD

Assistant Professor, Microbiology and Immunology – TNPRC jmanuzak@tulane.edu

My main research focus is on using the nonhuman primate model to determine the role of innate immune cells in mucosal dysfunction during SIV/malaria co-infection and to characterize the

immunopathogenesis of malaria in pregnancy (MIP), in the presence and absence of SIV co-infection. Additionally, my lab works to examine the impact of substance use, particularly cannabis, on immunity and biobehavioral factors leading to increased HIV transmission risk in disproportionately burdened populations and pathogenesis in people with HIV. Ultimately, these efforts will contribute to advances in HIV prevention efforts, reveal novel therapeutic targets for improving clinical outcomes in people with HIV, and mitigate the risk of MIP-associated morbidity and mortality in pregnant women with HIV. Other Research Interests include: Gastroenterology, Immunology/Allergy/Skin, Infectious Diseases, Women's Health



Nicholas Maness, PhD

Associate Professor, Microbiology – TNPRC <u>nmaness@tulane.edu</u>

We study the immunology and Virology of HIV/SIV and emerging viruses, including SARS-CoV-2, Zika and others. We work with both BSL-2 and - 3 viruses and develop in vitro neutralization and other assays and use next gen viral sequencing to study viral evolution.



Preston A. Marx, PhD

Professor, Tropical Medicine - SPHTM pmarx@tulane.edu

My research interests are the evolution and emergence of epidemic strains of HIV-2 in West Africa. I also conduct research on anti-viral vaccines, currently HIV and Dengue virus vaccines. I am interested in

prevention of STDs to women through the development of anti-viral vaginal microbicides. He primarily uses non-human primate models in his research. Other Research Interests include: Women's Health



Lisa A. Morici, PhD

Associate Professor, Microbiology and Immunology Imorici@tulane.edu

The majority of infectious diseases for which we lack an effective vaccine will require rational vaccine design and new approaches for

eliciting protective immune responses. In order to achieve the best immunological response, a vaccine must induce antibody and T cell memory responses within the tissues most vulnerable to infection. My laboratory is addressing this challenge by examining the impact of adjuvant, route, and location of immunization on vaccine efficacy against difficult infections, such as those caused by SARS CoV-2, Bordetella pertussis, and Pseudomonas aeruginosa. Other Research Interests include: Lung

Lina Moses, PhD, MSPH

Associate Professor, Global Community Health and Behavioral Sciences - SPHTM

Imoses2@tulane.edu

My research focuses on applied public health research, with particular emphasis on implementation of evidence-based interventions for vector-borne and zoonotic diseases at the community level. I'm also

interested in human and animal surveillance for zoonotic and emerging diseases, both from traditional indicator-based and community-event based approaches. Other Research Interests include: Behavioral Health



JC Mudd, PhD

Assistant Professor, Microbiology and Immunology – TNPRC jmudd1@tulane.edu

Although antiretroviral therapy (ART) is highly effective at limiting the extent of HIV-1 infection, the virus can hide out in 'latent' form in the genome of CD4 T cells, undergoing little or no transcription and thus remaining undetected by the immune system. Our lab explores

approaches to eradicate the HIV reservoir, and seeks to understand why currentlyimplemented HIV cure approaches face efficacy hurdles.

Other Research Interests include: Bioinformatics/Statistics

Immunology/Allergy/Skin



David A. Mullin

Associate Professor, Cell and Molecular Biology – SSE <u>damullin@tulane.edu</u>

My research interests are in the production of advanced liquid biofuels that can be used in place of gasoline and the development of a new class of antibacterial compounds that I discovered.



David Mushatt, MD, MPH

Professor, Medicine – Infectious Diseases - SOM <u>dmushatt@tulane.edu</u>

My focus is in HIV therapeutics, serving as the local PI for the Tulane site of the International Network for Strategic Initiatives in Global HIV Trials (INSIGHT). In addition, I am working with Deepak Kaushal, PhD at the Tulane Primate Center to develop a non-human primate model

of pulmonary M. avium complex infection.



Bo Ning, PhD Assistant Professor, Biochemistry and Molecular Biology - SOM <u>bning1@tulane.edu</u>



Mairi Noverr, PhD

Professor, Microbiology and Immunology – SOM mnoverr@tulane.edu

My lab research activities focus on investigating mechanisms of immunomodulation and sepsis caused by C. albicans and non-albicans Candida species (NAC) during invasive infection. We have developed a

polymicrobial intra-abdominal infection (IAI) model with C. albicans and S. aureus, two pathogens that inhabit the same niches in the host, and that cause synergistic effects on mortality and promote sepsis. We have also discovered that low virulence NAC species induce protective immunity against highly lethal polymicrobial IAI. Rather than adaptive immunity, this protection is dependent on long-lived Gr-1+ leukocytes, suggestive of a novel form of trained innate immunity mediated by myeloid-derived suppressor cells (MDSCs). Current projects in the lab are focused on investigating both mechanisms of infectious synergy between C. albicans and S. aureus, and mechanisms of trained innate immunity against sepsis. Other Research Interests include: Sepsis, Vaccinology, Trained Innate Immunology.



Richard Oberhelman, MD

Professor and Associate Dean for Global Health, Tropical Medicine – SPHTM

oberhel@tulane.edu

I am a pediatric infectious diseases and tropical medicine specialist with more than thirty years' experience in designing and conducting international infectious diseases clinical research projects and diagnostic investigations.

My primary research interests are the prevention and control of enteric infections and associated malnutrition in children from resource-poor environments, and novel diagnostic approaches for tuberculosis in children. I am actively involved in interdisciplinary international research training and capacity building through several NIH training grants where I serve as PI or as a consortium site director. Other Research Interests include: Medical Education, Public Health, Tropical Medicine



Bapi Pahar, DVM, PhD, MBA

Associate Professor, Pathology – TNPRC bpahar@tulane.edu

I have a broad background in cellular and humoral immunology and virology, and have worked for over 15 years in the macaque model. My research involves determining antigen-specific T and B cell responses in

infant and adult macaques in relation to vaccine and infection; understanding the role of intestinal stem cells in regulating intestinal epithelial cell proliferation; mucosal innate immune responses; 3-D primary cell culture; role of immunoregulatory cytokines in regulating intestinal homeostasis; and HIV pathogenesis. Other Research Interests include: Gastroenterology, Immunology/Allergy/Skin, Infectious Diseases



Kislay Parvatiyar, PhD

Assistant Professor, Microbiology and Immunology, SOM kparvatiyar@tulane.edu

We are interested in how nucleic acid sensing pattern recognition receptors contribute to antiviral host defense and how their dysregulation plays a role in instigating autoinflammatory diseases as well as antitumor responses. Other Research Interests include: Aging,

Cancer/Hematology, Immunology/Allergy Skin



Jay Rappaport, PhD

Professor, Microbiology and Immunology Director and Chief Academic Officer, Tulane National Primate Research Center - TNPRC jrappaport@tulane.edu

My current research focuses on SARS-CoV-2 with focus on pathogenesis, vaccines, and novel therapeutics. Other Research

Interests include: Aging, Behavioral Health, Cardiology, Gastroenterology, Genetics, Imaging, Immunology/Allergy/Skin, Kidney/Hypertension, Lung, Medical Devices, Medical Education, Men's Health, Neurosciences, Regenerative Medicine/Tissue Engineering, Stem Cell Research, Women's Health.

James E. Robinson, MD

Professor, Pediatrics – Infectious Diseases - SOM jrobinso@tulane.edu

My research is focused on dissecting B cell responses to human and primate retroviruses, dengue virus, and lassa fever virus in naturally infected hosts. We produce human and monkey monoclonal antibodies that define which antibodies mediate activities that might

protect against infection. The antibodies define structures that are capable of eliciting protective immune responses. In theory monoclonal antibodies should aid in vaccine design.



Namita Rout, PhD

Assistant Professor, Immunology – TNPRC <u>nrout@tulane.edu</u>

I lead nonhuman primate studies focused on HIV pathogenesis and cure strategies, pathogenesis of HIV/TB coinfection, mucosal immunity and inflammation of aging, and innate T cell biology. I also explore cellular immunology with a particular focus on unconventional T cells that recognize non-peptide antigens such as

lipids and small metabolites.



Chad Roy, MSPH, PhD

Professor, Associate Dean for Research – SOM <u>croy@tulane.edu</u>

I am a career aerobiologist focused on respiratory health and the aerobiology of airborne infectious diseases; specifically, on gaining a better understanding of aerosol infection in the context of the development and application of preclinical disease models. The

majority of my efforts are directed in the use of the nonhuman primate for this purpose. My laboratory works with a diverse array of infectious and highly toxic agents considered biological threat agents rather than a singular focus on a particular class or agent. My current research portfolio includes evaluation studies of antivirals in aerosol-induced poxviral infections, and evaluation of optimized monoclonal antibodies as therapeutic agents for toxin (SEB and ricin) exposure. I am also involved in investigation of the immunogenicity and protective efficacy of virally-vectored vaccines against aerosol-initiated alphaviral disease. There are also significant efforts ongoing in my laboratory to develop disease models for biothreat agents such as *Burkholderia pseudomallei* in the nonhuman primate. Other Research Interests include: Lung



Patricia Y. Scaraffia, PhD

Assistant Professor, Tropical Medicine - SPHTM pscaraff@tulane.edu

My expertise is in insect metabolism, specifically in Aedes aegypti mosquitoes, vectors of dengue, yellow fever, chikungunya, and Zika viruses. My research interests include medical entomology, vector

control, parasitology, and development, optimization, and application of mass spectrometry techniques. My laboratory uses traditional and cutting-edge approaches, including RNA interference, isotopically-labeled compounds, and mass spectrometry. We are particularly interested in unraveling the physiological, biochemical, and molecular bases underlying the regulation of nitrogen and carbon metabolism in mosquitoes, as well as in discovering new metabolic targets that can be used for the design of better mosquito-control strategies. Other Research Interests include: Medical Entomology



John S. Schieffelin, MD, MSPH

Associate Professor, Pediatrics and Medicine - Infectious Disease - SOM

jschieff@tulane.edu

My two main areas of research are 1. Antibody response to viral hemorrhagic fever infections and 2. Natural history, diagnosis and

treatment of Lassa fever and Ebola virus disease. Both of these areas of interest involve the development of novel diagnostic platforms and treatment and prevention strategies. Other Research Interests include: Immunology/Allergy/Skin, Virology



Qingbo Shu, PhD Assistant Professor, Biochemistry and Molecular Biology- SOM <u>qshu@tulane.edu</u> Research interests: Cancer, Hematology, Mass Spectrometry



Margarita Silio, MD, MPH Associate Professor, Pediatrics – Infectious Diseases – SOM <u>msilio@tulane.edu</u> I am PI of the Pediatric HIV/AIDS Cohort Study and co-investigator in the HIV vaccine trial HVTN-706. Other Research Interests include: Women's Health. Pediatrics



Kristefer Stojanovski, PhD

Research Assistant Professor, Social, Behavioral, and Population Sciences – $\ensuremath{\mathsf{SPHTM}}$

kstojanovski@tulane.edu

My research expertise spans monitoring and evaluation, policy analysis, and community-rooted research. I develop, implement, and

manage large-scale global studies, particularly in Southeastern Europe and Africa related to the health of LGBTQ+ communities. In addition, I use evidence synthesis methods to develop evidence maps and conceptual models of systems of interaction that create health inequities. My research is rooted in systems science, aiming to understand and intervene in the myriad of relationships and interactions stemming from oppression and marginalization that shape health inequity.



Vicki Traina-Dorge, PhD

Associate Professor, Microbiology and Immunology - TNPRC <u>vtraina@tulane.edu</u>

My research interests focus on nonhuman primate (NHP) models of pathogenic virus infections, including SVV, SIV, RSV, and SARS CoV-2, as well as, testing of vaccines and therapeutics to combat those

infections. Our shingles program focuses on SVV pathogenesis in the NHP characterize subclinical reactivation and multi-organ inflammation causing not only shingles, but stroke, arteritis, ocular infections, and potentially, Alzheimer's disease. We are testing RSV infection and RSV and SARS Co-V2 coinfections in the mouse and in vitro organoid models. We recently completed preclinical trials testing prophylactic vaccine efficacies with a SVV vectored SIV vaccine to identify immune correlates of protection and ultimately, to develop a vaccine against HIV. Other Research Interests include: Aging, Immunology/Allergy/Skin, Neurosciences



Monica Vaccari, PhD

Associate Professor, Microbiology and Immunology – TNPRC <u>monicavaccari@hotmail.com; mvaccar@tulane.edu</u>

The focus of my lab is to understand the roles, relationships, and actions of pro-inflammatory and anti-inflammatory immune responses that lead to favorable or unfavorable disease and vaccine outcomes. We are particularly interested in studying how to harness

innate and adaptive immune responses to increase the efficacy of current prophylactic HIV vaccines, and understanding the contribution of dysfunctional immune responses and immunoregulatory processes to disease progression in SARS-CoV-2, HIV and HIV related comorbidities. Other Research Interests include: Behavioral Health and Immunology/Allergy/Skin.

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Ronald S. Veazey, DVM, PhD

Professor, Pathology - TNPRC rveazev@tulane.edu

I research the immunology, prevention, and treatment of HIV infection and AIDS. Current projects involve determining correlates of protective immune responses, testing new HIV therapies and

preventatives (microbicides), and examining the immune response to HIV infection in mucosal tissues, including the intestinal and reproductive tracts. I am also examining the pathogenesis of SIV infection in pediatric hosts, and the effects of alcohol use as a cofactor in the susceptibility and progression to AIDS. Other Research Interests include: Gastroenterology, Immunology/Allergy/Skin, Infectious Diseases, Neurosciences.



Xiaolei Wang, PhD

Associate Professor, Comparative Pathology – TNPRC xwang@tulane.edu

My research interests are the immune system of infants, with a particular focus on mucosal immunology. We currently work on tracking & comparing the development of the systemic & mucosal

immune systems in the neonates, & study the immune responses to the vaccines & pathogens in infant nonhuman primates. We also seek to understand immune control of virus & eradication of reservoirs to achieve a functional cure in pediatric AIDS patients. Other Research Interests include: Infectious Diseases



Huanbin Xu, PhD Assistant Professor, Pathology – TNPRC hxu@tulane.edu

My research focuses on correlates of immunity to HIV infection, the immunology and pathogenesis of AIDS, and testing new and novel therapeutic strategies to eliminate viral reservoirs and "cure" pathogenic

infection in the highly relevant SIV/SHIV macaque models of HIV infection. His current work is to optimize universal delivery systems for vaccines and drugs, designed to eradicate viral reservoirs by combining new and novel approaches with innovative molecular biology techniques in nonhuman primate models.

Crystal Zheng, MD

COVID

Assistant Professor, Infectious Diseases - SOM <u>czheng5@tulane.edu</u>

I study the prevalence and pathophysiology of amenorrhea and other reproductive health outcomes among women Ebola survivors in Sierra Leone. Other Research Interests include: Women's Health,



Amanda Anderson, PhD, MPH

Associate Professor, Epidemiology - SPHTM <u>aanderson5@tulane.edu</u> My major research interests address the epide

My major research interests address the epidemiology of kidney diseases, with an emphasis on the causes and consequences of the excessive morbidity and mortality experienced by patients with chronic kidney disease (CKD). I focus particularly on factors associated with CKD

progression including fibrosis measures and the gut microbiome, prediction of kidney function decline over time, and the insufficiently characterized burden of co-morbidities and outcomes associated with CKD. Other Research Interests include: Bioinformatics/Statistics, Gut Microbiome, Biomarkers

Vecihi Batuman, MD



Professor, Medicine - Nephrology and Hypertension - SOM vbatuma@tulane.edu

I study renal metabolism and toxicity of myeloma light chains, biomarkers of tubular injury, acute kidney injury mechanisms, therapeutic strategies, radio-contrast-induced kidney injury, Balkan endemic nephropathy, and environmental kidney disease. I lead

research efforts in nephropathy and hypertension.



Rhea Bhargava, MD

Assistant Professor, Medicine – Nephrology & Hypertension – SOM Rbhargava@tulane.edu

My research focus is to evaluate the interaction of the immune system with the kidney in autoimmune disorders like SLE. Currently I am evaluating the pathogenic events prior to the development of nephritis in those with SLE. These include the glycosylation pattern on IgG that characterizes SLE patients with lupus nephritis, cell

signaling induced by these IgG in kidney resident cells and utilizing these findings to develop noninvasive bioassays for lupus nephritis. I hope to comprehensively characterize the events prior to and in early lupus nephritis, determine their prognostic and predictive value, and identify opportunities for new therapies. Other Research Interests include: Immunology/Allergy /Skin



Heddwen Brooks, PhD

Professor and Chair – Physiology – SOM hlbrooks@tulane.edu

We examine how sex differences impact physiology and pathophysiology, specifically how postmenopausal accelerated aging impacts chronic inflammatory diseases such as hypertension and diabetes. We study how estrogen loss impacts T cell and macrophage signaling to induce end organ damage and have used our preclinical menopause model to study the onset of

postmenopausal asthma, vascular cognitive dementia, Alzheimer's, kidney, and CV disease.



Jing Chen, MD

Professor, Medicine – Nephrology and Hypertension - SOM jchen@tulane.edu

My research interests are the etiology, prevention, and treatment of chronic kidney disease and hypertension, cardiovascular disease in chronic kidney disease metabolic syndrome, and obesity related kidney

disease. I also study vascular calcification in chronic kidney disease, diabetic nephropathy, and gene-environment interaction in chronic kidney disease and hypertension.



L. Lee Hamm, MD

Dean, School of Medicine - SOM <u>lhamm@tulane.edu</u>

I have previously studied acid-base homeostasis including basic mechanisms and clinical disorders, citrate transport in the kidney related to stones, sodium transport in the kidney related to

hypertension, cardiovascular disease in Chronic kidney disease, and genetic mechanisms of kidney disease and hypertension.



Robert S. Hoover, MD

Associate Professor, Medicine, Chief of Nephrology – SOM <u>Rhoover3@tulane.edu</u>

I study the impact of kidney distal tubular sodium on hypertension. We use in vivo assessments in transgenic animals as well as in vitro cell culture based techniques to address these questions.



Kathleen S. Hering-Smith, PhD

Associate Professor, Medicine – Nephrology - SOM khering@tulane.edu

We have significant experience and expertise in epithelial transport biology and cell and molecular techniques using a wide variety of kidney tubule cell lines. Most of these studies have addressed sodium,

acid-base, and citrate transport, the latter an important inhibitor of kidney stones. Recently these studies have led to related issues involving diabetes and intermediate cell metabolism. Current techniques involve CRISPR knock-out studies and RNA-Seq. Other Research Interests include: Kidney Transport Physiology



Suttira Intapad, PhD

Assistant Professor, Pharmacology - SOM <u>sintapad@tulane.edu</u>

I am interested in research related to the developmental programming of chronic diseases, especially cardiovascular disease, and how an improper environment during fetal development such as preeclampsia can result in long-lasting effects on an individual's health. Other

Research Interests include: Neurosciences, Women's Health



Jia Zhuo, MD, PhD

Professor, Physiology - SOM

Director, Tulane Hypertension and Renal Center of Excellence jzhuo@tulane.edu

My laboratory is interested in studying the roles of endocrine (tissueto-tissue), paracrine (cell-to-cell), and intracrine (endosomal, mitochondrial and nuclear) angiotensin II (ANG II) and its G proteincoupled receptor (GPCR) signal mechanisms in the proximal tubules

of the kidney and blood pressure control. Supported by three R01 grants from the NIDDK, the laboratory currently investigates: 1) the molecular and signaling mechanisms by which circulating and paracrine ANG II is taken up by the proximal tubule of the kidney to act as an intracellular peptide; 2) high resolution confocal and electron microscopic autoradiographic localization of the internalized ANG II and its receptors in intracellular organelles including endosomes, mitochondria and nucleus; 3) the effects and signaling mechanisms by which intracellular ANG II induces long-term genomic or transcriptional effects; 4) the role of the sodium and hydrogen exchanger 3 (NHE3) in the proximal tubule of the kidney on pressure natriuresis and blood pressure responses to paracrine and intracellular ANG II; and 5) the role and signaling mechanisms of proximal tubule ANG II and AT1a receptors in the pathogenesis of renal ischemia and reperfusion injury and kidney diseases. Other Research Interests include: Aging,

Associate Professor, Medicine – Nephrology - SOM



patients.

Xiao Li, MD, MsC Assistant Professor, Physiology – SOM Xli68@tulane.edu L research physiological omics. G prot

Myra A. Kleinpeter, MD, MPH

mkleinp@tulane.edu

I research physiological omics, G protein-coupled receptors, renal physiology, kidney tubular transport, experimental hypertension, kidney injury, and utilize transgenic mouse models.

I provide chronic kidney disease education and interventions to improve outcomes in patients with low health literacy and/or from underserved populations. I also study disaster outcomes in ESRD



Hongbing Liu, PhD Assistant Professor, Pediatrics – Nephrology - SOM hliu8@tulane.edu

I study the nephric lineage-specific functions of class I histone deacetylases (HDACs) in kidney development. Other Research Interests include: Cancer/Hematology, Genetics.



Dewan Syed Abdul Majid, MBBS, PhD

Professor, Physiology - SOM majid@tulane.edu

My research focus is the elucidation of the intra-renal mechanisms regulating renal hemodynamics and excretory function by endothelial/vasoactive factors. Elucidation of the mechanistic link between Oxidative stress, inflammation and salt-sensitive

hypertension. Other Research Interests include: Nitric Oxide, Oxidative Stress, Inflammatory molecules, etc.



Kenneth D. Mitchell, PhD

Professor, Physiology - SOM kdmitch@tulane.edu

My research interests are oriented toward evaluation of the mechanisms underlying the renal functional derangements that contribute to the pathogenesis of angiotensin II-dependent hypertension.



Nazih Nakhoul, PhD

Associate Professor, Medicine - Nephrology and Hypertension - SOM

nakhoul@tulane.edu

I study cellular and molecular mechanisms of renal regulation of acidbase balance and pH regulation. We have identified new

mechanisms of ammonia transport in the kidney that contribute to acid excretion by the kidney and we are investigating the role of acidosis as an epigenetic factor. Other Research Interests include: Gastroenterology, Imaging



L. Gabriel Navar, PhD

Professor, Physiology - SOM <u>navar@tulane.edu</u> Research in my lab consist of studies on experimental hypertension and the regulation of the intrarenal renin-angiotensin system.



Kailash N. Pandey, PhD

Professor, Physiology - SOM kpandey@tulane.edu

Our research is focused on the genetic and molecular basis of hypertension and cardiovascular disorders in a sex-and agedependent manner. Our long-term objectives are to determine the function of atrial and brain natriuretic peptides (ANP, BNP) that

interact with guanylyl cycles/ natriuretic peptide receptor-A (GC-A/NPRA) which plays a central role in pathophysiology of hypertension and cardiovascular disorders. We hope to learn the transcriptional regulatory elements and the impact of Npr1 gene dosage globally and in the cell-specific manner in vivo in regulating the blood pressure and cardiovascular disorders. Other Research Interests include: Aging, Genetics, Cardiovascular



Minolfa C. Prieto, MD, PhD

Associate Professor, Physiology - SOM mprieto@tulane.edu

My research interests include: renal physiology; experimental hypertension; the role of intrarenal RAS in hypertension; angiotensin II-dependent hypertension; the role of collecting duct renin and prorenin receptor interaction in the control blood pressure;

mechanisms of regulation of renin and prorenin receptor in the collecting duct in hypertension and diabetes mellitus; contributions of gender differences of the intrarenal RAS to the development of hypertension; intrarenal RAS activation in diabetic nephropathy; renal morphological rearrangements in hypertension; and effects of salt intake on renal damage during hypertension. Other Research Interests include: Women's Health, Sex differences in hypertension.



Ryosuke Sato, PhD

Assistant Professor, Physiology - SOM rsato@tulane.edu

We investigate molecular mechanisms underlying regulation of intrarenal renin-angiotensin system.



Eric Simon, MD Professor, Medicine - Nephrology and Hypertension - SOM <u>esimon@tulane.edu</u> I study diuretics in hypertension, aging and kidney function, acute kidney injury, and hemodialysis volume assessment.



Federico Teran, MD

Assistant Professor, Medicine - Nephrology and Hypertension - SOM <u>fteran@tulane.edu</u>

I am currently working on a developing a mouse model for kidney stone development and how certain electrolyte/compound transport in the kidneys affect the development of kidney stones.



Ihor V. Yosypiv, MD

Associate Professor, Pediatrics –Nephrology - SOM iiosipi@tulane.edu

I research kidney development, and particularly the renin-angiotensin system in ureteric bud branching morphogenesis. Other Research Interests include: renin-angiotensin system in kidney development

LUNG



Christine Bojanowski, MD

Assistant Professor, Medicine – Pulmonary and Critical Care - SOM <u>cbojanowski@tulane.edu</u>

My primary research interests are in lung immunology and host response to chronic infection. I am specifically interested in elucidating the role of IL-22 binding protein in host upper airway and lung defense and the

factors that contribute to chronic sinopulmonary infection. Other Research Interests include: Immunology/Allergy/Skin, Infectious Diseases



Joshua Denson, MD, MS

Assistant Professor, Medicine – Pulmonary and Critical Care – SOM jdenson@tulane.edu

My research surrounds the study of critically ill adults in the hospital by investigating novel approaches to identify and improve outcomes for this patient population. In this area, I have ongoing projects studying patient and provider outcomes surrounding ICU clinician transitions of care.

More recently, I have explored the relationship of metabolic syndrome as a unique phenotype for patients with Acute Respiratory Distress Syndrome (ARDS) related to COVID-19, and I continue to investigate the relationship between metabolic inflammation and acute lung injury in patients with critical illness unrelated to COVID-19. Other Research Interests include: Endocrine/Bone, Medical Education



Donald Gaver, PhD

Professor and Chair, Biomedical Engineering – SSE <u>dpg@tulane.edu</u>

My general area of research involves biofluid mechanics, biotransport, and mathematical modeling to understand physiological systems. Our research focuses on the lung, with experiments and computational models that are aimed at understanding acute respiratory distress

syndrome and the design ventilation methods that can reduce the severity of ventilatorinduced lung injury (VILI) that is a major contributor of mortality in ARDS. I also am the Director of Tulane's Interdisciplinary PhD program in BioInnovation. This is a T32 funded training program that prepares graduate students in scientific, regulatory, and entrepreneurship aspects that are critical to translating research findings to the marketplace.



Gary Haynes, MD, PhD

Professor and Chair, Anesthesiology - SOM ghaynes@tulane.edu

I am interested in point of care testing for assessment of hemostasis and coagulation as well as the use of non-invasive technology to assess hemodynamic function. Other Research Interests include: Aging, Cardiovascular, Endocrine/Bone, Immunology/Allergy/Skin,

Kidney/Hypertension Neurosciences
LUNG



Ross Klingsberg, MD

Associate Professor, Medicine - Pulmonary Diseases - SOM <u>rklingsb@tulane.edu</u>

My research focuses on corrector/potentiator medications for patients with CFTR mutations and cystic fibrosis. I also study bronchiectasis and mycobacterial diseases including tuberculosis and non-tuberculous mycobacteria. Additionally, I investigate anxiety and depression in

patients with chronic diseases, medical education, pulmonary rehabilitation, exercise therapy. Other Research Interests include: Behavioral Health, Endocrine/Bone, Genetics, Immunology/Allergy/Skin, Infectious Diseases, Medical Education



Joseph A. Lasky, MD

Professor and Section Chief, Medicine – Pulmonary Diseases - SOM <u>ilasky@tulane.edu</u>

My primary research interest involves basic and clinical aspects of pulmonary fibrosis. A significant component of the basic research program is focused on the role of class II HDACs in fibrogenesis, with an emphasis on the non-epigenetic functions of HDACs. The primary

thrust of this work now entails understanding which key fibrogenic signaling events are regulated by lysine acetylation. I also have an interest in the aging lung and so my laboratory is investigating the role of PML bodies in pulmonary fibrosis. Other Research Interests include: Again, Bioinformatics/Statistics



Anil Mishra, PhD

Professor of Medicine - Pulmonary Diseases & Critical Care - SOM amishra@tulane.edu

My research is aimed at deciphering mechanisms of inflammation, primarily based on discoveries concerning innate immunity. In particular, gene-environment interactions in the elicitation of

inflammatory states in the respiratory and gastrointestinal tracts are under investigation. Environmental triggers (such as aeroallergens and food allergens) are studied in the context of specific genetic variants (e.g., IL-15 and IL-18 signaling) using population studies (cross sectional and longitudinal prospective cohorts) and mechanism-driven studies. The biological properties of innate inflammatory cells (eosinophils, mast cells, iNKT cells, epithelial cells) and the cytokines (especially chemokines and cell surface receptors) that mediate their function are under investigation. Other Research Interests include: Gastroenterology

LUNG



Janet McCombs, PhD

Assistant Professor, Medicine - SOM jmccombs@tulane.edu

Working within the Center for Translational Research in Infection and Inflammation, I am interested in lung immunology and host responses to infections. Currently, I am investigating immune subversion mechanisms utilized by hypervirulent Klebsiella pneumoniae as a way to identify

potential immunotherapeutic strategies. In addition, I am interested in developing novel vaccines to lung pathogens. Other Research Interests include: Immunology/Allergy/Skin, Infectious Diseases



Gilbert Morris, PhD

Associate Professor, Department of Pathology - SOM gmorris2@tulane.edu

My research interests include modeling lung tumorigenesis in mice, lung tumor promotion by IL-17, and lung disease related to inflammasome repression by cigarette smoke. Other areas of interest include: Aging, Cancer/Hematology, Genetics, and Biology of gamma

herpesviruses.



Giovanni Piedimonte, MD

Vice President for Research; Professor - Pediatrics - SOM gpiedimonte@tulane.edu

I currently lead several funded projects involving basic, cellular, and molecular biology, as well as conducting translational research in both animal models and clinical trials. I have authored or co-authored

more than 400 peer-reviewed journal articles, book chapters, monographs, editorials, and abstracts, with the primary focus on airway inflammation; the neurobiology of the developing respiratory tract; pediatric respiratory diseases; the role of early viral respiratory infections and environmental pollution in the pathogenesis of asthma; the link between obesity, diabetes and asthma; and mother-to-fetus transmission of infections predisposing to chronic respiratory conditions.

LUNG



Derek Pociask, PhD

Assistant Professor, Medicine – Pulmonary Diseases - SOM dpociask@tulane.edu

I am interested in immune responses in the lung; specifically, in how aspects of the immune system can be exploited to reduce injury or promote repair during infection or injury. My lab uses models of chemical or particle injury (acid aspiration, bleomycin, asbestos) and

infectious injury (influenza, bacterial). While I am focused on the lung, my studies have branched to the liver, gut and thymus. The current major focus in my laboratory is the IL-22/IL-22BP axis and how this balance effects the immune response throughout the body. Other Research Interests include: Immunology/Allergy/Skin, Infectious Diseases

Shigeki Saito, MD, MsC

Assistant Professor, Medicine - Pulmonary & Critical Care Medicine - SOM

ssaito@tulane.edu

My research interests include pulmonary fibrosis, acute lung injury, and pulmonary hypertension. My current research projects: epigenetics (e.g. HDACs, miRNAs) of pulmonary fibrosis and pulmonary

hypertension. Other Research Interests include: Aging, Cardiology, Genetics



Adrienne Savant, MD

Professor, Pediatrics - Pulmonary - SOM

asavant1@tulane.edu

I am the Service Line Chief for Pediatric Pulmonology at Children's Hospital of New Orleans, Chief of Pediatric Pulmonology at Tulane University, the Tulane University Cystic Fibrosis Center Director, and the Pediatric Program Director for the Cystic Fibrosis Foundation

Therapeutic Development Network. I have served as a primary investigator in multi-center clinical trials related to cystic fibrosis, asthma, and neuromuscular diseases.

MEDICAL DEVICES



James Bennett, MD

Professor – Neurosurgery and Orthopedics – SOM <u>Jbennet1@tulane.edu</u>

I use advanced imaging utilizing computer-assisted navigation for the placement of pedicle screws. I also perform analysis of spinal implants used in deformity correction. Other Research Interests include: Imaging



Ryan Gelfand, PhD

Professor of Practice, Physics and Engineering – SSE Rgelfand1@tulane.edu

I am interested in developing optical methods for studying single protein biophysics. I use my studies in nanophotonics and nanofabrication to demonstrate novel medical devices and proof of

concept studies towards quantifying protein structure and behavior at the single molecule level. Other Research Interests include Imaging and Development of optical biophysics methods and single protein studies.



Peter Kastl, MD, PhD

Professor, Ophthalmology - SOM <u>pkastl@tulane.edu</u>

I have mainly researched contact lenses and their ocular effects. I have also performed tear analysis. Other Research Interests include: Bioinformatics/Statistics



Chenzhong, Li, PhD

Professor, Biochemistry and Molecular Biology Cli28@tulane.edu

My research focuses on biosensors, biomedical devices, biomarker detection, diagnosis and treatment. Other Research Interests include: Aging, Cancer/ Hematology, Cardiology, Infectious Diseases, Kidney/Hypertension, Medical Education, Neurosciences, Peptides

Chemistry, Diagnosis and Drug Screening

MEDICAL DEVICES



Noshir Pesika, PhD

Associate Professor, Chemical and Biomolecular Engineering - SSE <u>npesika@tulane.edu</u>

My research interest lies in developing cartilage mimicking surfaces that can be used in joint replacement devices. We have already demonstrated that we can fabricate polymer surface with a high degree of lubricity by through surface texturing. We would like to partner with a

medical doctor so as to move the project to the next step which would involve testing the biocompatibility and durability of the material. Other Research Interests include: Endocrine/Bone, Infectious Disease



Cedric Walker, PhD

Professor Emeritus, Biomedical Engineering – SSE <u>cfw@tulane.edu</u>

My work involves prototyping of new devices for medical research. The Tulane MakerSpace offers digital tools (3d printers, laser cutters, CNC mill and lathe) and training in their use to students, staff and faculty.

Most projects are "DIY" but there is a mechanism to hire our student workers for specific projects beyond the scope of the researcher requesting them. Other Research Interests include: 3D printing, prototyping, device design and fabrication

MEDICAL EDUCATION



Juan Duchesne, MD

Professor, Surgery – Trauma Division - SOM jduchesn@tulane.edu

We are looking to partner with basic scientists in order to further study the endotheliopathy of trauma resuscitation in patients with severe hemorrhagic shock. We are looking forward to expanding the

department of surgery collaboration with basic science. Other Research Interests include: Medical Devices, Stem Cell Research, Resuscitation

Kerstin Honer zu Bentrup, PhD



Assistant Professor, Microbiology and Immunology - SOM khonerzu@tulane.edu

My main research focus centers around methods of active learning in graduate medical education (MD, Ph.D., MS curricula). As a member of the Department of Microbiology/Immunology, I am furthermore

collaborating with colleagues by advising them on Imaging techniques (Fluorescent / Light Microscopy) as well as Three-dimensional Cell-culture Systems. My background is in Infectious Diseases, specifically Bacteriology. Other Research Interests include: Imaging, Infectious Diseases



Geraldine E. Ménard MD

Associate Professor, Medicine – General Internal Medicine - SOM gmenard@tulane.edu

I conduct research to expand and train primary care workforce to care for the aging population. As there are a limited number of geriatrics specialists, training others in primary care in key management and

prevention strategies for geriatrics patients will expand medical care to this vulnerable population. Partnering with UC-Irvine on this research which also includes mentorship for reestablishing the Geriatrics fellowship training program which ceased after hurricane Katrina. Other Research Interests include: Palliative, Hospital Medicine and Geriatics



Randolph Roig, MD

Associate Chief of Staff for Education, Veterans Affairs; Assistant Professor, Medicine – SOM

rroig@tulane.edu

I have investigated the effects of interdisciplinary care for patients on high morphine equivalent daily doses and concomitant benzodiazepine usage. Other Research Interests include: Pain Medicine

MEDICAL EDUCATION



Rebecca Schroll, MD

Associate Professor, Surgery - SOM <u>rschroll@tulane.edu</u>

I am interested in clinical research evaluating outcomes of care in trauma and critically ill patients. My research has primarily focused on pre-hospital treatment as well as operative and perioperative management of trauma patients. Other Research Interests include:

Trauma, Critical Care, General Surgery



Isis Smith, MD

Assistant Professor, Medicine – General Internal Medicine - SOM Ismith3@tulane.edu

I am interested in studying medical student's interested in learning more about underserved populations as part of their curriculum as well as what outcomes and how we can effectively teach them about these topics.

MEN'S HEALTH



Manesh Kumar Panner Selvam, PhD

Instructor, Urology – SOM <u>mpannerselvam@tulane.edu</u> My research focus includes Reproductive Biology (Andrology) and molecular science with expertise in sperm and seminal plasma proteomics. Other Research Interests include: Aging, Andrology, Bioinformatics/Statistics, Proteomics



Suresh C. Sikka, PhD

Professor & Research Director, Urology - SOM ssikka@tulane.edu

My research and clinic focus is on Aging male related to male infertility, Sexual health, Environmental reproductive toxicology; Forensic applications; Role of Oxidative Stress/Redox Changes and Antioxidants;

Sperm safety multicenter studies; Endocrine Disruptors, Prostatic inflammation; and Andropause. Other Research Interests include: Aging, Bioinformatics



Raju Thomas, MD

Professor and Chair, Urology - SOM rthomas@tulane.edu



Gregory Bix, MD, PhD

Professor and Director, Center for Clinical Neurosciences - SOM <u>gbix@tulane.edu</u>

I am a Professor of Neurosurgery and Neurology at Tulane University, and also currently the Director of the Clinical Neuroscience Research Center, Vice-Chair of Clinical & Translational Research, Department of

Neurosurgery, and the Vada Odom Reynolds Chair in Stroke Research at Tulane University. My research focus is the role and therapeutic potential of the extracellular matrix and its receptors in stroke and vascular dementia. Other Research Interests include: Aging, Infectious Diseases, Stroke, Vascular Dementia, COVID-19 and long covid



David Busija, PhD

Professor and Chair, Pharmacology - SOM <u>dbusija@tulane.edu</u>

My research focuses on the regulation of the brain circulation, including arteries and microvessels (end arterioles, capillaries, and venules), during health, diseases such as insulin resistance, diabetes, and strokes, and during aging. Utilizing proteomic and RNAseg methods as

well as more traditional approaches, my laboratory has focused on mitochondrial mechanisms promoting normal functioning of the brain blood vessels and how mitochondrial dysfunction affects the cerebral circulation including the blood-brain barrier and basement membrane during aging and age-related diseases. An important component of our studies is the examination of sex differences on the mitochondrial dynamics in brain blood vessels.Other Research Interests include: Mitochondria, cardiovascular, sex differences



Paul Colombo, PhD

Associate Professor, Psychology - SSE pcolomb@tulane.edu My research includes: Experience-deper

My research includes: Experience-dependent neural plasticity; nonpharmacological interventions to facilitate executive function and memory across the lifespan; neural oscillations and cognition. Other

Research Interests include: Aging, Behavioral Health



Jill M. Daniel, PhD

Professor and Director, Brain Institute, Psychology - SSE imdaniel@tulane.edu

I study the impact of estrogens and androgens on the brain and cognition across the lifespan using rodent models. Other Research Interests include: Aging, Women's Health



Benjamin Deen, PhD

Assistant Professor, Psychology – SSE bdeen@tulane.edu

I am a cognitive neuroscientist interested in social cognition - i.e., how we understand other people and their behavior. To study social cognition, my work measures human behavior as well as brain

activity, using neuroimaging methods such as fMRI.



Andrei Derbenev, PhD

Associate Professor, Physiology - SOM aderben@tulane.edu

My laboratory investigates the involvement of the brain in the regulation of blood pressure. We focus on synaptic plasticity in the in the brainstem during hypertension.



Elizabeth Engler-Chiurazzi, PhD

Assistant Professor, Neurosurgery - SOM eenglerchiurazzi@tulane.edu

My primary research interests are neuroimmunology and psychosocial stress. I am interested in how the brain and immune system, especially the B lymphocyte, converge to impact mental health, brain aging, and

neurological disease. I also have a project exploring the role that a single microRNA plays in driving the trajectory of cognitive aging. Finally, I have expertise in the evaluation of a wide range of rodent functional endpoints and behavioral outcomes. Other Research Interests include: Aging, Immunology/Allergy/Skin, Women's Health



Jonathan Fadok, PhD

Assistant Professor, Psychology – SSE jfadok@tulane.edu

My research is focused on understanding how the brain controls the formation and expression of emotional memory at the level of defined neuronal circuits. Methods in my laboratory include large-scale in vivo

recordings of neuronal activity, targeted manipulations of function in behaving animals, as well as cell-type specific neuroanatomical tracing techniques.



Tracy Fischer, PhD

Associate Professor, Microbiology and Immunology - TNPRC tfischer1@tulane.edu

My research is focused on advancing our current understanding of the role of chronic, low level neuroinflammation in the development and advancement of neurodegenerative diseases, such as Alzheimer's

Dementia and HIV-associated neurocognitive dysfunction. Using advanced methods of cell isolation and transcriptomic profiling, we are identifying unique mechanisms of neuronal cell injury and death that may be targeted for future therapeutic intervention. Other Research Interests include: Aging, Bioinformatics/Statistics, Genetics, Immunology/Allergy/Skin, Infectious Diseases, Medical Devices, Neurosciences, Traumatic Brain Injury



Maria Galazo, PhD

Assistant Professor, Cell and Molecular Biology – SSE mgalazo@tulane.edu

My research interests focus on understanding the molecular mechanisms controlling the development and function of brain circuits underlying higher cognitive skills, and how disruptions in these

mechanisms underlie abnormal brain functions.



Hai Huang, PhD

Associate Professor, Cell and Molecular Biology - SSE <u>hhuang5@tulane.edu</u>

We aim to understand the synaptic mechanisms that support reliable and precise auditory information processing and how hearing loss and neurological disorders (fragile X syndrome, Alzheimer's Disease, etc.) affect these functions, using a combination of techniques including

electrophysiology, two-photon imaging, computational modeling, and molecular biology.



Saifudeen Ismael, PhD

Instructor, Clinical Neurosciences – SOM sismael@tulane.edu Research interest: Neurosciences



Joe Iwanaga, DDS, PhD

Associate Professor, Neurosurgery - SOM jiwanaga@tulane.edu

I am an oral and maxillofacial surgeon, dentist, and anatomist. My research and surgical focus is on anatomical variations and microsurgical anatomy. My expertise in oral and maxillofacial surgery and clinical anatomy will be used in establishing surgical training courses for medical

students, residents of neurosurgery, OMFS, and other healthcare providers.



Jean-Pyo Lee, PhD Assistant Professor, Physiology - SOM jeanpyol@tulane.edu



Ning Liu, PhD Assistant Professor, Center for Clinical Neurosciences - SOM <u>nliu3@tulane.edu</u>

My research focuses on the investigation of molecular pathological mechanisms of acute brain injuries such as cerebral ischemia and traumatic brain injury, as well as therapeutic strategy development. I have expertise in molecular neuroscience, mitochondrial metabolic

mechanisms, in vivo brain injury animal models, and outcome assessments.



Andrew G. MacLean, PhD

Associate Professor, Microbiology & Immunology – TNPRC <u>amaclean@tulane.edu</u>

My lab looks at activation and disruption of the blood-brain barrier in health and disease, specifically HIV infection. We specialize in cell biological techniques, including cell adhesion, imaging and activation

of signal transduction pathways. These models are being adapted to examine the cell biology of lung inflammation. We are also examining activation of glia in behavioral abnormalities in nonhuman primates and the impact of opioid inhibitors. Ongoing projects include aging, depression and autism spectrum disorders. Other Research Interests include: Aging, Immunology/Allergy/Skin, Infectious Diseases, Kidney/Hypertension, Lung, Vascular Biology.

Demetrius Maraganore, MD

Associate Professor and Chair, Neurology – SOM Other Research Interests include: Aging





Julie Markant, PhD

Assistant Professor, Psychology – SSE jmarkant@tulane.edu

My research focuses on interactions between attention and memory systems and the development of neural systems supporting these interactions. I am particularly interested in examining the role of

increasing control over selective attention in promoting more effective learning during infancy. I use a convergent methods approach, including behavioral, eye tracking, genetics, and functional MRI methods.



Ricardo Mostany, PhD

Associate Professor, Pharmacology - SOM

rmostany@tulane.edu

Our laboratory studies synaptic plasticity of cortical neurons with emphasis on the effects of aging on the ability to establish and maintain synaptic contacts between neurons. We are applying our results from

the aged brain to the study of Alzheimer's disease using animal models of the disease. Our lab also studies the molecular mechanisms involved in the dysfunction of neurovascular coupling in Alzheimer's disease and diabetes. Other Research Interests include: Aging



Jeffrey Rouse, MD

Assistant Professor, Psychiatry and Behavioral Sciences - SOM jrouse@tulane.edu

As a forensic psychiatrist, my academic interests include neuroimaging of brain regions and networks involved in emotion regulation, the neural mechanisms of meditation and real-time

neurofeedback, and the application of biomarkers to forensic risk assessment. Other Research Interests include: Behavioral Health



and pathological electrophysiology biochemistry.

Laura Schrader, PhD

Associate Professor, Cell and Molecular Biology – SSE <u>schrader@tulane.edu</u>

The main research interest in my lab involves investigation of regulation of neuronal excitability by ion channels. This research is relevant to normal plasticity processes, such as learning and memory processes such as epilepsy. Techniques include: patch clamp in brain slices, behavioral paradigms, molecular biology and



Gregory W. Stewart, MD

Associate Professor, Orthopaedics, Sports Medicine - SOM <u>gstewart@tulane.edu</u> Latudu conguescion CTE, brain changes, and long term cordiou

I study concussion, CTE, brain changes, and long-term cardiovascular implications in former professional athletes. Other Research Interests include: Cardiovascular



Jeffrey Tasker, PhD

Professor, Cell and Molecular Biology – SSE tasker@tulane.edu

I am researching the physiological and biochemical properties of brain cells that control pituitary hormone release. Other Research Interests include: Endocrine/Bone, Kidney/Hypertension, Neurophysiology, Neuroendocrinology



R. Shane Tubbs, PhD

Professor, Neurosurgery - SOM rtubbs@tulane.edu

My research interests are centered around what my lab has termed "reverse translational anatomy research" where clinical/surgical problems are identified and addressed with anatomical studies. I collaborate with

Tulane surgeons and physicians to address patient complications and devise new approaches using anatomical studies. Other Research Interests include: Medical Education, Translational Research in Anatomy, Clinical Anatomy



Xiaoying Wang, MD, PhD

Professor, Center for Clinical Neurosciences - SOM xwang51@tulane.edu

I am a Professor of Neurosurgery and Neurology, and Program Director of Brain Injury Research at the Clinical Neuroscience Research Center (CNRC) within the Tulane University School of

Medicine. My research focuses on experimental investigation of molecular pathophysiology following cerebrovascular diseases and traumatic brain injury (TBI), and translational therapeutic strategy development.



James Zadina, PhD

Professor, Medicine, Pharmacology and Neuroscience - SOM jzadina@tulane.edu

Our laboratory studies the neurobiology of opioids and their receptors, acute and chronic pain, neuroinflammation, and development of novel analgesics with reduced adverse side effects. Other Research Interests include: Aging, Peptides Chemistry, Medication Development



Andrea Zsombok, PhD

Associate Professor, Physiology - SOM azsombo@tulane.edu

My laboratory examines the fundamental relationship between the central nervous system and glucose homeostasis. We identify circuits regulating visceral organs (e.g., brain-liver axis) and focus on neuronal alterations in the hypothalamus and brainstem during

diabetic and obese conditions. Other Research Interests include: Aging, Endocrine/Bone

REGENERATIVE MEDICINE / TISSUE ENGINEERING



Stephen Braun, PhD

Assistant Professor, Regenerative Medicine – TNPRC sbraun@tulane.edu

My work lies at the intersection of gene therapy and hematopoietic stem cells. Using the rhesus model, we are developing lentiviral vaccine vectors for AIDS and new inhibitors of HIV/SIV viral replication. We are studying transduction of rhesus (mouse and

human) CD34+ hematopoietic stem cells prior to expansion and differentiation into dendritic cells. These transduced DCs will be used to vaccinate animals. Other Research Interests include: Immunology/Allergy/Skin, Infectious Diseases, Stem Cell Research



Doug Chrisey, PhD

Professor, Physics and Engineering Physics – SSE <u>dchrisey@tulane.edu</u>

My research is focused on fabricating engineered tissue constructs by the CAD/CAM direct writing of cells, scaffold, and biomolecules for fundamental and applied research. Past work has included studying disparate cells and environments such as stem cell differentiation, angiogenesis, and neural growth. Other Research Interests include: Bioprinting for Tissue Engineering



Michael J. Moore, PhD

Professor, Biomedical Engineering – SSE mooremj@tulane.edu

The focus of our laboratory's research is to develop physiologicallyrelevant tissue culture models of the nervous system. We seek to engineer the 3D microenvironment of these neural microphysiological

systems to create models with that better represent tissue homeostasis and neurodegenerative disease states. We use primary rodent cells as well as human induced pluripotent stem cell-derived neurons and glia along with synthetic and natural hydrogels photopatterned in anatomically-relevant architectures. Other Research Interests include: Neurosciences, Stem Cell Research

REGENERATIVE MEDICINE / TISSUE ENGINEERING



Mimi Sammarco, PhD

Assistant Professor, Surgery – SOM <u>msammarc@tulane.edu</u> I investigate mechanisms promoting soft tissue and bone regeneration

in the context of aging. I use the mouse digit regeneration model to gain a more thorough understanding of how the role of oxygen and cellular

metabolism affect regeneration in an aged model in order to delineate between regeneration-competent and incompetent tissue environments. Using aging as a model to better understand regeneration will enable us to shed light on the regenerative process and to develop ways to address fracture healing and poor wound closure in the aged population. Other Research Interests include: Aging, Endocrine/Bone, Imaging

STEM CELL RESEARCH



Eckhard Alt, MD, PhD

Professor, Medicine - Cardiology – SOM ealt@tulane.edu My research interest is to bring translational research from bench to bedside in cooperation with experts providing complementary knowledge, as evidenced by 24,000 citations of our respective publications, an H factor of 84 and over 700 worldwide patterns.

Other Research Interests include: Cancer/Hematology, Cardiology, Regenerative Medicine/Tissue Engineering



Sharven Taghavi, MD

Assistant Professor, Surgery - SOM staghavi@tulane.edu

I am interested in the use of stem cell therapies to mitigate the inflammatory response. In addition, I am interested in the use of large databases to conduct clinical outcomes research. Other Research Interests include: Regenerative Medicine/Tissue Engineering,

Bioinformatics/Statistics

WOMEN'S HEALTH



Ron Clisham, MD

Professor, Obstetrics and Gynecology - SOM <u>rclisham@tulane.edu</u>

My research interest is examining the impact of DNA fragmentation on fertilization. Using the comet assay, determine whether the DNA fragmentation index of sperm can serve as a predictor for fertilization failure.



Anasthasia Gage, PhD

Professor, Global Community Health & Behavioral Medicine – SPHTM <u>agage@tulane.edu</u>

My current research focuses on adolescent health, gender-based violence, and maternal and reproductive health in sub-Saharan Africa and Haiti. I teach Monitoring and Evaluation of HIV/AIDS Programs, Monitoring and Evaluation of Maternal and Child Health Programs in

Developing Countries, and Adolescent Health Policies and Programs. I have extensive experience with the evaluation of population and health programs in the Democratic Republic of Congo, Ghana, Ethiopia, Haiti, Jamaica, Niger, Sierra Leone, Uganda, and Zambia. Other Research Interests include: Gender Inequality, Adolescent Health



Cecilia Gambala, MD, MPH

Assistant Professor, Obstetrics and Gynecology - SOM cgambal@tulane.edu

My interests reside in Women's Health, particularly during pregnancy. Topics of interest include diabetes, hypertension and obesity in pregnancy. Other Research Interests include: Kidney/Hypertension



Cynthia Hanemann, MD

Interim Chair, Radiology - SOM <u>chaneman@tulane.edu</u> My research interests are in breast cancer imaging.



Emily Harville, PhD, MSPH

Associate Professor, Epidemiology - SPHTM eharville@tulane.edu

My research interests include effects of disaster on pregnancy, multigenerational health, preconception health, pregnancy complications and later-life health.

WOMEN'S HEALTH



Julie Hernandez, PhD

Associate Professor, Global Health Policy and Management - SPHTM <u>hernan7@tulane.edu</u>

I am a geographer with technical expertise on geographic information systems, digital data collection, and use of ICT to support public health programs and research. My current work focuses on access to sexual

and reproductive health services in the Democratic Republic of Congo, with specific emphasis on community-based provision of family planning services, barriers to service delivery, contraceptive logistics and health information systems strengthening. Other Research Interests include: Infectious Diseases, Disease surveillance/ GIS



Irang Kim, PhD

Assistant Professor, Social Work – SSW ikim@tulane.edu

My research is focused on two areas: 1) examination of disparities in underserved communities of children with autism and other DDs; and 2) development of empirically based, culturally relevant interventions

for parents of young children with autism.



Sarah Lindsey, PhD

Associate Professor, Department of Pharmacology - SOM lindsey@tulane.edu

My current research investigates how estrogens are beneficial in vascular health. I am particularly interested in membrane-initiated estrogenic signaling events which influence vascular tone and remodeling. Other Research Interests include: Aging, Cardiology,

Endocrine/Bone, Kidney/Hypertension, Neurosciences, Women's Health



Catherine McKinley, PhD

Associate Professor, Social Work - SW catmckinley@tulane.edu

I have worked with Indigenous tribes cross-nationally for over 10 years and work on federally-funded research to develop and test culturally grounded interventions to promote family resilience and transcendence while addressing violence, substance abuse, and associated health

disparities, including diabetes and health. My work has been published in over 60 peerreviewed publications and in collaboration with tribes led to the development of the Indigenous-based and ecological "Framework of Historical Oppression, Resilience, and Transcendence (FHORT)", which identifies, and culturally relevant risk and protective factors related to wellness across community, family, and individual levels from a relational perspective. Other Research Interests include: Behavioral Health, Cancer/Hematology, Cardiology, Kidney/Hypertension, Women's Health

WOMEN'S HEALTH



Mary Mulcahey, MD

Associate Professor, Orthopaedics, Sport Medicine - SOM mmulcahey@tulane.edu

I am interested in women's musculoskeletal health, understanding the MSK injuries/conditions that women are more prone to and why, and identifying opportunities for injury prevention. I am involved in numerous orthopaedic clinical projects related to shoulder and knee injuries. Other

Research Interests include: Medical Education and have numerous ongoing projects.



Amber Naresh, MD, MPH

Assistant Professor, Obstetrics & Gynecology - SOM anaresh@tulane.edu

I am interested HPV-related pre-malignant lesions of the cervix in women. One current project focuses on improving HPV vaccination rates locally, and another seeks to delineate lifestyle factors associated with HPV persistence in women with low grade dysplasia, with a focus

on nutritional factors. This project also seeks to identify novel molecular bio-markets which could help predict behavior of HPV in the genital tract. Other Research Interests include: Infectious Diseases



Bonnie K. Nastasi, PhD

Professor, Psychology – SSE bnastasi@tulane.edu

My main research focus is the development of culturally constructed psychological theory/conceptual models, interventions, and assessment measures related to psychological well-being (i.e.,

children's mental health, youth and adult sexual health) in local and global contexts. I am also interested in participatory mixed methods research approaches.



Katherine Raymond, PhD

Professor of Practice, Biomedical Engineering – SSE <u>kraymon1@tulane.edu</u>

Through collaboration within the Tulane community and with international partners, I am working with other BME faculty to engage students in a biomedical global health initiative.



Paula D. Zeanah, PhD

Professor, Psychiatry and Behavioral Sciences and Pediatrics - SOM <u>pzeanah@tulane.edu</u>

I study perinatal, infant, child and pediatric mental health. My current research focuses on the relationship between nutritional risk and depression in first time, low income pregnant women.



Julie Albert, PhD

Associate Professor, Chemical and Biomolecular Engineering – SSE jalbert6@tulane.edu

I am interested in the relationships between molecular chemistry, material processing, and physical properties. Her group primarily works with polymers, a class of material that is ubiquitous in our lives in the

form of plastic bottles, rubber tires, non-stick and adhesive coatings, and other consumer products as well as at the forefront of advanced materials technologies including targeted drug delivery, nanolithography, organic electronics, and battery design.



Tiong Gim Aw, PhD

Assistant Professor, Environmental Health Sciences – SPHTM taw@tulane.edu

My research focuses on water quality, waterborne diseases, and microbial ecology of pathogens. We study the relationships between environment, microorganisms and hosts to better understand the distribution.

persistence and transmission of pathogens and infectious diseases. We are interested in data-driven discovery and the integration of biological big data towards the study of microbial communities in natural and engineered water systems and their impacts on our environment and health. Other Research Interests include: Environmental Health Microbiology, Water Quality



Henry Bart, Jr., PhD

Professor, Ecology and Evolutionary Biology – SSE hbartir@tulane.edu

I study ecology, molecular genetics and systematics (taxonomy, phylogenetic relationships) of fishes. I am the Director of the Tulane University Biodiversity Research Institute and Curator of the Royal D.

Suttkus Fish Collection (Hebert Research Center in Belle Chasse)



David Chae, ScD

Associate Professor, Social, Behavioral and Population Sciences - $\ensuremath{\mathsf{SPHTM}}$

dchae@tulane.edu

I conduct research on the social determinants of health inequities and the embodiment of racism. As part of this work, I study the interplay between social context, developmental period, behavior, and biology,

and links to disease susceptibility and progression. Other Research Interests include: Health Equity



Ricardo Cortez, PhD Professor, Mathematics – SSE <u>rcortez@tulane.edu</u> I perform mathematical and computational modeling of biological fluid dynamics.



Georgina Dobek, DVM

Assistant Professor, Director, Department of Comparative Medicine – SOM

gdobek@tulane.edu

My interest is in animal models of human disease utilized in a variety of research programs. As the Director of the Department of Comparative Medicine, I provide oversight for the care of the research animals

housed on the downtown and uptown campuses and support for research programs utilizing animal models. I also co-direct the Tulane University Laboratory Animal Medicine Training Program, which is an American College of Laboratory Animal Medicine recognized residency program. The program prepares veterinarians for board certification in the specialty of laboratory animal medicine, and includes a research project component.



Matthew Escarra, PhD

Associate Professor, Physics and Engineering Physics – SSE escarra@tulane.edu

I do research on new photonic materials and optoelectronic devices. This includes metasurfaces that can manipulate light by design and optical devices from 2D materials. These photonic structures are ultra-

small and may be used in highly-sensitive sensors, light detectors, light emitters, flat/microscale optics, and more.



Jia Fan, PhD

Assistant Professor, Biochemistry and Molecular Biology - SOM jfan5@tulane.edu

My research focuses on developing and validating mass spectrometrybased strategies for marker discovery and development of noninvasive clinical diagnostics approaches that use blood or urine

samples. My goal is to provide translatable solutions for personalized medicine in early disease diagnosis to improve patient outcomes. Other Research Interests include: Cancer/Hematology, Infectious Diseases, Peptides Chemistry



Lisa Fauci, PhD

Professor, Mathematics – SSE <u>fauci@tulane.edu</u>

I am an applied mathematician and computational scientist who works on modeling biological processes. In particular, my work focuses on the biophysics and fluid dynamics of motile microorganisms. I also have worked in the biofluid dynamics of reproduction.



Robin Forman, PhD

Provost and Senior Vice President for Academic Affairs <u>rforman@tulane.edu</u>

My research, which has been funded by the National Science Foundation, the National Security Agency and the Defense Advanced Research Projects Agency, focuses on combinatorial methods in topology and geometry. Other Research Interests include: Mathematics



Kimberly Foster, PhD

Professor and Dean, School of Science and Engineering - SSE <u>klfoster@tulane.edu</u>

My expertise is on the development of micro mechanical tools for biotechnology. Other Research Interests include: Medical Devices, Biomedical Microdevices, Biotechnology



Joseph Fuselier, MBA

Assistant Professor, Medicine - Peptide Research - SOM fuselier@tulane.edu

I am interested in creating novel therapeutic agents to help patients with diseases where there is little to no innovation or therapeutic benefit with current treatment modalities. My focus is to create intellectual property around these ideas and commercialize them to benefit humankind. My

area of expertise revolves around modifying exquisitely potent drugs, conjugating them to peptides and proteins in a way so they are stable in circulation, are targeted to a specific tissue, and then release the biological warhead to the tissue of interest. Synthetic organic chemistry, peptide / protein chemistry, pharmacology, entrepreneurship, and business are all areas of interest. Other Research Interests include: Aging, Cancer/Hematology, Immunology/Allergy/Skin, Infectious Diseases, Lung, Neurosciences, Drug Targeting



Bruce C. Gibb, PhD Professor, Chemistry – SSE <u>bgibb@tulane.edu</u> My research interests include aqueous solutions, the hydrophobic effect, and the Hofmeister effect



Chrissy Guidry, DO Assistant Professor, Surgery - SOM cguidry@tulane.edu

I study trauma resuscitation and endotheliopathy, and my other research interests include trauma, acute care surgery, and critical care.



Alex Gunderson, PhD

Assistant Professor, Ecology and Evolutionary Biology – SSE argunderson@tulane.edu I study how organisms adapt to climatic variation. Other Research Interests Include: Physiological ecology



Clarissa Hoff, MD, MPH

Associate Professor, Family and Community Medicine – SOM <u>choff@tulane.edu</u>

I serve as Director of the Southern Area Patient Oriented Research Network: a Practice Based Research Organization that focuses on primary care implementation research and quality improvement. We work with primary care clinics across the state of Louisiana to improve

primary care outcomes with a focus on screening interventions. Other Research Interests include: Practice Based Research Networks, Preventive Care Implementation, Healthcare Disparities, Quality Improvement



M. Matias Iberico, MD, MPH

Assistant Professor, Medicine – General Internal Medicine - SOM miberico@tulane.edu

My research interests include: Health Systems Design, Health Delivery, CHW centered health systems design



Colin Jackson, PhD

Assistant Professor, Earth and Environmental, SSE colinrmjackson@gmail.com

I research the chemical reactions that occur within planets. To do this we subject materials to high pressure and temperature in the laboratory environment and then analyze the chemistry of the reacted phases. Other Research Interests include: Planet Formation and Evolution



Neal Jackson, MD

Assistant Professor, Otolaryngology/Neurotology - SOM njackson1@tulane.edu

My primary interest is in human hearing including surgical treatment of hearing loss and chronic ear infections. My other research interests include any ear surgery, cochlear implants, and skull base tumors. I also study vestibular disorders of the inner ear. Other Research Interestes

include: Aging, Imaging, Medical Devices, Medical Education, Neurosciences, Hearing, Cochlear Implants, Temporal Bone



Olan Jackson-Weaver, PhD

Assistant Professor, Surgery - SOM ojacksonweaver@tulane.edu

Our lab has two projects, both related to endothelial cell biology. The first is endothelial cell damage during trauma, in particular damage to the endothelial glycocalyx. The second is the role of protein arginine methylation in angiogenesis. Other Research Interests include:

Endothelial cell biology, trauma, calcium signaling, angiogenesis, protein methylation



Jordan Karubian, PhD

Professor, Ecology and Evolutional Biology - SSE <u>jk@tulane.edu</u> My research interests include feedbacks between human and natural systems, including health. Other Research Interests include: Environment



Mary Killackey, MD

Professor and Chair, Surgery - SOM <u>mkillack@tulane.edu</u>

We have multiple areas of research going on in the department of surgery including but not limited to transplant, trauma, tissue regeneration, melanoma, thyroid cancer, and resident education.



Alyssa Lederer, PhD, MPH

Assistant Professor, Social, Behavioral, and Population Sciences - SPHTM

alederer@tulane.edu

I am a behavioral scientist and health promotion specialist. My research focuses on the design and evaluation of public health programs,

especially in the areas of adolescent sexual health, obesity prevention, and workforce development. I am particularly interested in the intersection between health education and behavior change. Other Research Interests include: Infectious Diseases, Women's Health, Intervention Design, Evaluation, Sexual Health, Public Health Workforce Development

Patrick McGrew, MD

Assistant Professor, Surgery - SOM <u>pmcgrew@tulane.edu</u>

I am currently researching mass casualty incidents. Interested in ICU delerium, affects of circadian rhythms on ICU drug metabolism. Interested in victim blaming in trauma patients. Other Research Interests Emergency Surgery, Critical Care

include: Trauma, Emergency Surgery, Critical Care



Howard Mielke, PhD

Professor, Pharmacology - SOM <u>hmielke@tulane.edu</u>

The environmental signal we measure is metals in accumulated dusts of communities of New Orleans. We then obtain children's exposure data from the city and state. The combined environmental signal and

exposure data is stratified by community and evaluated for patterns and trends. Other Research Interests include: Urban Environment and Health



Brian Mitchell, PhD

Professor Chemical and Biomolecular Engineering – SSE <u>brian@tulane.edu</u>

I study production, characterization and applications of functionalized silicon nanoparticles. Other research Interest include: Nanostructured Materials



Matthew Montemore, PhD

Assistant Professor, Chemical and Biomolecular Engineering - SSE <u>mmontemore@tulane.edu</u>

We are open to collaborations that will use our expertise in machine learning, data science, materials science, or quantum chemical calculations. Our primary focus is development of new materials for

energy applications, such as catalysts, solar cells, and batteries. However, we have collaborated on projects studying biological activity of nanomaterials and the activity of bacteria with different DNA sequences. Other Research Interests include: Computational materials science



Antonio (Nito) Panganiban, PhD

Professor, Microbiology and Immunology - TNPRC apangani@tulane.edu

We are working on virus replication, the host response to virus infection, and anti-viral strategies. Our primary focus is on emerging, zoonotic, minus strand RNA viruses that cause hemorrhagic fever and related pathogenesis. Pathogenesis typically involves infection of

vessel endothelial cells and either systemic or localized hemorrhagic fever. The approaches we use include molecular virology, genomics, and transcriptomics.



Igor Rubtsov, PhD

Professor and Chair, Department of Chemistry – SSE irubtsov@tulane.edu

I develop novel spectroscopic approaches for measuring 3D structures and structural dynamics of molecules in condensed phase, targeting energy sustainability, heat transport, catalysis, lipid bilayer

dynamics, and electrochemistry.



Jennifer Whitten, PhD

Assistant Professor, Earth and Environmental Sciences – SSE <u>Jwhitten1@tulane.edu</u>

My research program spans the inner solar system terrestrial bodies and focuses on processes that generate and modify planetary crusts. Towards this end, my research incorporates a wide variety of space- and

ground-based data types (Arecibo and Green Bank radio telescopes, ground penetrating radar), including visible-near infrared spectral data, visible imagery, topography, and radar image and sounder data. Other Research Interests include: Geology of Other Planets



Mark Wilson, PhD, MSPH

Assistant Professor, Global Environmental Health Sciences – SPHTM <u>mwilson9@tulane.edu</u>

I am interested in how obesity impacts chemical metabolism. My primary interest lies in determining if obesity is associated with increased sensitivity to chemicals that are metabolized via the CYP2E1 enzyme pathway. Other Research Interests include: Genetic Toxicology



Zizhan Zheng, PhD

Assistant Professor, Computer Science – SSE <u>zzheng3@tulane.edu</u>

My research is in reinforcement learning, trustworthy AI, security, and networks. I am interested in both the theoretical foundations of these areas and their applications in robotics, healthcare, climate change, and

social sciences.

Muhammad Abdul Awoal, MSC

Medical Research Specialist – Center for Aging - SOM mawoal@tulane.edu

Katie Acuff, MBA, JD Associate Vice President for Advancement, Principal Gifts kacuff@tulane.edu

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NOTES

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