Summer Research and Externship Program 2022

UCR School of Medicine- Office of Student Affairs

Christina Rangel

For questions, contact Christina Rangel, MBA, Career Services Specialist

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Summer Externship Program 2022

The UCR School of Medicine Summer Externship Program is for students who have successfully completed their first year of medical school. There are opportunities available with faculty from across campus who are excited to have you join them for research, clinical shadowing, and mentoring in our community.

The Summer Externship Application can be accessed here:
https://ucriverside.az1.qualtrics.com/jfe/form/SV_37X5YvJPWrRyVme

Applications are due no later than Sunday March 20th.

SCHEDULE

The schedule for this year's program is listed below. Attendance is required for all dates listed.

- 6 week program (M-F): June 20th- July 29th , 2022
- Externship Presentations: August (Dates TBD)

Please note, your host may have additional meetings/trainings that they require for onboarding and/or compliance. You are required to complete all trainings to participate.

ELIGIBILITY

Students must meet all criteria to be eligible for a summer opportunity:

- Must be in the class of 2025 cohort
- Successful completion of 1st year of medical school (no remediation during the summer, no exceptions).
- Must be available to attend all scheduled events listed above.

COURSE ENROLLMENT AND STIPEND

All program participants will be enrolled in Summer Sessions Course MDCL 290. Upon verification by your sponsor that your research/externship participation has been successfully completed, your participation in the SOM Externship Orientation, and final presentation participation, you will receive a grade of "Pass". If you do not complete the requirements outlined by your sponsor and SOM for your assigned opportunity, a grade of "Fail" will be recorded on your transcript. You will receive a stipend for your participation in the summer program in the amount of $1,500 (approximately), and the cost of the 1 unit will be paid by the School of Medicine. The SOM Financial Aid Office will disburse stipend funds to you. If you do not complete the course requirements, you may be required to refund all or part of the stipend.

APPLICATION PROCESS

The application for this program will open on March 10th, 2022 and close March 20th, 2022. Late applications will not be accepted. You will need to complete the application and upload a CV for consideration for placement.

HEALTH ADVISORY

Due to the COVID-19 pandemic, we are following recommendations and requirements outlined by Riverside County Department of Public Health and the UCR Public Health Committee. Currently, the campus is

open for research and clinical activity.

The clinical shadowing opportunities will require that you adhere to UCRSOM COVID-19 from the shadowing site as well at guidance from the SOM.

Visit our critical resources site for questions or assistance with potential COVID-19 exposure information and needle stick procedures: https://somsa.ucr.edu/critical-student-resources

This summer's opportunities are in person, unless otherwise noted on each announcement. Each Externship opportunity notes location. Please be sure to review each externship description carefully.

PROGRAM REQUIREMENTS:

- Complete the online application.
- Upon acceptance to the program, schedule meeting (zoom or phone call) with host prior to start date to discuss and agree on learning objectives, as well as any additional requirements/trainings.
- Submit 2-3 learning objectives to Christina.Rangel@medsch.ucr.edu no later than 24th (end of week 1 of the externship). A Worksheet will be provided with your acceptance notification.
- Attend any mandatory meeting, onboarding, or training requested by sponsor.
- Complete 6 weeks of participation between June 20th and July 29th. Dates can be flexible as long as your externship is 6 weeks long and ends before year 2 begins. (Please review alternate dates for Teresa Cofield's Community Health summer programs).
- Give 7-10 minute final presentation to incoming MS1's (class of 2026) and staff in August (date TBD).

COMMUNICATION

If you are selected to participate in this program, you will have 48 hours to accept/decline your opportunity. This allows time to offer unfilled projects to peers on the waitlist. You receive an official notification via email with your sponsors name, location, and contact information. Your sponsor will receive a notification with your information as well. It is YOUR RESPONSIBILITY to contact your research/externship sponsor to schedule a meeting (zoom or phone call) and/or finalize onboarding requirements (onboarding for clinical externships) prior to the start date.

Should you have any trouble getting in touch with your externship sponsor, please contact Christina.Rangel@medsch.ucr.edu to help facilitate initial contact. If you have any trouble or concerns regarding your externship (expectations, communication, or other) please contact Christina Rangel as soon as possible. The summer program is short, so it is important that you communicate any concerns to have the best experience possible.

You will be asked to complete a pre-and post-survey for the program. The Pre survey is to ensure communication and contact have been made with you and your host, and that you and your host have clear understanding of expectations. The post survey will allow Student Affairs to gather information as to your summer experience and will help us with program improvements. It is important that you complete both the pre and post surveys.

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CLINICAL OPPORTUNITIES

TEACHING/SERVICE OPPORTUNITIES

RESEARCH OPPORTUNITIES

Host: Nathan McLaughlin, MD

Project Title: Riverside University Health Clinical Shadowing

Location: Riverside University Health System

Email: Nathan.McLaughlin@medsch.ucr.edu

Positions: 4

Summary: Medical students will shadow physicians for the 6 week program in various departments at Riverside University Health System. Please note, there will be additional dates for training and onboarding requirements. All requirements must be met by the deadlines set by the host.

Host: Joanne Witkowski, MD

Project Title: Kiaser Permantente Clinical Shadowing

Location: KP Riverside

Positions: 2

Summary: Medical students will shadow physicians for the 6 week program in various departments at Kaiser Permanente, Riverside. Please note, there will be additional dates for training and onboarding requirements. All requirements must be met by the deadlines set by the host.

Faculty Host: Teresa Cofield

Title of Externship Project: Community Health Education Projects as Career Exploration Activities for Students Aspiring to Medical Careers

Host Email: teresa.cofield@medsch.ucr.edu

Host Phone: 951-827-4935

Location: SOM Education Building Room G0610

Summary:

Medical students will be part of UCR SOM faculty and staff team dedicated to to increasing access and opportunities for students from disadvantaged communities by offering summer programs to engage pre-health students in community health education through team projects. The Pathway Programs included for this project are Medical Leaders of Tomorrow and Future Physician Leaders. Participants are educated on health issues and health disparities within the Inland Empire through a series of lectures and workshops designed to teach students how to create a community health education project. Medical students will be an integral part of a team which guides and directs participants as they create a project and prepare for presenting the project topic in the community. Participants develop projects in small groups of 6-8 students and guidance from medical students includes delivering feedback to help teams improve their projects. Medical students will also work collaboratively with faculty and staff to facilitate interactive career exploration activities (case-based learning and mentorship). Pathway Program summer participants are local college, community college, and high school seniors attending school in San Bernardino and Riverside counties. Externship program dates are June 13 – July 22, 2022 and program hours vary based on programming and usually scheduled between Monday – Friday, 9am-7pm. Pathway Programs seek to increase students' awareness and interest in careers in the healthcare field and interest in higher education (https://pathwayprograms.ucr.edu/).

Approximate hours per week: Externship program dates are June 13 – July 22, 2022 and program hours vary based on programming, usually scheduled weekdays, Monday – Friday, 9am-7pm.

Faculty Host: Dr. Emma L. Aronson

Title of Externship Project: Assisting with chamber for environmental
microbial mouse exposure

Host Email: present.moment@gmail.com

Host Phone: 2677384855

Location: Boyce Hall 3413

Summary:

The interface between the environmental and human microbiomes is a new and developing area of research. The lungs, long thought to be sterile, are one site on the body that serves as such an interface. My lab is working with the medical school to test our ability to expose mouse lungs to a controlled air microbiome, and welcome a medical student intern to assist with these experiments.

Approximate hours per week: 15-20

Faculty Host: Djurdjica Coss

Title of Externship Project: Genetics of brain development

Host Email: djurdjica.coss@ucr.edu

Host Phone: 2-7791

Location: 303 SOM Research Building

Summary:

Fragile X syndrome is a developmental disorder affecting 1 in 3000 males and 1 in 6000 females. It is a the most common monogenic cause of intellectual impairment and autism spectrum disorder, caused by the mutation of the Fragile X mental retardation gene. The mechanisms of whereby Fragile X mental retardation gene regulates brain development are only beginning to emerge. Patients also experience sleep disorders, reproductive impairment and obesity. Nothing is known how this gene regulates sleep, metabolism or reproduction. The summer project will use mouse model of Fragile X syndrome to analyze development of circuitries that regulate these disorders by performing immunohistochemistry of brain slices throughout mouse development

Approximate hours per week: 20

Faculty Host: James Davies

Title of Externship Project: Characterizing the Physical Properties of Respiratory Aerosol

Host Email: jfdavies@ucr.edu

Host Phone: 5103844691

Location: Chemical Science

Summary:

The exhalation of aerosol particles from infected individuals, and subsequent inhalation by others, is strongly implicated in the spread of diseases such as COVID-19. The risk of transmission depends on the viability of microorganisms entrained within these respiratory particles, which may be linked to the composition and physical state of the particles. When exposed to ambient environments after exhalation, respiratory particles lose water via evaporation and will experience significant changes in their physical state and composition, impacting their airborne dynamics and possibly affecting the viability of entrained viruses and bacteria.

This short project will involve the study of aerosol particles made up of respiratory fluid mimics of known composition, including a mix of salts, proteins and surfactants. Using state-of-the-art particle levitation and spectroscopy, the influence of temperature and humidity on the physical state will be explored. It is hypothesized that small changes in composition of the respiratory fluid will lead to large changes in the physical state. This would have significant implications for disease transmission and may point towards compositional markers that indicate the infectivity risk of an individual. Students are directed to recent work in PNAS (https://doi.org/10.1073/pnas.2109750119) for a discussion of the topics to be explored in this project.

The student will:

1) Prepare solutions of a respiratory fluid mimic with a range of concentrations of specific proteins, such as mucin.

2) Levitate particles using established methods and characterize their size and physical state as a function of humidity and temperature.

3) Explore how composition affects the physical state and connect observations with previous work on virus viability and phase states.

Through this laboratory project, students will gain an understanding of fundamental and applied aerosol science. Additional opportunities to work on proposed outreach collaborations with EM residents and faculty at Riverside Community Hospital will be discussed (funding pending).

Approximate hours per week: Schedule is flexible; up to 30-40 hours per week.

Faculty Host: Iryna Ethell

Title of Externship Project: The mechanisms underlying the neurodevelopment disorders

Host Email: iryna.ethell@medsch.ucr.edu

Host Phone: 951-827-2186

Location: MRB (new building near Rec Center), room 2135

Summary:

Research in my lab focuses on understanding how neuronal networks are developed and maintained in the brain, with the goal of applying this knowledge to the development of therapeutics for neurodevelopmental disorders. We utilize new molecular and imaging approaches in neuroscience and mouse genetics to conduct research on the molecular basis of neurologic diseases. In particular, we are interested in molecular and cellular mechanisms that govern the synapse formation and plasticity in the brain areas that play a critical role in learning and memory.

I am accepting applications for summer research internships in my lab to work with a team of postdoctoral fellows and graduate students on one of two research projects:

(1) to study the mechanisms underlying the pathophysiology of Fragile X Syndrome (FXS), a neurodevelopmental disorder associated with intellectual disability and autism;

(2) to study glial control of synapse development in the brain.

Students will have an opportunity to learn or enhance their skills in cellular and molecular neuroscience using several techniques that are necessary for completion of the projects, such as mouse genotyping, preparation of brain slices, immunohistochemistry, primary cell cultures, various biochemical techniques, EEG recordings, mouse behaviors and confocal microscopy. Students will also participate in bi-weekly Journal Club meetings where we discuss recent journal articles and research-in-progress. During this time we discuss the merits and faults of the paper and how information from the paper can apply to the project. Journal Clubs will help in developing skills at reading literature on recent advancements in brain research and clinical neuroscience.

This internship will also provide an opportunity to participate in neuroscience translational research. As a critical element for career development is environment, students' interactions with other researchers within our FXS Research group at UCR.

Full list of published work: https://pubmed.ncbi.nlm.nih.gov/?term=Ethell+I&sort=date

Approximate hours per week: 30-40h/week

Faculty Host: Adam Godzik

Title of Externship Project: Analysis of the National COVID Cohort Collaborative (N3C) datasets

Host Email: adam.godzik@medsch.ucr.edu

Host Phone: 8589524065

Location: MRB

Summary:

The National COVID Cohort Collaborative (N3C) is a partnership several NIH and NHH Departments, which together developed a unique dataset of electronic health records for over 3 million COVID-19 patients. This data is now available for analysis. The goal of this project would be to learn to access and use the N3C Data Enclave and perform analysis of the comorbidities associated with COVID-19 outcomes. This project requires some prior knowledge of SQL and/or general database concepts as well as concepts of disease coding in electronic health records. In this project students would undergo training in using the N3C data enclave and work on this remote platform to build a database and analyze the data.

Approximate hours per week: 30

Faculty Host: Adam Godzik

Title of Externship Project: analysis of SARS-CoV-2 mutations in main variants of concern (VOC)

Host Email: adam.godzik@medsch.ucr.edu

Host Phone: 8589524065

Location: MRB

Summary:

Covid-19 pandemic resulted in creation of amazing data resources, making the SARS-CoV-2 virus one of the best studied pathogen in the history of human diseases. In particular, over 8 million genomes of SARS-CoV-2 virus document the details of its evolution during the pandemic and in particular, the emergence of Variants of Concern (VOC), particularly aggressive strains that were mostly responsible for the consecutive "waves" of the pandemic. In this project we aim at the analysis of the mutations defining specific VOC and using protein modeling and analysis of data from the Protein Data Bank build hypotheses about specific functions of the VOC defining mutations. General knowledge on protein 3D structure and ability to quickly learn visualization and modeling software (CHIMERA, Pymol) would be needed for this project.

Approximate hours per week: 30

Faculty Host: Erica Heinrich

Title of Externship Project: Dyspnea prediction and monitoring using noninvasive biomarkers of respiratory drive and blood gas tensions **Host Email:** erica.heinrich@medsch.ucr.edu

Host Phone: (951) 827-9198

Location: SOMRB 101

Summary:

Dyspnea is the sensation of breathlessness, or breathing discomfort, experienced by millions of patients with chronic and critical illnesses. In severe form, it can lead to intense suffering and psychological trauma in patients receiving mechanical ventilation or experiencing chronic lung disease. Despite this, dyspnea is routinely misdiagnosed and left untreated due to insufficient clinical tools and monitoring procedures. Therefore, we aim to develop novel tools for predicting dyspnea severity and continuously monitoring this sensation in critical care patients. The objective of this research project is to determine if we can use machine learning to predict dyspnea with noninvasive clinical biomarkers. Students will support this project by assisting with experiments which manipulate several physiological contributors to dyspnea in healthy participants, including arterial blood gas tensions, respiratory airflow resistive loading, and lung volume restriction. We will use this data to examine the physiological mechanisms of dyspnea manifestation and determine if subjective dyspnea severity can be predicted accurately with noninvasive biomarkers. This work will have a positive impact on the quality of life for chronic and critically ill patients by improving our ability to detect, monitor, and manage their dyspnea. Students will learn critical skills required for conducting clinical research including navigating IRB procedures, participant recruitment, and data safety and monitoring.

Approximate hours per week: This project will require 15 hours of effort per week. Weekly scheduling is flexible and dependent on participant availability.

Faculty Host: Francesca Hopkins

Title of Externship Project: Mapping Anaerobic Digesters on California Dairy Farms

Host Email: fhopkins@ucr.edu

Host Phone: 7073283135

Location: Science Labs 216

Approximate hours per week: 20 hours per week

Summary:

Dairy farms are the largest single source of methane, a powerful greenhouse gas, in California. In addition to emitting methane, dairy farms emit odorous ammonia and other gases that contribute to formation of atmospheric particulate matter that causes poor air quality. Most dairy farms in California are located in the San Joaquin Valley, where residents living near these farms are already burdened by high levels of air pollution. Our research group studies emissions from these dairy farms, investigating both the drivers of emissions and their local impact. Recently the State of California has invested several hundred million dollars in construction of anaerobic digesters, which capture methane from manure waste for use as a biofuel. To date, the effect of digesters on emissions of air pollutants from dairies is poorly known. To better understand the effect of digesters on emissions, we are mapping the locations of planned digesters on California dairies using high resolution satellite imagery, and making field measurements of air emissions before, during, and after digester construction. In this project, students will have the opportunity to contribute to mapping digesters, and to assessing the environmental justice impact of where digesters are being installed. Students may also have the opportunity to contribute to field measurements of air emissions on and near dairies.

Approximate hours per week: This project will require 15 hours of effort per week. Weekly scheduling is flexible and dependent on participant availability.

Faculty Host: Huinan H. Liu

Title of Externship Project: Assess the performance of bioresorbable implants in vivo using rodent and minipig models

Host Email: huinan.liu@ucr.edu

Host Phone: 9518272944

Location: MSE building 217

Summary:

Dr. Liu's Biomaterials and Nanomedicine Lab research involves design, fabrication and evaluation of novel biomaterials for tissue regeneration, controlled drug delivery, and medical implant/device applications. Medical applications of nanomaterials and nanotechnology are actively explored through both fundamental studies and applied research. Materials studied in the lab include polymer, ceramic nanoparticles, polymer/ceramic nanocomposites and biodegradable metals. Students will be involved in developing novel materials and implants for neural repair, bone regeneration, etc. Students may acquire lab skills and gain experience in material synthesis, characterization, electron microscopy, x-ray spectroscopy, optical emission spectrometry, fluorescence microscopy, bacterial culture, mammalian cell culture studies, and performing surgeries for assessing novel orthopedic implants or neural implants in rat/mouse/minipig models. Previous outstanding student researchers in Liu lab have co-authored publications in scientific journals and/or presented their work at national/international scientific conferences. Specifically, for summer 2022, medical students will assist our collaborating surgeons in implanting bioresorbable metallic implants into rat and minipig models and assessing the implant performance in vivo using histology, microCT, IVIS, bitplane, etc. Students may need to commute to nearby medical centers (UC Irvine or Loma Linda) in some days for animal surgeries.

Approximate hours per week: 20-40 hours per week, some additional time maybe needed in some weeks when there are animal surgery involved.

Faculty Host: David Lo

Title of Externship Project: Asthma in Eastern Coachella Valley and the Salton Sea

Host Email: david.lo@medsch.ucr.edu

Host Phone:

Location: SOM RB

Approximate hours per week: 10-20

Summary:

Our lab is doing a broadly interdisciplinary project to understand the apparent high incidence of asthma in the region around Salton Sea. We have been doing aerosol exposure studies, as well as analysis of dusts from the region. Studies suggest an unusual inflammatory response to Salton Sea playa dust, and we are working on developing a logic model to pull together data from several sources to try to identify communities or areas at highest risk for asthma due to environmental exposures. The work will involve analysis of lab data on exposures, as well as geospatial mapping data on the Salton Sea region, including information on soils and exposed playa, living conditions in the communities in the region, and health impacts. Students will help with compiling relevant scientific literature, geospatial mapping data, and integrating with lab exposure data and available analysis of dust samples.

Faculty Host: Aerika Loyd

Title of Externship Project: Youth Health and Development Lab

Host Email: aerikal@ucr.edu

Host Phone: (951) 827-5276

Location: Olmsted 2139

Summary:

We study health and development in diverse youth and families. We strive to use research to inform practice and policy so that young people can live happier, healthier, and more empowered lives. We currently have two research projects that students can participate in. In the Pathways to Resilience Project, we examine risk and resilience in Black youth who have encountered the juvenile justice system and/or police. The goal of this project is to learn more about ways to support Black youth and families. Research activities will include recruitment online and in-person at community events. Students may also assist with consenting youth and families. In the College Student Identity Project, we seek to understand how racially diverse college students construct their identity around culture, and implications of identity for academic achievement, mental health, and well-being. Research tasks for this project will include data cleaning, coding of participants' qualitative responses, and scoring quantitative measures.

Approximate hours per week: 20 hours per week

Faculty Host: Declan McCole

Title of Externship Project: Characterization and Therapeutic Rescue of a Novel Risk Factor For COVID-19

Host Email: declan.mccole@ucr.edu

Host Phone: 9518277785

Location: SOM Research Building - 307

Approximate hours per week: 15

Summary:

A major clinical confounder of COVID-19 is the lack of knowledge of host factors that promote susceptibility to SARS-CoV-2 infection and more severe symptoms in some patients, and the lack of interventions focused on alleviating host susceptibility. In patients with inflammatory bowel disease (IBD), we discovered a completely novel association of an autoimmune disease-associated risk variant in the PTPN2 gene (loss-of-function), with increased expression of the SARS-CoV-2 receptor, ACE2. In this project, we will use novel in vivo (mouse) and in vitro (organoids, patient cells) model systems to mechanistically define the cellular and molecular mechanisms by which loss of PTPN2 activity increases host cell susceptibility to SARS-CoV-2 entry. We will also identify if a clinically approved JAK inhibitor can be repurposed to alleviate this risk event. The McCole lab is seeking a student to work with a senior member of the group in addressing the goals of this study. Techniques that will be available to the student include: cell culture, histology, microscopy, PCR, Western blotting, barrier function assays, cytokine assays, and studying how particles coated with the SARS-CoV-2 Spike protein are taken up by cells in vitro.

Faculty Host: Kalina Michalska

Title of Externship Project: The Role of Ethnic Discrimination on the Development of Anxious Hypervigilance in Latinx Youth

Host Email: kalinam@ucr.edu

Host Phone: 951-827-5209

Location: Psychology 1137

Approximate hours per week: 10-20

Summary:

Ethnic-racial (ER) discrimination can lead to psychosocial problems for Latina youth, including anxiety and depression. Mexican-origin Latinx parents of pre-pubertal girls (ages 8–13) will be assessed to investigate how parental ER socialization strategies contribute to the association between parental discrimination experiences and changes in their daughter's anxiety and threat neurocircuitry.

This study spans three waves conducted at the UCR KIND Lab, directed by Dr. Kalina Michalska. Wave 1 involves parent-reported surveys of ER discrimination and their reported use of ER socialization practices. Latinx parents use six ER socialization strategies of value transmission, four adaptive (cultural socialization, advocating or active coping, promoting value diversity and plurality, and educating about citizenship, nativity, and immigrant status) and two avoidant (promotion of mistrust towards other ethnic and racial members and adapting to the environment through avoidant coping or normalizing discriminatory experiences) (Ayón et al., 2019). Wave 2 involves parent and child-report surveys assessing children's experiences of ER discrimination. Wave 3 (projected start date: May 2022) will test how latent changes in ER discrimination and parental ER socialization strategies across Waves 1-3 affect children's threat neurocircuitry and anxiety symptoms at Wave 3.

Threat vigilance will be assessed through a well-validated functional magnetic resonance imaging fMRI threat perception task at the UCR Center for Advanced Neuroimaging (CAN, adjacent to the KIND Lab), during which sympathetic responding will be concurrently collected. During the task, participants make binary social judgements (threatening/not threatening) about a set of White male face stimuli morphed along a continuum from not threatening to increasingly threatening. Threat vigilance is indexed by the location along the face trajectories at

which participants classify a face as threatening versus not threatening. Our goal is to test the hypothesis that girls with greater change in experiences of ER discrimination will show: (1) higher threat vigilance as indexed by an earlier set point, (2) higher physiological responding to faces rated as threatening, (3) hypoactivation in brain regions key for safety learning (dlPFC, vmPFC), and (4) greater representational similarity between ambiguous and threatening faces in amygdala and fusiform gyrus. Further, we test whether adaptive parental ER socialization practices will moderate the association between ER discrimination and neurophysiological indices of threat vigilance, such that ER discrimination leads to vigilance only for girls whose parents do not employ adaptive ER socialization practices.

Summer interns will contribute to the project by conducting clinical assessments of child participants and their caregivers, running autonomic and behavioral tasks at the KIND Lab, and running fMRI visits at the CAN, under Dr. Michalska's supervision. Students can also gain experience with fMRI data preprocessing and stastistical analysis.

Faculty Host: William Porter

Title of Externship Project: Health impacts of air pollution events in the Coachella Valley

Host Email: william.porter@ucr.edu

Host Phone: 503-708-3224

Location: Science Labs I, Room 310

Approximate hours per week: Flexible hours based on availability, individual and group meetings held weekly

Summary:

Reduced water inflows to California's Salton Sea are expected to increase particulate matter emissions from its surrounding dried lakebed surfaces, worsening regional air quality and impacting human health in nearby communities. Long term air pollution exposure and health disparities within the Coachella Valley have recently been examined spatially (Miao et al., 2022), and will now be explored temporally with a focus on the impacts of acute exposure during and after regional pollution events. Using air pollution observations, modeling tools, and daily hospitalization data, we will quantify the temporal relationships between speciated pollution episodes and observed respiratory and cardiovascular health outcomes within the Coachella Valley. Participating students will join an existing collaboration between atmospheric and environmental health scientists, learn about current data analysis strategies and methods, and will further be invited to develop their own research questions related to air quality and health within the project domain.

Miao, Y., Porter, W. C., Schwabe, K., & LeComte-Hinely, J. (2022). Evaluating health outcome metrics and their connections to air pollution and vulnerability in Southern California's Coachella Valley. Science of The Total Environment, 821, 153255. https://doi.org/10.1016/j.scitotenv.2022.153255

Faculty Host: Changcheng Zhou

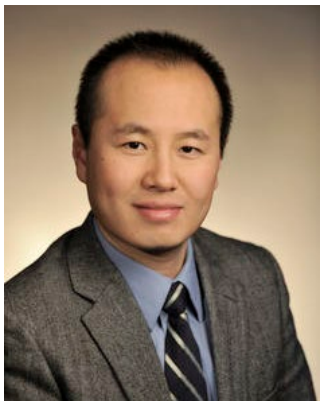
Title of Externship Project: Molecular Mechanisms of Atherosclerosis and Metabolic Disorders

Host Email: changcheng.zhou@medsch.ucr.edu

Host Phone: 9518279139

Location: MRB 2130

Approximate hours per week: 40 hours/week



Summary:

The primary focus of our research is on the molecular mechanisms of cardiovascular and metabolic diseases. We are currently investigating several important signaling pathways in the pathogenesis of cardiometabolic disease including atherosclerosis, obesity, and diabetes. For additional information about our research and recent publications, please visit our website: https://profiles.ucr.edu/changcheng.zhou