THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Repurposing effect of FDA-approved drugs on musculoskeletal trauma

Project Description: Our musculoskeletal trauma projects concentrate on investigating the therapeutic effects of US-FDA-approved drugs for regenerating skin, peripheral nerves, and bone after trauma. We aim to understand cellular and molecular signaling using both in vivo and cell culture studies. Our three different mouse research projects have been translated into human trials at Banner Hospital.

Project Details: You will work with animal models for bone fracture, skin excision, skin thermal burn, peripheral nerve crush, muscle crush, etc. You will learn how to culture Osteoblasts, mesenchymal stem cells, keratinocytes, macrophages, fibroblasts, etc. You will also learn advanced techniques suche as qRT-PCR, PCR, Western blot, immunofluorescence, histology, RNA/DNA/protein extraction and quantification from cells and tissues, microscopy imaging, etc. You will also get training in using softwares such as ImageJ, GraphPad Prism. You will learn how to inject animals using Intramuscular (IM), intravenous (IV), subcutaneous (SC), oral (PO), intraperitoneal (IP), etc. dosing routes.

Who will you work with: Directly with the faculty mentor.

Prem Kumar Govindappa, PhD

Assistant Research Professor
Orthopedics
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Neural mechanisms of early life stress-induced socioemotional deficits

Project Description: I use a mouse model to understand how early life stress affects neural circuits that are important for social and emotional behavior. Research entails mouse behavioral models, immunohistochemistry, and in vivo recordings of the brain.

Project Details: Students would work alongside my current grad student/ RAs to help with mouse behavior, brain tissue assaying, and analyzing data.

Who will you work with: A graduate student on the day-to-day experiments. The faculty mentor will supervise.

Lindsay Halladay, PhD

Assistant Professor
Neuroscience
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Adolescent brain development in NHP's

Project Description: We will be monitoring longitudinal changes in social decision-making in adolescent female monkeys. We will engage them in a task in which they take turns rewarding a social partner. They will decide to reward or not a social partner under two conditions: (1) when they also receive a reward, and (2) when they do not receive a reward but they have an incentive to reward their social partner to induce reciprocal behaviors when the partner will be a reward giver.

Project Details: The students will administer the test in the colony room using a touch-screen apparatus positioned in front of the cage, so the monkeys can "play the social game". The student will bring the data to the lab and analyze the results with the help of the graduate students and technicians.

Who will you work with: A graduate student on the day-to-day experiments. The faculty mentor will supervise.

Katalin M. Gothard, MD, PhD

Professor
Physiology
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Investigation into the mechanisms by which the orphan receptors GPR63 and GPR153 regulate microglia during pathological pain

Project Description: In our work we've found that the orphan receptors (no known activators or functions) GPR63 and GPR153 act as microglial negative feedback loops, working to reduce microglial activation and inflammation in the spinal cord during pathological pain. Going forward, we have much to do in terms of exploring the mechanisms by which these receptors regulate microglia, identifying exogenous and endogenous drugs/ligands using high-throughput screening, using new drug tools to determine the receptor signal transduction cascades (G protein type, etc.) and much more. This work promises to identify and explore a brand-new central regulator of neuroinflammation.

Project Details: 1) Using in vitro models of human and mouse primary microglia to explore GPR63/153 cell signaling and physiology. 2) Using mouse models of pathological pain to explore microglial activity in response to these receptors in vivo. 3) Using techniques like 3D reconstruction and modeling, CRISPR gene editing, qPCR, immunohistochemistry, pain behavioral assays, and more to determine these outcomes.

Who will you work with: A graduate student on the day-to-day experiments. The faculty mentor will supervise.

John Streicher, PhD

Professor
Pharmacology
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of
Veterinary Medicine

Stress-induced maternal effects on offspring cognition and behavior

Project Description: Our long-term goal is to understand how prenatal stress, behavior and brain morphological variation interact throughout the lifespan. We previously demonstrated that experimentally manipulating maternal glucocorticoids during oogenesis increases offspring fearfulness and leads to differences in the relative size of key areas of the limbic system of these offspring as adults. Here, we experimentally manipulate maternal stress and carry out longitudinal measures of offspring brain morphology and behavior at distinct developmental time points to test our central hypothesis that prenatal stress causes differences in anxiety and cognition through reorganization of limbic and cortical tissue early in development.

Project Details: The student will work with us to develop and investigate a sub-component of the above-described study (e.g. validating one of the assumptions or adding a new dimension). They will acquire skills in animal husbandry, passerine bird handling and hormone sampling, and behavioral observations.

Who will you work with: A graduate student on the day-to-day experiments. The faculty mentor will supervise.

Renee Duckworth, PhD

Professor
Ecology and Evolutionary Biology
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

The effect of bacterial capsule on persistence

Project Description: Streptococcus pneumoniae makes a carbohydrate capsule that affords it protection during infection. However, the carbohydrates it eats affect the size of its capsule, and further, the different niches it resides in inside the host offer a varying set of carbohydrates to consume. We hypothesize that different capsule sizes allow for better persistence but may reduce adhesion and thus initial colonization. We will test this through bacterial mutants and infection assays in tissue culture.

Project Details: Students will learn bacterial genetics, bacterial and tissue culture, and cell viability assays.

Who will you work with: A graduate student on the day-to-day experiments. The faculty mentor will supervise.

Michael Johnson, PhD

Associate Professor
Immunobiology
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Exploring the Role of Pet Ownership on People's Everyday Wellbeing

Project Description: This research study is set in the Human-Animal Bond Lab (HAB Lab) at the University of Arizona College of Veterinary Medicine, where we research how interactions with companion animals such as dogs and cats influence human health and wellbeing. We are conducting two connected studies to explore how pets support people's wellbeing in everyday life: one with a large, geographically diverse sample of pet owners worldwide, and another focused specifically on older adults, a population that may benefit greatly from animal companionship. To do this, we are using an experience sampling approach with a smartphone app to capture what's happening between pets and their owners in day-to-day life.

Project Details: Students will be involved in data collection for a global study recruiting pet owners across USA, France, and Mexico through an online platform. Students will monitor participant compliance, troubleshoot app issues, and keep track of participant progress. As the project moves into the analysis stage, students will learn how to visualize and interpret the data, create variables that reflect pet presence and momentary wellbeing, and run basic statistical analyses using R. By the end of the summer, students will gain hands-on experience with human-subjects research in a population of high relevance to the veterinary profession. Specifically, they will become familiar with real-world experience sampling methodology, data management in Excel and R, and analysis of daily human-animal interactions.

Who will you work with: A postdoctoral researcher on the day-to-day experiments. The faculty mentor will supervise.

Kerri Rodriguez, PhD

Assistant Professor
College of Veterinary Medicine
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Cytotoxic CD4 T cells in breast cancer

Project Description: The tumor immune microenvironment (TIME) plays a significant role in cancer progression. We found that mammary tumors deficient in a tumor suppressor gene called ING4 harbor a TIME depleted of cytotoxic CD4 cells, but not of cytotoxic CD8 cells. We hypothesize that ING4 deficient tumors manipulate the TIME, thereby evading immune surveillance, and metastasize. The goal is to test the hypothesis by characterizing the function of CD4 T cells in the TIME using a mouse model of breast cancer.

Project Details: The student will work with mice to inject tumor cells, harvest immune cells from tumors, and characterize CD4 T cells in in vitro tumor killing assays and in vitro tumor metastasis assays.

Who will you work with: Directly with the faculty mentor.

Suwon Kim, PhD

Associate Professor
Basic Medical Sciences
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

ACTIVE Aging in Dogs: Assessing how Cognitive Trajectories are Impacted by Varied Enrichment

Project Description: This study aims to improve the healthspan of aging dogs by examining how physical activity and mental engagement relate to cognitive decline, including Canine Cognitive Dysfunction, a condition similar to Alzheimer's disease in humans. We will follow working service dogs and released dogs aged roughly 6-10 over one year, collecting caretaker reports on lifestyle factors and cognitive health, along with objective measures via accelerometry and a cognitive test battery for a targeted subset. The resulting dataset will reveal whether physical and mental activity predict cognitive outcomes, how lifestyles differ between working and released dogs and whether those differences influence cognitive decline, and how well caretaker reports align with objective assessments-ultimately informing strategies to support healthier aging in dogs and strengthening future large-scale research efforts.

Project Details: Students will be trained on and assist with behavioral data collection (including hands-on handling of dogs during cognition testing at Canine Companions' Santa Rosa campus), data entry, and coding of videos. They will be an integral member of the team as they explore the behavior and cognition of older dogs, and how those things have been impacted by their life experiences.
Requires travel out of Tucson for a few weeks (funded by faculty)

Who will you work with: Directly with the faculty mentor.

Emily Bray, PhD, CAAB

Assistant Professor
College of Veterinary Medicine
THE UNIVERSITY OF ARIZONA

Faculty Profile

** Students will work in collaboration with the laboratory of Dr. Evan MacLean**

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Cognitive research in aging dogs and aging humans

Project Description: The relationship between pet ownership and human wellbeing is complex. Recent studies suggest that the impact of pet ownership on human wellbeing varies individually and contextually, thereby calling for more personalized approaches. Specifically, there is a need for more sophisticated methods such as ecological momentary assessment (EMA), that can capture the complexity of day-to-day interactions among people and their pets. Our research group also studies dog behavior and cognition and has diverse ongoing projects on this topic. One major area of work involves the study of cognitive aging in dogs, and dog models of Alzheimer's disease.

Project Details: Students will be working with data collected through the Cognitive Assessment in Realistic Environments (C.A.R.E.) study, which researches cognition and Alzheimer's disease risk in older adults. The Electronically Activated Recorder (EAR) is an application which intermittently samples snippets of ambient sounds throughout an individual's daily life. Students will be trained to code and process these recordings by noting aspects such as each participant's location, activity, emotional expression, and interaction partner(s). Part of this coding will involve flagging instances of 'pet talk,' which will be analyzed to quantify verbal communication between people and their pets. In parallel, students will help quantify dog behavior by engaging in hands-on experimentation with pet dogs that people bring into the Arizona Canine Cognition Center. They will administer a handful of cognitive and behavioral tasks that tell us about the ways in which dogs respond to the environment around them, and how this changes as dogs age into their senior years.
Requires travel out of Tucson for a few weeks (funded by faculty)

Who will you work with: Directly with the faculty mentor.

Evan MacLean, PhD

Associate Professor
College of Veterinary Medicine
THE UNIVERSITY OF ARIZONA

Faculty Profile

** Students will work in collaboration with the laboratory of Dr. Emily Bray**

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

West Nile Virus surveillance in Avian hosts

Project Description: The goal of our research is to determine the factors that underpin WNV retention and emergence within the state of Arizona, and, using these factors, develop models to predict future changes in WNV occurrence in the context of anthropogenic climate change. In order to understand the current circulation of WNV in avian hosts of Arizona, we are conducting serosurveys on wild passerine birds, aiming to understand the incidence of current and historic WNV infections in twenty species. Birds will be trapped, banded, and sampled in order to search for multiple markers of WNV infection. We will then use MaxEnt species niche distribution modeling and ArcGIS Pro to model the habitat distributions of these species to identify potential hotspots of WNV outbreaks. Understanding how the distributions of hosts and vectors shift under different climatic scenarios will allow both wildlife conservation and public health professionals to identify potential transmission 'hotspots' and perform proactive measures to mitigate future outbreaks.

Project Details: We will be entering the field in various locations around Tucson three mornings a week (Monday, Wednesday, Thursday) to trap and collect biological samples (blood, feathers, esophageal swabs) from wild passerines. Two days a week (Tuesday and Friday) we will be in the laboratory conducting RNA extractions, PCR analysis, and serosurveys to search for different biomarkers of WNV in each bird sampled.

Who will you work with: A graduate student on the day-to-day experiments. The faculty mentor will supervise.

Leigh Combrink, PhD

Assistant Professor
Natural Resources and Environment
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Project 1) Detecting Estrus in Cattle Using Virtual Fencing Behavior Data
Project 2) Temperature and Coat Color Effects on Navajo-Churro Sheep Grazing Behavior Using Virtual Fencing

Project Description: Project 1 This project evaluates whether virtual fence (VF) collar data can be used to detect behavioral changes associated with estrus (heat) in cattle. By pairing VF movement and activity data with breeding records, the study aims to identify behavioral indicators that signal when cows are coming into heat and determine whether those indicators cease following successful breeding. The goal is to develop practical, technology-based tools to support reproductive management in grazing systems.
Project 2 This project examined the use of 15 Navajo-Churro sheep equipped with virtual fence collars during a targeted grazing effort to control buffelgrass on A-Mountain in Tucson. The study investigates whether external temperature influenced grazing behavior, whether coat color (black vs. white) affected activity patterns, and whether behavioral data indicate potential heat stress. By integrating virtual fencing movement data with temperature records, the project aims to improve understanding of how environmental conditions affect small ruminant grazing performance in arid landscapes.

Project Details: Student's interests and ideas will be taken into consideration. Overall methods will be to compile and clean VF collar datasets. Quantify variable metrics. Use statistical modeling and time-series analysis to detect recurring behavioral patterns associated with heat cycles and temperature effects and coat colors. Compare behavioral data to determine whether research hypotheses hold true. Student Responsibilities in the Lab: Organize and clean behavioral and breeding datasets. Conduct exploratory data analysis and visualization. Perform statistical and time-series analyses under supervision. Assist in interpreting results. Contribute to development of practical detection criteria.

Who will you work with: Directly with faculty mentor.

Flavie Audoin, PhD

Assistant Professor
Natural Resources and the Environment
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Multi-site, Longitudinal Trial Evaluating the Efficacy, Mechanisms, and Moderators of Service Dogs for Military Veterans With PTSD

Project Description: SERVES is a large-scale randomized clinical trial investigating the efficacy of psychiatric service dogs for military veterans with PTSD. Veterans complete multi-modal assessments spread over 15 months, including surveys about PTSD (e.g., depression, anxiety, suicidal ideation) as well as other domains (e.g., quality of bond with service dog), wearing an actigraphy device to measure physical activity, providing human saliva samples and collecting canine fecal samples to measure cortisol, and responding to random EMA prompts to measure emotions in the moment. The overarching objective of this research is to understand how, why, and for whom PTSD service dogs are most effective.

Project Details: VSSRP students will assist other team members with data collection, processing, and storage, record keeping and data entry, as well as data verification. Students will prepare participant materials for shipment, including programming actigraphy devices and preparing saliva collection kits, fecal sample collection kits, and other study materials. Students will also work on protocol review and documentation for the lab. Importantly, students will be directly mentored in their own independent research projects, using data that has already been collected, and that will be presented at CVM day and other relevant venues.

Who will you work with: A research scientist on the day-to-day experiments. The faculty mentor will supervise.

Maggie O'Haire, PhD

Associate Dean for Research
Professor
College of Veterinary Medicine
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Behavioral and Neural Circuit Mechanisms of Light Sensitivity After Rotational Traumatic Brain Injury

Project Description: Traumatic brain injury (TBI) is commonly associated with persistent light sensitivity (photophobia), a disabling symptom that remains poorly understood mechanistically. This project will utilize a novel mouse model of rotational TBI (rTBI) model to define the behavioral and circuit-level mechanisms underlying post-traumatic light hypersensitivity by integrating home-cage-based monitoring using the PhenoTyper system with targeted behavioral assays to quantify light avoidance, circadian disruption, and affective responses to controlled photic stimuli. In parallel, in vivo two-photon calcium imaging will be used to characterize activity dynamics within visual and limbic cortico-thalamic circuits enabling an integrated behavioral-circuit framework of post-TBI photophobia and identification of translationally relevant neural targets for therapeutic intervention.

Project Details: Students will investigate the behavioral and neural circuit mechanisms of light sensitivity following rotational traumatic brain injury (rTBI). They will conduct behavioral assays to quantify light avoidance, visual function (Visual water task, Pole descent visual cliff task etc.), and circadian disruption, and will perform molecular analyses using immunohistochemistry and Western blotting to assess injury- and circuit-related signaling changes. Students may also have the opportunity to participate in in vivo two-photon calcium imaging studies conducted in collaboration with Dr. A. McGee's lab to examine neural activity dynamics following rTBI.

Who will you work with: Directly with faculty mentor.

James Bibb, PhD

Chair,
Translational Neurosciences
THE UNIVERSITY OF ARIZONA

Faculty Profile

Ayanabha Chakraborti, PhD

Assistant Research Professor
Translational Neurosciences
THE UNIVERSITY OF ARIZONA

Faculty Profile

****mentor lab is located within the College of Medicine in Phoenix****

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Visual ecology of bee foraging behavior

Project Description: Like many animals, both vertebrate and invertebrate, bees use vision to forage for essential resources. However, their vision differs from ours in important ways (as is true of dogs, cats, livestock and wildlife). This project seeks to identify floral color cues that allow bees to forage efficiently.

Project Details: This project will rely on use of spectroscopy to quantify visual characteristics of flowers and field and laboratory assays of bee behavior to assess the role of those color cues.

Who will you work with: Directly with faculty mentor.

Daniel Papaj, PhD

Professor
Ecology and Evolutionary Biology
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Project 1) Studying the Aging of Brain Stem Cells
Project 2) Assessing the mechanisms of Parkinson's disease in Human iPSC-derived neurons

Project Description: Project 1 assesses the how age and sex affect the ageing of stem cells in two germinal regions of the brain - the forebrain subventricular zone and hippocampal dentate gyrus. Project 2 focuses on deriving induced pluripotent stem cell based neurons from individuals with Parkinson's disease (PD) and healthy controls. These cells will be analyzed via several cellular and molecular assays to probe mechanisms core to PD.

Project Details: Students will be teaming up and assisting other graduate students on these projects and engaging in different cellular molecular and whole animal techniques. They will be expected to participate in lab meetings and present their data. They will also be expected to presented a poster at the end of their Summer research at the conference suggested by the program.

Who will you work with: A graduate student on the day-to-day experiments. The faculty mentor will supervise.

Lalitha Madhavan, MD, PhD

Associate Professor
Neurology
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Project 1) Cyclospora surveillance in fresh produce growing regions in the US and MX;
Project 2) Cyclospora cayetanensis Multilab ISO validation

Project Description: Project 1. Students will be collaborating on a Cyclospora cayetanensis surveillance project analyzing over 100 samples previously collected from fresh produce growing regions in Mexico and Arizona. Students will be trained on molecular techniques such as DNA extractions, purification, and Real-Time Polymerase Chain Reaction (qPCR). Project 2. Students will be collaborating on a Cyclospora cayetanensis multi-laboratory International Organization for Standardization (ISO) validation study. Students will work closely with students already working on the project.

Project Details: Project 1. Students will be assisting microbiology undergraduate students in processing environmental water samples previously collected and stored in 50ml conical tubes in the -80. Students will be using the FDA Bacteriological Analytical Manual (BAM) 19C method to complete DNA extractions, purifications, and Real-Time quantitative (RT qPCR) analysis. Followed by Next Generation sequencing using the Oxford Nanopore MinION platform. Project 2. Students will be assisting microbiology undergraduate students in conducting a Cyclospora cayetanensis multi-laboratory International Organization for Standardization (ISO) validation study. Students will conduct seeded studies on fresh produce and will concentrate samples followed by DNA extractions, purifications, and Real-Time quantitative (RT qPCR) analysis.

Who will you work with: A research associate or technician on the day-to-day experiments. The faculty mentor will supervise.

Gerardo (Jerry) U. Lopez, PhD

Associate Professor
Animal and Comparative Biomedical Sciences
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Evaluation of Grower Practices to Reduce Potential Risks Associated with the Use of Biological Soil Amendments of Animal Origin in Leafy Green Production

Project Description: There are numerous potential hazards that may play a role in elevating risk of leafy greens contamination (i.e. adjacent animal operations, Biological Soil Amendments of Animal Origin -BSAAO- including compost etc.). The goal of this study is to understand the variability in BSAAOs used for leafy green production, what industry practices impact growth and persistence at the field-scale, what impact do various weather events have on persistence and re-growth, identification of pathogen specific factors associated with higher rates of transmission, contamination, and survival through post treatment/application to result in human disease, and what best management practices mitigate those risks. Our specific objective is determining genotypic/phenotypic pathogen/indicator characteristics associated with enhanced survival/persistence including conditions that may induce Viable but not Culturable pathogens (VBNC). We hypothesize that the persistence and amplification of bacterial pathogens in compost and biological fertilizers between leafy greens crop cycles are influenced by factors such as source loading or bacterial concentration, amendment temperature, and humidity over time. Additionally, the timing of biological soil amendment incorporation into soil, with consideration of antecedence weather events, significantly impacts pathogen survival and persistence.

Project Details: Student will conduct experiments using mixed culture of Salmonella and E.coli consisting of a cocktail of ten strains from different sources and/or serovars. The effect of different moisture levels, storage temperature, ambient temperature, time points following incubation, as well as different locations including Tucson and Yuma will be studied. The culturable levels, injured or sublethal levels will be determined by conducting five tube most probable number (MPN). DNA extraction will be conducted and the pathogen viability levels quantified using qPCR. The number of injured/sublethal cells for each pathogen as well as VNBC levels will be determined.

Who will you work with: A research scientist on the day-to-day experiments. The faculty mentor will supervise.

Kerry Cooper, PhD

Associate Professor
Animal and Comparative Biological Sciences
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Student and Faculty Estimates of Pre-Class Preparation Time Compared to Actual Time and Workload Estimator in Veterinary Education

Project Description: This study will examine the accuracy of veterinary students' and faculty members' estimates of time required for pre-class preparation compared to actual time spent and predictions generated by the Wake Forest Workload Estimator (WFWE). First-year students and faculty involved in prework creation will be invited to participate in this prospective, minimal-risk educational study. For selected pre-class assignments, faculty will provide independent workload estimates and assignments will be entered into WFWE. Students will self-report time spent and record actual time-on-task using time logs or learning management system analytics. Agreement and discrepancy among student estimates, faculty estimates, WFWE predictions, and actual time will be analyzed using paired comparisons and agreement methods. Findings will inform evidence-based workload design, improve transparency in curricular expectations, and contribute to scholarship in veterinary medical education.

Project Details: The veterinary student will: Coordinate faculty estimate collection, Design student surveys, Manage time-log data, Organize deidentified datasets, Perform preliminary statistical analyses under mentorship, Assist with manuscript preparation and conference presentations

Who will you work with: Directly with faculty mentor.

Stephanie Shaver, DVM

Associate Professor
College of Veterinary Medicine
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

GBM modeling in mice

Project Description: Glioblastoma mice models in mice will be tested with various potential agents that could alter tumor growth and ultimately survival.

Project Details: Mice Injections, tumor implantation, imaging, tumor removal

Who will you work with: A research associate or technician on the day-to-day experiments. The faculty mentor will supervise.

Kristin Huntoon, PhD, DO

Assistant Professor
Neurosurgery
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of
Veterinary Medicine

Peripheral nervous system regulation of glucose homeostasis and blood pressure

Project Description: The lab focuses on interorgan communication via the peripheral nervous system and how this affects insulin sensitivity and blood pressure.

Project Details: The lab focuses on interorgan communication via the peripheral nervous system and how this affects insulin sensitivity and blood pressure. I will work with the trainee to identify a project within this framework that will be of interest to them.

Who will you work with: Directly with the faculty mentor.

Benjamin Renquist, PhD

Associate Professor,
Animal and Comparative Biomedical
THE UNIVERSITY OF ARIZONA

Faculty Profile

THE UNIVERSITY OF ARIZONA
College of Veterinary Medicine

Animal companions and vet clinics in the age of AI

Project Description: Study how AI tools in veterinary clinics and at-home pet monitoring affect diagnostic accuracy, workflow efficiency, client communication, and animal welfare, including ethical and practical implementation considerations.

Project Details: In-depth literature research, paper write-up, and poster presentation.

Who will you work with: A graduate student on the day-to-day experiments. The faculty mentor will supervise.

Martin Reimann, PhD

Associate Professor
Eller College of Management
THE UNIVERSITY OF ARIZONA

Faculty Profile