

## Department of Pharmaceutical Sciences

Our mission is to advance pharmaceutical sciences through research and the education and training of our professional, graduate, and post-graduate students

Cancer

Investigating the underlying

mechanisms of carcinogenesis and

preventative and treatment

approaches.

**Infectious Disease** 



### **Brain & Behavioral Health**

Investigating genetic predisposition to substance abuse and novel therapeutic targets.

### **Environmental Health** Investigating how exposures to pollution, metals, and UV radiation contribute to various diseases.

Center for Metals in Biology and Medicine focuses on both studying adverse health outcomes of metal contaminants as well as on harnessing the chemical properties of metals for therapeutic and nutritional purposes.

NIH-funded Center/Programmatic grants

**Metal Exposure Toxicity Assessment on Tribal Lands in the** Southwest (METALS) Superfund Basic Science Research and Training Program focuses on elucidation of how exposures to complex metal mixtures from uranium mining wastes move in the environment and result in systemic inflammation, DNA damage, immune dysregulation, and cardiovascular disease.

### Advancing **Pharmaceutical**

Sciences Through Research & Education

### Center for Native American Environmental Health Equity Research

uses primary biomedical and environmental research to assess the contribution of social determinants and exposures to complex metal mixtures in mine waste combined with emerging microplastic and related chemical toxicants to environmental health disparities in partnership with three Native American populations.

Understanding Risk Gradients from Environment on Native **American Child Health Trajectories: Toxicants, Immunomodulation,** Metabolic syndromes, & Metals Exposure program is the first largescale assessment of environmental exposures and children's health in tribal populations and assesses environmental exposures to abandoned mine waste

on birth outcomes and neuro- and physical child development. The New Mexico Integrative Science Program Incorporating

## Drug & Vaccine Delivery Investigating different routes of delivery and targeting drug release in the body.

Cardiovascular Disease Investigating the effects of inhaled substances on vascular physiology.

# Investigating the immune system and developing vaccines and diagnostics.

### Research in Environmental Science program enhances research through infrastructure support, career development activities and community engagement in underserved populations.

### **≻**Sarah Blossom, Ph.D.

Effects of environmental pollutants on adaptive immune responses in immune-mediated inflammatory disorders; T cell epigenetics; role of gut microbiome in xenobiotic-induced autoimmunity.

# >Amanda Barkley-Levenson, Ph.D.

Behavioral pharmacology; genetics of alcohol use disorder and related psychiatric disorders; novel therapeutic targets for alcohol use disorder.

# **≻**Alicia Bolt, Ph.D.

Mechanisms of metal-enhanced tumorigenesis; role of the tumor microenvironment to drive tumor promotion; metal immunotoxicity.

# ➤ Matthew Campen, Ph.D.

Cardiovascular health effects of inhaled substances along with basic research on vascular pathophysiology.

### **≻**Eszter Erdei, Ph.D. Autoimmune molecular markers; Tribal community-based participatory research; integration of human immune responses with exposure to metals and xenobiotics.

**≻Linda A. Felton, Ph.D.** Modified release drug delivery; polymeric film coating; formulation development and manufacturing drug products for clinical trials.



### **≻**Changjian "Jim" Feng, Ph.D.

Roles of metals in life processes with an emphasis on molecular mechanisms of nitric oxide synthase isoform regulation.



### **➢ Don Godwin, Ph.D.**

Scholarship of teaching and learning with emphasis on innovative methods to enhance problem solving and critical thinking.



### **≻**Laurie G. Hudson, Ph.D.

Regulation of epithelial plasticity in metastasis and wound repair; novel therapeutics for ovarian cancer; mechanisms of arsenic carcinogenesis.



### **➢ Debra MacKenzie, Ph.D.**

Immunotoxicology of metals and metal exposures in populations; Experimental therapeutics for prostate cancer and melanoma.



### > Jason McConville, Ph.D.

Drug delivery in cancer, infection, and other diseases; pulmonary drug delivery; nanomedicine; buccal drug delivery.



#### > Sebastian Medina, Ph.D.

Mechanisms of metal-induced toxicity to hematopoietic stem and progenitor cells; immune dysregulation produced by metal and other toxicant exposures.



### > Roberto Ivan Mota Alvidrez, M.D., M.S., FAHA

Applied molecular genetics and imaging aimed at therapeutic targeting of hyperglycemia in diabetes with common comorbidities like atherosclerosis. Clinical and translational interventions in diabetic vasculopathy and health disparities.



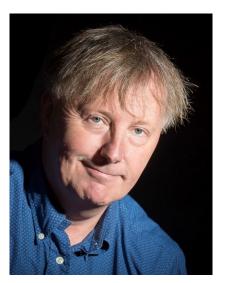
### **≻**Pavan Muttil, Ph.D.

Formulation, characterization, and preclinical evaluation of vaccines and drugs via oral, pulmonary, and transdermal routes.



#### **▶**Todd A. Thompson, Ph.D.

Experimental therapeutics for cancer; toxicity of androgenic endocrine disruptors; drug discovery; pharmacogenomics.



### **→** Graham Timmins, Ph.D.

Stable isotope compounds for the diagnosis and treatment of infectious diseases; radical pair quantum biology.



