Nu-Chu Liang
Associate Professor

Ingestive behaviors including eating, drinking, and substance use lead to metabolic and neurological consequences that impact health and quality of life. Genetic and environmental factors such as diet, exercise, and stress can interact to alter the consequences of ingestive behaviors, and understanding their underlying mechanisms can facilitate personalized approaches for disease prevention and intervention.

Research Interests

• Individual differences in the effect of exercise on diet preference
• Sex- and age-dependent influences of alcohol exposure on cognitive and emotional-like behaviors
• Effects of social isolation on aging and neurodegenerative disease
• Gut-brain mechanisms of metabolic and neurological disease

Current Projects

• Identifying non-invasive imaging marker of NASH
• The influences of social isolation on impulsivity and cortical tauopathy
• Behavior and physiology of humanized ApoE4 knockin rats

Keywords

Metabolic syndrome, obesity, diabetes, cognitive decline, impulsivity, exercise, sex differences, apolipoprotein E (ApoE), alcohol withdrawal syndrome, diet-induced non-alcoholic liver disease

Interest Areas for Collaboration/Future Work

Dr. Liang is interested in working with cellular and molecular biologists and data scientists who are experts of utilizing “omics” methods to identify mechanisms underlying sex and individual differences in physiology and behavior. Dr. Liang would also love to collaborate with human and clinical researchers who is motivated to establish translational rodent models to elucidate mechanisms of human conditions.