



THE UNIVERSITY OF ARIZONA
COLLEGE OF MEDICINE TUCSON

Physiology

Seminars in Translational & Advanced Research (STAR)

Friday, September 25
Arizona Health Sciences Center
Room 8403
11:00am - 12:00pm

<https://arizona.zoom.us/j/85062222452>



Qili Liu, PhD

*Assistant Professor, Department of
Anatomy, University of California,
San Francisco*

Host: Maya Kaelberer

"Molecular and Circuit Mechanisms of Protein-Specific Appetite"

The goal of the Liu lab is to understand the molecular and cellular mechanisms underlying the motivational drive to eat, with a particular focus on nutrient-specific appetite, using the fruit fly *Drosophila melanogaster* as a genetically tractable model. Since establishing her independent research program at the University of California, San Francisco in 2019, Dr. Liu has employed multidisciplinary approaches including large-scale genetic and behavioral analyses, immunohistochemistry, functional imaging, and patch-clamp electrophysiology to investigate the organization and modulation of nutrient-specific appetites.

Her research has identified the first neural circuit encoding protein-specific hunger, characterized the cellular and molecular mechanisms regulating protein intake setpoint, and demonstrated how coordinated RFamide GPCR signaling programs and adjusts protein-specific appetite. Dr. Liu's laboratory has also revealed an unexpected metabolic pathway that reallocates nitrogen from phospholipids to amino acids during protein starvation, providing new insight into the maintenance of protein homeostasis.