



THE UNIVERSITY OF ARIZONA
COLLEGE OF MEDICINE TUCSON

Physiology

Seminars in Translational & Advanced Research (STAR)

Friday, January 16
Arizona Health Sciences Center
Room 8403
11:00am - 12:00pm

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



Will de Lartigue, PhD

Associate Professor,

Dept. of Neuroscience, Univ. of Pennsylvania

Associate Member,

Monell Chemical Senses Center

Host: Maya Kaelberer

"Could disrupted gut-brain communication underlie obesity"

Dr. de Lartigue's research program investigates how the gut communicates with the brain to regulate feeding, motivation, and energy balance, and how these processes are disrupted in obesity and metabolic disease. A central focus is on vagal sensory neurons, which detect gastrointestinal signals and transmit them to the brain to influence both physiology and behavior.

To address long-standing gaps in the understanding of gut-brain communication, his lab has developed and applied innovative genetic, molecular, and viral approaches that provide selective access to vagal subpopulations defined by sensory function, gene expression, and innervation targets. These tools have enabled discoveries that gut-brain circuits are lateralized and control distinct aspects of feeding, including satiety, nutrient-specific reinforcement, and memory. Dr. de Lartigue's lab has also shown that vagal signals influence motivational drive via projections to higher-order brain regions, redefining their role beyond short-term satiety.