

TOPICAL Seminar

Date: 13 April
Time: 14:30-15:30
Venue: 1870-816



Yuuki Obata
Assistant Professor at
University of Texas,
Southwestern
Medical Center

How Gut Neural Circuits Sense the Outside World

The human body must sense internal and external environments to survive. The intestine is uniquely positioned to detect external cues such as food and microbes while communicating with the brain through the gut-brain axis. This function is coordinated by the enteric nervous system (ENS), an intrinsic neural network that regulates intestinal physiology and systemic responses. Due to its autonomy and complex circuitry, the ENS is often referred to as the “second brain.” Although interest in gut-driven behaviors has grown rapidly, the molecular mechanisms by which the ENS senses environmental signals remain incompletely understood. In this seminar, I will present our recent findings on microbial and immune regulation of ENS circuits and how feeding-fasting cycles shape their molecular programs.