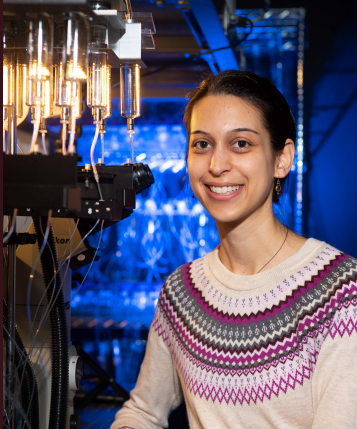




RIVERSIDE

DEPARTMENT OF ENTOMOLOGY
Entomology Seminar Series



Speaker:

Jessleen K. Kanwal, PhD

Date: Monday, February 24, 2025

Time: 4:00 pm - 5:00 pm

Format: In-Person Seminar & Virtual Access

Location: Genomics Auditorium, Room 1102A

Zoom: 983 6120 0167

Passcode: 818719

Title:

“From Feeding to Fighting: Multisensory Decision-Making in Insects”

Abstract:

Insects rely on rapid, adaptive decision-making to survive in complex environments. Whether foraging for food, avoiding predators, or engaging in defensive behaviors, these decisions depend on the seamless integration of sensory information. But how do insects reconstruct inputs from different sensory modalities to perceive and respond to their dynamic surroundings? In this talk, I will share findings from my studies on *Drosophila melanogaster* larvae and *Dalotia coriaria* rove beetles, exploring how insects integrate multiple sensory cues in the context of feeding and predator defense. Using quantitative ethological analyses and neural imaging, I find that *Drosophila* larvae synergistically combine olfactory and gustatory information to enhance food-seeking behavior in complex environments. I then extend this framework to *Dalotia*, a predatory rove beetle that must navigate interspecies interactions with both prey and predators. *Dalotia* deploy a chemical defense system against predatory ants, and I will discuss how *Dalotia* integrates predatory chemical and tactile cues to enable species recognition and context-dependent defensive strategies. Together, these studies illustrate how multisensory information and ecological context shape behavioral decision-making and neural representations.

<https://ucr.zoom.us/j/98361200167?pwd=cWsya2N4U2dEaUIZM0ExQkkzbC9ldz09>

Refreshments will be served in the Entomology Building at 3:00 pm