

Targeting environmentally-induced behavioral changes in predatory mites to advance biological control



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I0 am – II am, Wed, September 25th S-I28, Agriculture Main Building



Summary:

Plant-inhabiting predatory mites are globally among the most successful natural and biological control agents of herbivorous mites and insects. These mites are also model animals in genetics, evolution, ecology and behavior, making them ideal candidates to explore pioneering strategies for optimizing their use in biological control. One possibility is targeting genotypic changes through selective breeding and genetic engineering, while another one is targeting phenotypic changes. I will demonstrate the remarkable ability of predatory mites to adjust their phenotypes by transgenerational information transfer and personal experiences, i.e., learning. Further, I will highlight the newest findings on environmentally-shaped personality trajectories of predatory mites and discuss the potential to translate recent research achievements into the advancement of biological control.



This lecture is open to anyone.

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