

# Speaker Bio

## **Dr. See-Yeun Ting**

My research program centers around the study of interbacterial competition. At present, I am focusing on the identification and characterization of the bacterial immune system specific for interbacterial antagonism. My preliminary work suggests that bacteria have evolved mechanistically diverse pathways to confer resistance to their competitors. I hypothesize that these newly identified defense pathways allow bacteria to adapt to intense selective pressure imposed by competitor bacteria within their native habitats. This work builds upon my diverse background in Microbiology, Biochemistry, Structural Biology, and Genetics in my overarching goal to develop an interdisciplinary and innovative research program. As a Ph.D. student in Biochemistry, I joined Dr. Elizabeth Craig's lab at the University of Wisconsin-Madison and studied how proteins translocate between organelles. As a postdoc, I applied biochemical, structural, and genetic approaches to understand how the interaction between bacteria shapes the composition of the microbial community.

My laboratory in Academia Sinica was launched in September 2021. Since then, I have recruited two talented Ph.D. students, both with M.S. degrees in Microbiology-related fields. We have successfully piloted high-throughput Tn-seq approaches to identify and characterize defense factors against interbacterial antagonism. I have also recruited a motivated research technician with expertise in computer science, microbiology, and plant sciences. We have performed in-depth bioinformatic analyses and identified anti-bacterial effector proteins with previously unknown activity. We have also characterized the biochemical activity of the toxin, resolved the crystal structure, and conducted suppressor screenings in *E. coli* to elucidate the intoxicated mechanism. This team will facilitate an ideal environment to develop my technical and intellectual expertise as an independent investigator in my current institute.