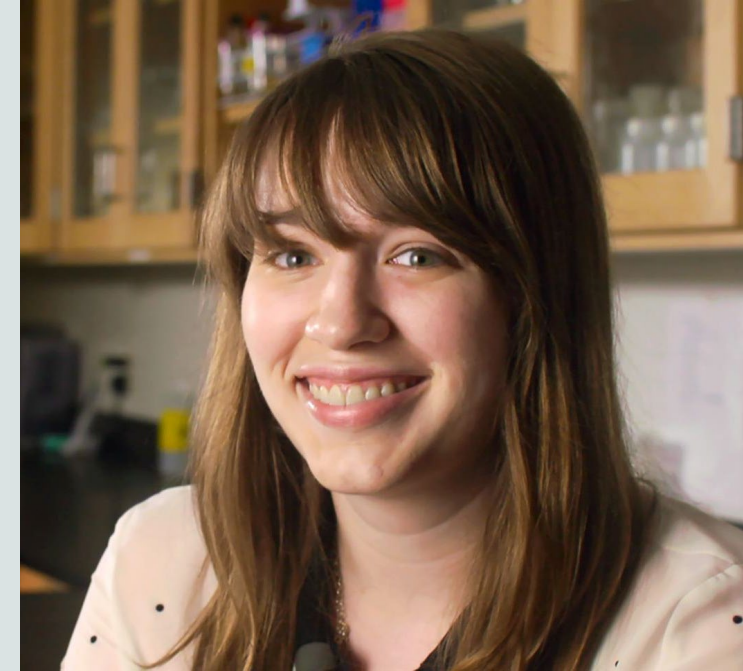


# Symbiommunity:

## Characterizing how host-microbe interactions shape cnidarian resilience in a rapidly changing world

Scleractinian corals, which form the structural foundation of vital coral reef ecosystems, are highly symbiotic organisms, reliant on associations with diverse microbiota (collectively termed the “holobiont”). These symbiotic associations play an important role in organismal response and resilience to a variety of stressors including thermal stress and disease. Still many gaps exist in our understanding of coral-microbiota associations and their roles in host fitness. Research in my group aims to understand how associations between cnidarians and their microbial partners (photosymbiotic algae and the microbiome) shapes organismal resilience in a rapidly changing world, with a focus on immunity and disease. We address these questions in a range of study systems, each selected for their unique experimental advantages. Here I will highlight three ongoing projects leveraging different cnidarian study systems to investigate: 1) the immunological consequences of natural variation in host-photosymbiont associations, 2) the impacts of thermal bleaching induced dynamic changes in photosymbiont density on host disease resilience, and 3) the roles of phenotypic plasticity and shifting microbial associations in rapid adaptation to disease. Combined, these studies aim to improve understanding of the factors contributing to coral resilience, and unlock knowledge regarding the future adaptive potential of reef-building corals in a rapidly changing world.

Monday, Feb. 3, 2025  
3:00-4:00 PM | ENR2 S107 & Zoom\*  
Reception to follow



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\*Visit [EEB.Arizona.edu/Seminars](https://EEB.Arizona.edu/Seminars) for link