



# KATHERINE DEETS, Ph.D.

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A wide range of organisms – such as nematodes, sea anemones, and bacteria – possess immune defenses to protect themselves against infectious microbes and viruses. Yet studying the interactions between hosts and infectious microbes remains limited to a handful of species. Dr. Katherine Deets will expand this list by examining the interactions between *Tetrahymena thermophila* and viruses in [Dr. Nels Elde's lab](#) at the University of Utah. Dr. Deets is currently identifying novel viruses that infect *Tetrahymena*, and working to understand how *Tetrahymena* defend themselves against these viruses. This research will unlock a new experimental platform with powerful genetic tools for diversifying studies of the evolution of host-virus interactions.

As a graduate student, Deets investigated host-microbe interactions in the context of the mouse small intestine in [Dr. Russell Vance's lab](#) at the University of California, Berkeley. Dr. Deets discovered a [novel mode of antigen presentation that only occurs following inflammasome activation](#). This finding revealed a new connection between innate and adaptive immunity in the intestine. Dr. Deets will use her experience in host-microbe interactions to expand our understanding of immune defense in diverse.

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