

# The role of conflict and cooperation in the evolution of behavioral and life history traits

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Conflict and cooperation have an important role in shaping the evolution of behavioral and life history traits. In this talk I will present three case studies where I tested the relative importance of conflict vs. cooperation between: 1) males and females; 2) parents and their offspring and 3) endosymbionts and their hosts. The first example focuses on sexual cannibalism in widow spiders. The study demonstrates that in one widow spider species cannibalism benefits females by allowing them to avoid mating with low quality males, while in another species cannibalism provides males with a reproductive advantage. The second study examined the interactions between maternal and offspring decisions in a parasitoid wasp. The findings demonstrate that competition between developing parasitoids within the host body may lead to the evolution of unique life history traits such as polyembryony (the development of several genetically identical individuals from a single egg). The third study examines the interaction between the endosymbiont bacteria *Wolbachia* and its wasp host in their natural habitat. These examples highlight the interplay between cooperation and conflict in shaping animal traits, and the importance of studying these interactions within their natural context.

