Towards understanding the genetic basis of sexually antagonistic coevolution

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Résumé

Males and females share most of the genome and are required to interact in order to reproduce; yet their evolutionary interests often diverge resulting in widespread conflict. Evidence of how sexual conflict shapes the divergence of the sexes at the phenotypic level has been steadily accumulating for the past decades. Despite these advances, our understanding of how sexually antagonistic selection shapes genome evolution remains surprisingly poor. Water striders are prominent models for the study of sexual conflict where we have a good understanding of how sexually antagonistic selection shapes the evolution of armaments in the form of sexually antagonistic traits. In this talk, I will detail some aspect of how sexual conflict over mating rate drives phenotypic divergence of the sexes in a number of species of water striders. I will present results linking this divergence with the action of prominent developmental genes. Finally, I will discuss some preliminary results and ideas as to how to further study the impact of sexual conflict at the genomic level both in the lab and in natural populations.

Mots-Clés: Sexual conflict, Correlated evolution between males and females, arms race, sexually antagonistic armaments

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