

# Considerations for mosquito microbiome research from the Mosquito Microbiome Consortium

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## Video Byte

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# Abstract

The mosquito microbiome is critical for mosquito development. Its influence on mosquito-borne pathogen transmission has resulted in increasing research interest. Although the mosquito microbiome has been extensively characterized, resulting in large amounts of data, neither standardized methods for mosquito microbiome research nor a curated data repository are available. With an overarching goal of collectively unravelling the role of the mosquito microbiome in mosquito biology, the authors created the Mosquito Microbiome Consortium to address this lack of standardized methods and data repository. The Consortium's first publication provides guidelines for conducting mosquito microbiome research, focusing on four broad areas: (i) sampling and experimental design for field, semi-field, or laboratory studies; (ii) metadata collection focused on data accessibility; (iii) sample processing, sequencing, and use of appropriate controls for high quality data; and (iv) rigorous data processing and analysis, including open data sharing practices. Bringing together researchers to standardize and streamline methods will help to improve the reproducibility of mosquito microbiome research and a well-curated repository of mosquito microbiome data will serve as a valuable resource for advancing mosquito microbiome research.