Topical Collection

Genomics and Cytogenetics of Mosquitoes

Message from the Collection Editors

Mosquitoes are vectors of numerous devastating infectious diseases. Traits relevant to the vectorial capacity of mosquitoes are determined or influenced by their genomes. Genome sequences for more than two dozen mosquito species are now available to the research community. A growing number of mosquito species have chromosome-level genome assemblies. Cytogenetics is playing an important role in developing physical maps that anchor genomic scaffolds to specific regions of chromosomes. Genomics can now be used to address questions about chromosome structure, function, and evolution. The marriage of genomics and cytogenetics raises studies to the next level—studies of mosquito population structure, genomic diversity, phylogeny, vectorial capacity, insecticide resistance, sex chromosomes, genome evolution, gene expression, and chromatin organization. Chromosome-scale assemblies facilitate the development of CRISPR-Cas9 gene drive systems for mosquitoes. For this Special Issue, we are inviting research articles, reviews, concept papers, and technical notes on any aspect of the genomics and cytogenetics of mosquitoes.

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Message from the Editor-in-Chief

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