Drosophila evolution


Genitalia evolution


Drosophila behavior


A protein complex offers explanation for how animals may sense Earth's magnetic pull.


In Drosophila larvae, mutation of microRNA miR-iab4/iab8 affects the animal’s ability to correct its orientation if turned upside down.


A Drosophila chemosensory receptor, expressed in leg sensory neurons, is necessary for behavioural and molecular synchronization of the fly’s circadian clock to low-amplitude temperature cycles; this temperature-sensing pathway functions independently from the known temperature sensors of the fly’s antennae.

Development and evolution


**Epigenetics**


Overexpression of a histone demethylase in the mouse germ line reveals a mode of transgenerational epigenetic inheritance through males. These aberrant histone modifications probably occur in the rare (≈1 to 3% in the mouse) regions of the sperm genome that remain complexed with nucleosomes rather than becoming condensed by protamines, which displace most of the histones in sperm nuclei.

**Review**


**Technology and society**


This system copies an ≈17-kb construct from its site of insertion to its homologous chromosome in a faithful, site-specific manner. Dual anti-*Plasmodium falciparum* effector genes, a marker gene, and the autonomous gene-drive components are introgressed into ≈99.5% of the progeny following outcrosses of transgenic lines to wild-type mosquitoes. The effector genes remain transcriptionally inducible upon blood feeding. Strains based on this technology could sustain control and elimination as part of the malaria eradication agenda.


**Sociology of science**


At the recent meeting of the Pan-American Society for Evo-Devo, terms associated with development at the more molecular/genetic level were vastly overrepresented compared to terms related to evolution or to development at the whole organism level.