Cuticular hydrocarbons and speciation in the fruit fly *Drosophila melanogaster*

Cuticular hydrocarbons (CH) are hydrocarbons that are present on the cuticle of many insects. In the fruit fly, differences in the CH profile have been implicated in the process of reproductive isolation between different species and populations.

This project will combine laboratory work on populations of *Drosophila melanogaster* with a chemical analysis of their CH profile. Methods will include quantitative genetics and gas chromatography.

Evolution of immunity in the fruit fly *Drosophila melanogaster*

The effectiveness of the immune system of insects is an important component of lifetime fitness. However, it is still unclear whether a strong immune response is indicative of a fit individual fighting an infection effectively, or a weak individual struggling with an infection.

This project will attempt to examine how immunity and Darwinian fitness are related to one another. The project will combine laboratory work on *Drosophila melanogaster*, quantitative genetics and assays of the immune system.

Both projects will be conducted under the supervision of Dr Ted Morrow.
http://www.iee.uu.se/zooekol/default.php?type=personalpage&id=119&lang=en

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