

Bachelor or Master Thesis Topic:

“Effect of Cold Exposure on the circadian clock of *Drosophila*”



Background

In order to stay synchronized with the external world most organisms have evolved endogenous clocks, which are necessary not only to track but also to anticipate periodical changes in environmental conditions. These endogenous oscillators rely on molecular clocks, of which the core components are transcriptional regulators. Fluctuation in the environmental conditions can influence the oscillation of core clock proteins and, therefore, drive behavioral and physiological changes. For instance, as in other ectotherms, exposure to cold temperatures will decrease flies' activity levels and stop behavioral rhythms.

Aim of the work

We aim to understand the reasons behind this lack of activity rhythms: is the circadian still ticking when environmental temperatures are low? To address this issue we will use mostly use immunoassays to quantify clock protein levels in the brain of the fly as well as behavioral recordings to monitor activity levels under different environmental temperatures

The specifics of the projects might vary depending on the progress of the project and your interest!

Contact us for any information:

pamela.menegazzi@uni-wuerzburg.de