

biol 256: Simple Animal Models for Human Diseases

block module

14.09.2020 – 25.09.2020



The main objective of the course is to illustrate the importance of simple model organisms for biomedical research and to teach the corresponding methods. The work is carried out with the fruit fly *Drosophila melanogaster*. Different transgenic models are used. The module is carried out in the form of a 2-week block in September. The projects will be carried out in groups of 2 students as independently as possible (but of course under supervision), in the form of a small scientific project. This means that they will be assigned a topic and will then use different methods (genetics, immunohistochemistry, molecular biology, behavioral analysis, physiology) to work on the corresponding question.

Possible projects include:

Effect of a high-fat diet on stem cell activity in the intestine of fruit flies

Inflammation induced structural changes in the airways of flies

Role of FoxO factors to translate environmental factors into suitable responses

etc.

In addition to the practical work, which is the main part of the module, each participant will also give a lecture on a topic that is relevant to the problems dealt with in the module. About 2 weeks before the start of the module, you can choose an appropriate topic from a set of given topics. This presentation is graded and contributes 50% of the total grade.

This seminar will be complemented by a number of other lectures from the work group.

A scientific protocol of the experiments, which should be submitted about 4 weeks after completion of the module, is also evaluated accordingly.

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