

## **Biol 221 Evolution of UV-B resistance**

In this module, we want to look at the consequences when genes important for the reaction to UV-B radiation get lost. The reaction of mutants of the model plant *Arabidopsis thaliana* to a challenge by UV-B radiation will be studied.

Techniques employed will be measuring epidermal UV transmittance and photosynthetic activity using chlorophyll fluorescence analysis, and pigment determination by HPLC.

The organization of the course will be as follows. Before the course, all participants will obtain a theme relevant to the topic, on which they will present a seminar lecture on the first day of the course. This seminar has the purpose to inform all participants on the basic knowledge needed for the understanding of the course. The teachers will complement potentially lacking topics. On this basis, the students will formulate research questions and hypotheses, supported by the teachers, and will be asked to develop an experimental design, including a time plan for the remaining time of the course. During the experimental period, the results will be reviewed as necessary and the experiments will be adjusted if needed. After completion of the experiments, the students will present a preliminary summary on the results. The success of the students will be evaluated on the basis of a written report.