

# Gene editing with CRISPR, 3 credits

## Preliminary program

### *Day1 - Intro (half day), **Monday 5 May 2025***

- Course participants introduction, discuss the program and what is needed to succeed in this course **14:00-14:30**
- Introduction lecture on CRISPR by Panagiotis Moschou (via Zoom) **14:30-16:30**

### **Before coming to the room on Day 1: (approximately 2 days)**

- Read up on the basics of CRISPR technology, its development and adaptation based on the articles, blogs, and links provided before the intro day
- Start making draft of an experimental plan of using CRISPR in your personal projects

### *Day 2 - CRISPR in diverse systems (full day, selection of external and local speakers) **8 May 2025***

- *Prof. Mattias Hahn (Kaiserslautern University, tbc) - Genome editing in fungi **09:30-10:30***
- *Dr. Yong Zou (Researcher, Molecular Sciences) - Genome editing in *Chlamydomonas reinhardtii* **11:00-12:00***
- *Dr. Joan Marquez Molins (Postdoc, Plant Biology) - Recent advances in virus-mediated genome editing **13:00-14:00***
- *Dr. Shamik Mazumdar (Postdoc, Molecular Sciences) - Genome editing in rice and *Arabidopsis* **14:30-15:30***

### **After Day 2: (approximately 1 day)**

- Create a reflection document about the use of CRISPR based on the lectures and discussions of Day 2.

### *Day 3 - Invited talk (half day), **Monday 12 May***

- Discussion about reflection document: 10:00-12:00
- Prof. Alain Tissier (Managing Director at the Leibniz Institute of Plant Biochemistry, IBP Halle, DE) - CRISPR-enabled knock-in in plants **14:00-16:00**

*Day 4 - Invited talk and dry lab exercise (full day), **Friday 15 May***

- Dr. Thomas Jacobs (Group leader at VIB-UGent Center for Plant Systems Biology, Ghent, BE) - CRISPR screens and optimization of diverse CRISPR-based systems in plants **10:00-12:00**
- Dry lab exercise and design of your own CRISPR experiment (guidance by Thomas Jacobs and local organizers) **13:00-16:00**

**Requirements to finish the course**

Final deadline - 23 May 2025

- Submit a written project idea based on CRISPR with a practical implementation part
- Submit the reflection document from Day 2 and report on different kind of CRISPR effectors.
- Attendance of four days