

Advanced Molecular Cloning : workshop program

- 9.00 Registration
- 9.10 Introduction
- 9.30 Tools for molecular cloning (**Vincent Bernard**, Representative for NEB Molecular cloning products, BioConcept, Allschwil)
The development of new cloning strategies offers a wide array of tools allowing the manipulation of DNA sequences and construction of plasmids. Advantages and disadvantages of different methods will be presented and discussed in the frame of potential cloning projects.
- 10.15 MoClo, a modular system for vector construction (**Dr. Sylvestre Marillonnet**, Head of the Synthetic Biology group, Department of Cell and Metabolic Biology, Leibniz Institute of Plant Biochemistry (IPB) Halle)
*The new cloning techniques allows the standardization of the cloning strategies allowing the construction of “building-block” based systems for the construction of multi-purpose vector. The case of the MoClo system adapted for the model organism *Arabidopsis thaliana* will be presented.*
- 11.00 *In silico* analysis of DNA and protein sequences (**Dr. Geoffrey Fucile**, Unibas, Biozentrum, Basel)
An increasing number of web-based tools become available to analyze the sequences from both DNA and protein molecule. This presentation will offer an introduction to the most popular tools introducing the important parameters to be considered before starting a cloning experience. A particular attention will be devoted to the prediction of protein structure essential for the design of a recombinant expression project.
- 11.45 Flash presentation from the students of their molecular cloning project.
- 13.00 Lunch break

- 14.00 – 17.00 *Hands-on session: The students will work in small groups with the assistance of the organizers and the experts to design a cloning strategy pertinent with their own cloning project. During this time, there will be the opportunity to freely discuss and share tips and ideas.*

- 17.00 – 18.00 *Brief presentation, per group of the cloning strategy developed to the other members of the workshop, final discussion.*

Following days...

This workshop aims to stimulate the beginning of a new cloning project, the idea behind it is to bring the project to your own lab and be able to start the real cloning. As a follow-up we will have the contacts of the organizers and the other members useful to share your opinions and to ask questions or assistance! In a way, the workshop will not end on 14 January, but its continuation will be in your hands!