Ad hoc support : REGENCROP Workshop and training

WORKSHOP Plant Regeneration, Transformation and Genome Editing 2020 (PRTGE)

ABSTRACT

The RegenCrop consortium brings together more than 50 researchers from a dozen research centres working on more than 20 plant species. The coordinator of this network is Mr. Pierre Hilson (INRA Versailles). For the past three years, this consortium has organised a workshop each year in a different member institution (and city) of the network. In 2020, the workshop will take place in Montpellier at CIRAD from 20 to 24 April 2020 and its work will be more applied to tropical and perennial species (Rice, Citrus, Hevea). The techniques that will be studied are detailed in the following section.
Objectives During this five-day course, participants will carry out the 'key' steps necessary for the transformation and regeneration of several agronomic species. The supervisors are from the French RegenCrop network, which includes some twenty research teams from 13 units (INRA, CIRAD, IRD). Collectively, they work on more than 20 plant species. The trainees will be trained in the major methods and tools in the following fields
- Transformation of protoplasts (PEG transfection), agroinfection and biolistics;
- Cloning and vectors for editing (CRISPR/Cas9) of plants, choice of guide RNA, detection of induced mutations;
- Gene expression analysis (GUS staining, GFP visualisation in living tissue);
- Regeneration via organogenesis and somatic embryogenesis;
- Study and improvement of limiting steps related to tissue regeneration in vitro.
- Cryopreservation of various types of explants.

Keywords : Regeneration, Tissue Culture, Training, Crisper Cas9, Editing

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Project leader : AXEL LABEYRIE
Project leader's institution : CIRAD
Project leader's RU : DIADE

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