

COST Action CA18111 "Genome Editing in Plants"

1st WG1 PlantEd Training School

Date: 13 – 17 June 2022

Place: The John Innes Centre, Norwich Research Park, Norwich, UK

Objectives

The WG1 Training School will focus on the transformation of cereal and Brassica crops. Participants will be asked which crop they would like to work with out of wheat, barley or Brassica. The main objective is to equip participants with the full set of skills such that they can set up the relevant transformation system in their own labs. This will include choosing the appropriate construct design, working with *Agrobacterium*, media preparation, isolation of explants, transformation, selection, regeneration, rooting and transfer to soil. It will also include initial molecular analysis of transgenic plants.

Expected outputs

Participants will gain practical experience of the entire transformation process in their chosen crop and have detailed protocols. They will also hear from experts in the field, describing technology developments in transformation and genome editing, as well as examples of applications of the technologies.

Venue and Dates

The Training School will take place at The John Innes Centre, Norwich Research Park, Norwich, UK.

Call launched: 21 February 2022

Application deadline: 1 April 2022

Expected decision: 15 April 2022

Training School: 13-17 June 2022

Eligibility

This call is open to all Action participants, but priority will be given to Early Career Investigators (ECIs). An ECI is a researcher with less than 8 years of experience from obtaining a PhD.

The number of trainees attending the Training School is limited to 12 (8 participants focusing on cereal transformation and 4 on Brassica transformation). The number of trainees eligible for reimbursement is limited to 12.

Note: Only PlantEd participants are eligible for reimbursement for a PlantEd activity. Therefore, if you are not a PlantEd participant already but would like to apply for this Training School, you will first have to log in at e-COST and register as a PlantEd participant.

Financial support

The financial support to the attendants is intended to help cover travel costs, including flight tickets, accommodation, local transport and meals. The maximum amount is EUR 750.

There is no course fee applied to this Training School.

Following the COST rules, the grant is paid after the Training School has been completed and the participant has submitted a Travel Reimbursement Request (TRR) via e-COST. The grant will be paid directly to the bank account entered in the e-Cost system.

How to apply

Applications are submitted via e-mail to the Organizer Prof Wendy Harwood at Wendy.Harwood@jic.ac.uk and PlantEd WG1 Leader Dr Götz Hensel goetz.hensel@hhu.de.

The application should contain the following parts:

- CV including relevant publications (maximum two pages)
- Short description of the applicant's field of work, of the motivation for participating in this Training School, and how the knowledge learned will be of future use to the applicant (maximum one page in total).

Evaluation of applications

The evaluation of the applications is performed jointly by the Training School organizer, the WG1 leaders, the Action Chair and the ECI Coordinator. The following evaluation criteria will be considered, in order of importance: 1) how the Training School will contribute to the professional development of the applicant, 2) ECI status, 3) geographical balance, and 4)

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gender balance. The Training School local organizer will inform every applicant of the outcome of the evaluation by email. Selected trainees will receive further information on programme and logistical arrangements.

Contact

For more information and enquiries, please do not hesitate to contact Prof Wendy Harwood (Wendy.Harwood@jic.ac.uk) and Dr Götz Hensel (goetz.hensel@hhu.de).

Tentative program

Monday, 13 June 2022

Arrival and welcome event – 18.00

Tuesday, 14 June 2022

Introductory lecture

General experimental design considerations

Construct design and cloning

Crop specific groups:

1. Media preparation
2. Working with *Agrobacterium*, preparation of standard inocula for transformation.
3. Construct checks following transformation into *Agrobacterium*.

Wednesday, 15 June 2022

Lecture from invited trainer

Crop specific groups:

1. Explant choice, sterilization and isolation
2. Transformation and co-cultivation with *Agrobacterium*

Evening social event

Thursday, 16 June 2022

Lecture from invited trainer

Crop specific groups:

1. Use of the gene gun
2. Selection of transgenic tissue. Embryo removal in wheat.
3. Regeneration and rooting stages

Friday, 17 June 2022

Lecture on advances in crop transformation and genome editing

Crop specific groups:

1. Transfer to soil
2. Confirmation of transformation and copy number determination

Training school end – 16.00