

4th TRAINING SCHOOL on 'SynComs development'

COST Action CA22158 Microbiomes WG4 Activity. Co-organized with the Plant Pathology Group-Center for Innovation and Development in Plant Health (CIDSAV) of the Institute of Food and Agricultural Technology at the University of Girona

Held in Girona from 20 to 23 July 2026 at the Polytechnic School of the University of Girona.



PARTICIPANTS



TRAINEES

Marija Anđelković, Serbia
Tina Arnse, Slovenia
Francesco Modica, Italy
Enrica May Hedgecock, Belgium
Alex K Alexander, United Kingdom
Isidora Knezevic, Serbia
Vilija Lapinskaite, Lithuania
Louise Mathier, Switzerland
Lena Pesenti, Belgium
Ronaldo Rwubuzizi, Italy
Katalin Tajti, Hungary

TRAINERS

-Dr. Claire Prigent-Combaret, Ecologie Microbienne, Université Claude Bernard Lyon I, Université de Lyon
-Dr. Ioannis A. Stringlis, Laboratory of Plant Pathology, Agricultural University of Athens
-Dr. Victor J. Carrion, Departamento de Microbiología, Universidad de Málaga; Instituto de Hortofruticultura Subtropical y Mediterránea “La Mayora” Universidad de Málaga-CSIC
-Prof. Emilio Montesinos, Dr. Núria Daranas and Dr. Anna Bonaterra, Laboratory of Plant Pathology, Institute of Food and Agricultural Technology-CIDSAV, Universitat de Girona

Over four days, 11 early-career researchers from different countries took part in an intensive training programme on the development of SynComs for more sustainable agriculture. Beyond the scientific training, the activity provided an excellent opportunity to foster collaboration, exchange knowledge, and build new networks among researchers.

The training focused on provide insight and gaining experience on SynComs development, including selection of microbial inoculants for the SynCom design, compatibility tests between the members of the consortia, production in bioreactors and monitoring after inoculation in plant samples. It included theoretical and hands-on experience sessions to get familiar with methodologies used for SynComs designing and testing.

PROGRAM

Monday, July 20

14:00-14:30 Participant arrival, welcome and registration

14:30-15:00 Introduction

15:00-17:00 Lab session 1. Characterization of bacterial strains (phosphate solubilization, IAA and siderophore production, ACC deaminase activity, motility). Antagonism test. Compatibility assessment. Bioreactor I (inoculation)

17:00-18:00 Talk 1. SynComs designing. Claire Prigent-Combaret

Tuesday, July 21

09:00-10:00 Talk 2. Plant responses affecting SynCom assembly. Ioannis Stringlis

10:00-11:00 Talk 3. Prediction of lifestyle-associated genes in bacteria using bioinformatic tools. Victor Carrion

11:00-13:00 Bioinformatics session. Victor Carrion

13:00-14:30 Lunch

14:30-18:00 Lab session 2. Characterization II (PCR detection of metabolite genes and ACC deaminase. Bioreactor II (UFC counts). Population levels on rhizosphere of wheat plants

Wednesday, July 22

09:00-10:00 LAB SESSION 3. Preparation of samples

10:00-13:00 Microscope session

13:00-14:30 Lunch

14:30-15:30 Talk 4. Regulatory framework in development and exploitation of plant beneficial microorganisms. Emilio Montesinos

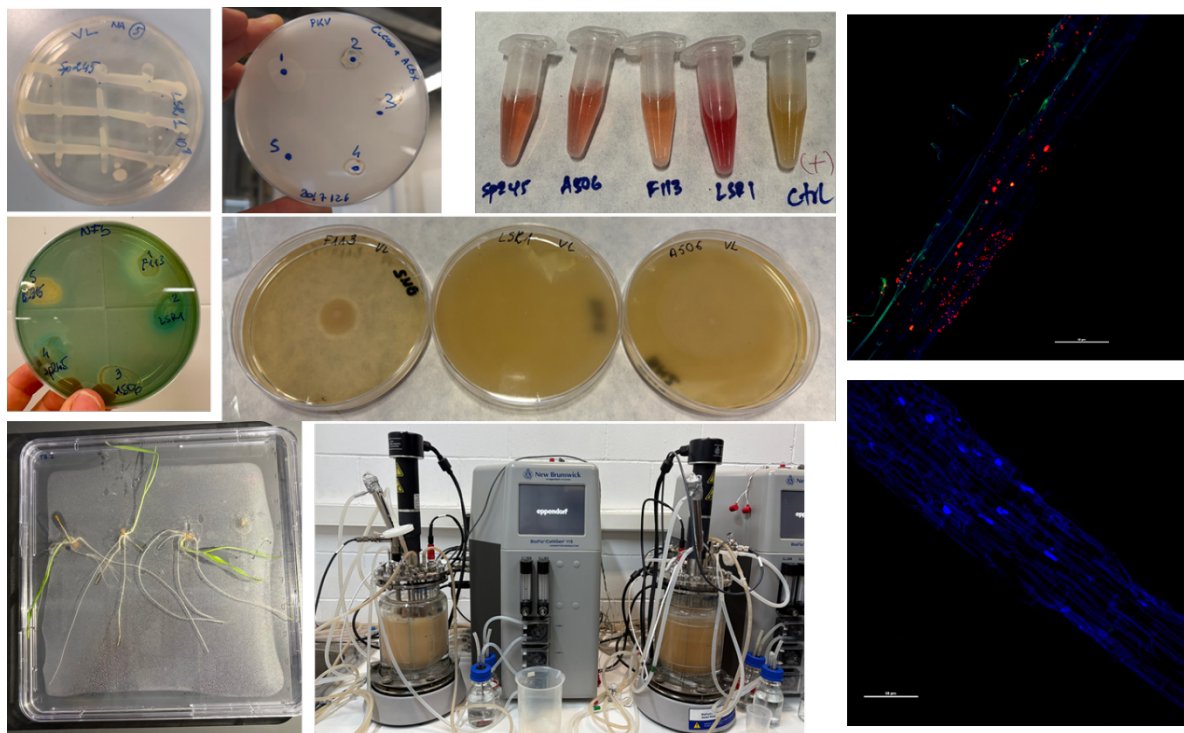
15:30-18:00 Lab session 4. Evaluation of the plant growth-promoting potential of SynComs in wheat (duallex, fresh weight, dry weight, shoot and root lenght).

Thursday, July 23

09:00-10:00 Talk 5. Production and formulation of SynComs. Anna Bonaterra

10:00-12:00 Conclusions of lab sessions

12:00 - Closure



Beyond the scientific and technical content, the training allowed participants to foster networking and collaborative environment between participants.

