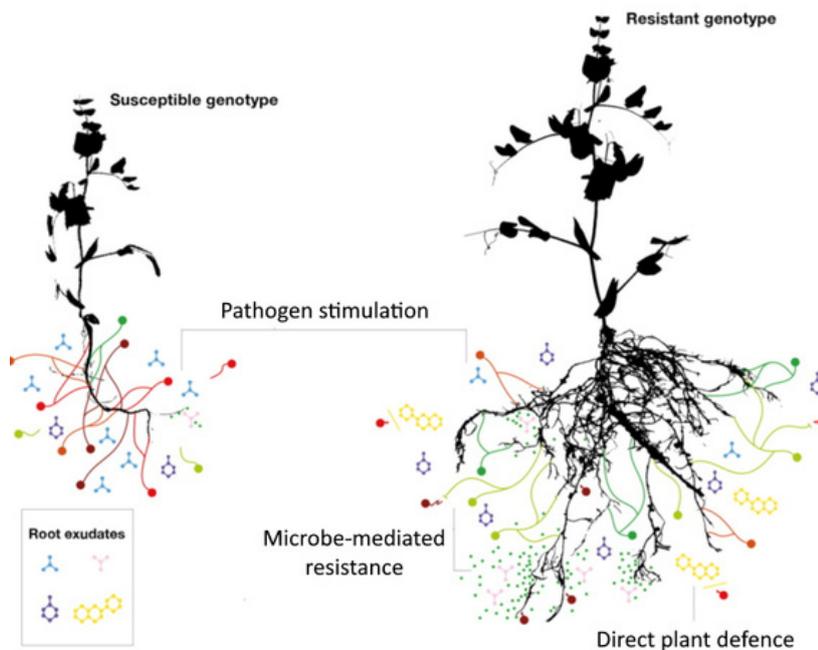

3rd EUCARPIA Workshop on Implementing Plant-Microbe Interactions in Plant Breeding

15th JULY 2022
Tulln (Austria)



modified from Wille et al. 2019, *Plant Cell Environ*

Description

The workshop aims to strengthen a network among plant breeders and scientist of different disciplines to explore the use of **plant-microbe interactions in plant breeding**.

Plant-associated microbes have received considerable attention in research for their ability to improve crop productivity and yield stability. Knowledge on plant genetic determinants for beneficial interactions with individual microbes (incl. biologicals) and entire communities is growing rapidly. Several reports indicate that not only the host species but also the **host genotype** play a significant role in driving microbial community composition and activity, selecting for and against particular members of the microbial community. However, to what extent genetic factors are responsible for shaping beneficial plant microbiomes is still poorly understood. Similarly, **plant microbiome manipulation** via the introduction of biologicals offers great promise, but still suffers from variable outcomes due to insufficient knowledge of the factors involved for successful applications. In conclusion, there are still many uncertainties on how to implement this knowledge into plant breeding and propagation programmes.

The Workshop is organised by the **EUCARPIA Working Group** on plant-microbe Interactions of the Section Organic and Low-Input Agriculture and will continue to discuss the potential and limitations of implementing the growing knowledge on plant-microbe interactions in plant breeding. The 2nd workshop in 2019 led to fruitful discussions on related opportunities and challenges, e.g. emphasising the importance of high-throughput phenotyping, modelling, genetic markers, standards for -omics protocols, microbiome functions (beyond description) and decision tools for genotype selection. The workshop outputs were synthesized in a perspective article on emerging research priorities towards microbe-assisted crop production ([Hohmann et al. 2020, FEMS Micr. Ecol.](#)).

This year's 3rd EUCARPIA workshop will continue the discussion and foster the dialogue between the different research disciplines and industry in order to **develop advanced breeding strategies for future resilient agroecosystems**.

Session I: Genetic determinants of plant-microbe interactions.

Keynote: **Victor Carrion** (Assistant Professor, Leiden University).

Session II: Integration of plant-microbe interactions into breeding.

Keynote: **Eveline Adam** (Head of Oil Pumpkin and Legume Breeding, Saatzucht Gleisdorf).

Registration

For miCROPe participants, register via [miCROPe website](#)

For workshop-only participants, register via [IRTA website](#).

until July 3, 2022

Abstract submission

Submit abstracts to Pierre Hohmann pierre.hohmann@irta.cat

until May 15, 2022.

Workshop direction: Pierre Hohmann, IRTA / Friederike Trognitz, AIT / Monika Messmer, FiBL.
