

# Deciphering citrus tolerance determinants to multifactorial stresses by multi-omic ultra-high resolution spatial mapping of plant-microbiota interactions

## OBJECTIFS

COSMO aims at unravelling the spatial complexity of plant-microbiota interactions in roots at tissue level and characterized the changes in response to multifactorial stresses. The finality is to identify tissue-specific plant-microbiota interaction patterns related to plant stress tolerance to propose new targets for efficient breeding strategies. COSMO is at the interface of two innovative research fronts tackling the challenges of in planta microbiota spatial dynamic and plant response to multifactorial stresses associating abiotic (salinity) and biotic (pathogen) factors. In the last few years, changes in plant microbiota dynamic and compartmentalization became as one of the central hypotheses in plant health but roughly assessed at the plant level (i.e. mainly plant organ level). In addition, multifactorial stress-based approaches mainly focus on abiotic stressors, whereas increasing pathogen pressures on plants and vulnerability are predicted due to global change, and important interactions notably between drought or salinity and pathogens were evidenced.

**Responsable :**

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