Special Issue

Plant Growth Regulators and Microbiome Interplay in Crop Growth and Development

Message from the Guest Editor

In recent years, the role of the plant microbiome has emerged as a central topic within the field of plant physiology. Ubiquitous in nature, microorganisms can colonize a variety of ecological niches within (endosphere, phyllosphere) or close (rhizosphere) to plants, establishing complex chemical dialogues with the host tissues that can drive different types of relationships. However, how these interactions influence plant growth and development is still poorly understood. One of the main strategies used by microorganisms to influence crop behavior is based on their ability to synthesize plant growth regulators (PGRs) or closely related compounds, that once released in the tissues modulate the behavior of the host plant. These actions modify gene expression, secondary metabolite production and overall crop performance, thus directly impacting crop yield. On the other hand, plants' own PGRs also have a relevant effect on the assembly and performance of the microbiome, establishing a chemical arms race that ultimately impacts plant fitness.

Guest Editor

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