



Molecular Communication between Plants and Plant Growth Promoting Microorganisms for Stress Tolerance

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Message from the Guest Editor

Plant growth promoting microorganism are beneficial microbes that reside in the rhizosphere and roots of plants and direct their developmental process and induce systemic resistance. Plants select beneficial bacteria and help in their colonization through secretion of root exudates. An exchange of chemical signals started between microbes and plants to establish a positive or inhibitory interaction. Molecular communication was built up by encompassing chemical signals from microbes to microbes, plants to microbes or microbes to plants that resulted into cellular response and altered gene expression. Microorganisms are also known for their role in altering the metabolomics expression of host plants and inducing their systematic resistance by increasing the expression of stress responsive secondary metabolites. Plant growth promoting microorganisms can enhance tolerance of crops to various environmental stresses by improving the level of cellular metabolites, which suggests a novel role of microorganisms to interact with plant metabolome as well as to influence the plant microbiome.





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Message from the Editor-in-Chief

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