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Interaction of Plants and Endophytic Microorganisms: Molecular Aspects, Biological Functions, Community Composition, and Practical Applications

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Message from the Guest Editors

Dear Colleagues,

Endophytes are an endosymbiont, often a bacterium or fungus that resides within a plant without causing apparent disease. They are ubiquitous and have been isolated from almost all plants examined to date. However, most of the endophyte and plant relationships are not well understood, especially in their molecular and biochemical aspects. Plant–microbe interactions are not exclusively mutualistic, since endophytic fungi can potentially become pathogens or saprotrophs, usually when the host plant is under stress conditions. At the same time, some endophytes may enhance plant host growth, nutrient acquisition, biosynthesis of secondary metabolites, and improve plant abiotic and biotic stress tolerance.

This Special Issue aims to gather recent advances in studying the participation of various chemical compounds (stress hormones, secondary metabolites, small RNAs, etc.) in the plant-endophyte interactions. Another important goal is to discuss in more detail both possible and actual applications of the knowledge in agriculture and biotechnology.



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Special Issue



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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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