Special Issue

Growth-Promoting Microorganisms as Potential Biological Control Agents of Plant Pests and Diseases

Message from the Guest Editors

There is growing evidence that many beneficial microorganisms, apart from their use as biological pesticides, can act as endophytes colonizing the tissues of certain plants. These endophytic species are non-disease-causing microbes surviving in the living tissues of plants, contributing to an array of plant growth benefits ranging from enhanced growth and biomass accumulation to tolerance to abiotic and biotic stresses and aiding in nutrient acquisition. The last couple of decades have witnessed a burgeoning literature on the role of endophytes in regulating plant growth and development and their adaptation to abiotic and biotic stresses. Though the underlying mechanisms of plant–endophyte interactions are far from clear, several studies have raised the hope of their potential application in agriculture, mainly in improving nutrient acquisition and plant growth but also in mitigating pest and disease infestation in numerous economic crops. In this Special Issue, we welcome original research as well as review articles on this topic presenting the multiple effects of endophytes on plants growth, pest control and disease management.

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"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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