Special Issue

Panor-Omics-Based Design of Next Generation Biofertilizers for Sustainable Agriculture

Message from the Guest Editors

It is well known that plant microbiomes include beneficial bacteria that play a crucial role in plant health and growth. These plant growth-promoting bacteria (PGPB) exhibit beneficial effects on plant growth, antagonize disease-causing microbes, improve nutrient availability and assimilation, and increase plant tolerance and resistance to biotic and abiotic stressors. Microorganisms that play critical roles can be isolated, identified, characterized, formulated and customized to develop new biofertilizers.

Despite the significant amount of generated knowledge in this area, the rational engineering of plant microbiomes for sustainable agriculture requires understanding the intricate complexity of plant–microbiome interactions, solving environmental variability issues, increasing the cultivability of beneficial microbes, translating laboratory findings to field applications and expanding research to non-model species through panoramic analytical methodologies such as omics.

Therefore, in this Special Issue articles that focus on the development of plant microbiomes for sustainable agriculture based on individual or multiomic approaches are welcome.

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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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