

Special Issue

Impacts of Rhizobacterial Inoculation on Plant Physiology and Metabolism

Message from the Guest Editors

Rhizobacteria play a fundamental role in shaping plant physiology and metabolism, influencing growth, nutrient uptake, stress tolerance, and the production of primary and secondary metabolites. Increasing attention has been given to plant growth-promoting rhizobacteria (PGPR) and their capacity to modulate plant responses through multiple mechanisms, including nitrogen fixation, hormonal regulation, metabolic reprogramming, the emission of volatile organic compounds (VOCs), and the induction of systemic resistance (ISR). These processes can trigger profound physiological and biochemical changes that enhance plant growth and defense. This Special Issue aims to gather recent advances in the mechanisms underlying plant–rhizobacteria interactions, including molecular signaling, VOC-mediated communication, ISR activation, improved nutrient acquisition, and protection against biotic and abiotic stresses. Contributions addressing innovative inoculation strategies, multi-omics approaches, and applications for sustainable and resilient agriculture are especially welcome.

Guest Editors

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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, and 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.

Editor-in-Chief

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