

## Special Issue

# Research on Beneficial Mechanisms of Plant Growth Promoting Bacteria

### Message from the Guest Editor

Plant growth-promoting bacteria (PGPB) help plants resist abiotic/biotic stress by supporting physiological activities and structures. PGPB mechanisms include: biological control, inducing plant immunity, producing antimicrobials or phytohormones, secreting enzymes, enhancing growth, biofertilization, and managing abiotic stresses. This Special Issue covers PGPR isolation, biodiversity, and activity/mechanisms in vitro and in vivo. It discusses biological control and providing absorbable beneficial elements, developing PGPB into field-use biopesticides and biofertilizers. Evaluating PGPB as alternatives to synthetic pesticides/fertilizers may reduce chemical residues. Thus, the issue examines effects of plant pathogens, heavy metals, and synthetic chemicals on PGPB communities. It also investigates relationships between PGPB and fungal groups (plant growth-promoting fungi, endophytic fungi, Trichoderma, nonpathogenic fungi, mycorrhiza, nonmycorrhiza, dark septate endophytes, saprophytes, edible/inedible mushrooms). Multi-omics is highly relevant for studying plant–bacteria interactions. This Special Issue advances our understanding of PGPB research.

### Guest Editor

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