

Special Issue

Plant Growth-Promoting Rhizobacteria (PGPR): Microbiological and Genomic Characterization, and Potential Applications

Message from the Guest Editors

In the past several decades, productivity in agriculture has been achieved through the prolonged usage of external chemical inputs. However, these production systems, coupled with the current threat of global climate change, are not sustainable. As one of the most effective and sustainable alternatives to this problem, research and development on plant-growth-promoting rhizobacteria (PGPR) have gained momentum in the past few decades. The rhizosphere of many wild and cultivated plant species harbor hundreds of PGPR strains with several beneficial genes and traits that could be exploited for biotechnological application in agriculture to increase crop productivity and improve soil health. In this Special Issue, we invite manuscripts including original research articles and reviews that report high-throughput microbiological and genomic characterization to elucidate their phylogeny, metabolic and genomic features, as well as beneficial plant-microbe interactions and signaling methods in the rhizosphere. Moreover, manuscripts that address the biotechnological application of PGPR in sustainable agroecological systems are also invited under this Special Issue.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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