

Special Issue

Advances in Soil Microbiome

Message from the Guest Editors

The soil microbiome plays a critical role in cycling carbon in the ecosystem, and in promoting plant health. However, the complexity of the microbiome makes analysis of the involved communities, molecular processes, and emergent phenotypes difficult. This difficulty is compounded by the fact that while our analytical tools can be applied at the molecular scale in the laboratory, this is often not possible in natural soil, requiring either the use of nonsoil environments or the analysis of soil samples at a scale that is much greater than that of microbial interactions. In order to bridge these gaps, new tools are required that can mimic soil in the laboratory, as are new techniques to query soil directly and new modeling tools to apply what we learn in the laboratory to the field. This Special Issue will cover some of the latest advances in both analytical and modeling techniques applied to the soil microbiome as well as new conclusions gained from these approaches that lead to a deeper understanding of how the soil microbiome drives plant health and carbon cycling in the ecosystem.

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Message from the Editor-in-Chief

"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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