

## Special Issue

# The Soil Microbiome: Diversity, Genomics and Potential Applications in Climate Smart Agriculture

### Message from the Guest Editors

The soil microbiome, a vital, yet often overlooked component of the planet's health, is composed of a diverse community of microorganisms living in the soil. Due to the complexity and versatility of their enzymatic, genetic and metabolic functions, they interact with each other, the soil environment and plants. In doing so, they play crucial roles in nutrient cycling, plant health, soil structure and fertility, carbon sequestration, greenhouse gas regulation and ecosystem resilience. However, the soil microbiome is largely influenced by both intensive agricultural practices and the changing soil climate. Thus, to maintain the sustainability of agricultural productivity as well as ecosystem functioning that lead to improved human health and food security, it is vital to have a healthy microbiome. Recently, the application of various DNA sequencing technologies such as next-generation sequencing has enabled scientists to better understand soil microbes... We accept manuscripts that deal with the taxonomic, phylogenetic and functional diversities of soil microbiomes, including studies that address the various modes of actions of the soil microbiomes...

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### Guest Editors

Dr. Ahmed Idris Hassen

Prof. Dr. Olubukola Oluranti Babalola

Dr. Timothy Sibanda

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### Deadline for manuscript submissions

closed (20 May 2025)



## Applied Sciences

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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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### Editor-in-Chief

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