

## Special Issue

# Plant-Associated Microorganisms: Exploring Their Beneficial and Harmful Impacts on Plant Production in Response to a Changing Climate

### Message from the Guest Editors

This Special Issue aims to gather recent data and innovations in the research on plant-soil microorganism interactions, as well as identify new prospects, directions, and challenges in plant and microbial biotechnologies. Understanding these interactions will help design treatments that promote crop yield and quality under changing climate conditions. We welcome the submission of original research articles, reviews, opinion, and methods, focusing on (but not limited to) the following topics:

- Microbial application for plant growth promotion and/or protection;
- Innovative and more effective microbial formulations towards agriculture sustainability;
- Drivers, roles, processes, and mechanisms in plant-microbe interactions;
- Molecular, genomic, and metagenomic analysis of plant-associated microbe biodiversity;
- Physiological, biochemical, and molecular functions of symbiotic microorganisms in plants to mitigate the adverse impact of environmental stresses;
- Impact of symbiotic microbes application on plant susceptibility to pathogen infection;
- Impact of microorganisms on nutrient transformations in soil toward promoting plant fitness.

### Guest Editors

Dr. Mohamed Ait-El-Mokhtar

Department of Biology, Hassan II University of Casablanca, Casablanca 20000, Morocco

Dr. Marouane Baslam

Laboratory of Biochemistry, Faculty of Agriculture, Niigata University, Niigata 950-2181, Japan

### Deadline for manuscript submissions

closed (20 January 2025)



## Plants

an Open Access Journal  
by MDPI

Impact Factor 4.1  
CiteScore 7.6  
Indexed in PubMed



[mdpi.com/si/181457](https://mdpi.com/si/181457)

*Plants*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[plants@mdpi.com](mailto:plants@mdpi.com)

[mdpi.com/journal/  
plants](https://mdpi.com/journal/plants)





# Plants

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.1  
CiteScore 7.6  
Indexed in PubMed



[mdpi.com/journal/  
plants](https://mdpi.com/journal/plants)



## About the Journal

### 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, 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

Prof. Dr. Dilantha Fernando  
Department of Plant Science, University of Manitoba, Winnipeg, MB  
R3T 2N2, Canada

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, PubAg, AGRIS, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q1 (Plant Sciences) / CiteScore - Q1 (Ecology, Evolution, Behavior and Systematics)