

## Special Issue

# Plant Responses to Biotic and Abiotic Stresses: Crosstalk between Biochemistry and Ecophysiology

### Message from the Guest Editors

In general, biotic and abiotic stresses often cause a series of morphological, physiological, biochemical, and molecular changes that unfavorably affect plant growth and productivity and cause interference in stress tolerance and adaptation. Biotic and abiotic stresses such as drought, salinity, extreme temperatures (cold and heat), and oxidative stress are often interrelated; these conditions, singularly or in combination, induce cellular damage. Plant responses to different stresses are highly complex and involve changes at the physiological, biochemical, transcriptome, and cellular levels. Understanding the organism-coordinated responses involves a fine description of the mechanisms occurring at the cellular and molecular level. The current Special Issue of *Plants* aims to analyze, from a multi-perspective approach (ranging from gas exchange, metabolomics, proteomics, isotopic and genomics, etc.), drivers (e.g., trait selection, phenotypic plasticity) and specific strategies used by the plants at physiological and molecular levels for their better adaptations to stressful growth conditions.

---

### Guest Editors

Dr. M. Iftikhar Hussain

Prof. Dr. Adele Muscolo

Dr. Mukhtar Ahmed

---

### Deadline for manuscript submissions

closed (31 May 2022)



## Plants

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.0  
CiteScore 6.5  
Indexed in PubMed



[mdpi.com/si/57180](https://mdpi.com/si/57180)

*Plants*

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 4.0  
CiteScore 6.5  
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, and 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)