

## Special Issue

# Physiological and Molecular Mechanisms of Plant Resistance to Abiotic Stress

### Message from the Guest Editors

Abiotic stresses significantly reduce crop quality and yield. To adapt to environmental stimuli, plants have acquired stress resistance mechanisms through long-term evolution. Therefore, elucidating the physiological and molecular mechanisms underlying abiotic stress responses is essential for enhancing crop sustainability and addressing the increasing global demand for food production. This Special Issue aims to highlight regulatory mechanisms in economically important plants, including food crops, horticultural crops, oil crops, and ornamental crops, affected by various abiotic stresses such as salt-alkaline stress, extreme temperature stress (cold/heat), water stress (drought/flooding), heavy metal stress, etc. Studies investigating protein interactions, transcriptional regulatory pathways, splicing factor functions, or root development are particularly encouraged. Submitted manuscripts should be original work that has neither been published previously nor is currently under consideration for publication in other journals.

### Guest Editors

Dr. Lei Cao

Dr. Yao Zhang

Dr. Qiang Li

### Deadline for manuscript submissions

17 February 2026



## Plants

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.1  
CiteScore 7.6  
Indexed in PubMed



[mdpi.com/si/239067](https://mdpi.com/si/239067)

*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)