



*biology*



an Open Access Journal by MDPI

## Molecular Genetics in Plant Responses to Abiotic Stress

Guest Editors:

**Dr. Abhishek Bohra**

State Agricultural Biotechnology Centre (SABC) and Centre for Crop and Food Innovation (CCFI), Murdoch University, Perth, WA 6150, Australia

**Dr. Rohit Joshi**

CSIR-Institute of Himalayan Bioresource Technology, Palampur 176061, India

**Prof. Dr. Rajeev Varshney**

State Agricultural Biotechnology Centre (SABC) and Centre for Crop and Food Innovation (CCFI), Murdoch University, Perth, WA 6150, Australia

Deadline for manuscript submissions:

**31 December 2024**

### Message from the Guest Editors

Abiotic stresses such as heat, drought and salinity present a great threat to global crop production and food security. Stressful conditions interfere with normal growth and development of plants. Crop yields and quality of the produce reduce significantly under exposure to abiotic stress conditions due to adjustments in plant's molecular, physiological and biochemical processes. Climate change has increased the intensity, frequency and duration of extreme weather events in recent times. Plants have evolved acclimation mechanisms to cope with abiotic stress challenges. These acclimation mechanisms involve receiving the stress signals and then communicating these signals to the other tissues. Advances in genetic technologies in combination with the availability of multi-omics datasets and high-throughput phenotyping measurements have contributed to improving the understanding of plant abiotic stress response. In this Special Issue, we invite high-quality research work including original research articles and reviews related to genetics and multi-omics aspects of plant abiotic stress responses.



[mdpi.com/si/181933](https://mdpi.com/si/181933)

**Special** Issue



an Open Access Journal by MDPI

## Editors-in-Chief

### Prof. Dr. Jukka Finne

Research Programme in  
Molecular and Integrative  
Biosciences, Faculty of Biological  
and Environmental Sciences,  
University of Helsinki, P.O. Box  
56, FI-00014 Helsinki, Finland

### Prof. Dr. Andrés Moya

Integrative Systems Biology  
Institute, University of Valencia  
and CSIC, 46980 Valencia, Spain

## Message from the Editorial Board

A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

## 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, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (*Biology*) / CiteScore - Q1 (*General Agricultural and Biological Sciences*)

## Contact Us

---

Biology Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/biology](http://mdpi.com/journal/biology)  
[biology@mdpi.com](mailto:biology@mdpi.com)  
[X@Biology\\_MDPI](https://twitter.com/Biology_MDPI)