

## Special Issue

# New Insights into the Molecular Mechanisms of Plant Defense Against Abiotic Stress

### Message from the Guest Editor

Abiotic stresses such as drought, salinity, extreme temperatures, and heavy metal toxicity severely impact plant growth and crop productivity. Therefore, the molecular mechanisms underlying plant defense responses is crucial for the development of stress-resistant crops. Recent research has uncovered novel insights into stress perception, signal transduction, and adaptive responses, revealing the roles of reactive oxygen species (ROS) signaling, phytohormone crosstalk, epigenetic regulation, and post-translational modifications. Advances in omics technologies (genomics, transcriptomics, and proteomics) and CRISPR-based genome editing have further elucidated key stress-responsive genes and regulatory networks. This Special Issue aims to explore the molecular active protection mechanisms that plants employ to cope with abiotic stress (e.g., drought, salinity, extreme temperatures, heavy metals, etc.). Scientists and academics from all over the world are welcome to share original research, review articles, and short communications in the field of plant defense mechanisms.

### Guest Editor

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### Deadline for manuscript submissions

30 September 2025



## Agriculture

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### Message from the Editor-in-Chief

*Agriculture* (ISSN 2077-0472) is an international, cross-disciplinary and scholarly journal on the science and technology of crop and animal production, and management of the natural resource base for agricultural production. We invite submissions from authors according to the aims and scope of the journal described in more detail on this page. *Agriculture* is published in an open access format – articles are published on the journal's website immediately after acceptance, giving the scientific community and the public unlimited and free access to the content.

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