Special Issue

Plant Stress Resilience: From Physiological Perception to Omics-Driven Systems

Message from the Guest Editor

This Special Issue of Plants will highlight recent advances in stress resilience research, emphasizing integrative physiological and multi-omics approaches. We invite contributions that explore dynamic responses under abiotic and biotic stresses, including changes in photosynthesis, water and nutrient use efficiency (WUE and NUE), stomatal regulation, source–sink dynamics, and growth modulation. We especially welcome contributions employing genomics, transcriptomics, proteomics, metabolomics, epigenomics, and high-throughput phenomics to uncover key regulatory genes, stress biomarkers, gene functions, metabolic shifts, and tolerance pathways. Emphasis will be placed on studies linking physiological traits with omics data to identify biomarkers and key tolerance mechanisms. Topics of special interest include stress memory, alternative mRNA splicing, organ-specific responses, and long-distance signaling. Reviews synthesizing emerging insights or proposing new models for stress adaptation are also encouraged. Particular emphasis will be given to research that effectively bridges the gap between molecular-level omics discoveries and measurable physiological or phenotypic outcomes.

Guest Editor

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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

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