Special Issue

Molecular Mechanisms and Omics Approaches in Plant Stress Tolerance

Message from the Guest Editors

The current Special Issue entitled "Molecular Mechanisms and Omics Approaches in Plant Stress Tolerance" aimed to gather research focused on unraveling molecular basis of biotic/abiotic stress perception, signaling, and tolerance in plants utilizing multi-omics approaches. We welcome studies that employ integrative approaches such as transcriptomics, proteomics, metabolomics, epigenomics, and systems biology to decipher regulatory networks underlying stress responses. We especially encourage contributions that investigate gene regulation at multiple levels (transcriptional, post-translational), highlighting candidate genes/proteins characterization through methods such as overexpression, gene silencing, or CRISPR/Cas-mediated genome editing to improve stress resilience. By bridging classical molecular biology with next-generation omics and biotechnological innovations, this issue seeks to provide new insights into stress adaptation mechanisms with potential applications in crop improvement, resilience breeding, and sustainable agriculture.

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Message from the Editor-in-Chief

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