

Special Issue

Molecular Mechanisms of Plant Stress Responses and Development

Message from the Guest Editor

Plants constantly face environmental pressures, drought, heat, salinity, nutrient imbalance, and biotic attack, which shape how they grow and survive. Over the last decade, rapid progress in genomics, multi-omics technologies, and advanced imaging has begun to reveal how plants translate these external cues into molecular and developmental responses. Hormonal signaling, transcriptional regulation, metabolic adjustments, and cellular communication play crucial roles in orchestrating these responses. This Special Issue aims to bring together studies that deepen our understanding of how plants sense stress, reprogram their metabolism, and adjust their developmental pathways. We welcome contributions exploring hormone signaling networks, stress-responsive regulators, epigenetic modifications, metabolite dynamics, developmental plasticity, and synthetic or genome-editing approaches that uncover new mechanistic insights. Submissions involving both model and crop species are encouraged, particularly those offering translational perspectives for improving resilience and agricultural productivity.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Current Issues in Molecular Biology (CIMB, ISSN 1467-3045) is an international, peer-reviewed, open access journal established in 1999 and published monthly online by MDPI (from Volume 43 Issue 1-2021). CIMB publishes original research articles and comprehensive reviews on emerging and significant topics in molecular biology, covering all aspects of molecular biology and related interdisciplinary fields. We invite you to read recent articles published in CIMB and consider submitting your next research to the journal, particularly studies exploring mechanistic insights, translational applications, and interdisciplinary approaches across molecular biology.

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