

Special Issue

Molecular Mechanisms of Interaction and Adaptation Between Non-Model Plants and the Environment

Message from the Guest Editors

The dynamic interplay between plants and their environments represents a fundamental biological process that has been extensively investigated in model species. However, significant knowledge gaps persist regarding the molecular mechanisms underlying environmental adaptation in non-model plants. While substantial progress has been made in characterizing stress response pathways in *Arabidopsis* and other model systems, the unique evolutionary trajectories and ecological adaptations of non-model plants remain underexplored at the molecular level. This Special Issue will highlight methodological innovations and molecular mechanisms with common sense or species uniqueness in non-model plants in adaption, including but not limited to the following topics: Multi-omics integration strategies bridging transcriptomic, proteomic, and metabolomic analyses; Comparative studies identifying lineage-specific innovations versus conserved stress response modules; Functional validation approaches adapted for recalcitrant transformation systems; Complex response mechanisms of non-model plants in response to various stresses.

Guest Editors

Dr. Nan Chao
Dr. Li Liu
Prof. Dr. Ying Gai

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Plants
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
plants@mdpi.com

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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, and 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

Prof. Dr. Dilantha Fernando
Department of Plant Science, University of Manitoba, Winnipeg, MB
R3T 2N2, Canada

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