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Unravelling the Molecular Mechanisms of Different Stress Responses in Plants

Guest Editor:

Dr. Hakim Manghwar

Lushan Botanical Garden,
Chinese Academy of Sciences,
Jiujiang 332000, China

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Message from the Guest Editor

Plants exist in dynamic environments that frequently present conditions that are unfavorable to their growth and development. Different plant stresses significantly impair plant productivity, thereby constraining agricultural output and posing a serious threat to global food security. Plant stress responses are intricate and involve a network of molecular mechanisms to ensure survival and adaptation to various environmental challenges. These stresses trigger a cascade of signaling pathways and gene expression changes. Plants have evolved sophisticated mechanisms to perceive stress signals and mount rapid responses to these stresses by regulating molecular, physiological, metabolic, and developmental pathways. Advances in genomic and biotechnological tools have allowed researchers to identify key regulatory genes and pathways, offering new opportunities for breeding or engineering stress-tolerant plants.

This Special Issue features articles that explore the response of crops to various stresses and their molecular mechanisms. Original research and review articles on response of plants to different stresses are welcome.



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Special Issue



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Prof. Dr. Lluís Ribas de Pouplana

Institute for Research in Biomedicine (IRB Barcelona), The Barcelona Institute of Science and Technology, 08028 Barcelona, Spain

Message from the Editor-in-Chief

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Life Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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