

Special Issue

Molecular Research in Plant Adaptation to Abiotic Stress

Message from the Guest Editors

Plants are constantly exposed to adverse environmental factors. In recent years, changes in temperature, periodic water deficits and increased salinity have occurred, impairing plants' physiological processes and modifying their metabolism. To survive unfavorable conditions, plant cells activate various adaptive mechanisms. This activation includes the induction of signaling pathways and modifications at the gene expression level. Small gaseous molecules, such as NO and H₂S, reactive oxygen species and phytohormones, may transmit signals from the environment to the cell and cellular compartments. For this reason, it is very important to understand their role in plants' tolerance to climate changes. This could help create more resistant crop varieties or promote appropriate agricultural practices. In this Special Issue, original studies on all aspects of plant adaptation to unfavorable climate changes are welcome, with particular attention on the role of signaling molecules, including NO, H₂S, H₂O₂, GABA and phytohormones.

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Deadline for manuscript submissions

closed (20 February 2025)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/186400

*International Journal of
Molecular Sciences*
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