

Special Issue

Bioactive Compounds: Plant Stress Responses, Metabolic Regulation, and Therapeutic Insights

Message from the Guest Editors

Natural resources such as plant-derived compounds, seaweed formulations, and microbial inoculants are being widely explored as eco-friendly strategies to support sustainable agriculture. These inputs enrich soils, promote plant growth, and enhance tolerance to environmental stresses.

This Special Issue invites interdisciplinary contributions exploring the roles, mechanisms, and applications of bioactive compounds in plant growth, metabolic regulation, stress adaptation, and therapeutic applications, with emphasis on integrative approaches including multi-omics, metabolite profiling, genome editing, and field validation. *Key themes include (but are not limited to) the following:*

- Impacts on plant physiology, metabolism, and yield;
- Roles in abiotic stress adaptation;
- Regulation of secondary metabolites;
- Nutrient uptake, signaling, and metabolic efficiency;
- Organic amendments and soil quality improvement;
- Gene expression, molecular networks, and pathway regulation;
- Integrative multi-omics approaches;
- Therapeutic bioactivities;
- Cytotoxicity and antioxidant potential of plant extracts and metabolites.

Guest Editors

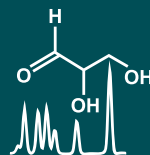
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Deadline for manuscript submissions



Metabolites

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Impact Factor 3.7
CiteScore 6.9
Indexed in PubMed



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About the Journal

Message from the Editor-in-Chief

The metabolome is the result of the combined effects of genetic and environmental influences on metabolic processes. Metabolomic studies can provide a global view of metabolism and thereby improve our understanding of the underlying biology. Advances in metabolomic technologies have shown utility for elucidating mechanisms which underlie fundamental biological processes including disease pathology. *Metabolites* is proud to be part of the development of metabolomics and we look forward to working with many of you to publish high quality metabolomic studies.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.4 days after submission; acceptance to publication is undertaken in 3.6 days (median values for papers published in this journal in the first half of 2025).