

Special Issue

Molecular Advances in Omics in Agriculture

Message from the Guest Editor

Modern agriculture faces the challenge of sustaining a growing population of both humans and animals. The future of agriculture lies in the development of new crop varieties and genetic lines that are more resilient to pests, diseases, and environmental stress, while simultaneously increasing yields.

At the same time, large-scale monocultures and climate change are driving the spread of pests and diseases into new regions, making the need for rapid and effective molecular diagnostic tools more pressing than ever. Whether it is breeding new plant and animal varieties, advancing agricultural biotechnology, or diagnosing pathogens, a deep understanding of molecular mechanisms is crucial; this is where omics technologies play a transformative role. This Special Issue highlights the power of omics methods and high-throughput technologies in advancing the breeding of plants and animals, unraveling molecular pest–host interactions, diagnosing unculturable plant and animal pathogens, and revolutionizing agricultural biotechnology.

Guest Editor

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Deadline for manuscript submissions

closed (20 September 2025)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



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*International Journal of
Molecular Sciences*
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