

## Special Issue

# Epigenetic Regulation in Plant–Microbe Interactions and Environmental Adaptation

### Message from the Guest Editors

Plants constantly interact with a dynamic environment, facing challenges from microbial pathogens and fluctuating abiotic conditions. To adapt, they employ sophisticated epigenetic mechanisms to modulate gene expression dynamically without altering the underlying DNA sequence. These epigenetic changes play pivotal roles in regulating plant immunity, symbiosis, and stress responses, offering a layer of plasticity that enhances survival in changing environments.

Recent advances have uncovered how epigenetic regulation fine-tunes plant–microbe interactions, from pathogen defense to beneficial symbiosis. Additionally, environmental cues, such as light, temperature, and nutrient availability, can induce epigenetic modifications that prime plants for future stresses. Meanwhile, emerging studies reveal crosstalk between epigenetic pathways and other regulatory layers, such as RNA modifications and hormonal signaling, further expanding our understanding of plant adaptability.

This Special Issue invites original research and review articles that explore the epigenetic basis of plant–microbe interactions and environmental adaptation.

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### Guest Editors

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### Deadline for manuscript submissions

20 November 2025



## Cells

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*Cells* has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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