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.

Guest Editors

Dr. Zhongshou Wu

State Key Laboratory of Rice Biology, Key Laboratory of Molecular Biology of Crop Pathogens and Insects, Zhejiang University, Hangzhou, China

Dr. Bochen Jiang

School of Life Science and Technology, Shanghai Jiao Tong University, Shanghai, China

Deadline for manuscript submissions

closed (20 November 2025)

Cells

an Open Access Journal by MDPI

Impact Factor 5.2
CiteScore 10.5
Indexed in PubMed

mdpi.com/si/241042

Cells
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
cells@mdpi.com

mdpi.com/journal/cells

Cells

an Open Access Journal by MDPI

Impact Factor 5.2
CiteScore 10.5
Indexed in PubMed

mdpi.com/journal/cells

About the Journal

Message from the Editorial Board

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.

Editors-in-Chief

Dr. Alexander E. Kalyuzhny
Dental Basic Sciences, University of Minnesota, 308 Harvard St. SE, Minneapolis, MN 55455, USA

Prof. Dr. Cord Brakebusch
Biotech Research & Innovation Centre, The University of Copenhagen, Copenhagen, Denmark

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Cell Biology) / CiteScore - Q1 (General Biochemistry, Genetics and Molecular Biology)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.5 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).