

Special Issue

Epigenetic Regulation in Neuronal Development, Neurodegeneration and Regeneration

Message from the Guest Editor

The intricate interplay between epigenetic mechanisms and neuronal processes has emerged as a cornerstone of modern neuroscience, offering transformative insights into how the nervous system develops, adapts, and repairs itself. This Special Issue invites researchers to contribute cutting-edge work exploring the dynamic role of epigenetic regulation—spanning DNA methylation, histone modifications, non-coding RNAs, and chromatin remodeling—in shaping neuronal development and regeneration.

This issue aims to bridge fundamental discoveries with translational applications, fostering dialog across disciplines including molecular biology, neurobiology, and clinical research. We welcome original research articles, and reviews addressing topics such as the following:

Epigenetic control of neural stem cell fate and neurogenesis;

Chromatin dynamics in synaptic plasticity and cognitive function;

Epigenetic barriers to neuronal regeneration and strategies to overcome them;

Cross-talk between metabolism, inflammation, and epigenetic pathways;

Therapeutic interventions targeting epigenetic modifiers in neurodegeneration (e.g., Alzheimer's, Parkinson's) or spinal cord injury.

Guest Editor

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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.

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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 16 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).