

Special Issue

Molecular and Cellular Drivers of Parkinson's Disease

Message from the Guest Editors

Parkinson's disease is a debilitating neurodegenerative disorder characterized by the progressive loss of dopaminergic neurons in the nigrostriatal pathway and the abnormal and toxic aggregation of α -synuclein. Disease progression is driven by mitochondrial dysfunction, impaired proteostasis, neuroinflammation, oxidative stress, and impaired synaptic function. The complex etiology of PD is linked to an interplay between genetic predisposition and environmental exposures, yet the precise molecular and cellular mechanisms remain elusive.

This Special Issue will showcase studies that advance our understanding of these pathways and how they are regulated under PD conditions. Topics of interest include molecular signaling cascades, cell-to-cell communication, neuroimmune responses, protein aggregation dynamics, and neuroprotective strategies. This Special Issue will also explore how environmental factors influence PD-related molecular mechanisms along with the genetic predisposition of the individual. Contributions should focus on unraveling the pathophysiology of PD, exploring the mechanisms driving neurodegeneration, and identifying potential targets to combat disease progression.

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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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