

Special Issue

From Inflammaging to Dementia: Cellular and Molecular Drivers of Cognitive Decline

Message from the Guest Editors

A growing body of evidence implicates neuroinflammation as a central mechanism linking aging, vulnerability to neurodegeneration, and cognitive dysfunction, operating across neurons, glia, vascular cells, and peripheral immune systems. Inflammaging, characterized by chronic, low-grade activation of inflammatory pathways that accompanies aging, acts as a critical upstream driver of sustained neuroinflammatory states in the aging brain. This process reshapes neuro-immune communication at both the cellular and molecular levels, influencing synaptic function, neuronal resilience, and cerebrovascular integrity. Elucidating these mechanisms is essential for identifying the early drivers of cognitive decline and translating biological insight into effective therapeutic strategies. The scope of this Special Issue includes **normal aging, prodromal cognitive impairment, dementia, and neurodegenerative diseases**, while emphasizing **cell-type specificity, temporal dynamics, and translational relevance**.

Guest Editors

Prof. Dr. Michael P. McDonald

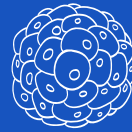
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About the Journal

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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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