

Special Issue

Molecular Interplay Between Aging, Dementia and Renal Function: Mechanisms, Biomarkers and Therapeutic Targets

Message from the Guest Editor

The aging process is a major risk factor for both cognitive decline and renal dysfunction, which often coexist and interact in a complex, bidirectional relationship. Emerging molecular evidence suggests that shared mechanisms—such as chronic inflammation, oxidative stress, mitochondrial dysfunction, and vascular damage—underlie both dementia and impaired kidney function in older adults. This Special Issue aims to explore the molecular pathways linking aging, dementia, and renal function, with a focus on identifying promising biomarkers, therapeutic targets, and intervention strategies. We welcome original research and reviews encompassing molecular biology, genomics, proteomics, metabolomics, and systems biology approaches that deepen our understanding of these intertwined conditions. Particular emphasis will be placed on translational studies that bridge basic science with clinical implications. Contributions exploring sex differences, genetic susceptibilities, and the impact of early renal changes on neurodegeneration are especially encouraged.

Guest Editor

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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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