

## Special Issue

# Recent Molecular Research of Parkinson's Disease

### Message from the Guest Editors

Various causative genes (e.g., PARKs) have been discovered in the small cohort with familial PD (fPD, ~5%). Alpha-synuclein, a main protein in Lewy bodies, was found not only in the brain in “brain-first PD” but also in the whole body and in the intestine, where it is produced by intestinal microbiota in “body-first PD”. Most cases, which are of sporadic PD (sPD, ~95%) without family history, are aging-related, and the molecular mechanism has been intensively explored. Oxidative stress by internal (genetic) and external factors might trigger endoplasmic reticulum stress (ERS) and mitochondrial dysfunction, which results in production of reactive oxygen species (ROS), with subsequent impairment of intracellular proteolysis due to dysfunctions in the autophagy (mitophagy) and ubiquitin–proteasomal systems, alpha-synuclein oligomer accumulation and neuromelanin accumulation with iron, neuroinflammation, and finally neuronal death. This Special Issue aims to provide an update on the recent research progress in the mechanism and treatment of PD.

### Guest Editors

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### Deadline for manuscript submissions

closed (20 January 2025)



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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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### Editor-in-Chief

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