

Special Issue

Oxidative–Inflammatory Crosstalk in Retinal Pigment Epithelium: Models, Mechanisms, and Modulators

Message from the Guest Editor

Chronic oxidative stress and low-grade inflammation in the retinal pigment epithelium (RPE) create a vicious cycle driving diseases including age-related macular degeneration, diabetic retinopathy, uveitis, and heavy-metal toxicity. Reactive oxygen species, mitochondrial dysfunction, and impaired lipid turnover trigger inflammasome activation, metabolic shifts, and barrier disruption, while inflammation worsens oxidative imbalance, promoting angiogenesis and neuronal loss. This Special Issue welcomes research, reviews, and communications on the interplay between oxidative stress and inflammation in RPE biology. Topics include in vitro/in vivo models, multi-omics of redox-immune interactions, extracellular vesicle signaling, imaging and metabolite studies, and therapeutic strategies from small molecules to gene editing. Submissions connecting mechanisms to translational insights are highly encouraged.

Guest Editor

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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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