

Special Issue

Molecular Insights in Neuro-Ophthalmology

Message from the Guest Editor

Neuronal cell death and degeneration are irreversible changes in all retinal and optic nerve diseases. Since neuronal death directly causes vision loss, it must be prevented before the point of no return. Multiple cell death types, including necrosis, apoptosis, pyroptosis, autophagic cell death, ferroptosis, and necroptosis, are involved in disease pathogenesis. Therefore, various neuroprotective therapies targeting different cell death pathways are needed. To establish effective neuroprotection, the precise mechanisms of neuronal cell death must be clarified to identify the irreversible point. Once axons degenerate, functional recovery is impossible. Thus, the molecular mechanisms of axonal degeneration and regeneration must be elucidated for regenerative therapies. This Special Issue focuses on molecular mechanisms of neuronal cell death, neuroprotection, and regeneration for retinal and optic nerve diseases. It welcomes basic, translational, and clinical studies, including clinical trials of neuroprotective therapies. We hope this issue will greatly advance related medical research.

Guest Editor

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