

Special Issue

Molecular Mechanisms of Retina Development and Degeneration

Message from the Guest Editor

The retina is the core of vision, a highly specialized and intricately organized tissue composed of multiple neuronal and non-neuronal cell types. Its development from multipotent progenitors requires finely tuned spatiotemporal regulation of molecular and cellular mechanisms to ensure the formation of functional circuits. Conversely, retinal degeneration arises from the progressive dysfunction and loss of these highly differentiated cells, leading to visual impairment. Understanding the molecular mechanisms that govern both retinal development and degeneration is therefore crucial for uncovering the pathogenesis of blinding diseases and for guiding the design of novel therapeutic strategies. This Special Issue welcomes original research articles and comprehensive reviews that highlight recent advances in retinal neuroscience. Contributions may explore signaling pathways, genetic and epigenetic factors, cellular interactions, and molecular determinants of retinal health and dysfunction. We encourage studies using *in vitro* and *in vivo* models, to provide an updated and integrated view of the molecular underpinnings of retina development and degeneration.

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