EDITORIAL

Glaucoma: In Search of Better Neurotherapeutics

Increased intraocular pressure (IOP) and age are the main risk factors for glaucoma, a leading cause of irreversible blindness worldwide, identified as a progressive degeneration of retinal ganglion cell (RGC) axons causing optic nerve head damage and distinctive visual field defects. The neurodegenerative process often extends beyond the eye into the CNS (mainly lateral geniculate nucleus and visual cortex) and characteristics of the disease share features with other central nervous system degenerative disorders. Excitotoxicity and oxidative stress have been largely investigated as important detrimental factors of RGC. However, defective axonal transport, trophic factor withdrawal, derangement of autophagic flux and neuroinflammation are emerging pathophysiological factors where targets for novel therapeutics to treat glaucoma might be discovered.

The contributors to this special issue “Glaucoma: in search of better neurotherapeutics” are leading scientists in the field and review the most up to date literature dealing with pathophysiology mechanisms underlying RGC death with the scope to propose new venues for the discovery of better therapeutics on a rational basis. To all of them, we would like to address our most sincere gratitude and appreciation.

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