



Potential roles of (endo)cannabinoids in the treatment of glaucoma: from intraocular pressure control to neuroprotection

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Abstract

Recent evidence shows that the [endocannabinoid system](#) is involved in the pathogenesis of numerous neurodegenerative diseases of the [central nervous system](#). Pharmacologic modulation of [cannabinoid receptors](#) or the [enzymes](#) involved in the synthesis, transport, or breakdown of endogenous [cannabinoids](#) has proved to be a valid alternative to conventional treatment of these diseases. In this review, we will examine recent findings that demonstrate the involvement of the endocannabinoid system in [glaucoma](#), a major neurodegenerative disease of the eye that is a frequent cause of blindness. Experimental findings indicate that the endocannabinoid system contributes to the control of [intraocular pressure](#) (IOP), by modulating both production and drainage of [aqueous humor](#). There is also a growing body of evidence of the involvement of this system in mechanisms leading to the death of retinal ganglion cells, which is the end result of glaucoma. Molecules capable of interfering with the ocular endocannabinoid system could offer valid alternatives to the treatment of this disease, based not only on the reduction of IOP but also on [neuroprotection](#).

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Keywords

cannabinoids; intraocular pressure; glaucoma; neuroprotection; retinal ganglion cells

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