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(71) Applicant: ALLERGAN SALES, INC. [US/US]; 2525 Dupont Drive, Irvine, CA 92612 (US).

(72) Inventor: ADORANTE, Joseph, S.; 5146 Thorn Tree, Irvine, CA 92615 (US).

(74) Agents: BARAN, Robert, J. et al.; Vision Pharmaceuticals L.P., 2525 Dupont Drive, Irvine, CA 92612 (US).

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(54) Title: USE OF SODIUM CHANNEL BLOCKER IN THE MANUFACTURE OF A MEDICAMENT FOR PREVENTING OPTIC NERVE DEGENERATION ASSOCIATED WITH GLAUCOMA

(57) Abstract

A method and composition for altering a plausible sequence of pathological events in retinal ganglion cells associated with glaucoma, the sequence including membrane depolarization, influx of millimolar amounts of Na^+ via non–inactivating Na^+ channels, and the lethal elevation of cell Ca^{2+} due to reversal of the Na^+ exchanger. The method includes blocking, by administration of a selected composition, of associated, non–inactivating Na^+ channels in retinal ganglion cells in order to limit Na^+/Ca^{2+} exchange in the retinal ganglion cells and prevent buildup of the Ca^{2+} level in the retinal ganglion cells to a lethal level. The results in a method of preventing retinal ganglion cell death, associated with glaucoma, by administering to the optic nerve of a mammal, a compound which blocks the non–inactivating sodium ion channels of the optic nerve. Alternately, said invention relates to a method of preventing optic retinal ganglion cell death in a human by administering to the retinal ganglion cells of said human a compound which blocks the non–inactivating sodium ion channel of the retinal ganglion cells.