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Investigating the morphology of ipRGCs in control vs. glaucomatous retinas

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Investigating the morphology of ipRGCs in control vs. glaucomatous retinas

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Glaucoma is a build-up of pressure in the eye that leads to the gradual loss of sight. The intention of this study was to investigate how glaucoma affects intrinsically photosensitive Retinal Ganglion Cells (ipRGCs). These cells contain melanopsin, a photopigment, that enables the cells to react to light. Four-month-old control and five-month-old glaucoma mice retinas were dissected, stained using primary and secondary antibodies, then traced using ImageJ's Simple Neurite Tracer. There were no significant differences in soma size, total dendritic length, dendritic field size, and dendritic field diameter between control and glaucoma ipRGCs. However, further research is needed to provide conclusive evidence regarding glaucoma's effects on retinal cells.