

Honors Research Project Proposal

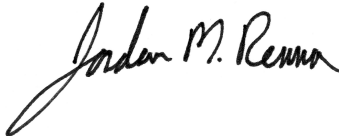

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Title of Proposed Project: Glaucoma Alters the Morphology of Mouse Melanopsin-Containing Retinal Ganglion Cells	
Major: Biology	Graduation (semester/year): Spring 2022

Please include a brief (maximum 200 words) summary of your proposed project

Melanopsin ganglion cells are intrinsically photosensitive ganglion cells in the mammalian retina. These cells mediate aspects of non-image forming vision to help regular circadian rhythm. Glaucoma is an eye disease involving an increase in intraocular pressure that has been linked to irregular circadian rhythm. This project will investigate the impact glaucoma has on these melanopsin ganglion cells at different pathological timepoints. This will be performed by using dissection, immunohistochemistry, and computer imaging methods to visualize, trace, and measure the cells' morphologies in both control and glaucomatous retinas at different timepoints of disease to analyze if glaucoma has a significant effect on the cells.

Approval:

Honors Course No.: 3100:499	No. of Project Credits: 3	
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Your approved cover sheet and proposal must be [submitted to the Williams Honors College through IdeaExchange](#)