



Albin Camitz and James Tribble were awarded best essay and best supervisor for the vt23 medical student research project.

Description of the project:

Albin's project built on previous work in the group which had demonstrated that Valproic acid could reduce neuroinflammation in retinal injury. It was unknown if this was through a direct effect on glia in the retina or secondary to neuroprotection of retinal ganglion cells.

To study the effects of Valproic acid in glia in isolation, we used an established human Müller-cell line exposed to pro-inflammatory stimuli and treated with Valproic acid. Cells were stained and visualized using Immunofluorescence microscopy to quantify markers and morphological changes that are indicative of inflammatory changes. We found that the cell line was in a basal inflammatory state and that markers of glial reactivity were already active. This has now led to a series of experiments outside of this project where we are examining the inflammatory status of this cell-line. We were also able to determine that Valproic acid was not toxic to Müller cells and will continue these experiments in the future to establish mechanisms of action of Valproic acid.