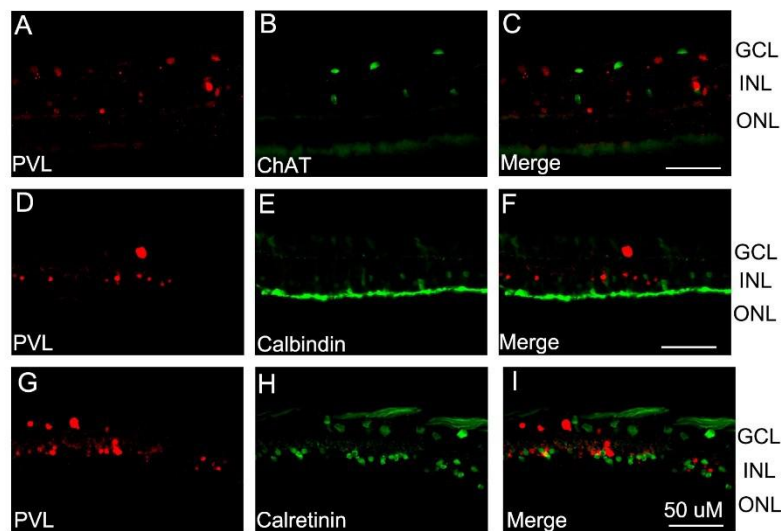
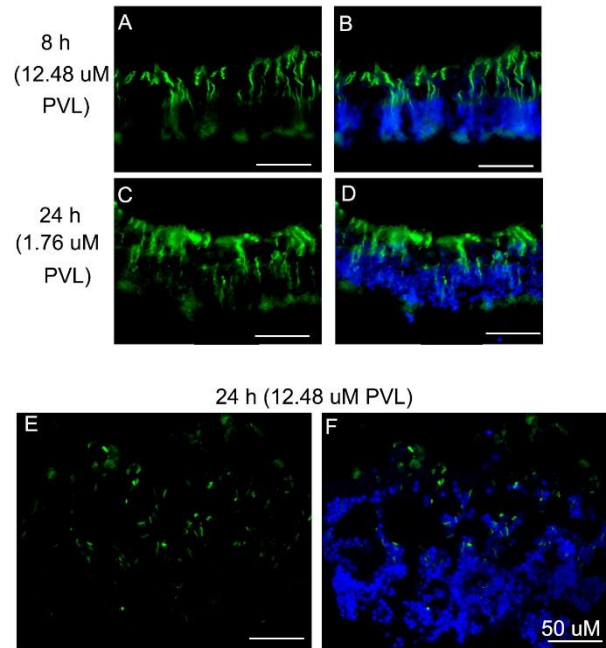


## Supplementary Materials: Panton-Valentine Leucocidin Proves Direct Neuronal Targeting and Its Early Neuronal and Glial Impacts a Rabbit Retinal Explant Model

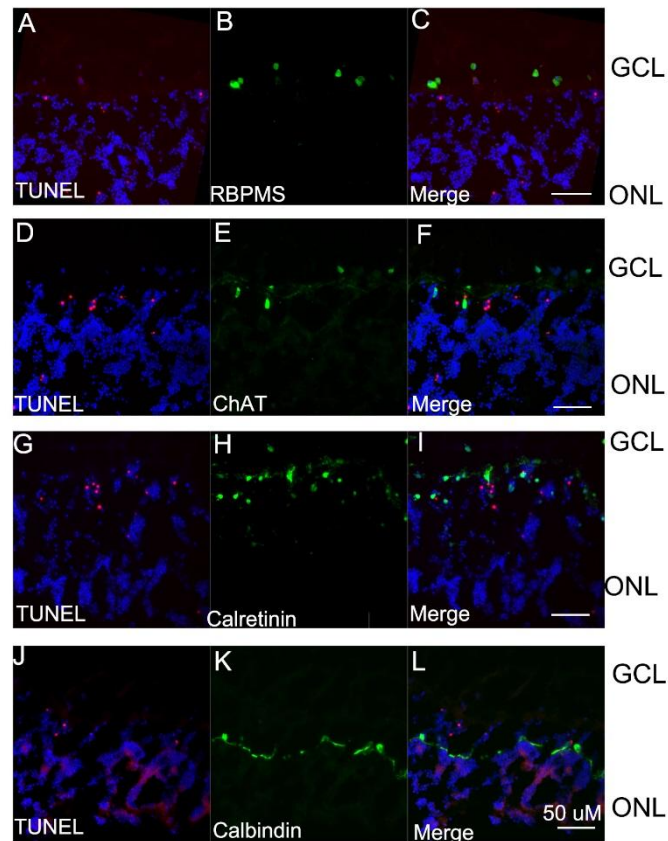
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**Figure S1.** PVL did not colocalize with cholinergic amacrine cells, nor AII amacrine cells; nor calretinin-positive cells (bipolar and horizontal cells) before 4 h after PVL treatment. PVL (red fluorescence) did not colocalize with cholinergic amacrine cells labeled with an anti-ChAT antibody, nor AII amacrine cells labeled with an anti-Calretinin antibody. PVL did not colocalize with calbindin-positive bipolar cells, nor horizontal cells before 4 h after PVL treatment. Abbreviations: PVL, Panton–Valentine leukocidin; ChAT, Anti-Choline Acetyltransferase; GCL, ganglion cell layer; INL, inner nuclear layer; ONL, outer nuclear layer.



**Figure S2.** Müller cells were activated and retinal structure was destroyed in PVL-treated explants. Müller cells labeled with an anti-GFAP antibody showed abnormal extension in ONL, and nuclei labeled with Hoechst began to show disordered organization 8 h after PVL treatment (1.76  $\mu\text{M}$  PVL) (A,B). At 24 h, Müller cell processes were visible in the whole retina, nuclei could not show normal retinal structure in 1.76  $\mu\text{M}$  PVL-treated explants (C,D). The Müller cells and nuclei were dissolved, retinal structure was destroyed 24 h after PVL treatment (12.48  $\mu\text{M}$  PVL) (E,F). Abbreviations: PVL, Panton-Valentine leukocidin; GFAP, glial fibrillary acidic protein; ONL, outer nuclear layer.



**Figure S3.** TUNEL positive cells did not colocalized with RGCs, nor cholinergic amacrine cells, nor AII amacrine cells, nor calretinin-positive cells (bipolar and horizontal cells) in PVL-treated explants. The TUNEL positive cells did not colocalized with RGCs labeled with an anti-RBPMS antibody (A–C), nor with cholinergic amacrine cells labeled with an anti-ChAT antibody (D–F), nor with AII amacrine cells labeled with an anti-calretinin antibody (G–I), nor with calbindin-positive bipolar or horizontal cells labeled with an anti-calbindin antibody (J–L). Abbreviation: PVL, Panton-Valentine leukocidin; TUNEL, terminal deoxynucleotidyl transferase dUTP nick end labeling; RGCs, retinal ganglion cells; RBPMS, RNA-binding protein with multiple splicing; ChAT, Anti-Choline Acetyltransferase; GCL, ganglion cell layer; ONL, outer nuclear layer.