# Supplementary Information

In order to investigate the effect of $NaIO_3$ on primary (rod) PRCs retinas from postnatal day 4 C57BL6 mice were dissociated using the papain dissociation kit according to the manufacturer's instruction (Worthington Biochemical Corporation, Lakewood, NJ, USA). Single cells were then seeded at 10,000 cells/well in a 96-well plate. One day later, the cells were incubated with different concentrations of $NaIO_3$ for 24 h.

In the dissociated retinal cell culture that consists of roughly 35%–50% PRCs the cells adapted a more round morphology with increasing concentrations of $NaIO_3$ (6 or 48 mM) administered. The apoptosis inducer staurosporine triggered similar outcome (Figure S1A–D).

To quantify the loss of cell viability in primary photoreceptors the MTT (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) viability assay was employed. A maximum of 50% loss in cell viability was observed with 48 mM $NaIO_3$ 14 h after exposure with the toxin (Figure S1E). Because the dissociated primary cells are dying rapidly in culture as a result of the absence of physiological environment we have performed the PCD experiments with the 661W cell line only.

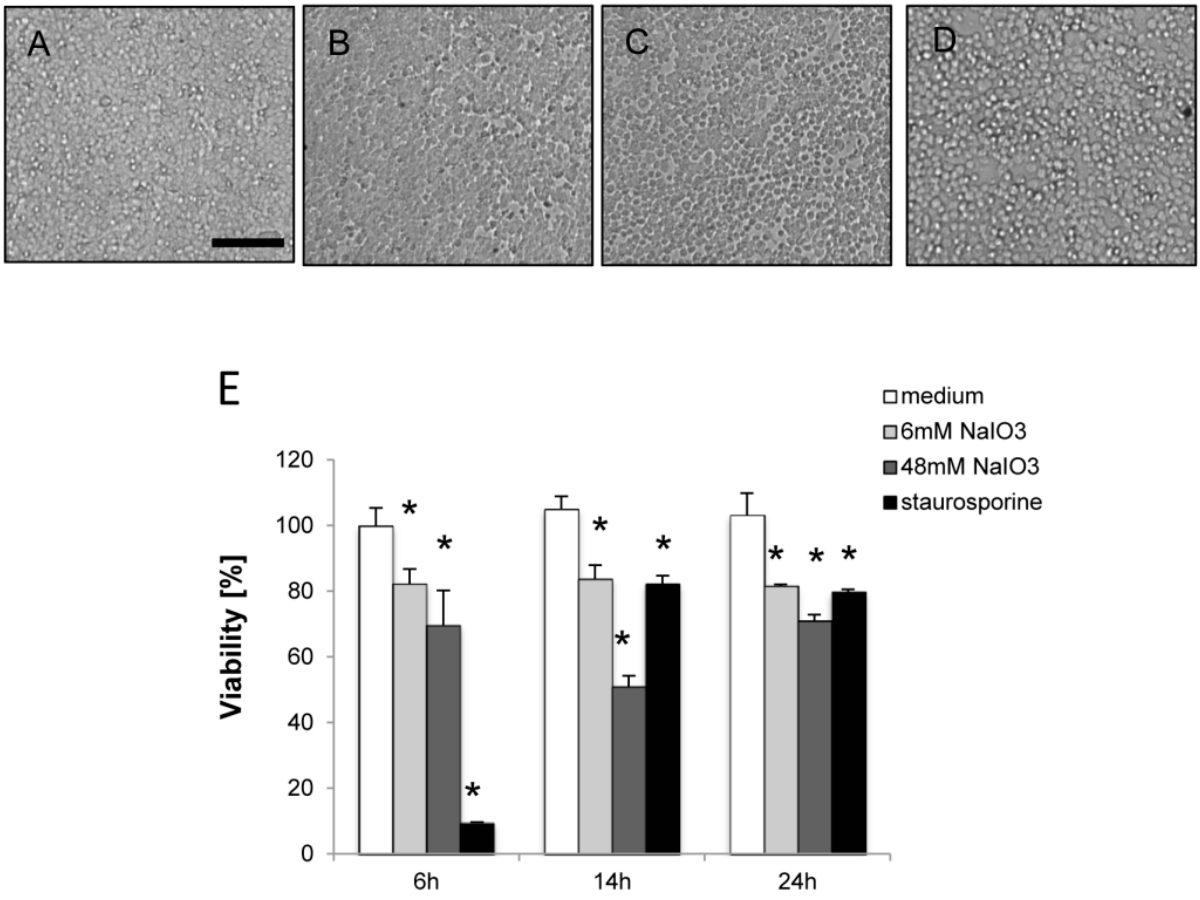


**Figure S1.** Dissociated retinal cells from the neurosensory retina containing approx. 50% photoreceptors were exposed to $NaIO_3$. Untreated controls (**A**) and treated cells (6 mM (**B**), 48 mM (**C**) or 1 μM staurosporine (**D**)) imaged at 14 h post treatment. Degenerating cells are characterized by roundish cell morphology. Scale = 50 μm; and (**E**) Viability assay indicates a significant loss of viability for all treatments (* $p \leq 0.05$).

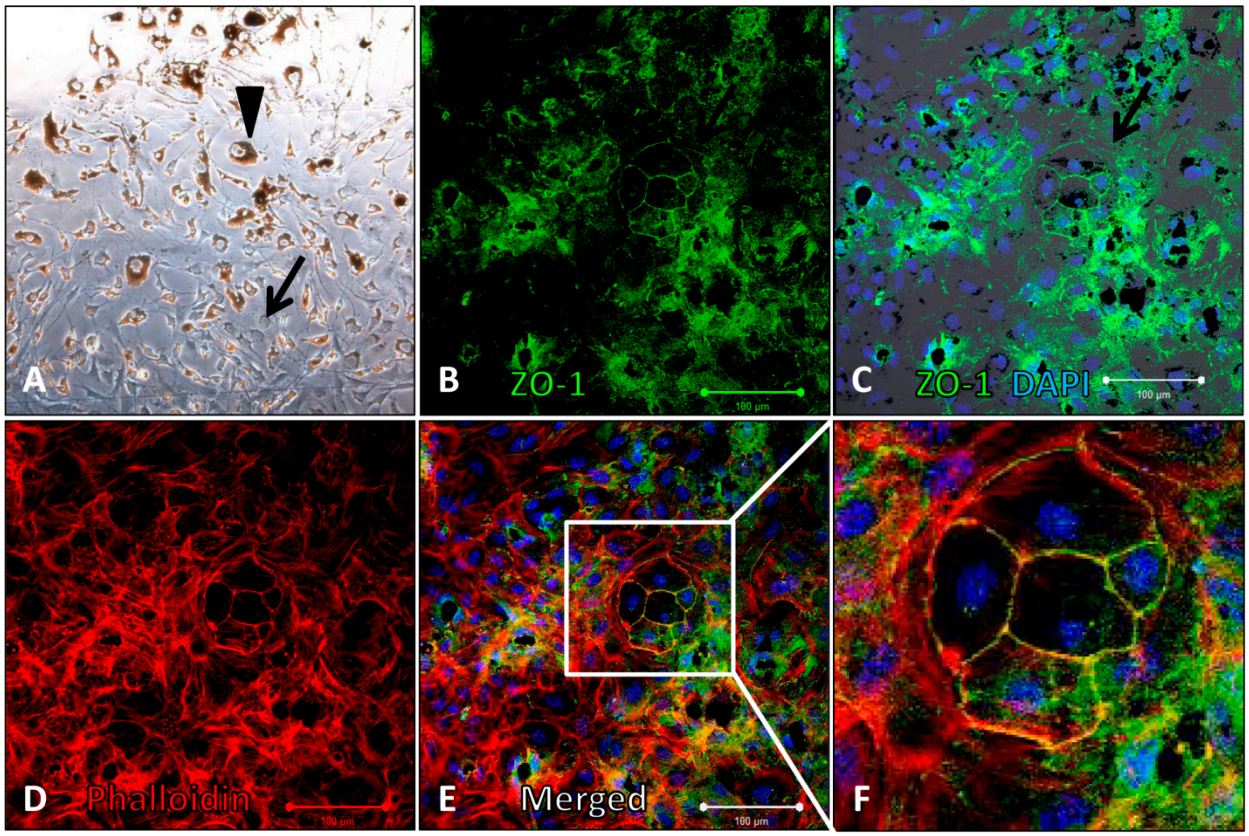


**Figure S2.** Characterization of murine RPE cells. (**A**) Freshly isolated RPE cells display melanin pigmentation (arrow) and hexagonal morphology. They are surrounded by fibroblast-like RPE cells (arrowhead) that underwent epithelial mesenchymal transition; (**B**,**C**) RPE cells with cobblestone-like morphology (arrow) expressed the tight junction marker ZO-1 (green); (**D**) The epithelial nature of the cells was confirmed by F-actin staining using phalloidin (red); (**E**) Merged image to visualize the co-localization of all investigated RPE markers with a magnification of the central area in panel (**F**).