



**Supplementary Figure 4. The BXD32 retina exhibits phagoptosis using 3D modeling.** Using TUNEL labeling (**red**) for apoptotic nuclei (arrowheads, >) and immunolabeling for monocytes (IBA1, **green**) and photoreceptors (RHO, **blue**) at p84 (A) and p105 (B-D), followed by subsequent 3D reconstruction, presumed microglia can be observed migrating to the ONL and phagocytosing non-apoptosing photoreceptor nuclei (arrows, →), an aberrant function of these leukocytes. Rotated images show the monocytic enveloping of photoreceptor nuclei from the reverse side of the Z-stack, conclusively demonstrating phagoptosis. Scale bars = 5  $\mu$ m.