



**Figure S1. Misexpression of codon optimized TDP-43 using GMR-GAL4 promoter induces robust phenotype in the external eye. (C-F) Transgenic flies expressing CO-TDP-43 showing severe eye phenotypes compared to controls (A and B). Scale bar: 100 nm. Genotype: (A) Canton S, (B) w1118/+;GMR-GAL4/+;+; (C and E) w1118/+; GMR-GAL4/UAS-TDP-43<sup>CO</sup>;+, (D and F) w1118/+; GMR-GAL4/+;UAS-TDP-43<sup>CO</sup>/+.**