



**Figure S4. Heterozygous misexpression of codon optimized TDP-43 induces age dependent phenotype in the external eye.** Transgenic flies expressing heterozygous CO-TDP-43 show mild eye phenotypes at 1-day post-eclosion (**B**) and severe eye phenotype at 10-day post-eclosion (**D**) exhibiting an age dependent affect compared to age matched controls (**A and C**). Scale bar: 100 nm. Genotype:

(**A**) Canton S, (**B**)  $w^{118}/+;gl-TDP-43^{CO}/+;+$ , (**C**) Canton S (**D**)  $w^{118}/+;gl-TDP-43^{CO}/+;+$ .