



Figure S1. Confocal images of the distribution of TiO_2 and $\text{TiO}_2\text{:Eu}$ nanocrystals in the third instar larval brain. (A–D) Brain dissected from unexposed flies fed in standard food medium. Note the intense autofluorescence of the tracheal system under 405 laser excitation. (E–L) Brain dissected from third instar larvae exposed to 4 mg/mL of TiO_2 and $\text{TiO}_2\text{:Eu}$ showed aggregates of these nanocrystals closed to the optic lobe (arrowhead in G). DIC: differential interference contrast; Green: TiO_2 nanocrystals fluorescence under 405 laser excitation; Red: $\text{TiO}_2\text{:Eu}$ nanocrystals fluorescence under 552 laser excitation.