



**Figure S1: Mitochondrial function and NCXs expression in striatal neuronal cells from A53T  $\alpha$ -syn and WT mouse embryos/pups.** (A) Quantification of cytosolic calcium concentrations, mitochondrial calcium content and mitochondrial membrane potential, in primary striatal neurons from A53T- $\alpha$ -syn and WT mouse embryos; (B) Quantification of cytosolic calcium concentrations, mitochondrial calcium content and mitochondrial membrane potential, in primary striatal astrocytes from A53T- $\alpha$ -syn and WT mouse pups (P1); (C) Quantification of NCX1 and NCX3 protein expression in striatal neurons (upper panel) and astrocytes (lower panel). In A and B: each bar represents the mean  $\pm$  S.E.M. of the percentage of fluorescence intensity values of at least 20–30 cells recorded in three independent experimental sessions. In C: each bar represents the mean  $\pm$  S.E.M of the percentage of the NCX1 and NCX3 protein expression obtained in three independent experimental sessions.