



FOR ONLINE PUBLICATION

Supplementary data

**Supplementary figure1: Phospho-tau distribution in the mouse brain (A) and gliosis around phospho-tau containing neurons (B)**

(A) AT8-immunoreactivity (in brown color) at different anatomical sites of THY-Tau22 mice at 3, 7, 12 and 16 months. Representative sections of n=3 mice per age are shown. entorh cortex, entorhinal cortex; SM cortex, somatosensory cortex.

Bar: 200  $\mu$ m.

(B) Microglia and astroglia accumulate around AT8-positive neurons. AT8-immunoreactive pyramidal neurons (in blue) in the CA1 are surrounded by GFAP-positive cells (in red) and microglia (stained with Tomato Lectin in green) in tau transgenics. Overlay of the three fluorescence channels from a 12 months old THY-Tau22 and WT. Representative sections of n=10 mice are shown.

Bars: 20  $\mu$ m.