

Longitudinal investigation ¹ of neuroinflammation and metabolite profiles in the APP_{swe}×PS1_{Δe9} transgenic mouse model of Alzheimer's disease.

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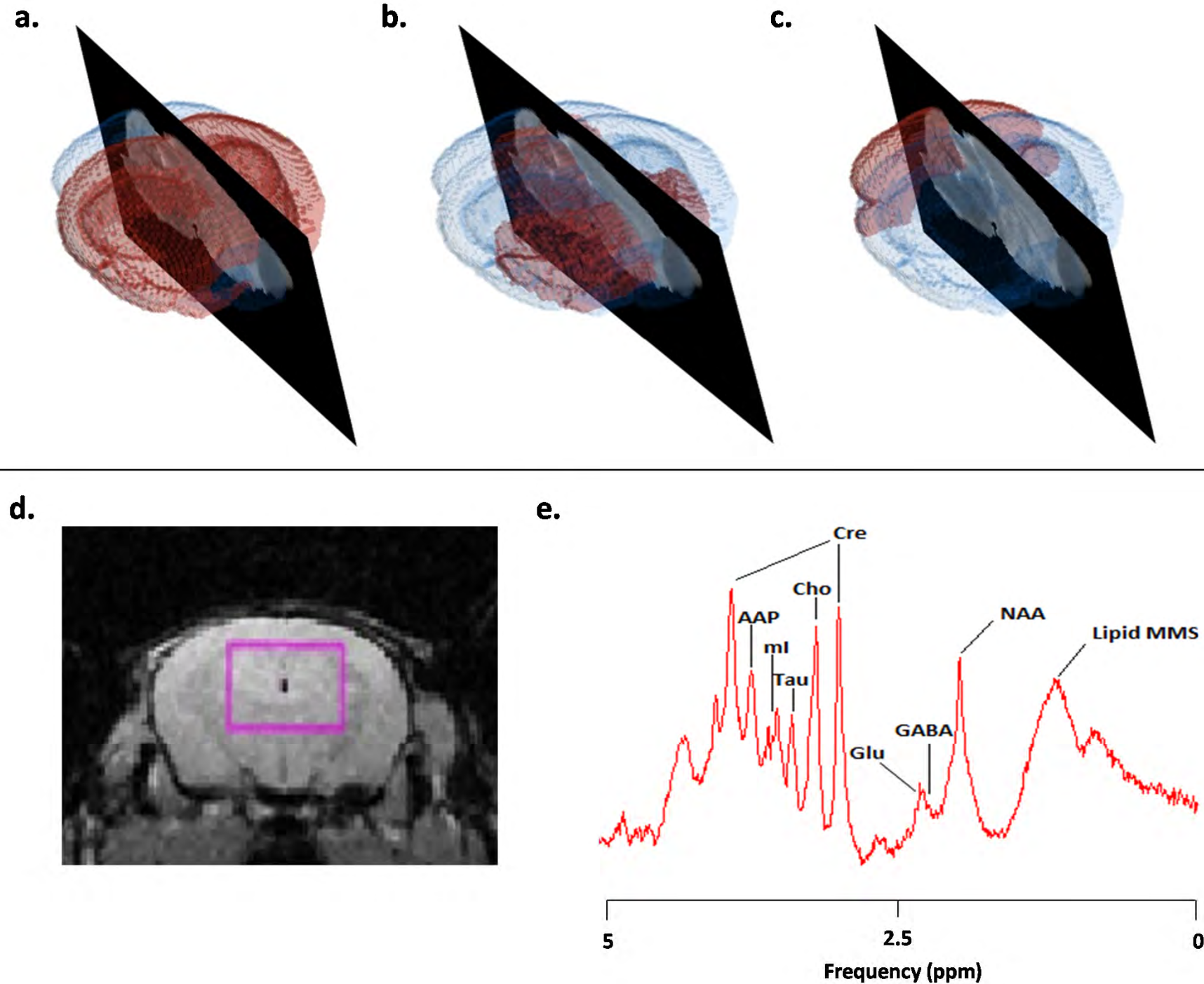
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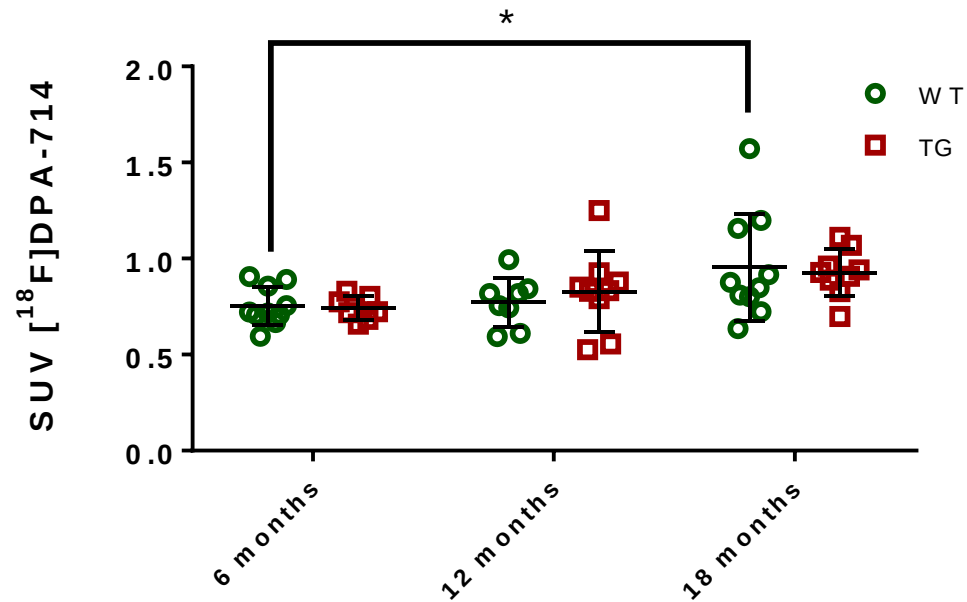
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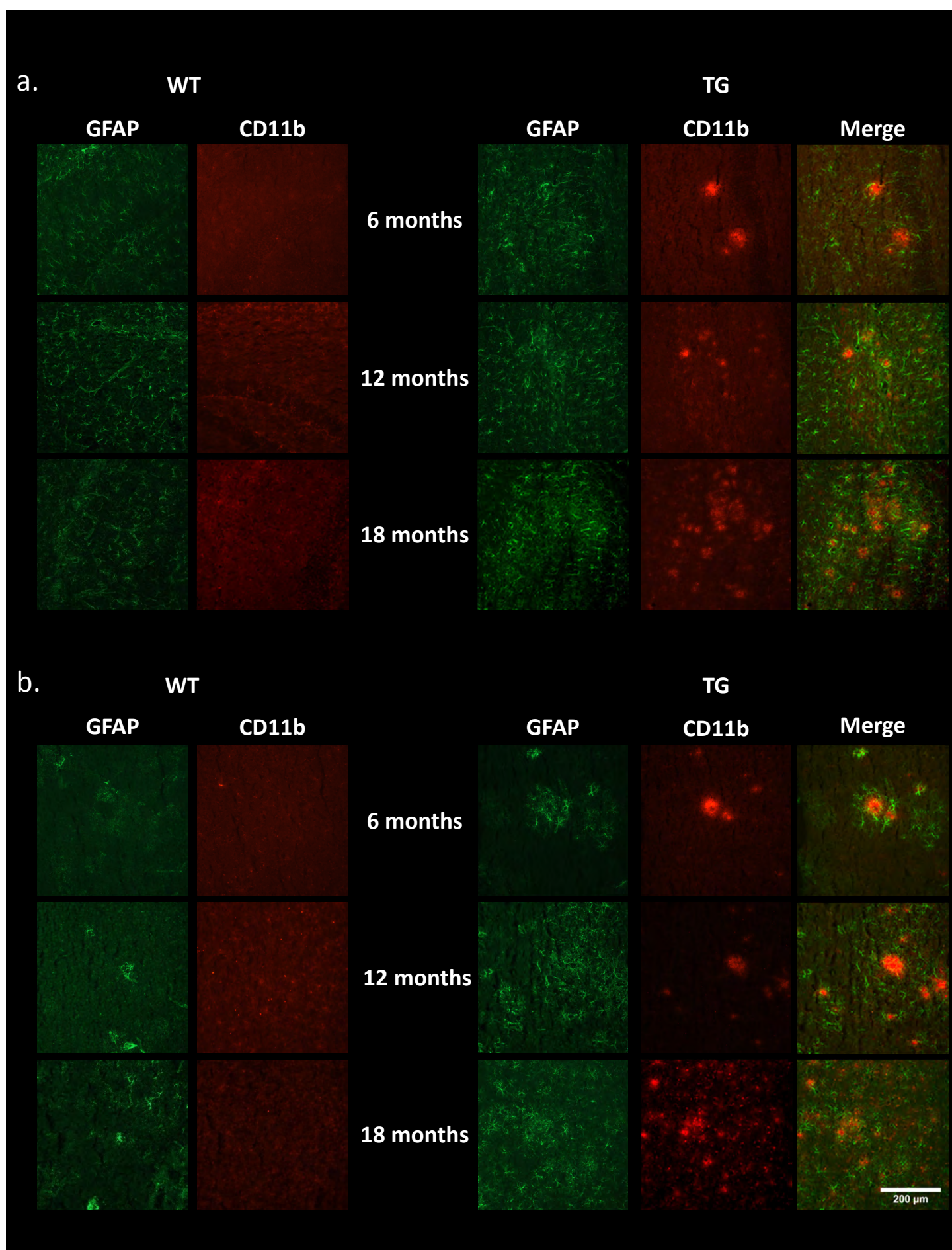
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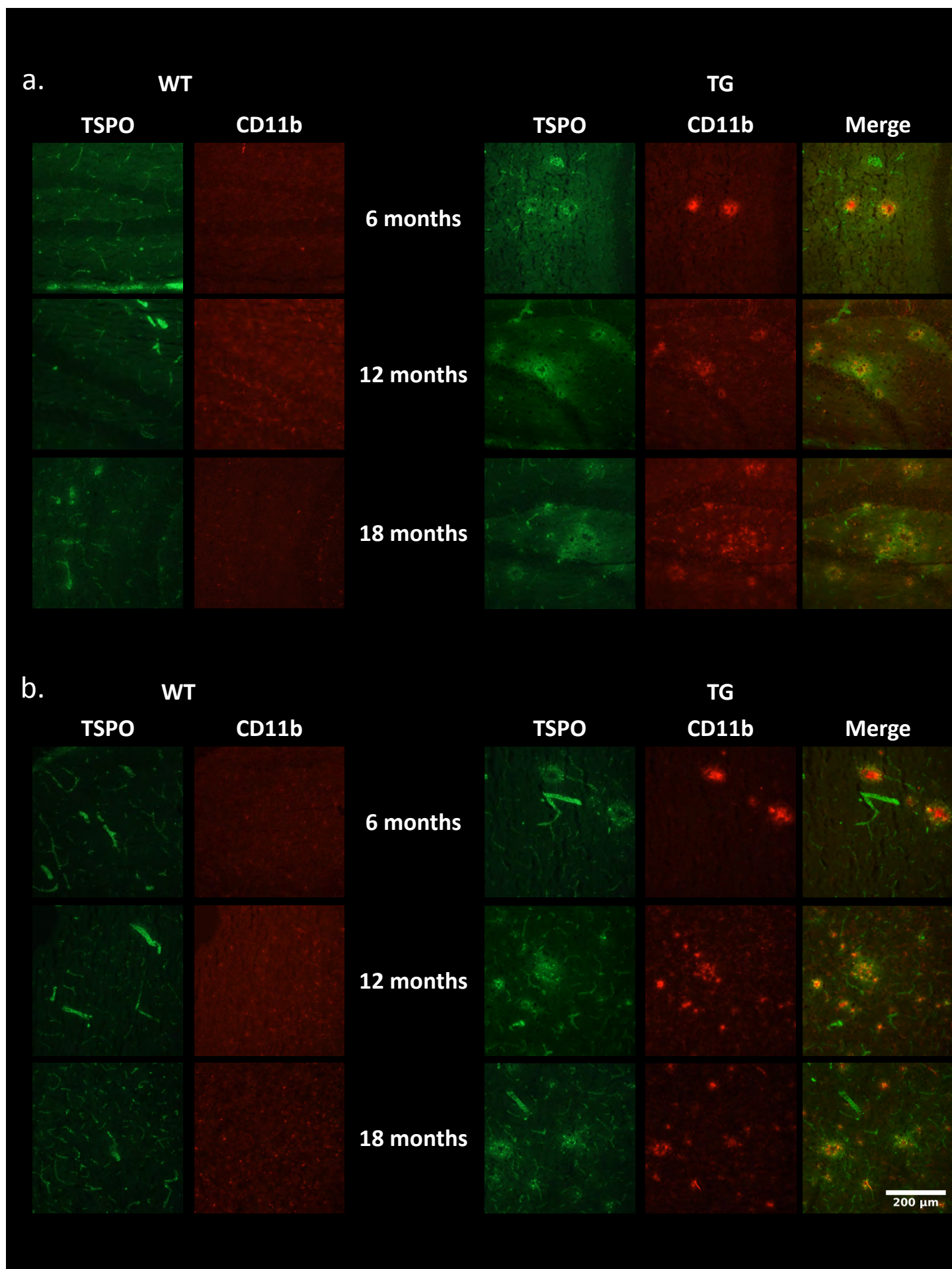
Supplementary figure 1: Whole brain was segmented into the hippocampus and cortex (a), other subcortical (b) and cerebellum (c) regions of interest for PET quantification using a modified version of the Waxholm space template (Johnson et al. 2010). The MRS voxel was centred at bregma -2.30mm according to the Paxinos mouse brain atlas and encompassed hippocampal and thalamic regions (d). Example of an MRS spectrum *in vivo* with the main metabolites highlighted (e). AAP-amino acid proton, ml-myoinositol. Tau-taurine, Cho-choline containing compounds, Cre- creatine+phosphocreatine, Glu- glutamate, GABA- γ-aminobutyric acid, NAA- N-acetylaspartate, Lipid MMS- lipid and macromolecules.



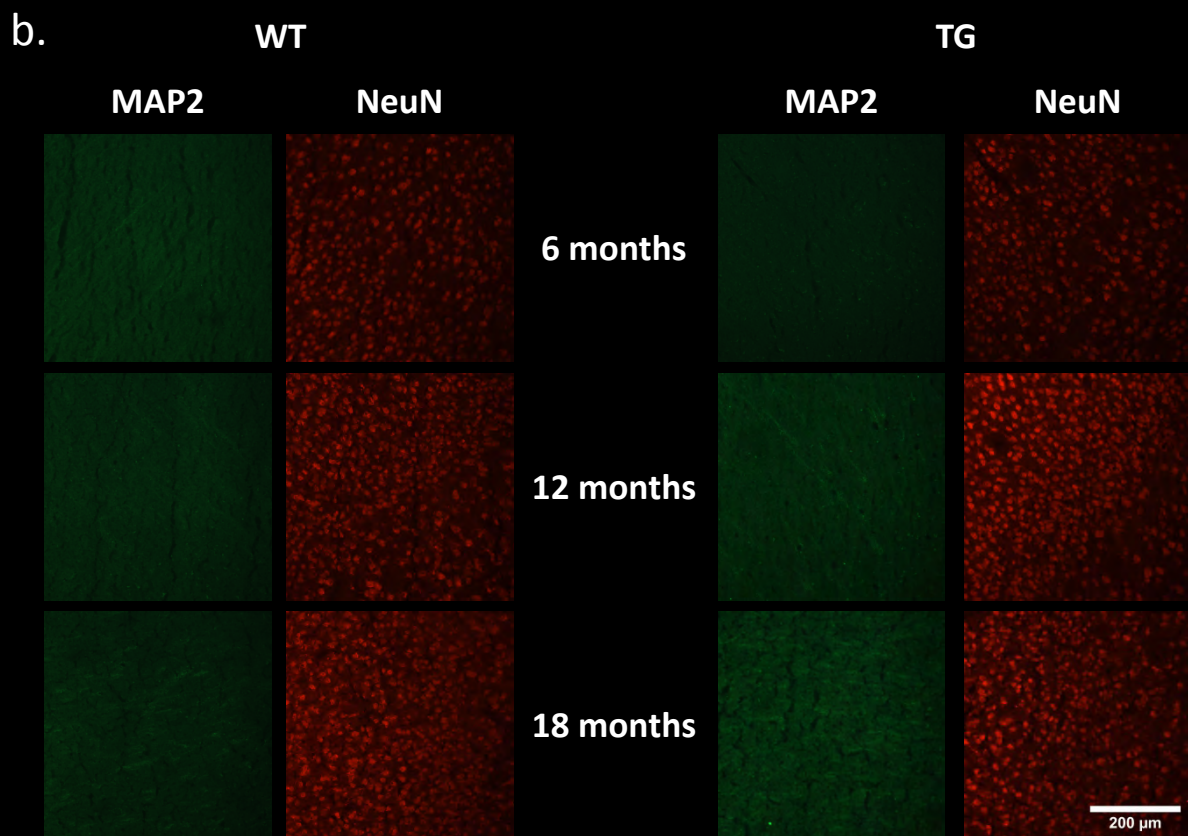
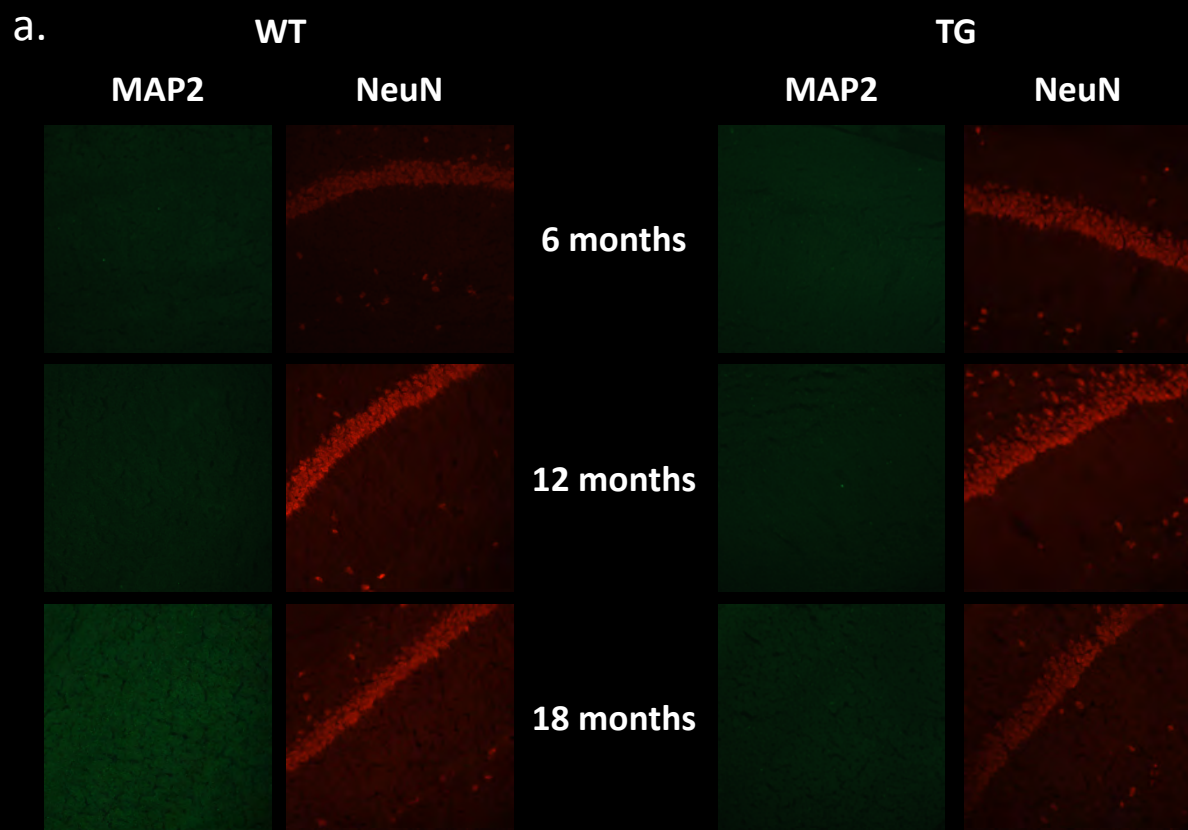
Supplementary Figure 2: [^{18}F]DPA-714 standard uptake value in the cerebellum of WT and APP_{swe}×PS1_{Δe9} mice at 6 (WT n=10, TG=7), 12 (WT n=8, TG=9) and 18 months (WT n=10, TG=9) of age. Results are expressed as mean±SD. Statistical analysis was performed using two-way ANOVA followed by Sidak's post-hoc analysis (*p≤0.05).



Supplementary figure 3: Immunoreactivity of GFAP (green) and CD11b (red). Representative images of double staining in the hippocampus (**a**) and cortex (**b**) of WT and APP_{Swe}×PS1 Δ e9 mice at 6, 12 and 18 months of age. Pictures were taken at **20×** magnification between bregma -2.06mm and -2.30mm. Scale bar represents 200μm.



Supplementary figure 4: Immunoreactivity of TSPO (green) and CD11b (red). Representative images of double staining in the hippocampus (a) and cortex (b) of WT and APPsw $\times$ PS1 Δ e9 mice at 6, 12 and 18 months of age. Pictures were taken at **20 $\times$** magnification between bregma -2.06mm and -2.30mm. Scale bar represents 200 μ m.



Supplementary figure 5: Immunoreactivity of MAP2 (green) and NeuN (red). Representative images of double staining in the hippocampus (**a**) and cortex (**b**) of WT and APP_{swe}×PS1^{Δe9} mice at 6, 12 and 18 months of age. Pictures were taken at **20×** magnification between bregma -2.06mm and -2.30mm. Scale bar represents 200μm.