



TMHT Transgenic Mouse Model

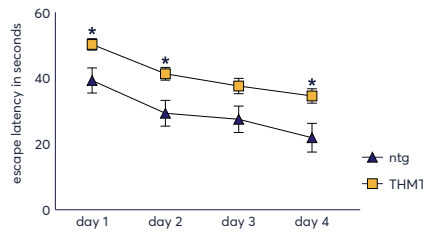
The TMHT (Thy1 Mutated Human Tau) mouse was developed in-house and is exclusively available at QPS Austria. TMHT mice overexpress the human TAU441 with two mutations, V337M and R406W under control of the neuron-specific murine Thy1 promoter.

- Cognitive deficits in the Morris water maze starting at 5 months of age
- No motor deficits
- TAU phosphorylation at Thr181, Ser202, Thr231/Ser235, Ser396/Ser404

Figure 1: Morris water maze escape latencies of 5 and 8 month old TMHT mice. Mean ± SEM; n = 19 - 54; Two-way ANOVA with Bonferroni's post hoc test; *p<0.05, ***p<0.01.

5 months

Figure 1: A



8 months

Figure 1: B

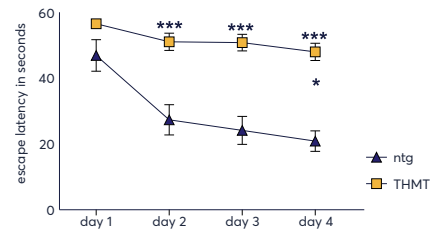
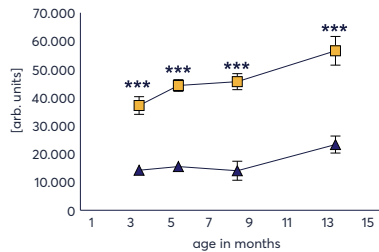


Figure 2: Quantitative analysis of soluble and insoluble Tau and pTau expression levels in the hippocampus of 3 to 13 months old TMHT mice compared to non-transgenic animals by MSD immunosorbent assay. **A:** Soluble total Tau levels. **B:** Soluble pTau Thr231 levels. n = 4 - 13. Mean ± SEM. Two-way ANOVA with Bonferroni's post hoc test. ***p< 0.001

soluble total tau

Figure 2: A



soluble ptau

Figure 2: B

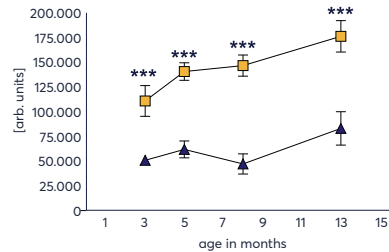
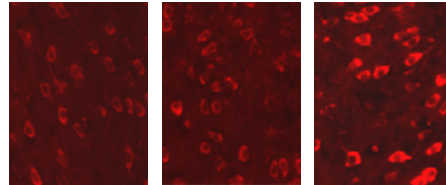


Figure 3: Immuofluorescent of total tau (HT7) and pTau Thr231 (AT180) labeling in the amygdala of 2, 6 and 12 months old TMHT mice.

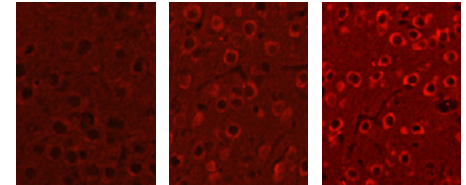
pTau Thr231

2 months 6 months 12 months



Total Tau

2 months 6 months 12 months



Flunkert et al. Elevated Levels of Soluble Total and Hyperphosphorylated Tau Result in Early Behavioral Deficits and Distinct Changes in Brain Pathology in a New Tau Transgenic Mouse Model. Neurodegener Dis. 2012 Jul 10.

