

Supplemental Data

Supplemental movie. Motor deficit in γ -synuclein transgenic mice (mild clinical signs of pathology). Clip 1 shows movements of 8 month-old wild type and homozygous Thy1 μ SN littermates in the home cage. Clip 2 shows movements of a 8 month-old homozygous Thy1 μ SN mouse on a solid surface.

Fig. S1. Dynamics of the development and progression of phenotypical signs of pathology in homozygous Thy1 μ SN mice. The scale is limited by 16 months because the lifespan of these mice does not exceed this limit.

Fig. S2. Immunohistochemical detection of γ -synuclein in the brain of transgenic mice. A coronal mouse brain section at approximately -3 Bregma level was stained with anti-mouse γ -synuclein SK23 antibody (A). Two areas boxed in the low magnification image are shown at higher magnification on panels B and C. Note intense staining of the cell bodies and neuritis of cortical and hippocampal neurons. Higher magnification of the substantia nigra lateralis area (boxed in panel C) is shown in panel D. A section through the brainstem was stained with the same antibody and counterstained with hematoxylin and eosin (E). γ -synuclein-positive eosinophilic cytoplasmic inclusions are shown by arrowheads, spheroids - by large arrows and pathological neurites - by small arrows. Scale bars = 20 μ m for panel D and 10 μ m for panel E.

Fig. S3. Increased abundance of heat shock protein HSPB1 (HSP25/HSP27) but not heat shock protein HSP70 in the spinal cord of γ -synuclein transgenic mice. Western blot analysis of total cytosolic proteins extracted from the spinal cords of 12 month-old wild type mice, hemizygous

Thy1m γ SN mice, homozygous Thy1m γ SN mice with mild clinical signs of pathology and homozygous Thy1m γ SN mice at the advance stage of pathology.

Fig. S4. Activated astrocytes in the spinal cord of γ -synuclein transgenic mice are HSPB1 positive. Double immunofluorescent staining of 12 month-old homozygous Thy1m γ SN mouse spinal cord section with antibodies against GFAP (green) and HSPB1(red). Scale bar = 50 μ m.

Supplemental tables

Suppl. Table 1.

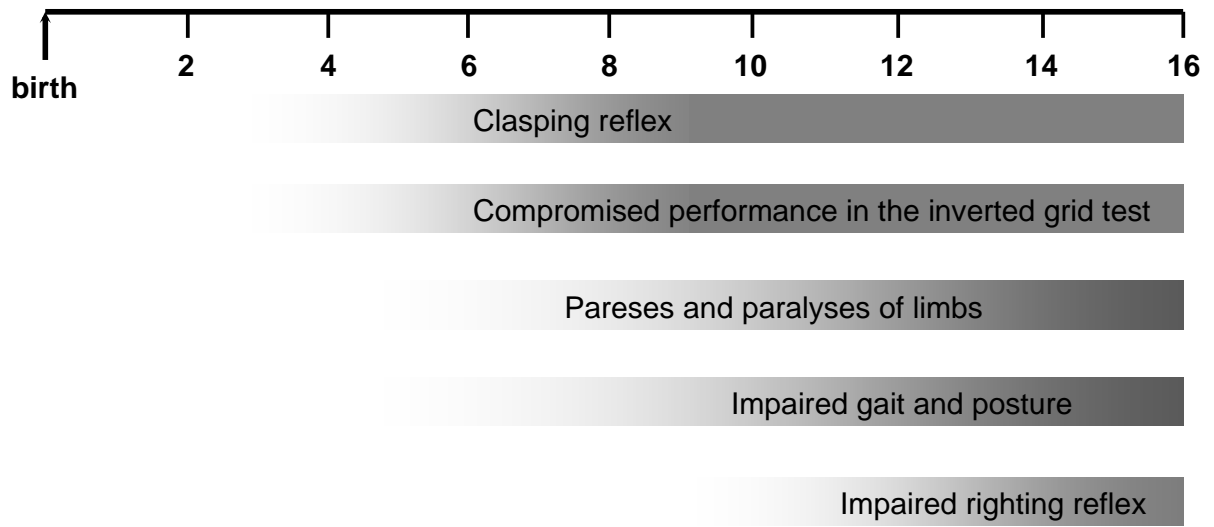
Ability of animals to turn 180 degrees on a 11 mm diameter horizontal beam

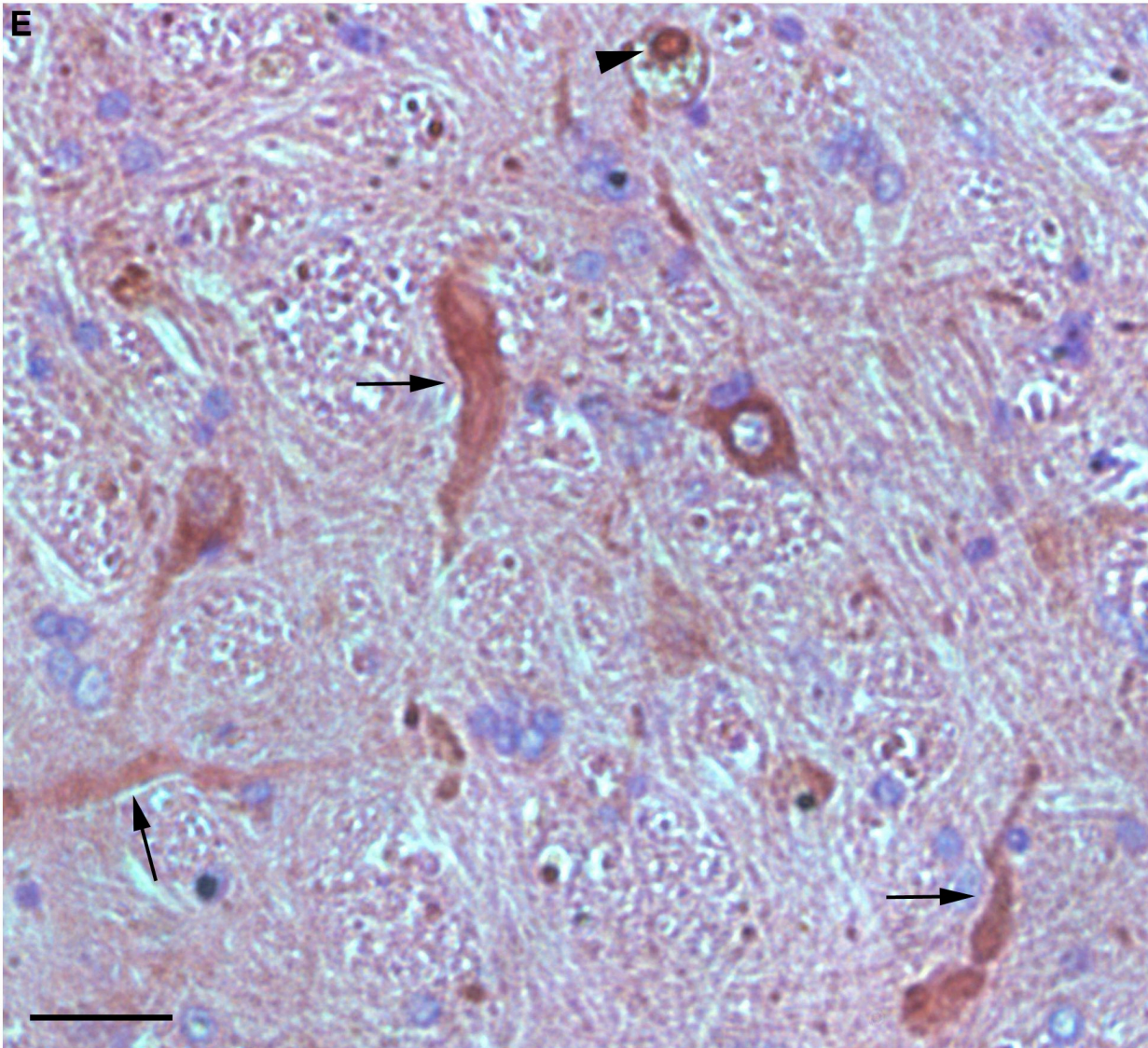
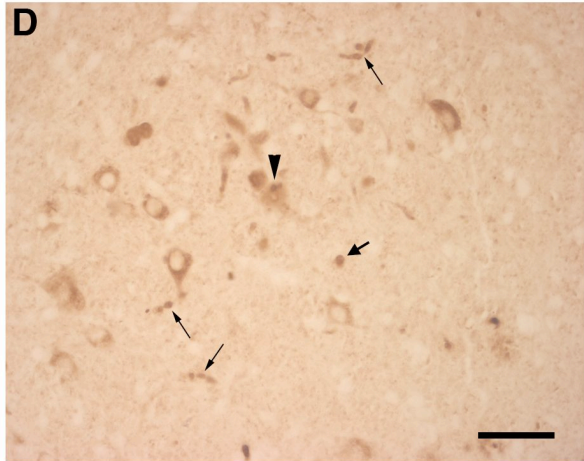
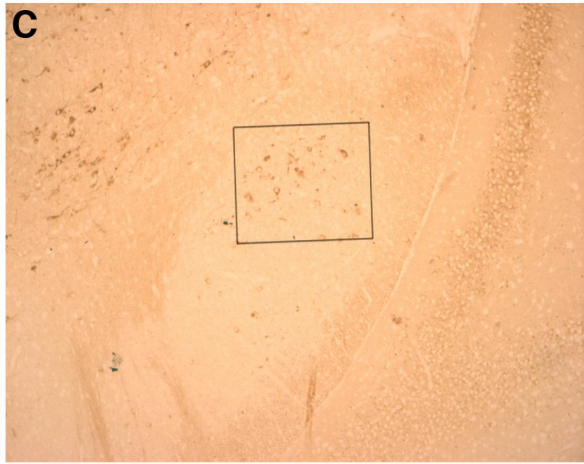
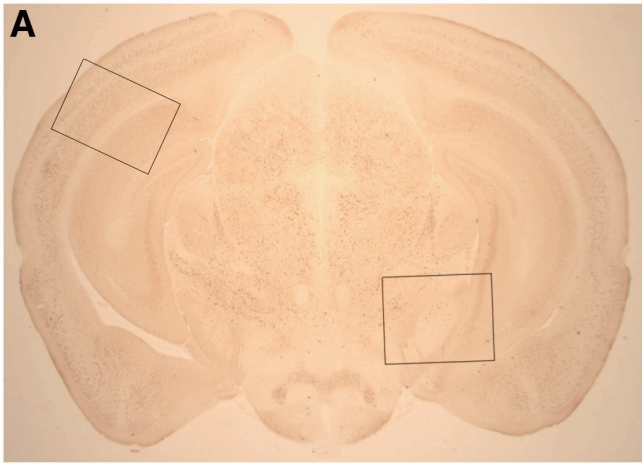
Age (months)	4	6	9	12
	<u>Animals successfully completed the task (%)</u>			
WT	92.9	97	93.9	95
hemi	95.5	85.4	81.8	54.2
homo	25	15.4	4.7	0

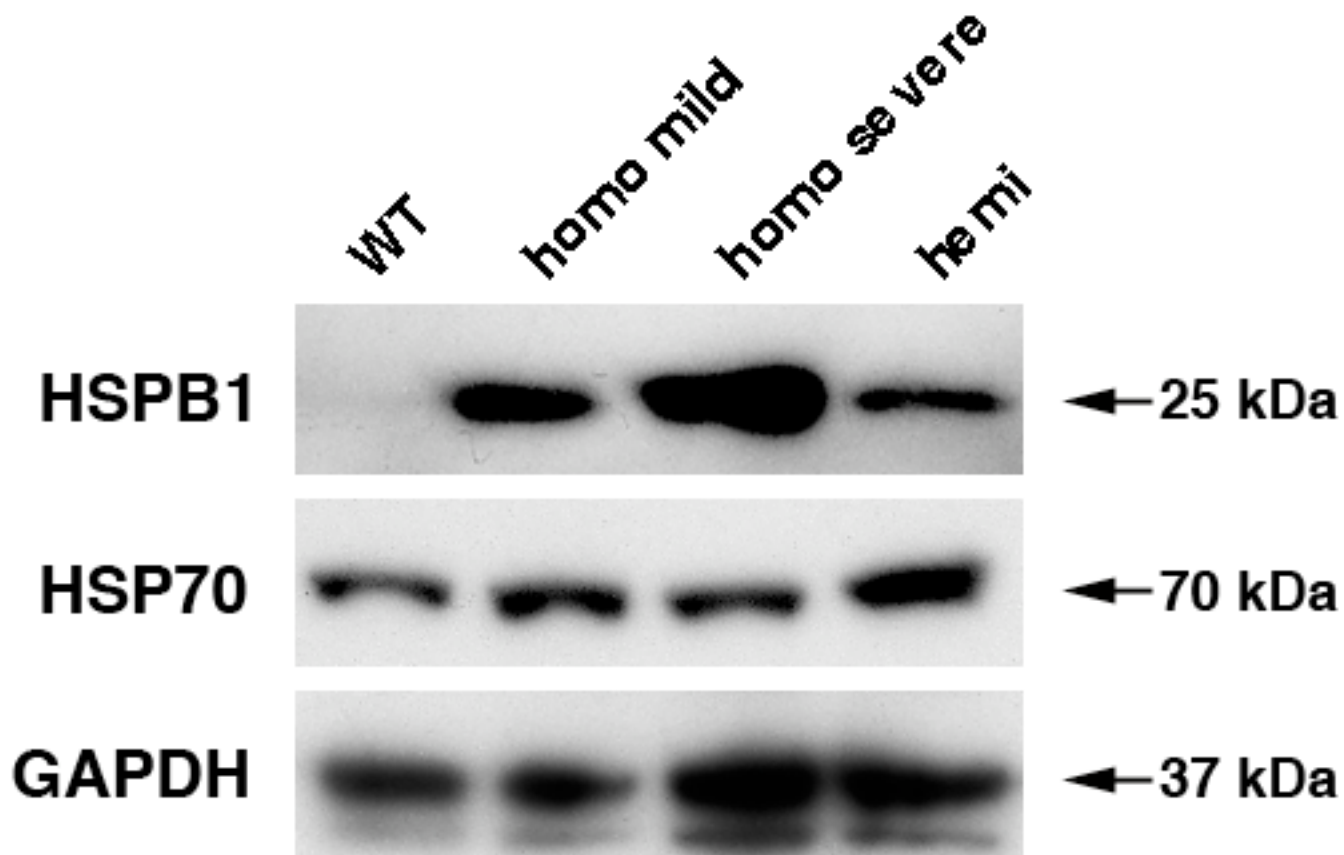
Suppl. Table 2.

Ability of animals to cross 50 cm distance on a 11 mm diameter horizontal beam

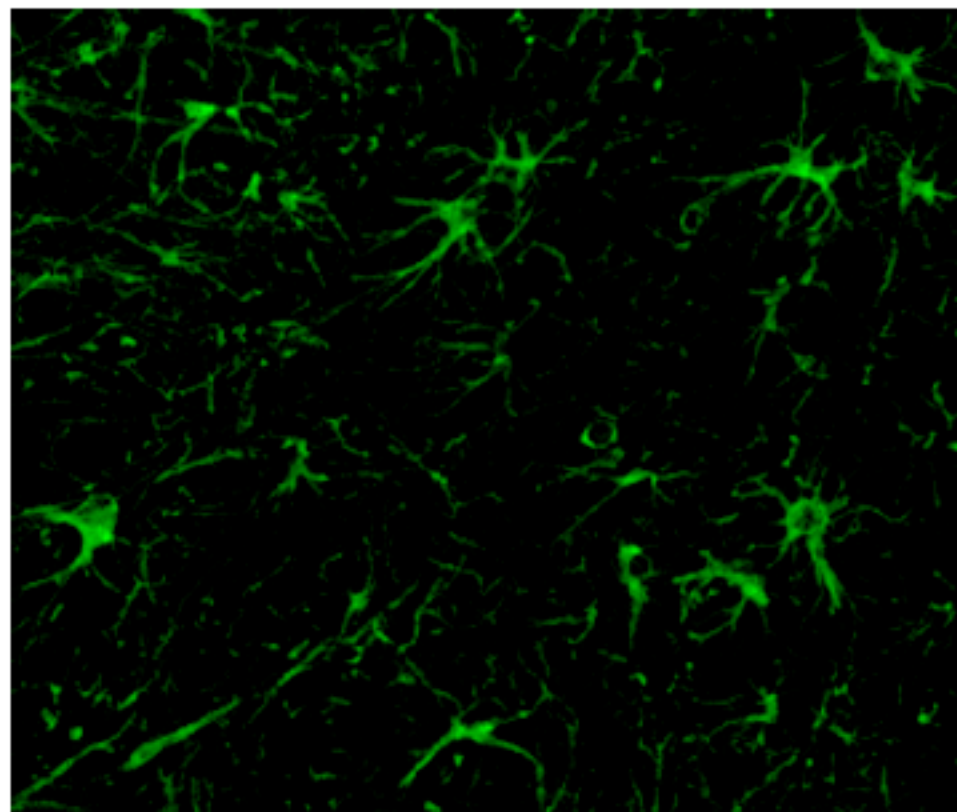
Age (months)	4	6	9	12
	<u>Animals successfully completed the task (%)</u>			
WT	92.3	78.1	90.3	73.7
hemi	81	71.4	66.7	53.8
homo	83.3	0	0	0



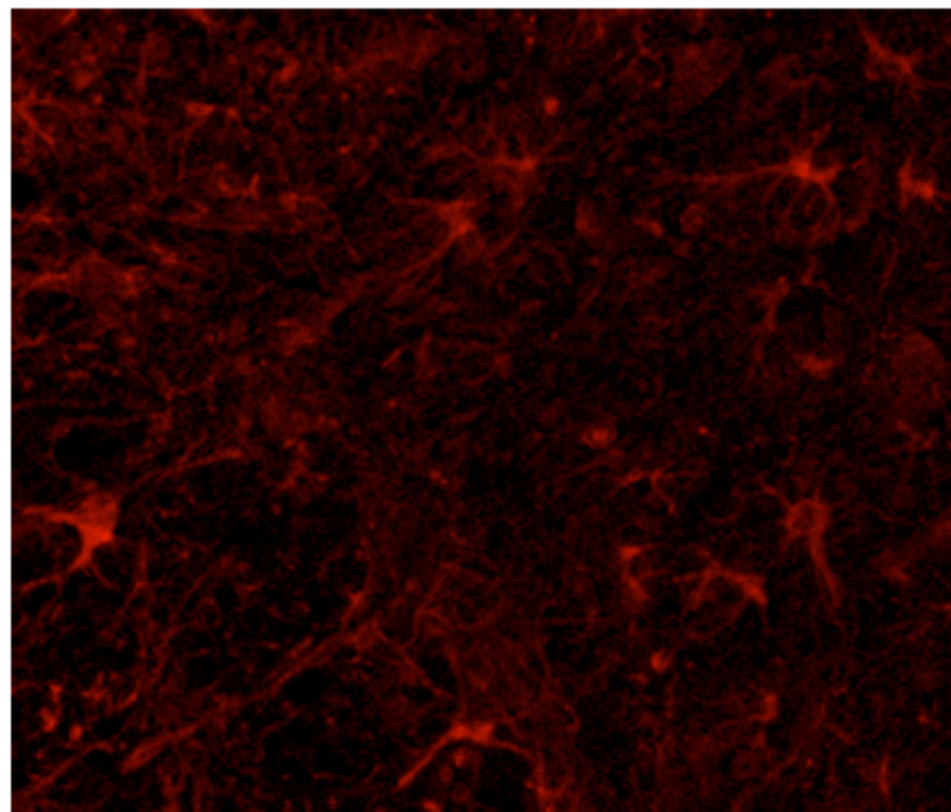




GFAP



HSPB1



merge

