



## Line 61 Transgenic Mouse Model

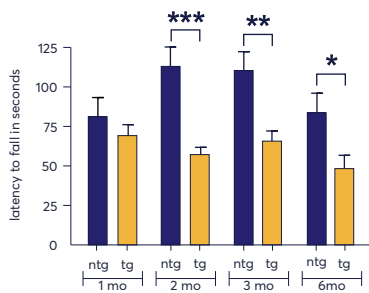
This PD transgenic mouse model overexpresses human wild type  $\alpha$ -synuclein under the control of the human Thy1 promoter.

- High expression of  $\alpha$ -syn already in young mice
- Axonal  $\alpha$ -syn depositions
- Loss of striatal dopaminergic synapses
- Impaired nest building behavior
- Motor deficits in behavioral read outs

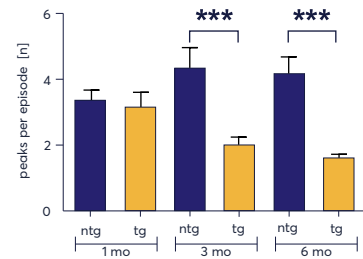
**Figure 1:** RotaRod and Pasta Gnawing test of 1, 2, 3 and 6 month old Line 61 mice. Mean + SEM; n = 13 - 15; Two-way ANOVA with Bonferroni's *post hoc* test: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

Figure 1

### RotaRod



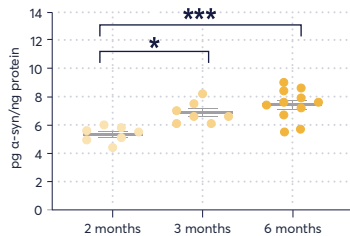
### Pasta Gnawing



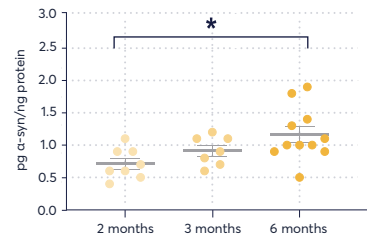
**Figure 2:** Total hippocampal soluble and insoluble  $\alpha$ -synuclein levels of 2, 3 and 6 month old male Line 61 mice. Mean + SEM; n = 8; One-way ANOVA; \* $p < 0.05$ ; \*\*\* $p < 0.001$ .

Figure 2

### Soluble fraction



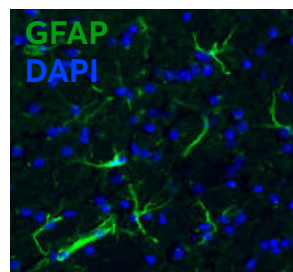
### Insoluble fraction



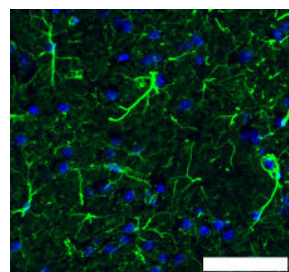
**Figure 3:** Astrocytosis in Line 61 mice. Representative images of GFAP labeling in the striatum of 6 month old Line 61 and ntg animals. Scale bar: 50  $\mu$ m.

Figure 3

### ntg



### Line 61



Fleming SM, Salcedo J, Hutson CB, Rockenstein E, Masliah E, Levine MS, Chesselet MF. Behavioral effects of dopaminergic agonists in transgenic mice overexpressing human wildtype alpha-synuclein. *Neuroscience*. 2006 Nov 3;142(4):1245-53. Epub 2006 Aug 23.

