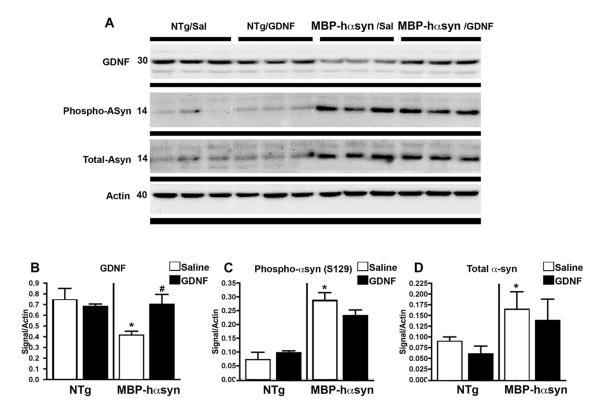


Supp. Fig. 1 - Immunoblot analysis of Neurotrophic Factor Expression Levels at 6, 9 and 12 months.

In order to investigate the age-related modification in neurotrophic expression levels immunoblot analysis (A) of  $\alpha$ syn, BDNF, IGF-1, bFGF and GDNF (by two different antibodies) was conducted in the NTg and MBP-h $\alpha$ syn tg mice at 6, 9 and 12 months of age, and quantified in B-G, respectively.

\* Indicates significant difference between age-matched NTg and MBP-hasyn tg mice (p<0.05, one way ANOVA and post hoc Fisher)



Supp. Fig. 2 - Immunoblot analysis of asyn in NTg and MBP-hasyn tg mice following GDNF infusion

In order to complement the immunohistochemical studies immunoblot analysis of the levels of GDNF, phosphorylated  $\alpha$  syn (S129) and total  $\alpha$ syn (A) was conducted in mouse brain homogenate from the posterior hemi brain of saline infused NTg mice, GDNF infused NTg mice, saline infused MBP-h $\alpha$ syn tg mice and GDNF infused MBP-h $\alpha$ syn tg mice (n=5, age = 8 months in each group, a representative 3 blots from each group is shown) and analyzed in (B), (C) and (D) respectively.

# Indicates significant difference between saline-treated MBP-hasyn tg mice and GDNF-treated MBP-hasyn tg mice (p<0.05, one way ANOVA and post hoc Fisher)

<sup>\*</sup> Indicates significant difference between saline-treated MBP-hasyn tg mice and saline-treated NTg (p<0.05, one way ANOVA and post hoc Fisher)