

Supplementary Material

Table S1. Primary and secondary antibodies

Primary antibodies	Host	Company	Catalog #	Dilution
Human α -Synuclein	Rabbit	Abcam	Ab138501	1/500
DAT	Rat	Millipore	MAB369	1/250
GFAP	Rabbit	Dako	Z0334	1/500
Iba1	Goat	Novus Biological	NB100-1028	1/1000
TH	Sheep	Abcam	Ab113	1/200
Secondary antibodies	Host	Company	Catalog #	Dilution
Anti-Goat Alexafluor 633	Donkey	Life Technologies	A21082	1/1000
Anti-Rabbit Alexafluor 488	Donkey	Life Technologies	A21206	1/1000
Anti-Rat Texas Red	Donkey	LifeSpan Biosciences	LS-C61063-2000	1/1000
Anti-Sheep Cy3	Donkey	Millipore	AP184C	1/800

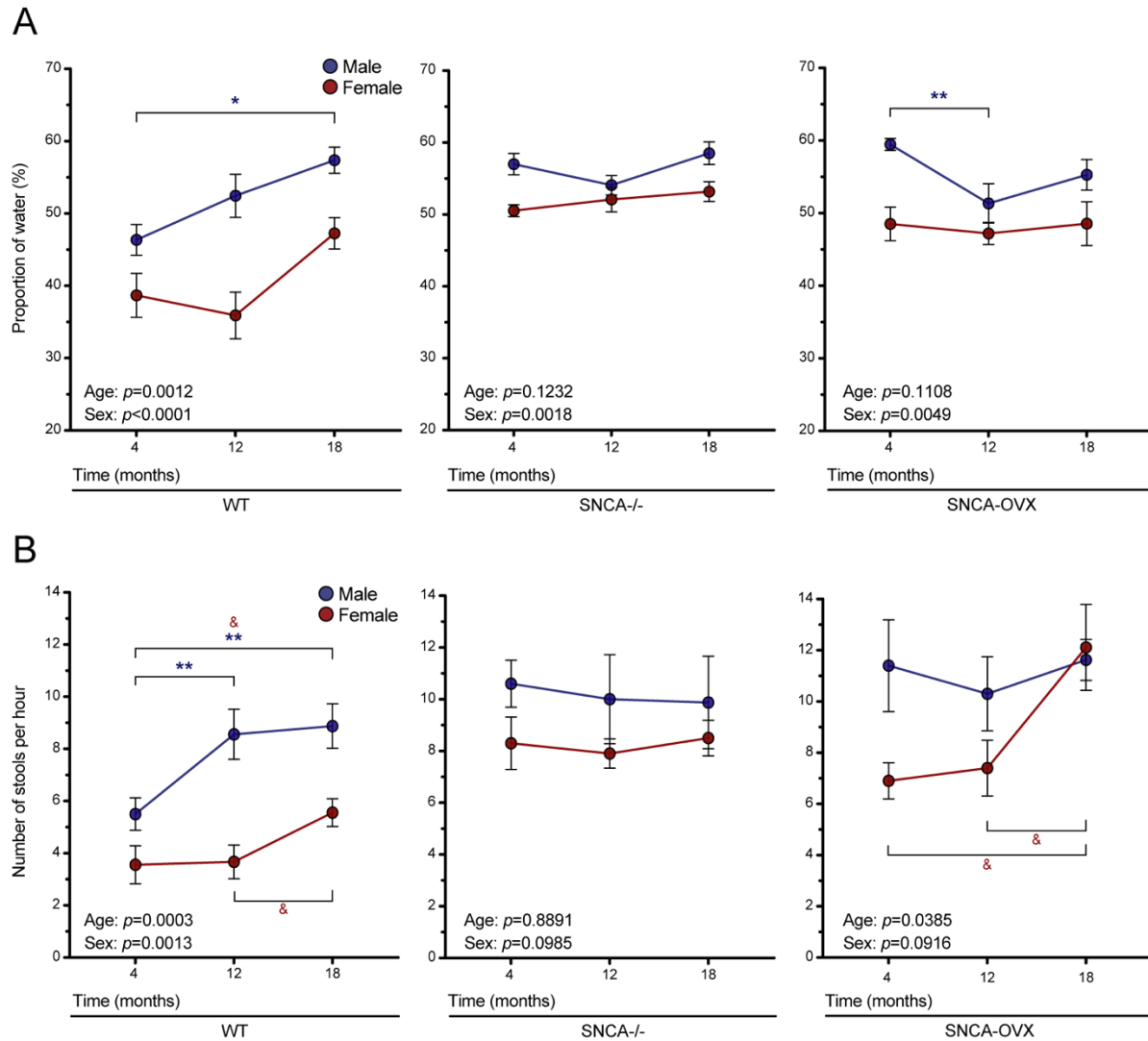


Figure S1. Sex differences in the efficiency of stool excretion. **A.** Analysis of the proportion of water in feces of mice reveals that male excretes a higher level of fluid than female mice for all genotypes. **B.** The count of stools per hour shows that wildtype male and SNCA-OVX female mice have a faster increase of fecal excretion than the opposite sex. Each group included 8-10 mice. Tukey's post-hoc tests: (Male) $*p < 0.05$, $**p < 0.01$; (Female) $\&p < 0.05$. **Abbreviations:** WT, wildtype.

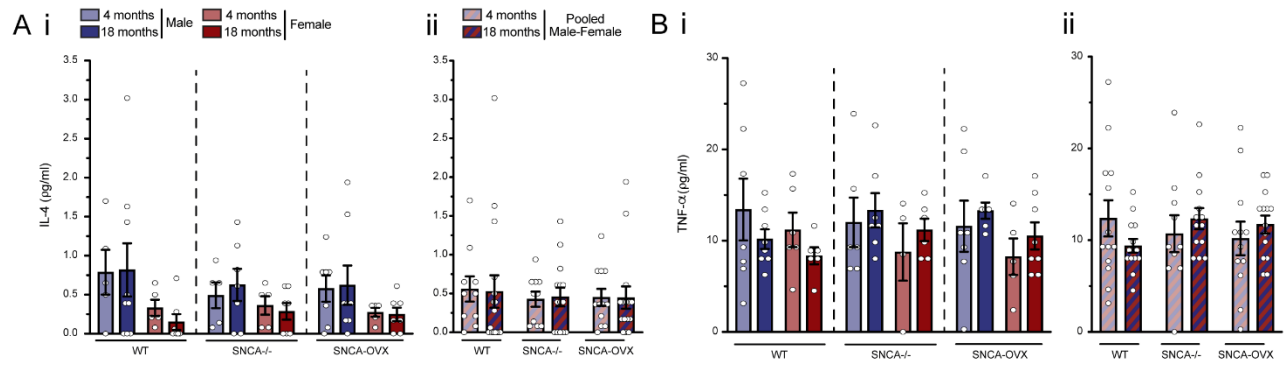


Figure S2. Aging and aSyn have no effect on IL-4 and TNF- α levels. A-B. Plasma analysis of IL-4 (A) and TNF- α (B) reveals non-significant change with aging or between animal models. Although IL-4 appears higher in male than female, no sexual differences were found. Each group included 7-10 mice. **Abbreviations:** IL, interleukin; TNF- α , tumor necrosis factor alpha; WT, wildtype.