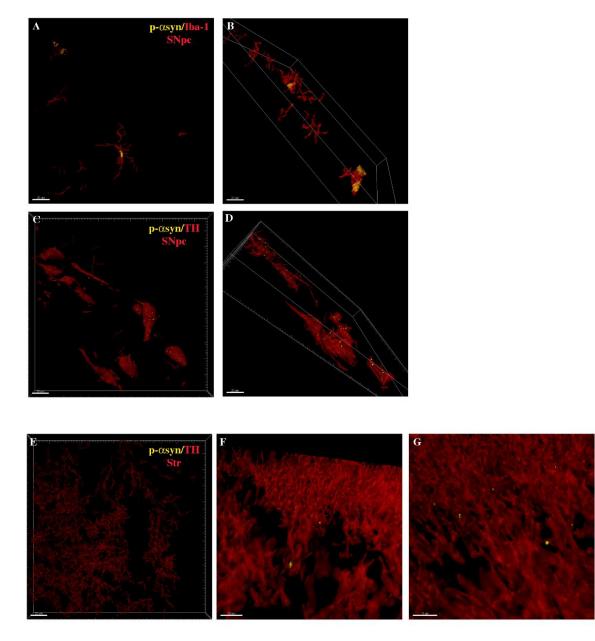
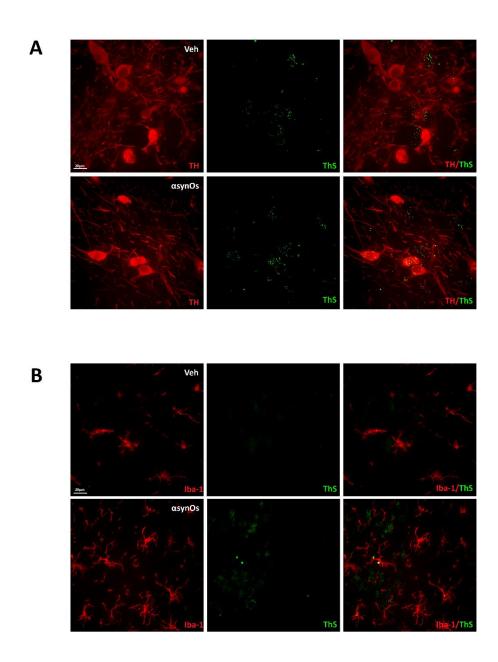
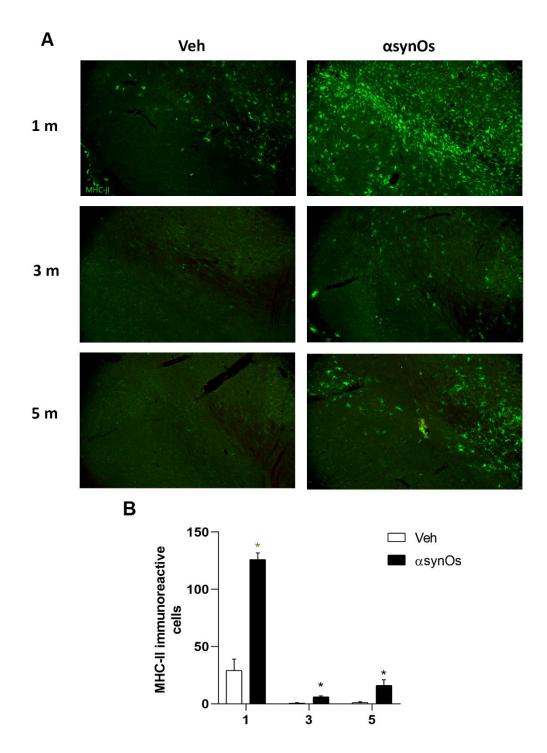
## Supplementary Figures



*Figure S1.* 3D reconstruction of colocalization of p129- $\alpha$ Syn (yellow) with Iba-1 (red, A-B) or TH cell bodies (red, C-D) and fibers (E-G), revealed by surface rendering algorithm in SNpc. To evaluate the p129- $\alpha$ Syn primary and secondary antibodies penetration into the cell, the image stack was rotated of about 45° (B, D) or 9° (F, G) in the Y-axis. All scales are expressed in  $\mu$ m.



*Figure S2. Thioflavin-S signal in TH-positive and Iba-1 positive cells.* Representative confocal images from the Substantia Nigra pars compacta (SNpc) of vehicle or H- $\alpha$ SynOs-infused rats. Thioflavin-S aggregates (green) are shown in TH<sup>+</sup> neurons (red in A panels) and Iba-1 positive cells (red in B panels). Scale bar: 20 $\mu$ m.



*Figure S3.* Representative images of MHC-II immunofluorescence (A) and quantification of MHC-II-immunoreactive cells (B) in the SNpc from vehicle or H- $\alpha$ SynO-infused rats (A). Values represent the mean  $\pm$  SEM. \*p<0.01 vs corresponding vehicle one, three or five months post infusion, by t-test (n=4/5 per group).