

## ***Supplementary Information***

### ***Systems biology reveals reprogramming of the S-nitroso-proteome in the cortical and striatal regions of aging mice***

Maryam Kartawy<sup>1</sup>, Igor Khaliulin<sup>1</sup>, and Haitham Amal<sup>1,#</sup>

<sup>1</sup> Institute for Drug Research, School of Pharmacy, Faculty of Medicine, The Hebrew University of Jerusalem, Jerusalem, Israel

# Corresponding Author: Dr. Haitham Amal, Email: [Haitham.amal@mail.huji.ac.il](mailto:Haitham.amal@mail.huji.ac.il)

**Supplementary legends:**

**Supplementary Figure S1:** Pathways analysis of the SNO proteins exclusive to the adult cortex and adult striatum. MetaCore from Clarivate Analytics (MetaCore version 6.34 build 69200) was used to generate this figure.

**Supplementary Figure S2:** Enriched “Adult neurogenesis pathway in the subventricular zone” pathway. Green circles are the SNO-proteins in the adult cortex. Red circles are the SNO-proteins in the adult striatum. Blue circles are the SNO-proteins in both regions. MetaCore from Clarivate Analytics (MetaCore version 6.34 build 69200) was used to generate this figure.

**Supplementary Figure S3:** Enriched “Synaptic vesicle fusion and recycling pathway in nerve terminals” pathway. Green circles are the SNO-proteins in the adult cortex. Red circles are the SNO-proteins in the adult striatum. Blue circles are the SNO-proteins in both adult cortex and adult striatum. MetaCore from Clarivate Analytics (MetaCore version 6.34 build 69200) was used to generate this figure.

**Supplementary Figure S4:** Proteins classification enrichment analysis by PANTHER, Version 15.0. The analysis shows the SNOed phosphatases and kinases in the juvenile cortex (**a**), adult cortex (**b**), juvenile striatum (**c**) and adult striatum (**d**).

**Supplementary Figure S5:** Protein-Protein interaction network analysis of the SNO-proteins in the cortex and striatum. Juvenile cortex (**a**); adult cortex (**b**); juvenile striatum (**c**); and adult striatum (**d**). STRING, version 10.0 and Cytoscape software version 3.3.0 were used to generate this figure.

**Supplementary Figure S6:** Clustering analysis of the SNO-proteins exclusive to the adult cortex (**a**) and adult striatum (**b**). STRING, version 10.0 was used to generate this figure.

**Supplementary Tables are uploaded as Excel files:**

Table 1: IDs of SNO-proteins in the different groups.

Table 2: Systems biology analysis of the juvenile cortex.

Table 3: Systems biology analysis of the adult cortex.

Table 4: Systems biology analysis of the juvenile striatum.

Table 5: Systems biology analysis of the adult striatum.