

## Research Article

## Supporting Information

# (-)-Oleocanthal Nutraceuticals for Alzheimer's Disease Amyloid Pathology: Novel Oral Formulations, Therapeutic, and Molecular Insights in 5xFAD Transgenic Mice Model

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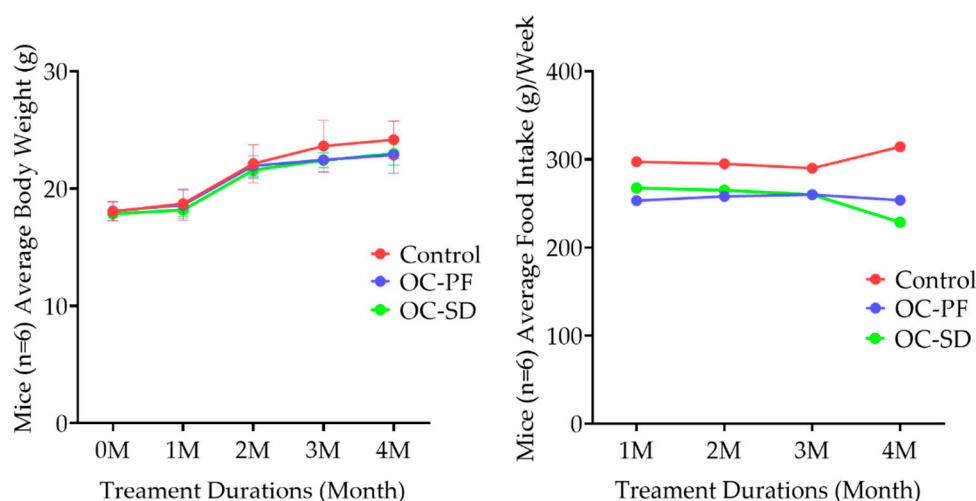
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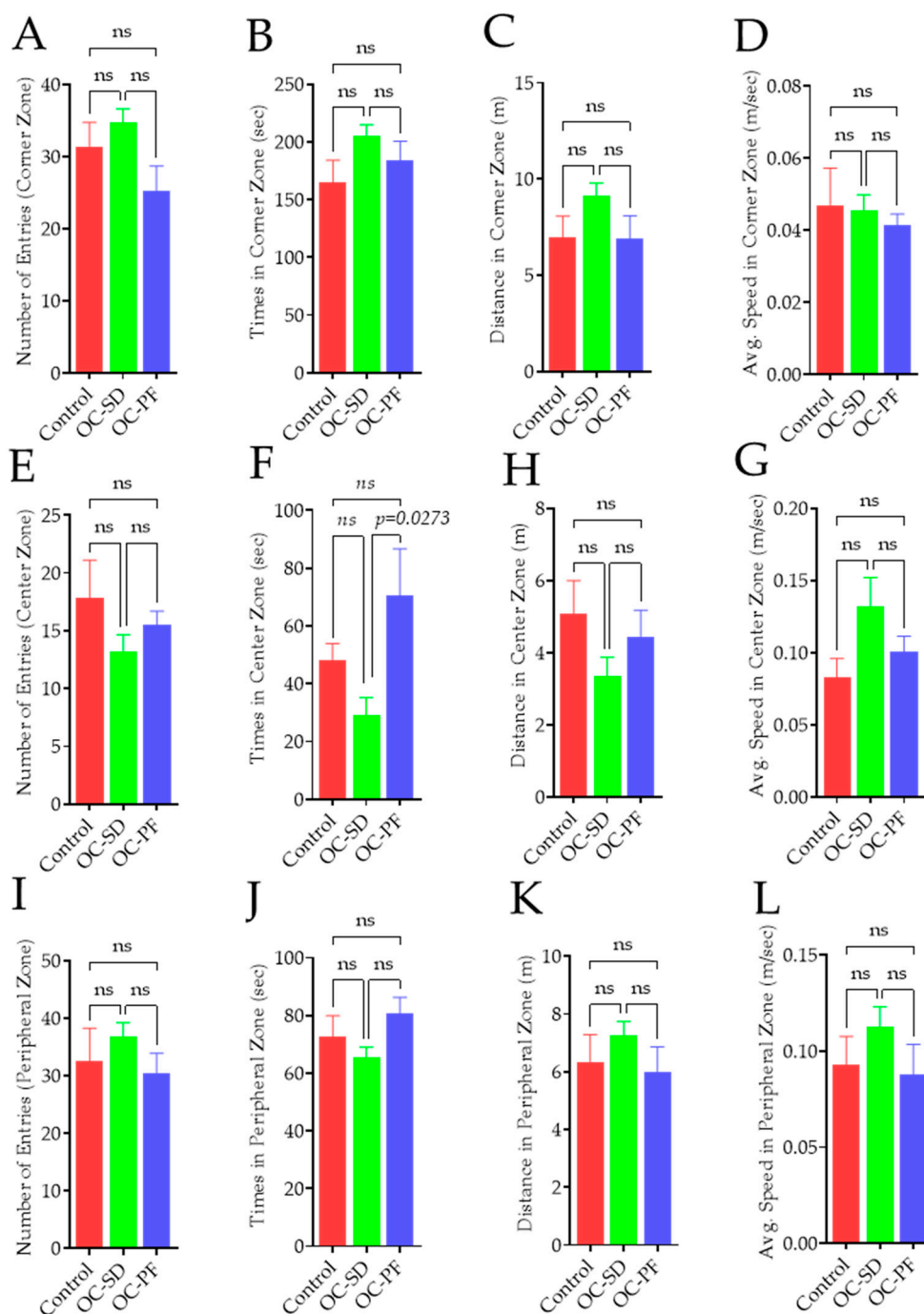
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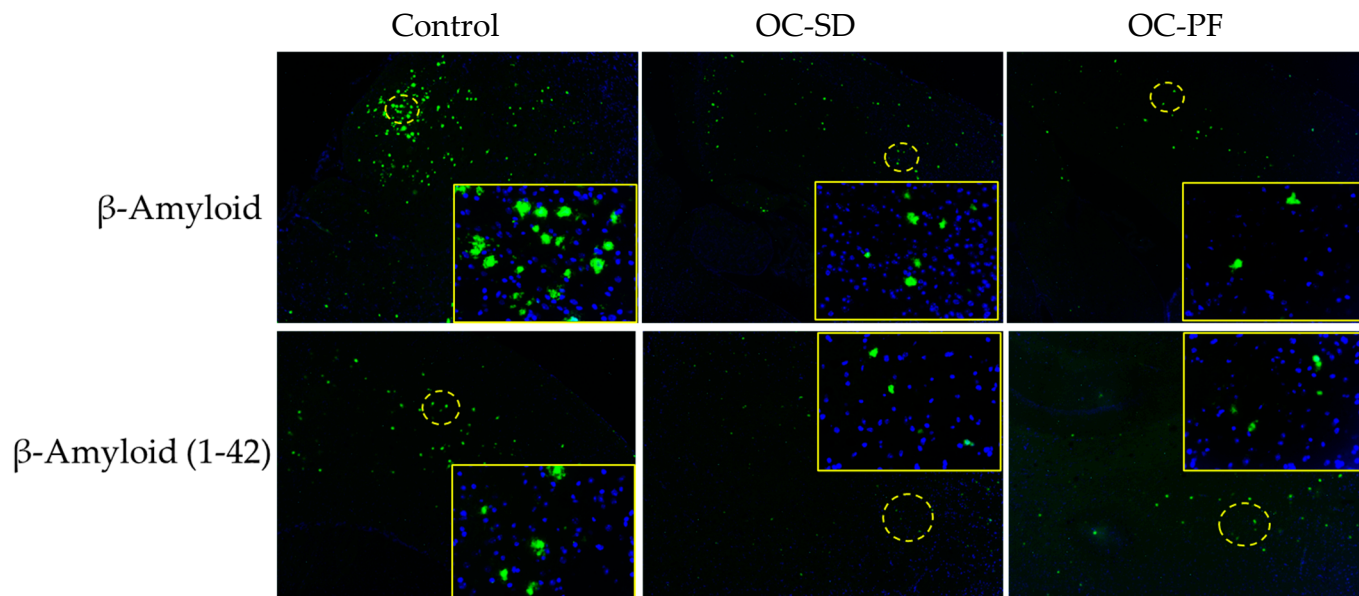


**Supplementary Figure S1.** The effects of OC-PF and OC-SD four-month treatments course in 5xFAD female mice body weight and food consumptions. **(A)** Average body weight of the control, OC-SD, and OC-PF-treated 5xFAD mice. **(B)** Average food intake per week of the control, OC-SD and OC-PF-treated 5xFAD mice.



**Supplementary Figure S2. The effects of OC-PF and OC-SD four-month treatments course in 5xFAD female mice using the open field test for general exploration and anxiety. (A-D)** Number of entries to, time spent, distance travelled and average speed in the corner zone. **(E-H)** Number of entries to, time spent, distance travelled and average speed in the center zones. **(I-L)** Number of entries to, time spent, distance travelled and average speed in the peripheral zone. There was no effect of OC-SD and OC-PF in compared to control on the number of entries to, time spent and percentage distance travelled in the center zone. OC-PF spent more time in the center zone than OC-SD ( $p=0.0273$ ), but there was no effect of OC-SD and OC-PF in compared to control on time spent, number of entries and distance travelled in the

corner zones. There was no effect of OC-SD and OC-PF in compared to control on the number of entries to, time spent and distance travelled in the periphery zone. Individual datapoints are presented on the plot. Data are presented as mean  $\pm$  the standard error of mean (SEM). Data analyzed using One-way ANOVA followed by post-hoc Tukey test and presented as mean  $\pm$  SEM (n = 6 per group).



**Supplementary Figure S3.** Representative IHC photographs for 5xFAD female mice brain cortex sections (n = 4 mice/group) stained with A $\beta$  antibody (green) for the total A $\beta$  deposition and AB42. DAPI (blue) was used to stain the nuclei. Images are available at 4X and 40X (square) magnification for selected (circled) areas.