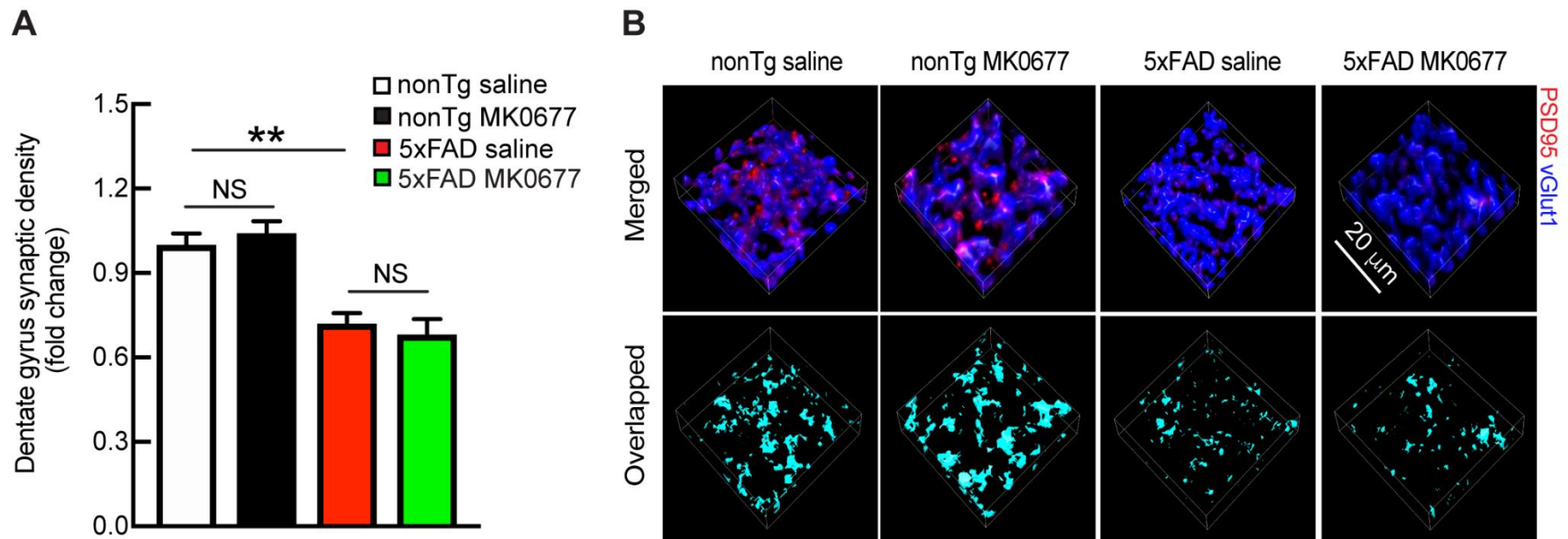


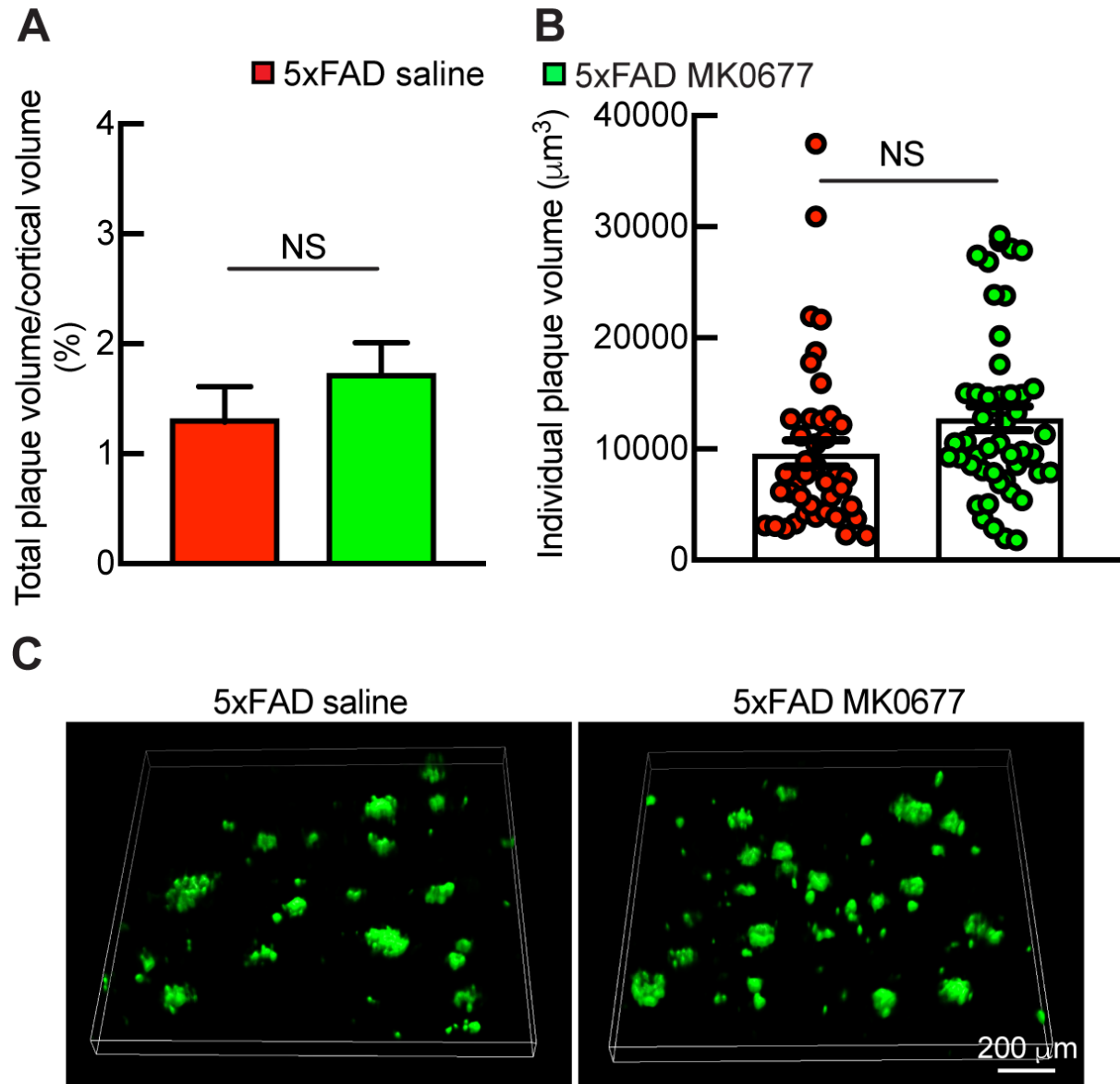
Supplementary Material

MK0677, a Ghrelin Mimetic Improves Neurogenesis but Fails to Prevent Hippocampal Lesions in a Mouse Model of Alzheimer's Disease Pathology

Supplementary Figure 1. Dentate gyrus synaptic density remained unaltered in 5xFAD regardless of MK0677 treatment. A) Saline and MK0677-treated 5xFAD mice showed similar synaptic density in hippocampal dentate gyrus area. Two-way ANOVA followed by Bonferroni post hoc analysis. $t = 4.718$, $**p < 0.01$ between nonTg saline and 5xFAD saline groups; $t = 0.6174$, NS, no significant difference for 5xFAD saline and MK0677 treatment groups; $t = 0.6976$, NS, no significant difference for nonTg saline and MK0677 treatment groups. $n = 4$ mice per group except for 5xFAD MK0677 treatment ($n = 3$). B) Representative images of synapse staining. vGlut1 (blue) and PSD95 (red) were used as pre- and post-synaptic markers, respectively. The overlaid staining of vGlut1 and PSD95 indicates synapses. Scale bar = 20 μm .



Supplementary Figure 2. MK0677 treatment did not influence cortical amyloid plaque deposition. A) MK0677 treatment did not change amyloid plaque-occupied volume on 5xFAD mice. Unpaired Student's *t*-test. $t = 1.059$, NS, not significant, $n = 4$ mice per group. B) Cortical single amyloid plaque volume remained the same in 5xFAD mice with MK0677 treatment. Unpaired Student's *t*-test. $t = 1.982$, NS, not significant, $n = 4$ mice per group. C) Representative images for amyloid plaque staining. Scale bar = 200 μm .



Supplementary Figure 3. MK0677 did not cause microglia related changes in 5xFAD mice cortex. A1) Microglia density remained the same in 5xFAD mice cortex after MK0677 treatment. Unpaired Student's *t*-test. $t = 1.704$, NS, not significant, $n = 4$ mice per group. A2) 3D representative images for hippocampal microglia density. Iba1 (red) were used to stain microglia. Scale bar = 10 μm . B1) Cortical plaque-associated microglia density remained unchanged after MK0677 treatment in 5xFAD mice. Unpaired Student's *t*-test. $t = 0.7636$, NS, not significant, $n = 4$ mice per group. B2) 3D representative images for cortical plaque-associated microglia density. Scale bar = 20 μm .

