



Supplementary Materials

Neuroprotective epigenetic changes induced by maternal treatment with an inhibitor of soluble epoxide hydrolase prevents early Alzheimer's disease neurodegeneration

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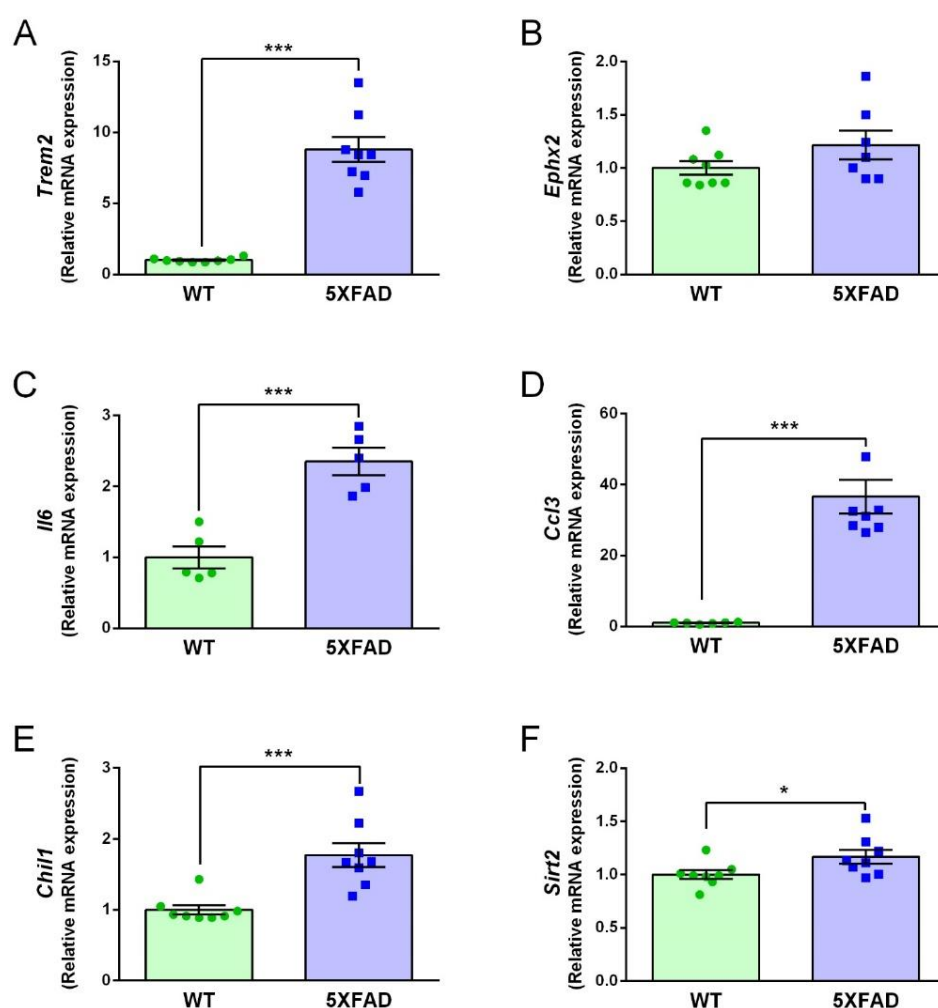


Figure S1. Gene expression of inflammatory and neurodegenerative biomarkers in the hippocampus of 7-month-old 5XFAD male mice. Increased relative mRNA values of 5XFAD mice compared to wild-type (WT) littermates of the genes: (A) Triggering receptor expressed on myeloid cells 2, *Trem2*; (B) Epoxide hydrolase 2, *Ephx2*; (C) Chitinase-like 1, *Chl1*; (D) Sirtuin 2, *Sirt2*; (E) Interleukin 6, *Il6*; (F) Chemokine C-C motif ligand 3, *Ccl3*. Values are mean \pm SEM ($n = 5 - 8$). Statistics: Student's *t* test, * $p < 0.05$, *** $p < 0.001$.



Table S1. CRP and TNF α ELISA results from mouse dams plasma samples

		Ct	TPPU
CRP	$\mu\text{g/mL}$ (mean \pm SEM)	10.36 \pm 0.81	12.77 \pm 1.36
	<i>n</i>	6	6
TNF α	pg/mL (mean \pm SEM)	< 2	< 2
	<i>n</i>	6	5

Abbreviations: CRP, C-reactive protein; TNF α , Tumor necrosis factor α .

Table S2. TaqMan Assays used in qPCR analysis

Gene Name	Gene Symbol	Assay ID
Actin, beta	<i>Actb</i>	Mm02619580_g1
Brain derived neurotrophic factor	<i>Bdnf</i>	Mm04230607_s1
Chemokine C-C motif ligand 3	<i>Ccl3</i>	Mm00441259_g1
Chitinase-like 1	<i>Chil1</i>	Mm00801477_m1
Epoxide hydrolase 2	<i>Ephx2</i>	Mm01313813_m1
Histone deacetylase 1	<i>Hdac1</i>	Mm02391771_g1
Histone deacetylase 2	<i>Hdac2</i>	Mm00515108_m1
Interleukin 6	<i>Il6</i>	Mm00446191_m1
Sirtuin 2	<i>Sirt2</i>	Mm01149204_m1
Triggering receptor expressed on myeloid cells 2	<i>Trem2</i>	Mm00451744_m1

Table S3. Primers used in SYBR Green qPCR analysis

Gene name	Gene symbol	Forward primer (5'-3')	Reverse primer (5'-3')
Actin, beta	<i>Actb</i>	CAACGAGCGGTTCCGAT	GCCACAGGTTCCATACCCA
DNA methyltransferase (cytosine-5) 1	<i>Dnmt1</i>	GGGCTGTGCTTCCTGTCG	GGTGTCCCCAAGCTTGTCT
DNA methyltransferase 3A	<i>Dnmt3a</i>	GGGCCACACGGCAGAG	CACGGTTCTCCTCCTGTTC
DNA methyltransferase 3B	<i>Dnmt3b</i>	TGCCAGACCTTGAAACCTC	GCTGGCACCCTCTTCTTCAT
Tet methylcytosine dioxygenase 1	<i>Tet1</i>	CCTGCCTCTTCTACGGGAAC	GATTTGGAAGGCTTTGCGGG
Tet methylcytosine dioxygenase 2	<i>Tet2</i>	CCATCATGTTGTGGGACGGA	ATTCTGAGAACAGCGACGGT
Tet methylcytosine dioxygenase 3	<i>Tet3</i>	GGGCAGGCAGCGTAGC	CAGGATCTGGGGCAAGACAG

Table S4. Antibodies used for Western blot analysis

Antibody	Host	Source (catalog)	WB dilution
Actin	Rabbit	Sigma-Aldrich (#A5060)	1:10,000
Early growth response protein 1 (EGR-1)	Rabbit	Cell Signaling (#4153)	1:1000
Glyceraldehyde 3-phosphate dehydrogenase (GAPDH)	Mouse	Assay designs (#CSA-335)	1:5000
Glial fibrillary acidic protein (GFAP)	Mouse	Sigma-Aldrich (#G3893)	1:500
p-Tau clone AT8	Mouse	Thermo Fisher Scientific (#MN1020)	1:1000
β -Tubulin	Mouse	Abcam (#ab21754)	1:10,000
Total tau clone HT7	Mouse	Thermo Fisher Scientific (#MN1000)	1:1000
Sheep-anti-mouse HRP conjugated		Amersham (GE) (#NA931)	1:2000
Donkey-anti-rabbit HRP conjugated		Amersham (GE) (#NA934)	1:2000