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Early administration of the phytocannabinoid Cannabidivarin prevents the neurobehavioral abnormalities associated with the Fmr1-KO mouse model of Fragile X syndrome

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Citation: Lastname, F.; Lastname, F.; Lastname, F. Title. *Cells* **2022**, *11*, x. https://doi.org/10.3390/xxxxx

Academic Editor: Firstname Lastname

Received: date
Accepted: date
Published: date

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Gene	GenBank ID	Forward Sequence (5′-3′)	Reverse Sequence (5′-3′)
Nono	NM_023144	CTGTCTGGTGCATTCCTGAACTAT	AGCTCTGAGTTCATTTTCCCATG
Sdha	NM_023281	TACAAAGTGCGGGTCGATGA	TGTTCCCCAAACGGCTTCT
Ywhaz	NM_011740	CTTGTGAGGCTGTGACACAAACA	CAAGAGTGTGCACGCAGACA
Tuba4a	NM_009447	CCACTTCCCCTTGGCTACCTA	CCACTGACAGCTGCTCATGGT
Gapdh	NM_008084	TCAAGAAGGTGGTGAAGCAG	TGGGAGTTGCTGTTGAAGTC
IL-1b	NM_008361	TCGCTCAGGGTCACAAGAAA	TCAGAGGCAAGGAGGAAAACAC
IL-6	NM_031168	TACTCGGCAAACCTAGTGCGT	ATTTTCTGACCACAGTGAGGAATG
IL-10	NM_010548	AGTTGTGAAGAAACTCATGGGTCT	TGCTGCAGGAATGATCATCAA
TNFα	NM_013693	GGCACTCCCCCAAAAGATG	GCCACAAGCAGGAATGAGAAG
ITGAM (CD11b)	NM_001082960	CTCATCACTGCTGGCCTATACAA	GCAGCTTCATTCATCATGTCCTT
PTPRC (CD45)	NM_011210	TGGGACAACGCAGACTCTCA	CTGCACAGCCATGTTCTTTCAT
BDNF	NM_007540	CCCGTCTGTACTTTACCCTTTGG	TGACTAGGGAAATGGGCTTAACA

Table S1: Primer Sequences used in RT-PCR.

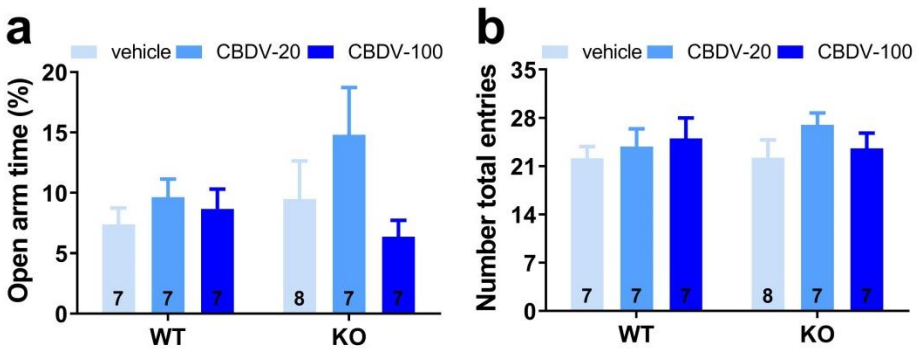

Fig. S1: Effects of adult subchronic CBDV treatment (20 or 100 mg/Kg) in the elevated plus maze (Study 1). Anxiety-like behavior (a) and locomotor activity (b) were measured in WT and Fmr1-KO mice. Data are expressed as mean ± SEM. Numbers in histograms indicate sample size for each group.

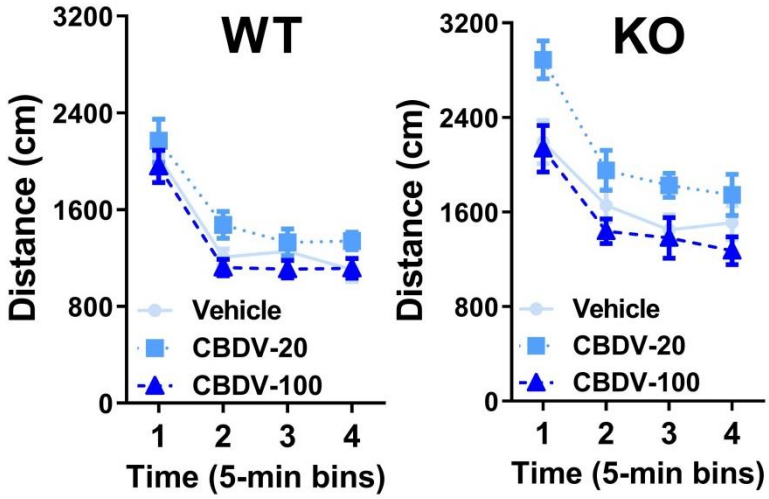

Fig. S2: Effects of adult subchronic CBDV treatment on locomotor habituation in the open field (Study 1). Locomotor activity decreased during the 20-min habituation phase of the object recognition test in all experimental groups. Data are expressed as mean ± SEM. N=7-8 as in Fig.2a.

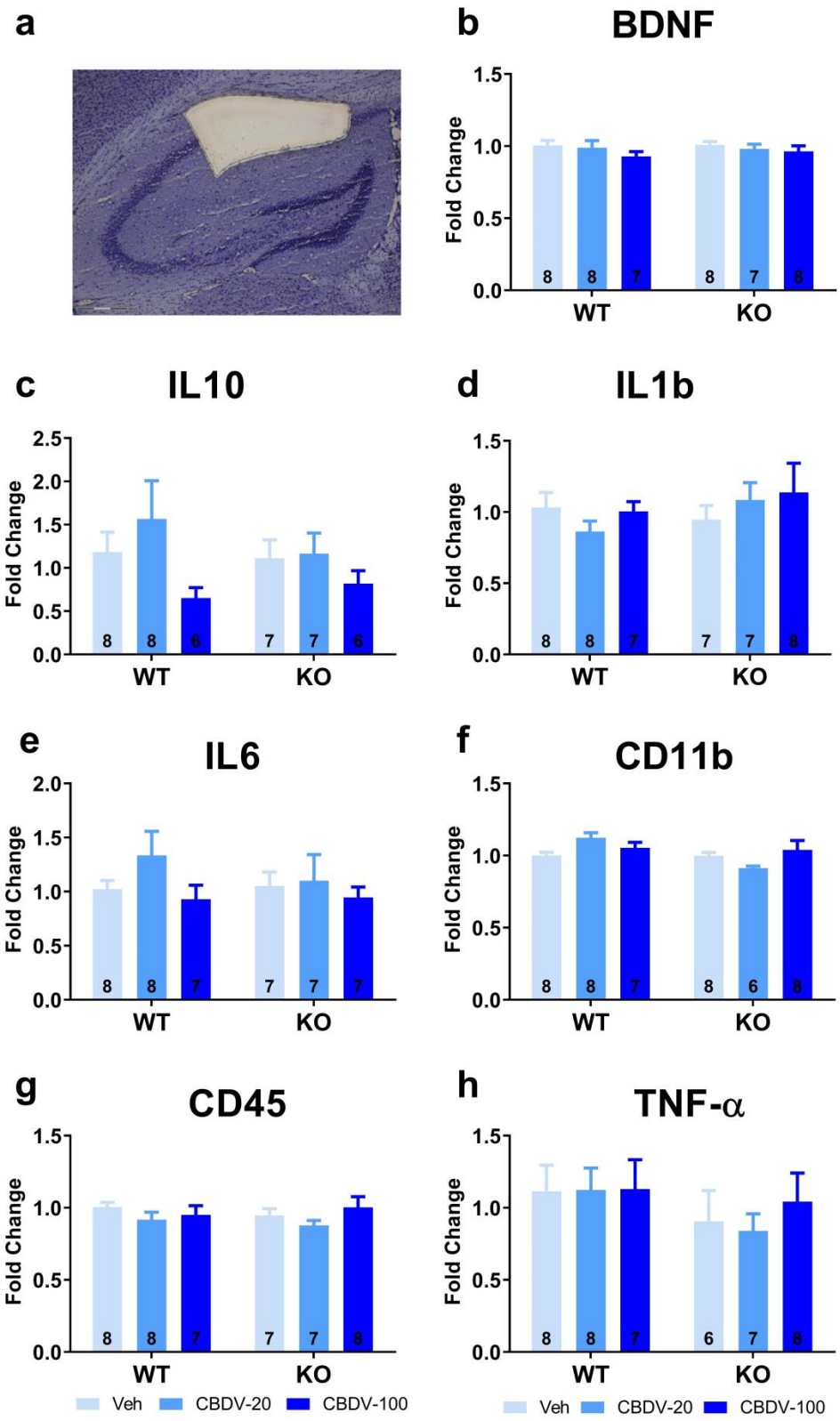

Fig. S3: Effects of subchronic adult CBDV treatment on the expression of BDNF and inflammatory markers in CA1 (Study 1): Representative image of CA1 obtained by laser microdissection (a) and levels of plasticity (b) and inflammatory markers (c-h). Data are expressed as mean±SEM. N=6-8 as specified in each graph; differences among dataset were due to the exclusion of outliers using Grubbs' test or extreme studentized deviate ESD method.

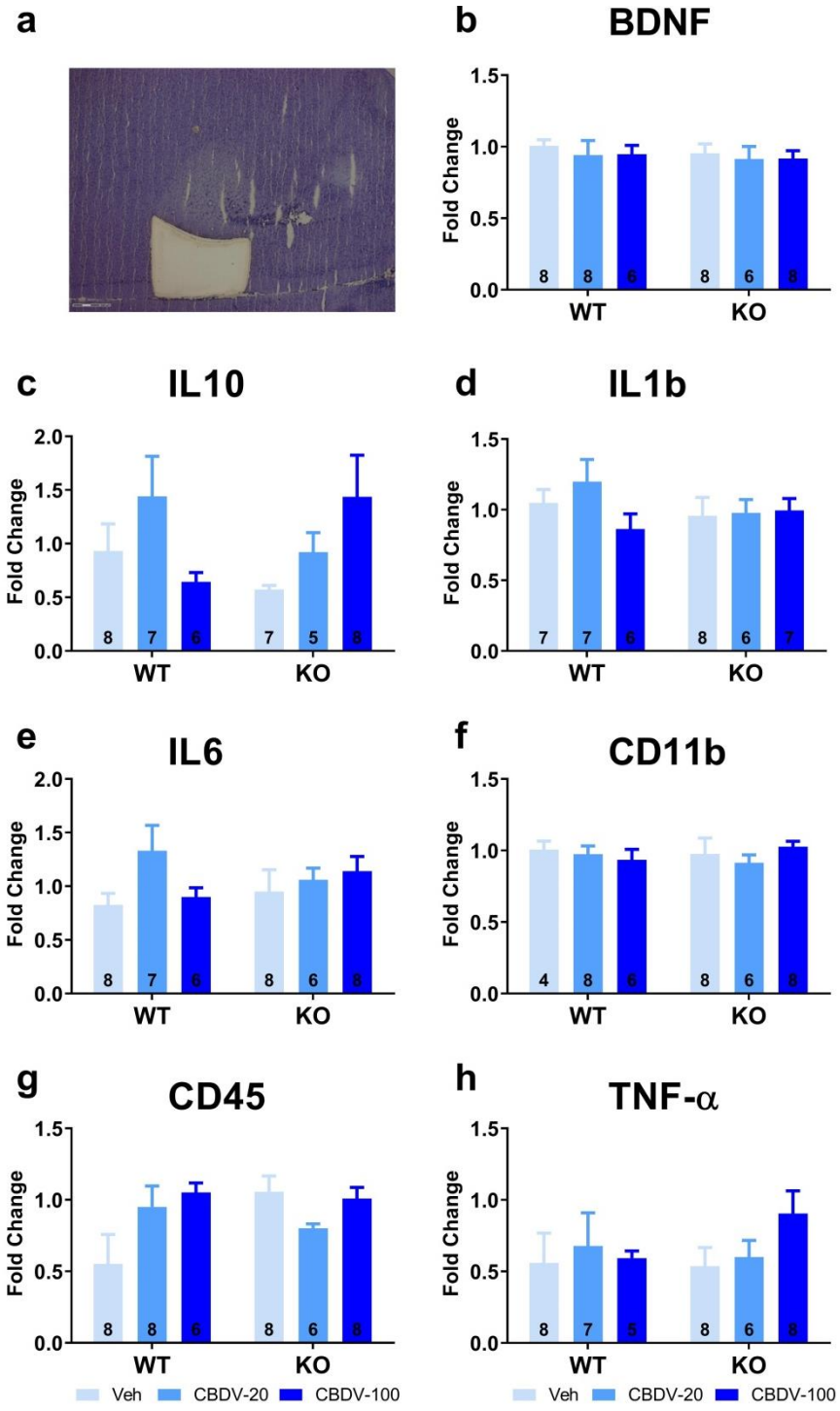

Fig. S4: Effects of subchronic adult CBDV treatment on the expression of BDNF and inflammatory markers in the prefrontal cortex (Study 1): Representative image of the prefrontal cortex obtained by laser microdissection (a) and levels of plasticity (b) and inflammatory markers (c-h). Data are expressed as mean±SEM. N=5-8 as specified in each graph; differences among dataset were due to the exclusion of outliers using Grubbs' test or extreme studentized deviate ESD method.

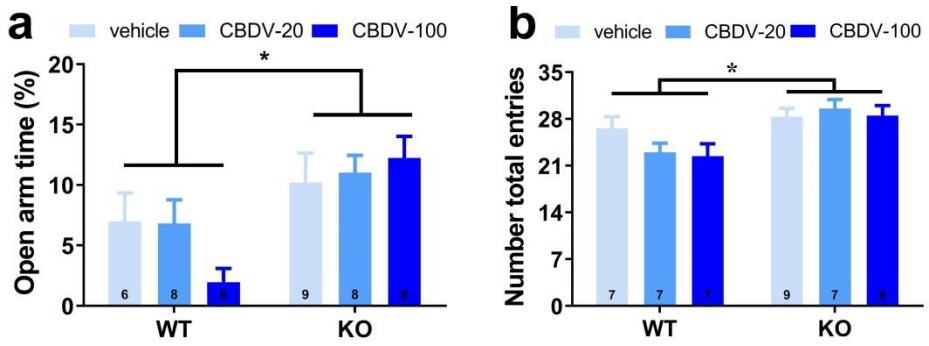

Fig. S5: Effects of juvenile chronic CBDV treatment (20 or 100 mg/Kg) in the elevated plus maze (Study 2). Anxiety-like behavior (a) and locomotor activity (b) were measured in WT and Fmr1-KO mice. Data are expressed as mean ± SEM. Numbers in histograms indicate sample size for each group.

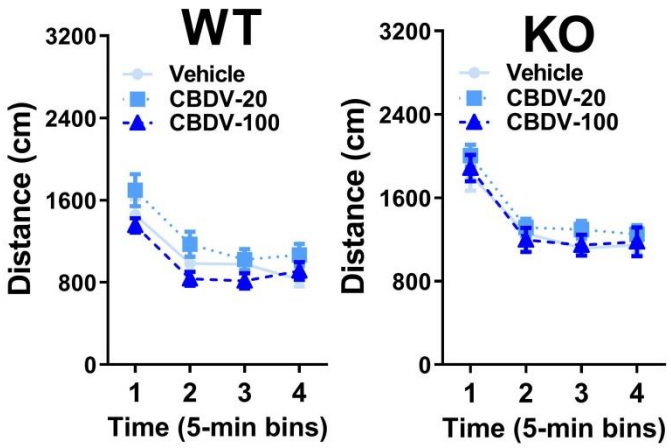

Fig. S6: Effects of juvenile chronic CBDV treatment on locomotor habituation in the open field (Study 2). Locomotor activity decreased during the 20-min habituation phase of the object recognition test in all experimental groups. Data are expressed as mean ± SEM. N=7-8 as in Fig.7a.

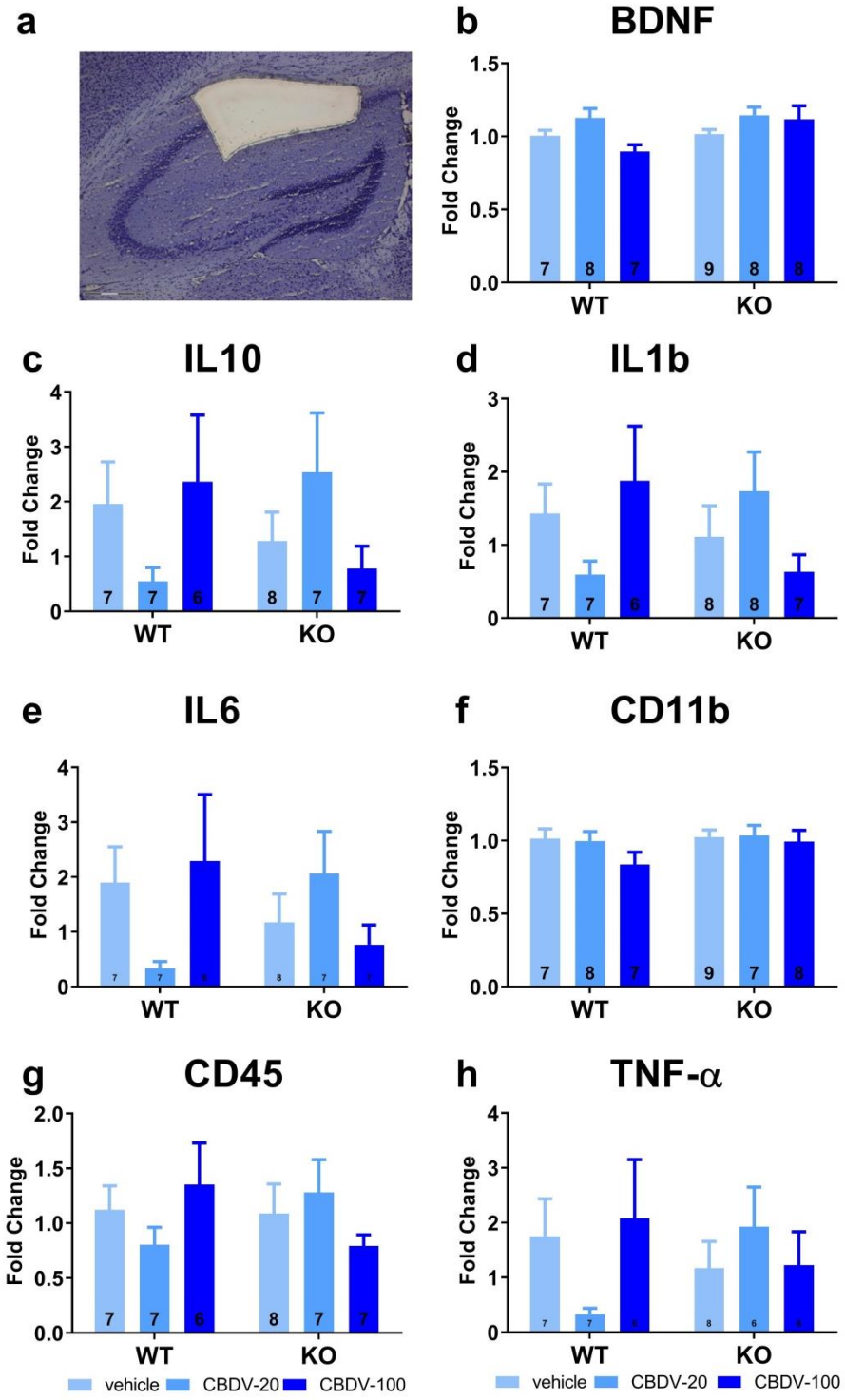

Fig. S7: Effects of juvenile chronic CBDV treatment on the expression of BDNF and inflammatory markers in CA1 (Study 2): Representative image of CA1 obtained by laser microdissection (a) and levels of plasticity (b) and inflammatory markers (c-h). Data are expressed as mean±SEM. N=6-8 as specified in each graph; differences among dataset were due to the exclusion of outliers using Grubbs' test or extreme studentized deviate ESD method.

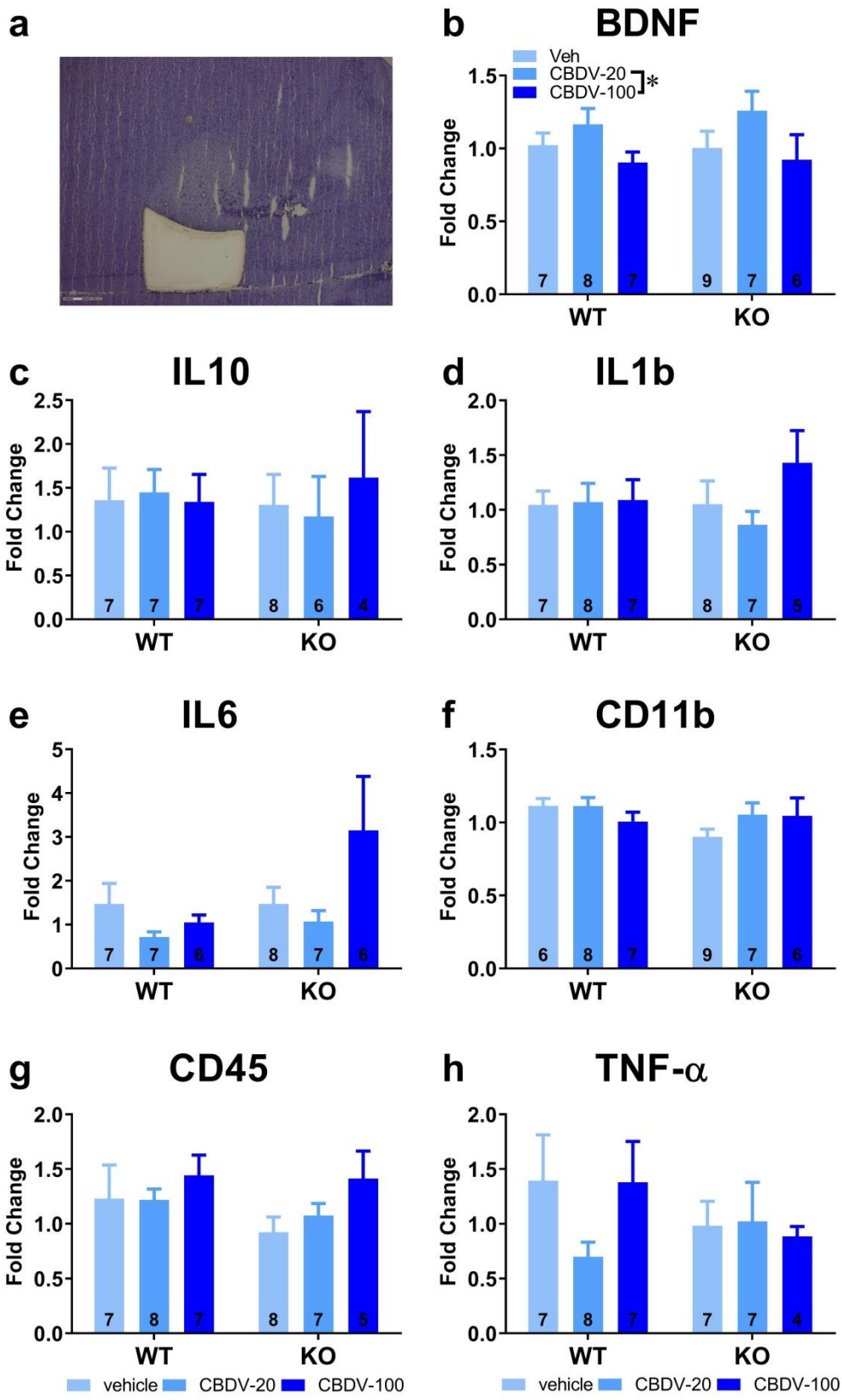

Fig. S8: Effects of juvenile chronic CBDV treatment on the expression of BDNF and inflammatory markers in the prefrontal cortex (Study 2): Representative image of the prefrontal cortex obtained by laser microdissection (a) and levels of plasticity (b) and inflammatory markers (c-h). Data are expressed as mean±SEM. N=5-8 as specified in each graph; differences among dataset were due to the exclusion of outliers using Grubbs' test or extreme studentized deviate ESD method.