Supplementary Information

Effect of orally administered Δ^9-Tetrahydrocannabinol (THC) and cannabidiol (CBD) on obesity parameters in mice

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Table S1: Fatty acid composition of the STD and HFD used in this study

	HFD	STD
Total fat (g/kg)	342.7	62
Saturated fat (g/kg)	119.2	0.63
C14:0 myristic	3.1	-
C16:0 Palmitic	74.6	0.49
C18:0 Stearic	41.5	0.14
Monounsaturated fat (g/kg)	134	9.1
C16:1 Palmitoleic	6.2	-
C18:1 Oleic	127.8	8.4
Polyunsaturated fat (g/kg)	77.2	23.8
C18:2 Linoleic	71.7	21.7
C18:3 Linolenic	5.5	0.21
ω6:ω3 ration	13	10

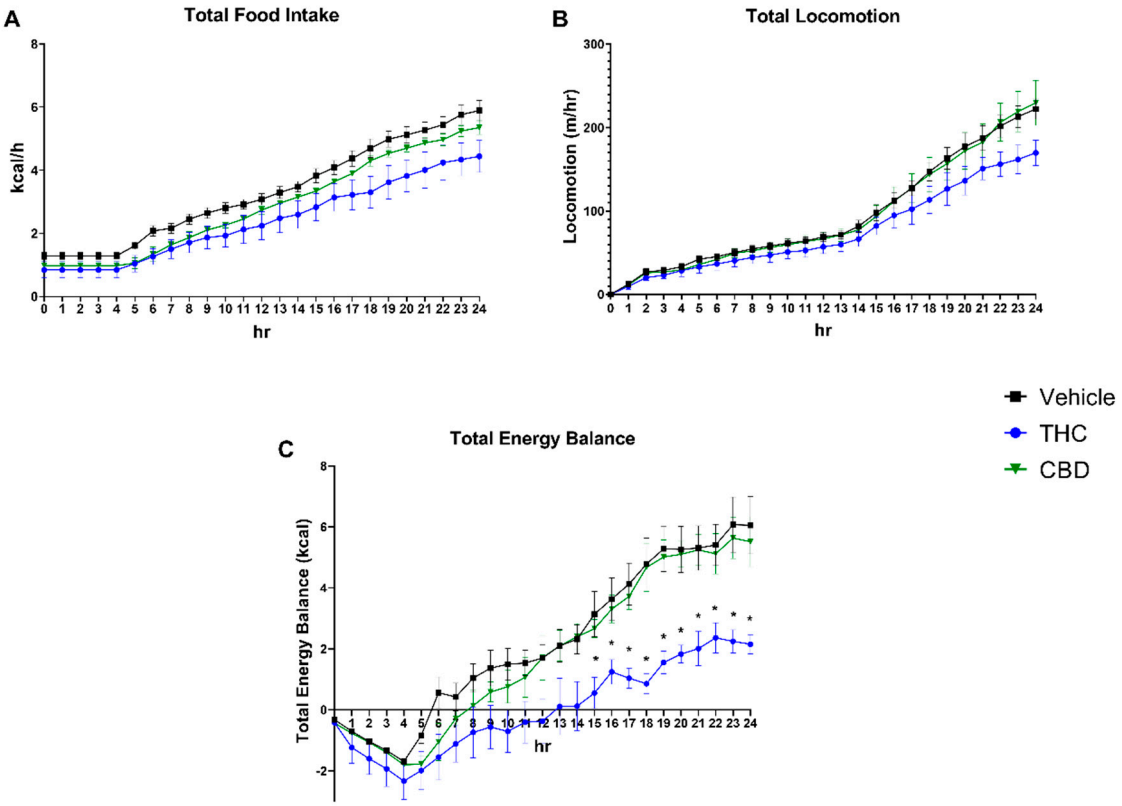


Figure S1: Food intake, locomotion, and energy balance after single dose of 30 mg/kg of THC and CBD. Mice were treated with vehicle, THC (30 mg/kg), or CBD (30 mg/kg) and placed in metabolic cages for 24 hours. (A) accumulative food intake, (B) accumulative locomotion, and (C) accumulative energy balance were assessed. Data are shown as mean ± SEM with n=4 mice per group. Statistical significance was determined by two-way ANOVA followed by Tukey's post hoc test. * $p<0.05$

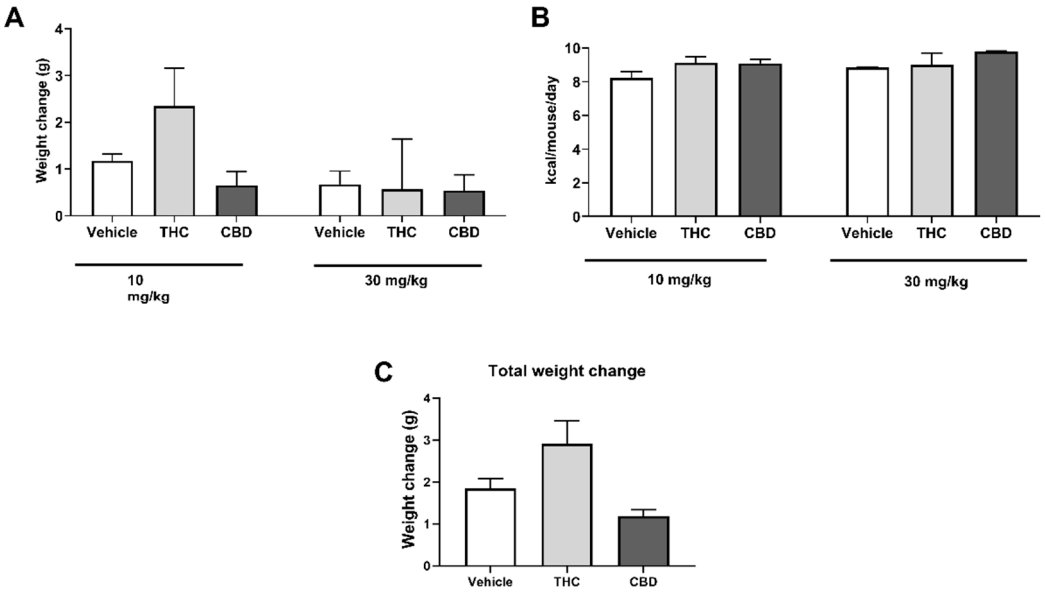
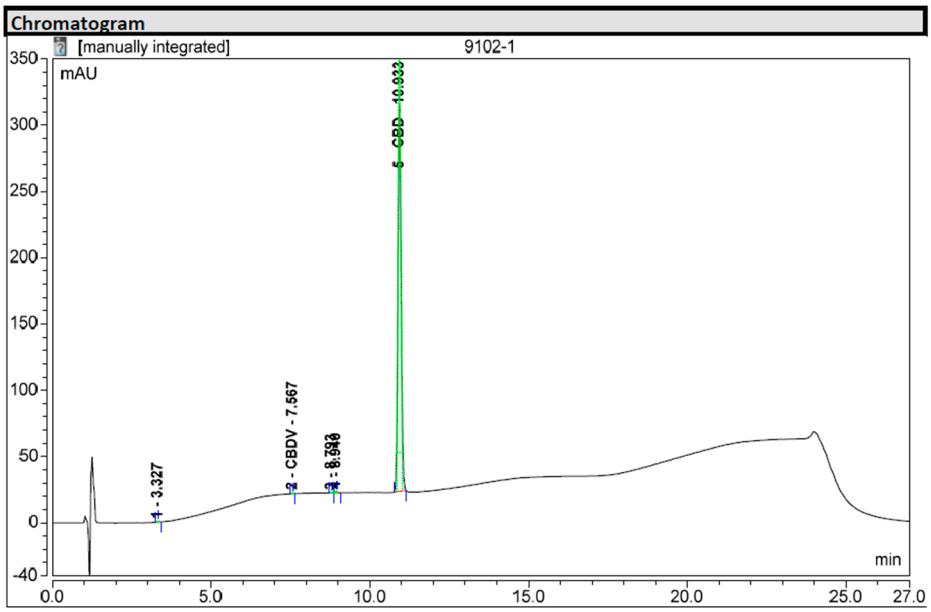


Figure S2: Effect of THC and CBD on weight gain and caloric intake in mice fed standard diet. Weight and food consumption were measured twice a week during the curse of the treatment regime. A. Body weight change of mice fed chow diet after 5-week treatment with 10 mg/kg or 30 mg/kg of THC, CBD, or vehicle (n=5), B. Average caloric intake of mice fed a chow diet and treated with 10 mg/kg or 30 mg/kg of THC, CBD, or vehicle (n=5), C. Total weight change of the treatment regime.



Peak Results

No.	Peak Name	Retention Time min	Area mAU*min	Amount ug/ml	w/w %	Rel. Area %
1		3.327	0.044	n.a.	n.a.	0.13
2	CBDV	7.567	0.022	0.1250	0.01	0.06
3		8.793	0.004	n.a.	n.a.	0.01
4		8.940	0.065	n.a.	n.a.	0.19
5	CBD	10.933	33.964	206.2462	14.72	99.61

Figure S3: HPLC chromatogram of CBD extract. Identification of CBD according to analytic standard by LC/HRMS/MS as described in the materials and methods.

Table S2: Primer list

Gene	Forward primer Reverse primer	Accession number
F4/80	CCTTTGGCTATGGGCTTCCA CCTCAGAACCCACAGTGTCC	NM_001355722.1
TNF-α	GTCTGTGCCTCAGCCTCTTC GCTTGGTGGTTTGCTACGAC	NM_013693.3
MCP-1	GCTGTAGTTTTTGTCACCAAGC GTGCTGAAGACCTTAGGGCA	NM_011333
CD14	CTGAAGCCTTTCTCGGAGCC GCATAAGCTTCATGGTCGGTAGA	NM_009841.4
FASN	GTGATAGCCGGTATGTCGGG TAGAGCCCAGCCTTCCATCT	NM_007988.3
FADS2	TTACCAAATGGTCCCAGCGG GCTTCAAGAACTTGCCCACG	NM_019699.2
SCD-1	CCAAGCTGGAGTACGTCTGG CAGAGCGCTGGTCATGTAGT	NM_009127.4
CD36	GCAAAACGACTGCAGGTCAA GGCCATCTCTACCATGCCAA	NM_001159558.1
FATP1	CAGATCGGCGAGTTCTACGG TGACCTTGACCAGACGGATG	NM_001357182.1
PPAR-α	CCTCAGGGTACCACTACGGA AGCGAATTGCATTGTGTGACAT	NM_001113418.1
ACOX1	AGTCAAAGGCATCCACCAAAG CTATGGGATCAGCCAGAAAGG	NM_001271898.1
CPT1α	GTCTGGCTCTACCATGACGG CGTGCAAAATAGGTCTGCCG	NM_013495.2
FATP2	TGAATGTGTATGGCGTGCCT AGGTACTCCGCGATGTGTTG	NM_011978.2
FATP5	GCCTCTGAGGGACAAACAGG TCCTACGCGTCGTACATTCG	NM_009512.2