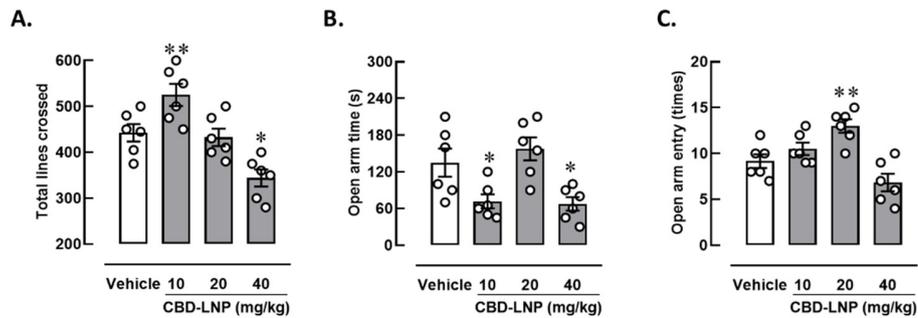


## Supplemental data



**Supplementary Figure S1.** Effects of CBD-LNP on locomotor activity and anxiety-like behaviors in normal male rats. (A) Number of total line crossed in the open filed test (B) open arm entry and (C) open arm time in the elevated-plus maze. Data are presented as mean  $\pm$  SEM (n=6 rats/group). \* $P < 0.05$ , \*\* $P < 0.01$  compared to vehicle-treated control group.

**Supplementary Table S1.** Metabolic parameters at baseline and after diabetic induction

Metabolic parameters	Control group			Diabetic group		
	Baseline	Fed normal food diet	0.01 M sodium citrate injection	Baseline	Pre-treatment with high fat diet	STZ injection
	9-week-old	10-week-old	11-week-old	9-week-old	10-week-old	11-week-old
Body weight (g)	228.00 $\pm$ 4.01	250.75 $\pm$ 5.10	283.63 $\pm$ 2.21	231.13 $\pm$ 3.56	263.50 $\pm$ 6.86	300.00 $\pm$ 4.33**
Triglycerides (mg/dL)	89.88 $\pm$ 2.97	89.13 $\pm$ 4.65	90.88 $\pm$ 2.84	88.13 $\pm$ 3.89	90.00 $\pm$ 2.84	124.00 $\pm$ 6.74***
Total cholesterol (mg/dL)	74.38 $\pm$ 3.95	76.88 $\pm$ 4.00	79.13 $\pm$ 3.02	75.00 $\pm$ 2.67	77.25 $\pm$ 3.42	139.38 $\pm$ 16.41**
Fasting blood glucose (mg/dL)	98.75 $\pm$ 3.98	105.63 $\pm$ 2.49	107.50 $\pm$ 5.26	98.13 $\pm$ 2.49	106.88 $\pm$ 3.89	243.38 $\pm$ 17.97***
Insulin ( $\mu$ U/L)	29.23 $\pm$ 1.01	29.60 $\pm$ 1.07	29.35 $\pm$ 0.98	29.12 $\pm$ 1.06	29.15 $\pm$ 1.68	22.22 $\pm$ 1.99**
HOMA-IR index	7.35 $\pm$ 0.42	7.50 $\pm$ 0.36	7.38 $\pm$ 0.34	7.44 $\pm$ 0.27	7.68 $\pm$ 0.56	12.59 $\pm$ 1.25***
HOMA- $\beta$ index	284.13 $\pm$ 18.89	281.69 $\pm$ 24.01	283.60 $\pm$ 24.64	282.74 $\pm$ 22.53	246.69 $\pm$ 15.10	51.05 $\pm$ 6.65***

Data are presented as mean  $\pm$  SEM (n=8 rats/group). HOMA-IR (Homeostatic Model Assessment for insulin resistance), HOMA- $\beta$  (Homeostatic Model Assessment estimates steady state beta cell function). \*\* $P < 0.01$ , \*\*\*  $< 0.001$  compared to baseline.