

Supplementary Information to:

Differential Regulatory Effects of Cannabinoids and Vitamin E Analogs on Cellular Lipid Homeostasis and Inflammation in Human Macrophages

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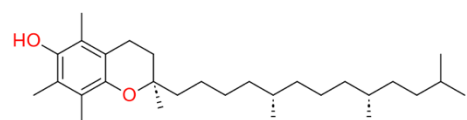
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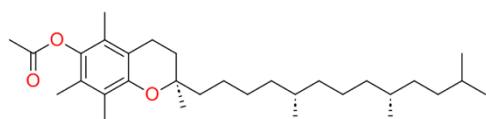
**corresponding authors*

Gene	Product Name
ABCA1	Hs01059137_m1
ABCG1	Hs00245154_m1
CB1	Hs00275634_m1
CB2	Hs05019229_s1
CCL8	Hs04187715_m1
CD36	Hs01567191_m1
CXCL4	Hs00427220_g1
CXCL8 (IL8)	Hs00174103_m1
GAPDH	Hs02786624_g1
GPR55	Hs00271662_s1
IL6	Hs00174131_m1
IL1 β	Hs01555410_m1
IL10	Hs00961622_m1
LXR	Hs01027215_g1
PPAR γ	Hs01115513_m1
SR-B1	Hs00969821_m1
TNF α	Hs00174128_m1
TRPV1	Hs00218912_m1

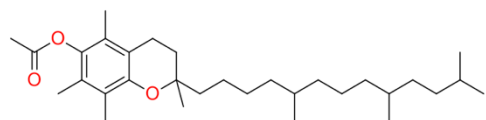
Table S1. TaqMan Probes.



α T (Natural *RRR*- α -Tocopherol)



α TAn (Natural *RRR*- α -Tocopheryl Acetate)



α TAr (Synthetic racemic *all-rac*- α -Tocopheryl Acetate)

Figure S1. Structures of Vitamin E analogs.

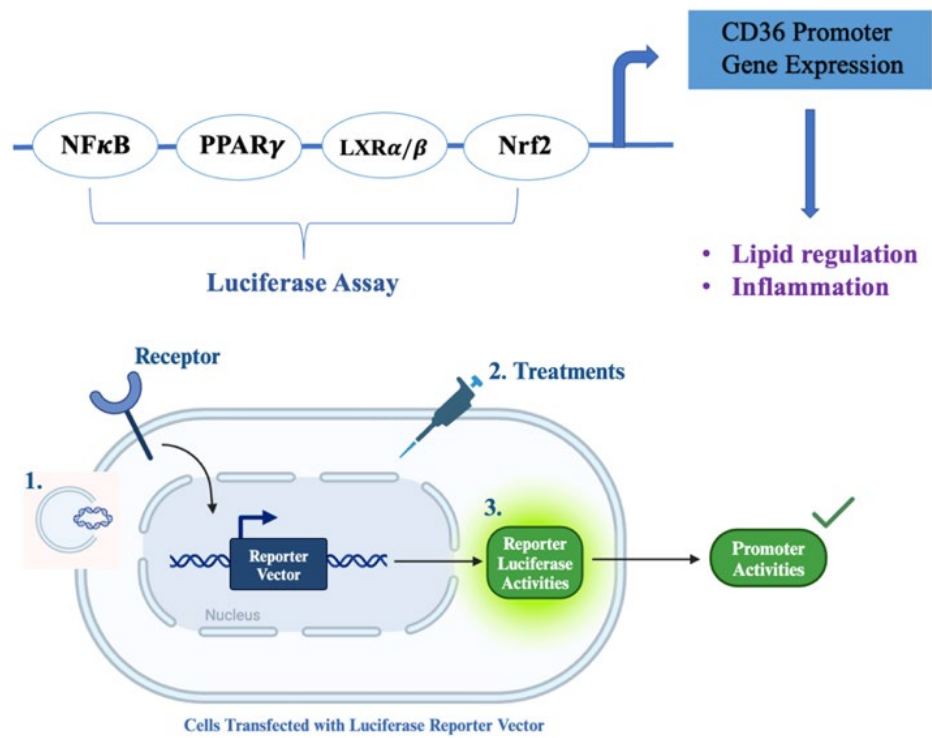


Figure S2. Luciferase assay procedure.

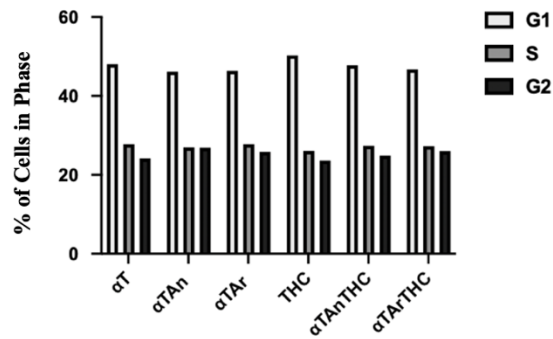


Figure S3. Cell cycle analysis. Cell cycle analysis after treatment with αT, αTAn, αTAr (50 μM) with/without THC or CBD (6 μM), for 18 h as assessed by propidium iodide staining (% cells in each phase, mean ± SEM, n = 4, total set to 100%). A small increase in G1 with THC but not significant.

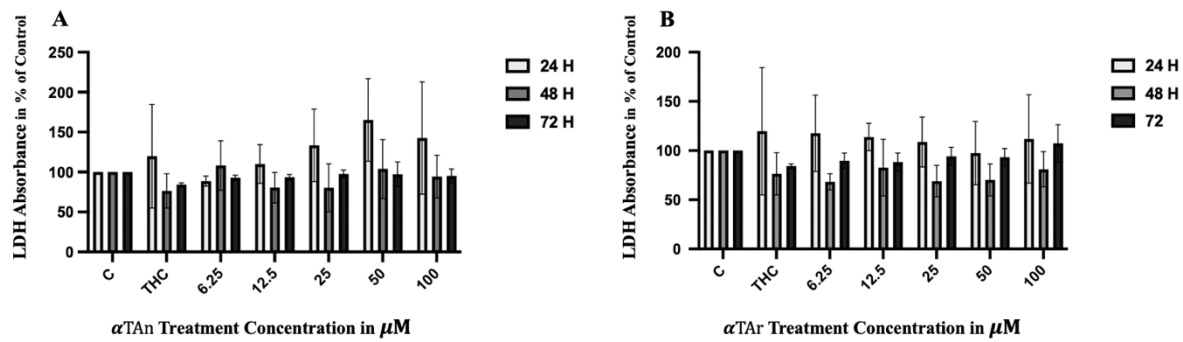


Figure S4. Cytotoxicity assay with THP-1 monocytes as measured with Lactate dehydrogenase (LDH) release assay. (A). Cells were treated with αTAN or αTAR at the indicated concentrations (0-100 μM), with THC (6 μM) for 24 h. LDH release was measured at OD590 (mean ± SEM, n = 4 for THC, relative to untreated control set to 100%). Increased LDH release was only observed at 48 h at 50 and 100 μM αTAN. THC reduced the LDH release, most likely as result of inhibition of cell proliferation. **(B).** There is no significantly increased LDH release with combined THC and αTAR treatment in THP-1 macrophages with both 24h, 48h and 72h.

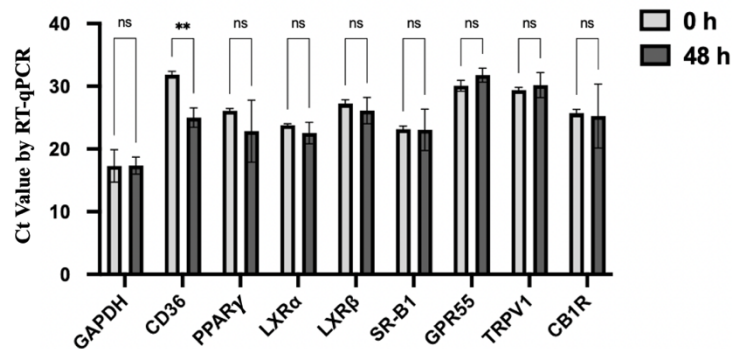


Figure S5. Differentiation of THP-1 monocytes to macrophages. THP-1 monocytes were differentiated by PMA (phorbol 12-myristate 13-acet ate) treatment (100 nmol) of 0 h and 48 h. There is a significant induction of CD36 gene expression observed in macrophages after 48 h PMA treatment. No significant effect was found on expression of the other genes with 0 and 48 h PMA treatment. CB2R was not detectable. ** $p < 0.005$; ns: non-significant.

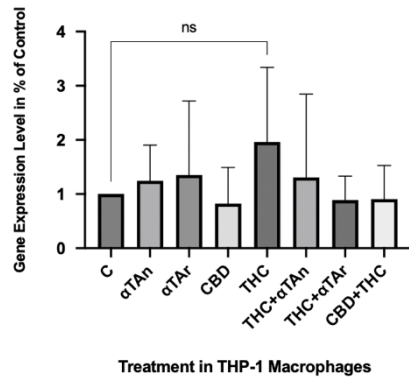


Figure S6. Quantification of PP2AC mRNA expression in THP-1 macrophages. In THP-1 macrophages, non-significant induction was observed with THC that was reduced by co-treatment with α TAn, α TAr and CBD. Cells were treated as indicated for 18 h (α TAr, α TAn (50 μ M); THC, CBD (6 μ M)). PP2AC was measured using quantitative RT-PCR with Taqman probes (n=6, $p < 0.05$, compared to control, ns: non-significant).