Supplemental Material for:

Aryl Hydrocarbon Receptor Deficiency Enhances Insulin Sensitivity and Reduces PPAR-α Pathway Activity in Mice

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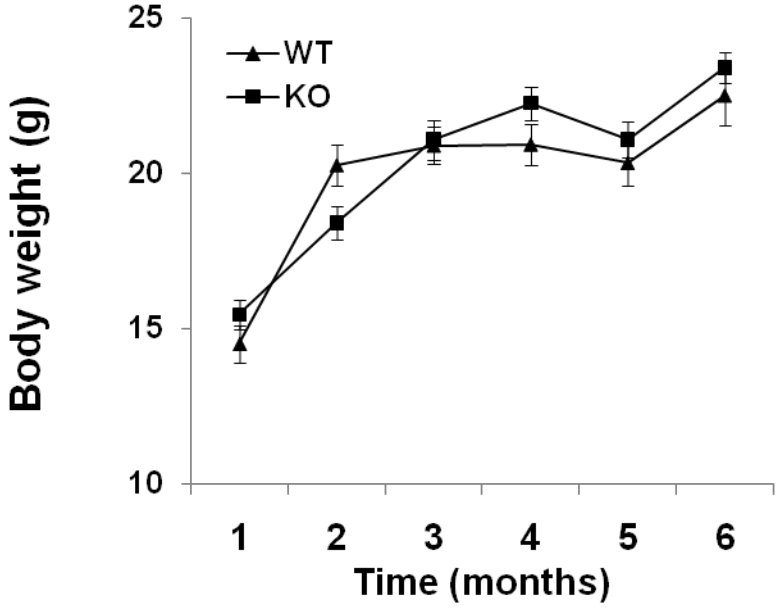
Supplemental Material, Table

Gene	Direction	Sequence	Source
Ahr siRNA	Sense Antisense	GCAGAUGCCUUGGUCUUCUAUGCUU AAGCAUAGAAGACCAAGGCAUCUGC	Invitrogen
Bmal1 siRNA	Sense Antisense	UGGACGAAGACAAUGAGCCAGACAA UUGUCUGGCUCAUUGUCUUCGUCCA	Invitrogen
Pepck primers	Forward Reverse	5'-CCACAGCTGCTGCAGAACA-3' 5'-GAAGGGTCGCATGGCAAA-3'	Stone et al. 2004
G6pase primers	Forward Reverse	5'-TGCAAGGGAGAACTCAGCAA-3' 5'-GGACCAAGGAAGCCACAATG-3'	Bernal-Mizrachi et al. 2003
Aco primers	Forward Reverse	5'-ATTCTCACAGCAGTGGGATTCC-3 5'-CTGCAGCATCATAACAGTGTTCTC-3'	Tordjman et al. 2001
Ppar-α primers	Forward Reverse	Proprietary Proprietary	Qiagen
Pdk4 Primers	Forward Reverse	Proprietary Proprietary	Qiagen
Cpt1b primers	Forward Reverse	Proprietary Proprietary	Qiagen

Supplemental Material, Table. Sequences for antisense and primers.

Sequences are given for the antisense and primers indicated, along with their source. Qiagen sequences are proprietary.

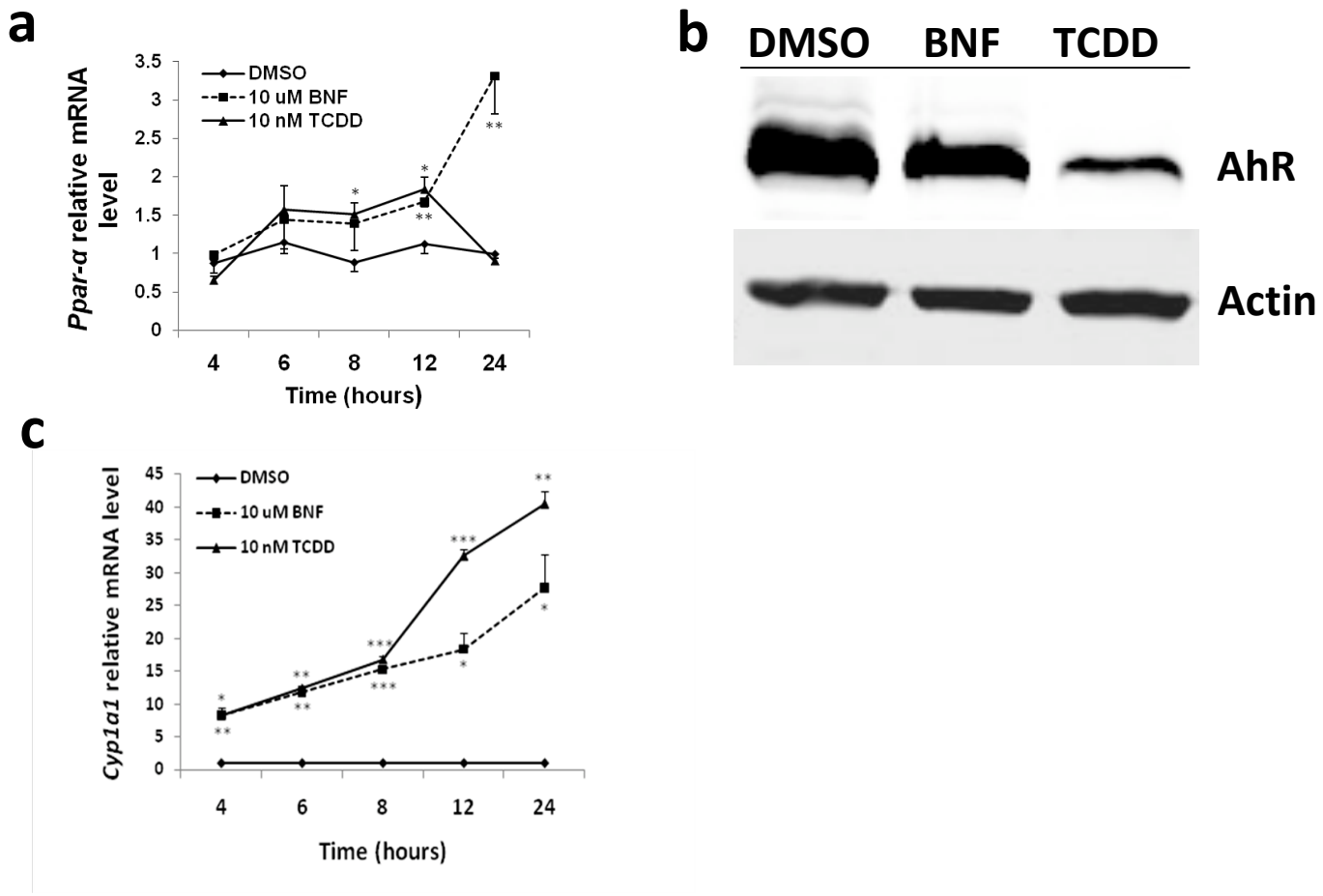
Supplemental Material, Figure 1



Supplemental Material, Figure1. **Average body weights of WT and AhRKO mice.**

Mice were weighed at 1, 2, 3, 4, 5 and 6 months of age (n=4 each). **KO**: AhR deficient animal (knockout).

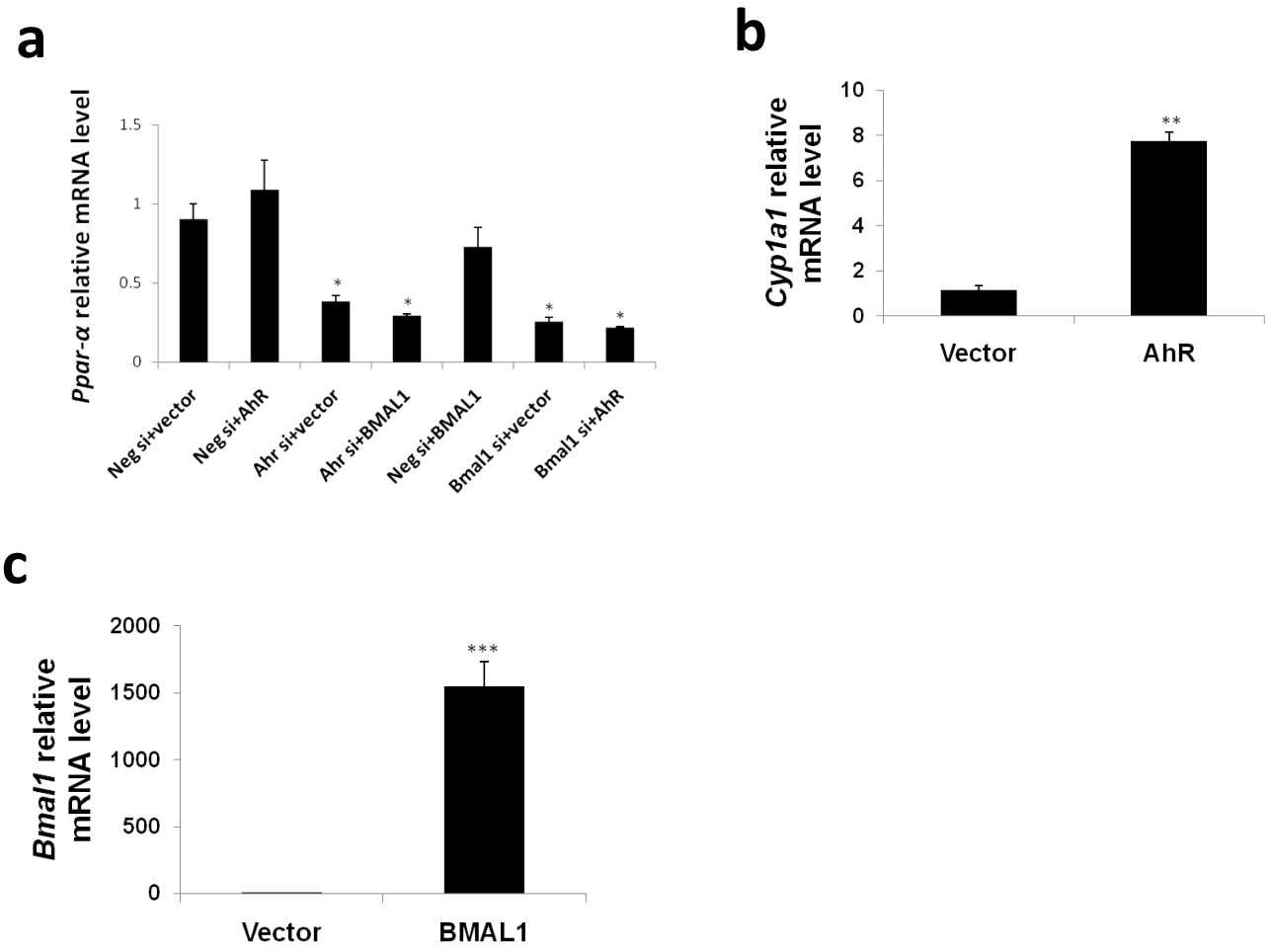
Supplemental Material, Figure 2



Supplemental Material, Figure 2. Effect comparison of TCDD and BNF on PPAR-α expression.

a. Time courses of *Ppar-α* mRNA levels in 10 nM TCDD or 10 μM BNF treated c7 cells. **b**. AhR protein expression in c7 cells treated with 10 nM TCDD or 10 μM BNF for 24 hr. **c**. *Cyp1A1* mRNA levels in cells described in **a**. Data are presented as mean ± SEM of three replicates. *, $P < 0.05$, **, $P < 0.01$ and ***, $P < 0.001$ vs. DMSO control at different time points.

Supplemental Material, Figure 3



Supplemental Material, Figure 3. Effect of co-transfection of AhR/BMAL1 plasmid and BMAL1/AhR siRNA on PPAR-α expression.

a. qPCR analysis of *Ppar-α* in *Ahr*/*Bmal1* plasmid and *Bmal1*/*Ahr* siRNA co-transfected c7 cells. **b**. qPCR analysis of *Cyp1A1* in c7 cells transfected with *Ahr* plasmid. **c**. qPCR analysis of *Bmal1* in c7 cells transfected with *Bmal1* plasmid. Data are presented as mean ± SEM of three replicates. *, $P < 0.05$, **, $P < 0.01$ and ***, $P < 0.001$ vs. Neg si and/or vector control. **AhR si:** AhR siRNA; **BMAL1 si**: BMAL1 siRNA ; **Neg si:** negative siRNA; **AhR:** *Ahr* plasmid; **BMAL:** *Bmal1* plasmid.

References

Bernal-Mizrachi C, Weng S, Feng C, Finck BN, Knutsen RH, Leone TC, et al. 2003. Dexamethasone induction of hypertension and diabetes is PPAR-alpha dependent in LDL receptor-null mice. Nat Med 9(8):1069-1075.

Stone SJ, Myers HM, Watkins SM, Brown BE, Feingold KR, Elias PM, et al. 2004. Lipopenia and skin barrier abnormalities in DGAT2-deficient mice. J Biol Chem 279(12):11767-11776.

Tordjman K, Bernal-Mizrachi C, Zemany L, Weng S, Feng C, Zhang F, et al. 2001. PPARalpha deficiency reduces insulin resistance and atherosclerosis in apoE-null mice. J Clin Invest 107(8):1025-1034.