Supplemental Material

Differential Response to Trichloroethylene-Induced Hepatosteatosis in Wild-Type and PPARα-Humanized Mice

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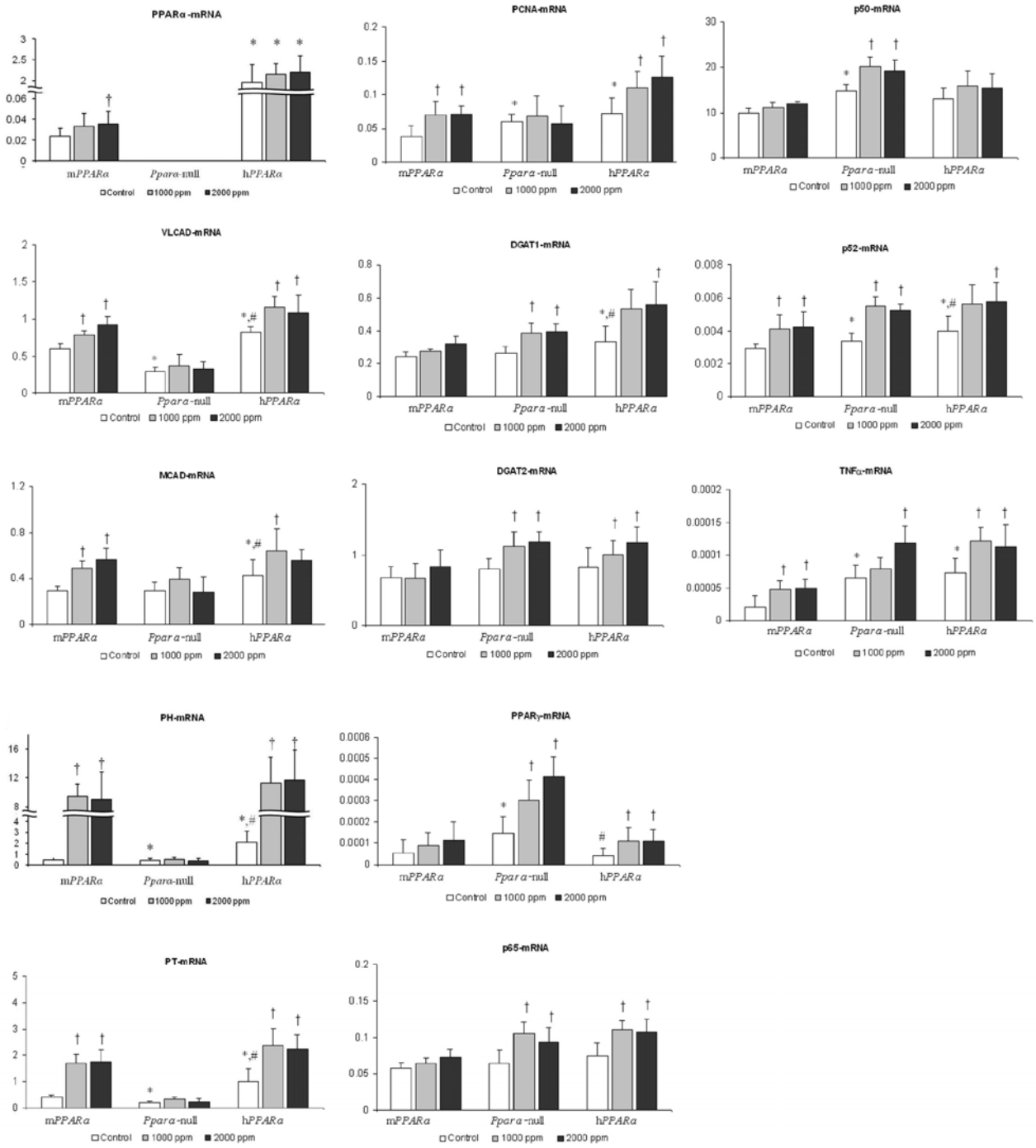
Supplemental Material, Table 1. Severity of hepatic injury.

Histological score	No	m*PPARα*			*Pparα*-null			h*PPARα*		
		Control	1000	2000	Control	1000	2000	Control	1000	2000
Steatosis	1	0	0	0	0.3	0.9	2.5	0.2	1.3	1.4
	2	0	0	0	0.3	1.0	1.4	0.4	1.6	1.5
	3	0	0	0	0.1	1.1	1.9	1.0	1.4	1.8
	4	0	0	0	0.2	1.0	1.3	0.3	1.3	2.3
	5	0	0	0	0.2	1.3	1.4	0.3	1.5	1.1
	6	0	0	0				0.4	2.0	2.6
Mean ± SD		0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.2 ± 0.1*	1.1 ± 0.2†	1.7 ± 0.5†,¶	0.4 ± 0.3*	1.5 ± 0.2†	1.8 ± 0.5†
Necrosis	1	0	0.9	1.4	0	1.0	1.2	0	0.7	1.2
	2	0	0.4	1.0	0	0.3	1.0	0	0.6	1.0
	3	0	0.8	1.1	0	0.7	1.0	0	0.4	0.8
	4	0	0.4	1.0	0	0.3	1.0	0	1.0	1.1
	5	0	0.8	1.8	0	1.0	0.7	0	0.5	1.0
	6	0	0.7	1.1				0	0.6	1.1
Mean ± SD		0.0 ± 0.0	0.7 ± 0.2†	1.2 ± 0.3†,¶	0.0 ± 0.0	0.7 ± 0.4†	1.0 ± 0.2†	0.0 ± 0.0	0.6 ± 0.2†	1.0 ± 0.1†,¶
Inflammation	1	0	0.2	1.6	0	0.2	0.3	0	0.3	0.3
	2	0	0.2	0.5	0	0.3	0.3	0	0.2	0.1
	3	0	0	0.3	0	0	0.2	0	0	0.2
	4	0	0	0.5	0	0	0.2	0	0.3	0.5
	5	0	0.1	2.7	0	0.1	0.5	0	0	0.5
	6	0	0.1	0.3				0	0	0.8
Mean ± SD		0.0 ± 0.0	0.1 ± 0.1	1.0 ± 1.0†,¶	0.0 ± 0.0	0.1 ± 0.1	0.3 ± 0.1†	0.0 ± 0.0	0.1 ± 0.2	0.4 ± 0.3†
Hepatocyte proliferation	1	0	0	1	0	0	0	0	0	0
	2	0	0	1	0	0	0	0	0	1
	3	0	1	0	0	0	0	0	0	0
	4	0	0	1	0	0	0	0	1	0
	5	0	0	1	0	0	0	0	0	1
	6	0	0	1				0	0	0
Mean ± SD		0.0 ± 0.0	0.2 ± 0.4	0.8 ± 0.4†	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.2 ± 0.4	0.3 ± 0.5

* Significantly different from control group ($P < 0.05$) of m*PPARα* mice.
† Significantly different ($p < 0.05$) from the 0 ppm group (control) in the same genotyped mice.
¶ Significant difference ($p < 0.05$) between 1000 and 2000 ppm TRI.

Supplemental Material, Figure 1



Hepatic PPARα, VLCAD, MCAD, PH, PT, PCNA, DGAT1, DGAT2, PPARγ, p65, p50, p52 and TNFα mRNA expression in m*PPARα*, *Ppara*-null, and h*PPARα* mice (unexposed controls, or exposed to 1000 or 2000 ppm TRI). Values represent means ± SD for 5 or 6 mice per group. Each mRNA level was normalized to the level of β-actin mRNA in the same preparation.

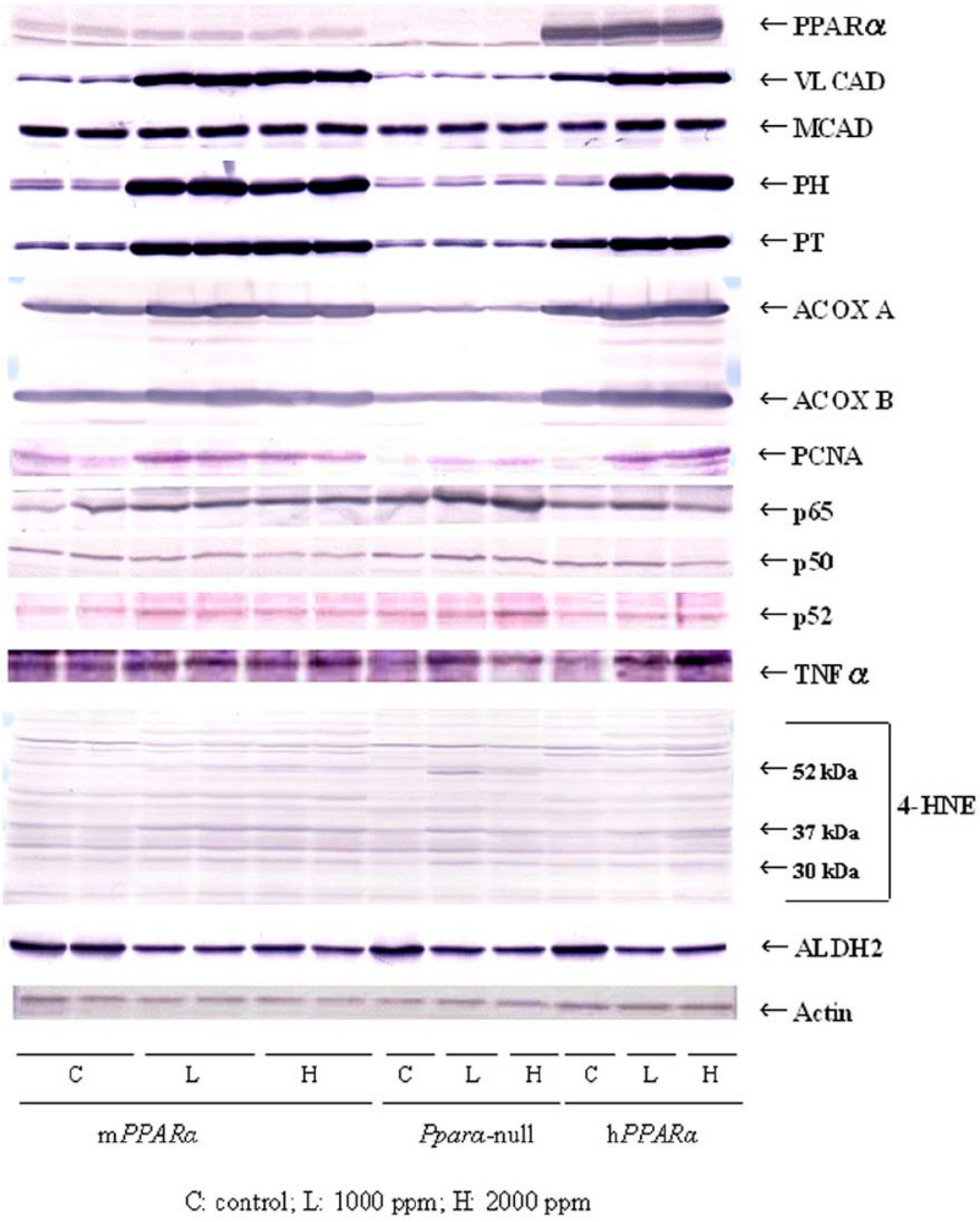
* Significantly different from m*PPARα* controls ($P < 0.05$).

[#] Significantly different from *Pparα*-null controls ($P < 0.05$).

[†] Significantly different from controls ($P < 0.05$) in the same genotype group.

Supplemental Material, Figure 2

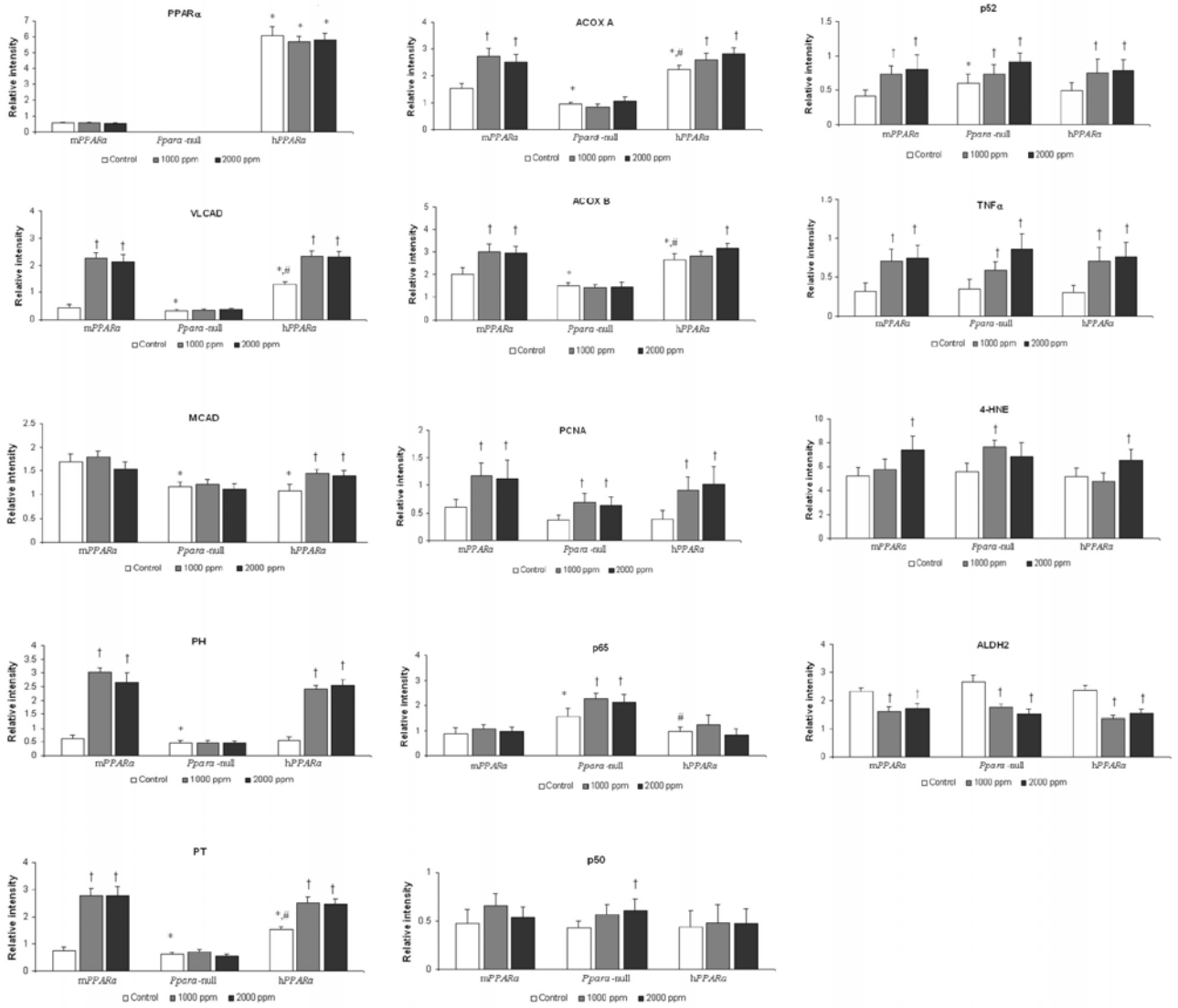
A



Western blot analyses of hepatic PPARα, PPARα target gene, and actin proteins from m*PPARα*, *Ppara*-null, and h*PPARα* mice (unexposed controls, or exposed to1000 or 2000 ppm TRI).

Supplemental Material, Figure 2

B



Relative intesities of PPARα, VLCAD, MCAD, PH, PT, PCNA, ACOX A, ACOX B, NFκB p65, p50, p52, TNFα, 4-HNE, and ALDH2 protein expression. Each band was quantified by densitometric analysis and normalized to the level of actin in the same preparation. Histograms represent means ± SD for 5 or 6 mice per group.

* Significantly different from m*PPARα* controls ($P < 0.05$).

[#] Significantly different from *Pparα*-null controls ($P < 0.05$).

[†] Significantly different from controls ($P < 0.05$) in the same genotype group.