Supplementary Material

Manuscript title:

Role of the CLOCK protein in liver detoxification

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Table S1. Primer sequences for quantitative real-time PCR

Gene	Forward sequence	Reverse sequence
Cyp2a4	AACGGTGCTTTCATTGACCC	CCTCATAGTCAAAGCGGTCCC
Cyp2a5	GGACAAAGAGTTCCTGTCACTGCTTC	GTGTTCCACTTTCTTGGTTATGAAGTCC
Cyp2j9	ATGCGCCTTCCTTTCGTGG	CCAGGCTTAGAACATTCCCGTA
Cyp39a1	ATCCAGCCACACTCAATACCC	GGAGCCATACTCAAAGCCCTC
Cyp4a10	TTCCCTGATGGACGCTCTTTA	GCAAACCTGGAAGGGTCAAAC
Cyp2c37	CACGAGGCGTTTCTCACTCA	AGGGCTGCTCAGAATCTTTGT
Cyp2b10	TGCTGTCGTTGAGCCAACC	CCACTAAACATTGGGCTTCCT
Cyp2c55	AATGATCTGGGGGTGATTTTCAG	GCGATCCTCGATGCTCCTC
Cyp3a25	CTTCACTGTCCAGCCTTGTGAA	AATTGGTTCCCTGCTGATCTTC
Cyp3a11	CGCCTCTCCTTGCTGTCACA	CTTTGCCTTCTGCCTCAAGT
Cyp2c70	AGTATGGCCCTGTGTTTACTGT	GCCTTGGCTGGTTCTACTGAG
Cyp4a12b	GGGGAGATCAGACCCAAAAGC	ATTCGTCGGTGCTGAAACCAT
Cyp2c40	TCCGGTTTTTGACAAGGTTTCTAC	TGCCCAAGTTCCTCAAGGTATTC
Cyp2j6	ATGCTCGCTGCTACCGGCTC	GTGCTTCTTTGATTAAGGGC
Cyp4f14	ACTGGCTTATGGGTCACGTG	ACCCACCAAACGAGTCAATTC
Ugt1a1	GCTTCTTCCGTACCTTCTGTTG	GCTGCTGAATAACTCCAAGCAT
Ugt1a5	TGAGAAGGTGCTAGTGTTTCCT	GGGAACGGCATAGACTTTGAA
Ugt1a9	TTTCGATGTGTGCGGCTTAAC	GGTTCCGAGTTCTTTCCTTGAA
Sult1a1	CACAAGGGTCCTCTCCTTAGC	TGACAGCGGAACGTGAAGTC
Sult2a7	TTGTTATGAGAGAAGACACAGTCGT	GCAGACAATCTCAACAAGCCAG
Clock	CCAGAGGGAGAACATTCA	TGGCTCCTTTGGGTCTAT
Dbp	ACATCTAGGGACACACCCAGTC	AAGTCTCATGGCCTGGAATG
Car	CCCTGACAGACCCGGAGTTA	GCCGAGACTGTTGTTCCATAAT
Bmal1	CTCCAGGAGGCAAGAAGATTC	ATAGTCCAGTGGAAGGAATG
Rev-erbα	TTTTTCGCCGGAGCATCCAA	ATCTCGGCAAGCATCCGTTG
Rev-erbβ	GGAGTTCATGCTTGTGAAGGCTGT	CAGACACTTCTTAAAGCGGCACTG
Npas2	GAACATTCCGAAGTTTAT	AATCGTTGTCAGATTTTAG
Hmbs	CCGAGCCAAGGACCAGGATA	CTCCTTCCAGGTGCCTCAGA

Table S2. Oligonucleotide sequences for EMSA assays

Oligonucleotide	**Sequence**
Cyp2a5-E-box *(-1729/-1696 bp)*	CTTCATTCAGGCAATTCCAGTGACCACCTGCTT
Cyp2b10-RevRE *(-2346/-2319 bp)*	GACTTAGGAGGAAGGTCAGAAAAACAT

Table S3. Primer sequences for ChIP assays.

Primer	Forward sequence	Reverse sequence
Cyp2a5-CLOCK	GTCTCAGAGTCCAACAGCCTAAAAC	TTTGGTTCCAGCAGGTTC
Cyp2a5-Distal	AAAGGCAGATTGAAGTTTAG	TTCCTCCTGATAGTAATGGT
Cyp2b10-REV-ERBα	CACATCTGTGGTCCCAGTA	TCCCAGGTGTCAGGATTTCAG
Cyp2b10-Distal	GAAGTTCTGCTGTGGGTC	GTAACATTACTATCTAGCCTCT

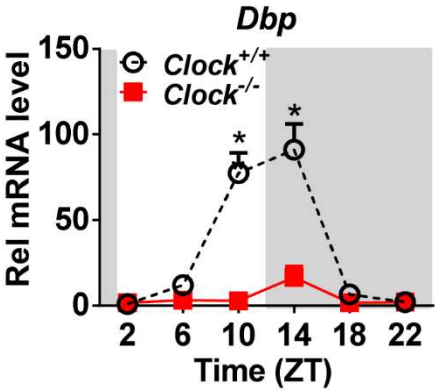

Fig S1 Expression of *Dbp* in *Clock*$^{+/+}$ and *Clock*$^{-/-}$ mice. Data are mean ± SD (n = 5). *p < 0.05 (two-way ANOVA with Bonferroni post hoc test).

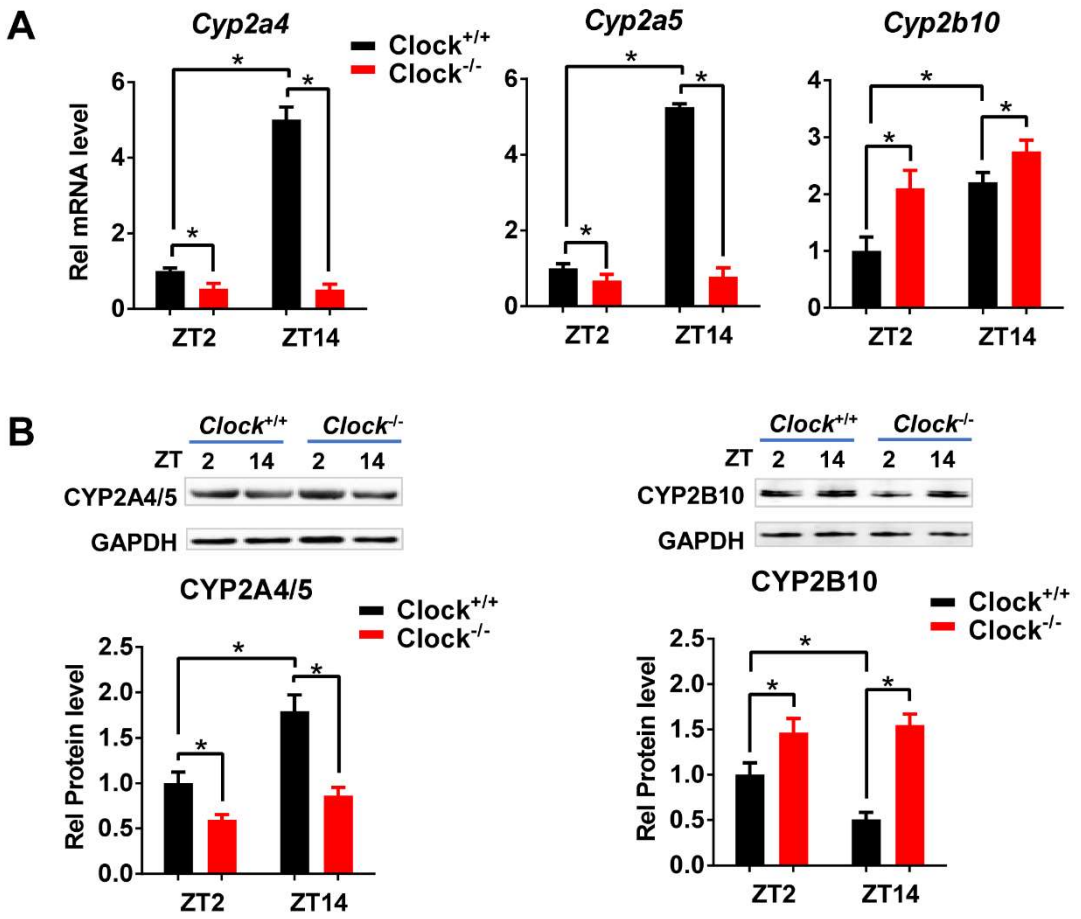

Fig S2 Hepatic mRNA and protein expression of CYP2A4/5 and CYP2B10 in female *Clock*$^{+/+}$ and *Clock*$^{-/-}$ mice. Data are mean ± SD (n = 5). *p < 0.05 (two-way ANOVA with Bonferroni post hoc test).

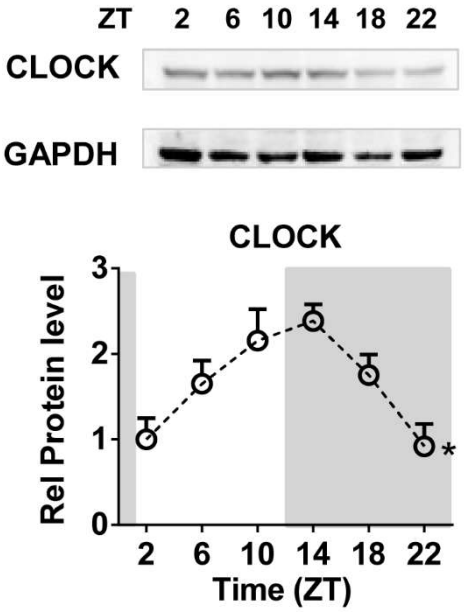

Fig S3 Circadian expression of CLOCK protein in mouse liver. Data are mean ± SD (*n* = 5). *p < 0.05 (one-way ANOVA with Bonferroni post hoc test).

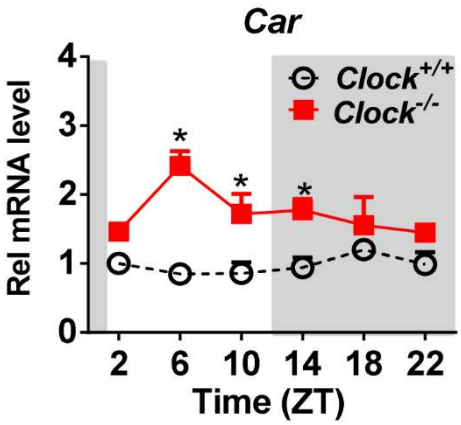

Fig S4 Expression of *Car* in *Clock*$^{+/+}$ and *Clock*$^{-/-}$ mice. Data are mean ± SD (n = 5). *p < 0.05 (two-way ANOVA with Bonferroni post hoc test).

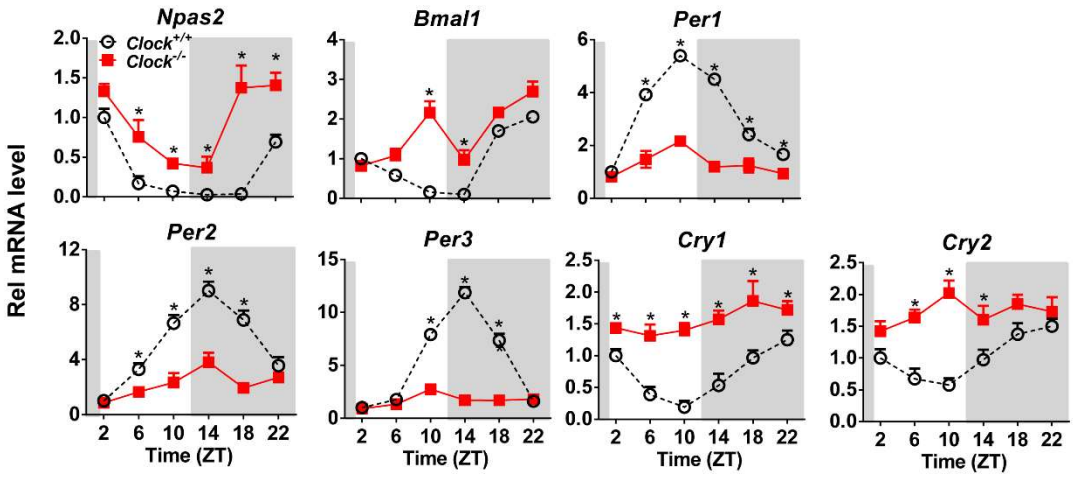

Fig S5 Core clock genes expressions in *Clock*$^{+/+}$ and *Clock*$^{-/-}$ mice. Data are mean ± SD (n = 5). *p < 0.05 (two-way ANOVA with Bonferroni post hoc test).

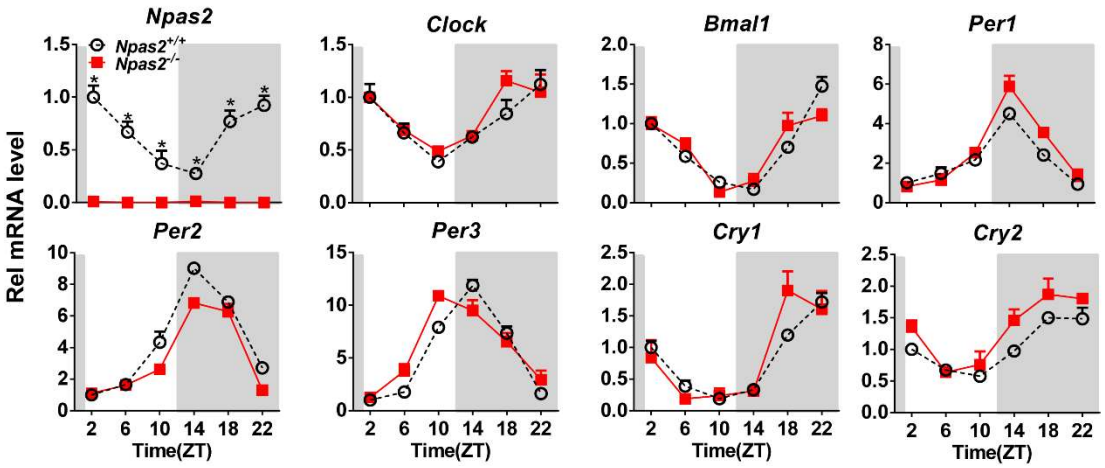

Fig S6 Core clock genes expressions in *Npas2*$^{+/+}$ and *Npas2*$^{-/-}$ mice. Data are mean ± SD (n = 5). *p < 0.05 (two-way ANOVA with Bonferroni post hoc test).