

## Supplementary Material

### **Lack of multidrug-resistance associated protein 4 prolongs partial hepatectomy-induced hepatic steatosis.**

*Ajay C Donepudi<sup>1</sup>, Gregory J. Smith<sup>1</sup>, Oladimeji Aladelokun<sup>1</sup>, Yoojin Lee<sup>2</sup>, Steven J Toro<sup>1</sup>, Marisa Pfohl<sup>3</sup>, Angela L Slitt<sup>3</sup>, Li Wang<sup>4</sup>, Ji-Young Lee<sup>2</sup>, John D. Schuetz<sup>5</sup>, and José E Manautou<sup>1</sup>*

<sup>1</sup> *Department of Pharmaceutical Sciences, University of Connecticut, Storrs, CT,*

<sup>2</sup> *Department of Nutritional Sciences, University of Connecticut, Storrs, CT;*

<sup>3</sup> *Department of Biomedical Sciences, University of Rhode Island, Kingston, RI;*

<sup>4</sup> *Department of Internal Medicine, Section of Digestive Diseases, Yale University, New Haven, Connecticut;*

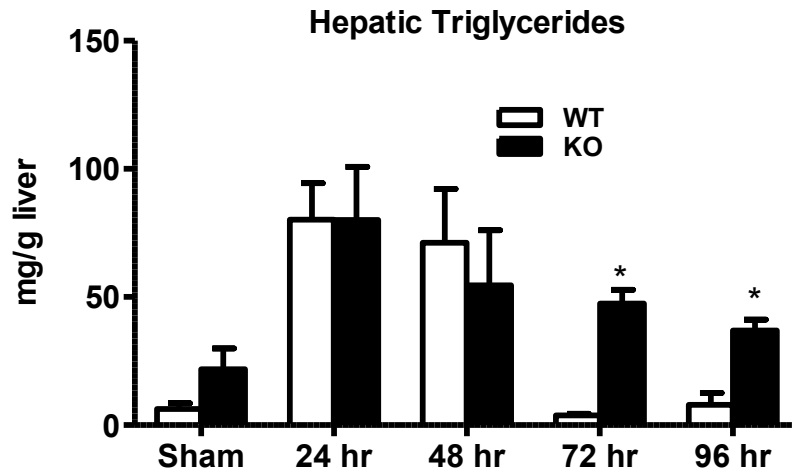
<sup>5</sup> *Department of Pharmaceutical Sciences, St. Jude Children's Research Hospital, Memphis, TN.*

<b>Gene ID</b>	<b>Forward</b>	<b>Reverse</b>
Mrp4	AGGAGCTTCAACGGTACTGG	GCCTTTGTTAAGGAGGGCTTC
Cyclin D1	GCGTACCCTGACACCAA	ACTTGAAGTAAGATACGGAGGC
Pcna	TTTGAGGCACGCCTGATCC	GGAGACGTGAGACGAGTCCAT
Lipin1	CATGCTTCGGGAAAAGTCCTTCA	GGTTATTCTTTGGCGTCAACCT
Dgat1	CTGATCCTGAGTAATGCAAGGTT	TGGATGCAATAATCACGCATGG
Dgat2	CGAGACACCATAGACTACTTGCT	GCGGTTCTTCAGGGTGACTG
Lipin2	CAGTGAAGATGAGAAGACGGTTCAGGA	TTCCTTCACAGTGACGAGCACCTG
$\beta$ -actin	GGCTGTATTCCCCTCCATCG	CCAGTTGGTAACAATGCCATGT

Supplemental table-1: Primer sequences for genes analyzed using RT-qPCR.

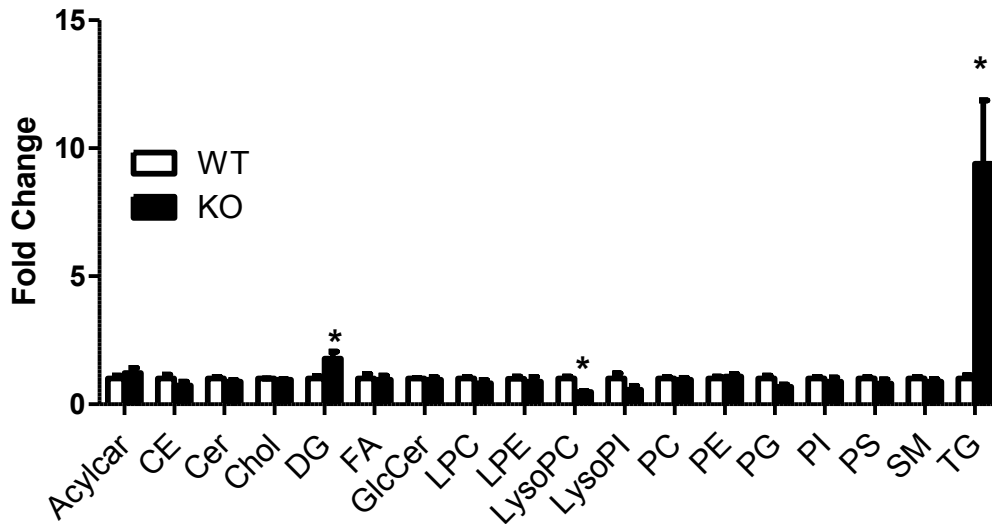
<b>Fas</b>	<b>Ccl2</b>	<b>Gclc</b>	<b>Cidea</b>	<b>Cyp4a14</b>	<b>Hprt</b>
<b>Acaca</b>	<b>Tnf</b>	<b>Gstm3</b>	<b>Fabp4</b>	<b>Ehhadh</b>	<b>Eif3f</b>
<b>Ppara</b>	<b>IL6</b>	<b>Nqo1</b>	<b>Pparg</b>	<b>Hmgcs1</b>	<b>Actb</b>
<b>Acot2</b>	<b>Csf2ra</b>	<b>Nfe2l2</b>	<b>Fatp1</b>	<b>Mttp</b>	<b>Ppia</b>
<b>Srebf1</b>	<b>Cpt1b</b>	<b>Gpam</b>	<b>Fabp1</b>	<b>Lpl</b>	<b>Gusb</b>
<b>Scd1</b>		<b>Sod1</b>	<b>Cd36</b>	<b>Cpt1a</b>	<b>Gapdh</b>

Supplemental table-2: List of genes analyzed using on multiplex platform. Total 35 genes were analyzed using multiplex platform. Housekeeping genes are tabulated in the last column of the table.

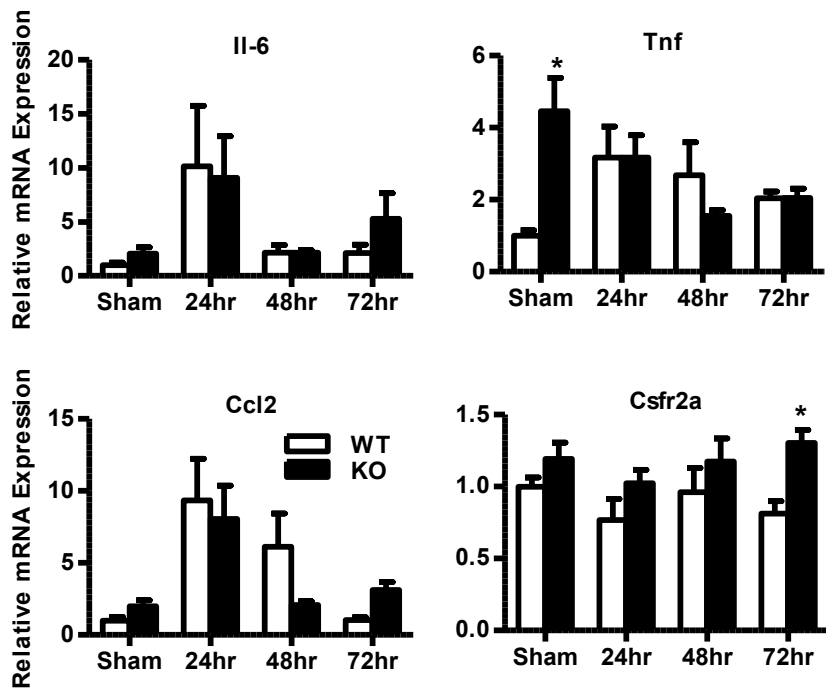


**Supplemental Figure-1: Lack of Mrp4 results in persistent hepatic triglyceride accumulation following PH-surgery.** Biochemical quantification of hepatic triglyceride levels in WT and Mrp4 KO mice. Data are presented as fold change compared to WT mice and  $p \leq 0.05$  is considered as statistically significant. An asterisk “\*” denotes significant difference between WT and Mrp4 KO mice.

### Hepatic lipid composition



**Supplemental Figure-2:** Lipidomics analysis for determining hepatic lipid composition. WT and Mrp4 KO sham mice livers were analyzed for composition of hepatic lipid species such as acylcarnitine (Acyl Car), cholesterol ester (CE), cholesterol (Chol), diglyceride (DG), Free fatty acids (FA), ceramide (Cer), lysophosphatidylethanolamine (LPE), lysophosphatidylcholine (LysoPC), lysophosphatidylinositol (LysoPI), phosphatidylcholine (PC), phosphatidylethanolamine (PE), phosphatidylglycerol (PG), phosphatidylinositol (PI), phosphatidylserine (PS), sphingomyelin (SM) and triglyceride (TG). Data are presented as fold change compared to WT mice and  $p \leq 0.05$  is considered as statistically significant. An asterisk “\*” denotes significant difference between WT and Mrp4 KO mice.



**Supplemental Figure-3:** Hepatic expression of proinflammatory genes. WT and Mrp4 KO liver mRNA levels were analyzed for proinflammatory gene expression on quantigene 2.0 multiplex platform. Data are presented as fold change compared to WT sham mice and  $p \leq 0.05$  is considered as statistically significant. An asterisk “\*” denotes significance difference between WT and Mrp4 KO mice.

