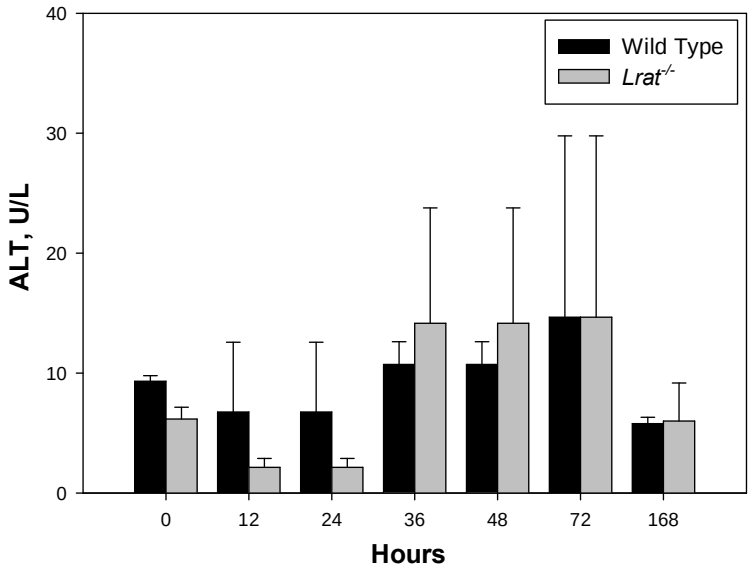
Supplementary Table 1.

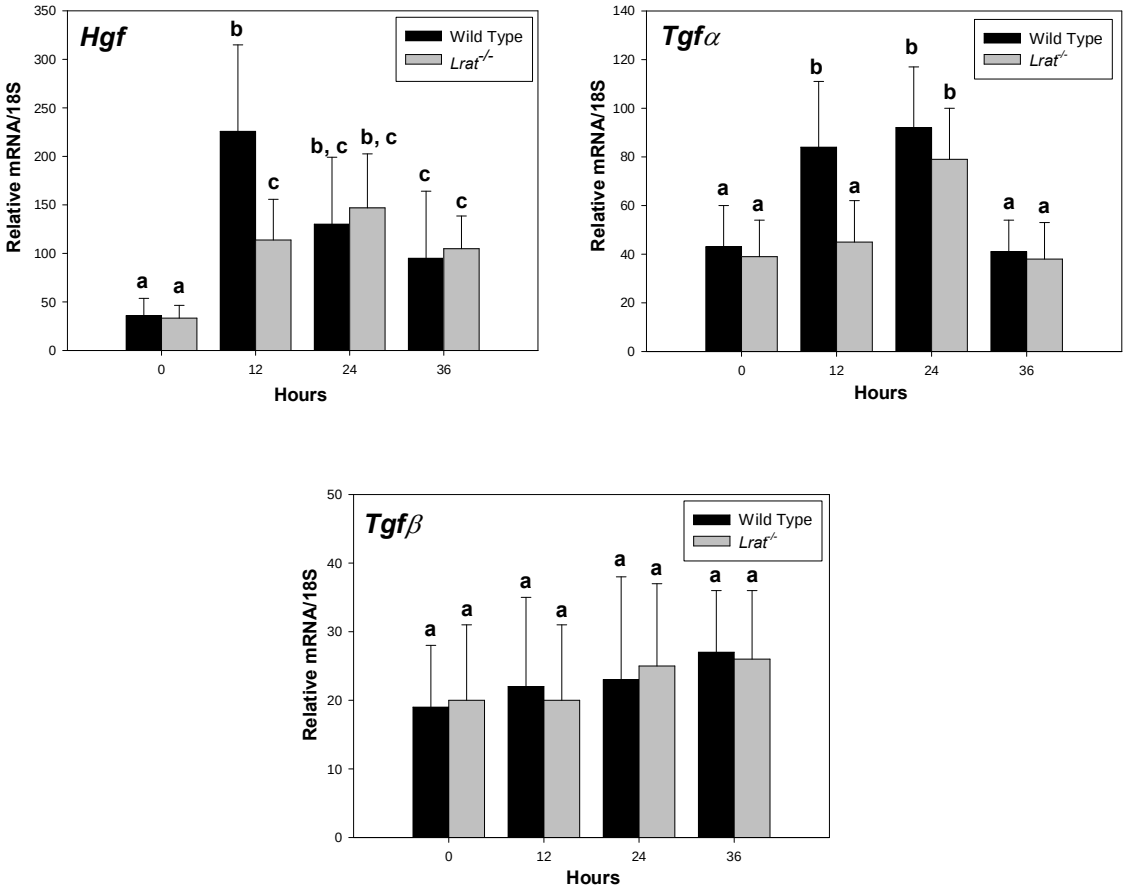
Primers used for real time qPCR

Gene	Accession number	Forward/reverse primers
Tgfα	NM_031199	5'-CCATCAGTCTACCCTTTGC
		5'-GGAGAAGGTACACAGCG
Tgfβ1	NM_011577	5'-GGCTACCATGCCAACTT
		5'-ACCCACGTAGTAGACGA
Hgf	NM_010427	5'-AAATGAGAATGGTTCTTGGTG
		5'-CTGGCCTCTTCTATGGCT
Cyclin A2	NM_009828	5'-GGCTGACACTCTTTCCG
		5'-CTGGTAGCAAGAATTAGAGCAT
Cyclin B1	NM_172301	5'-AGCAAATATGAGGAGATGTACC
		5'-CGACTTTAGATGCTCTACGGA
Cyclin D1	NM_007631	5'-TCCCAGACGTTCAGAACC
		5'-AGGGCATCTGTAAATACACT
Cyclin E1	NM_007633	5'-TGCACCAGTTTGCTTATGTT
		5'-CCGTGTCGTTGACATAGG
FoxM1	NM_008021	5'-CTTACTGCCCTTTCCTCG
		5'-GAACACTATCAGAGAAACACCTAAT
p21	NM_007669	5'-GGTTCCTTGCCACTTCTT
		5'-GAGTCGGGATATTACGGTTG
Lrat	NM_023624	5'-AGTTCAAGACTAGCCTGCTCA
		5'-TACAAGCTGGCCTTCGAC
Cyp26A1	NM_007811	5'-AGAGCAATCAAGACAACAAGTTAG
		5'-ATCGCAGGGTCTCCTTAAT
CrbpI	NM_011254	5'-AATGAGAGCTGAGGGTG
		5'-GGTATGCGTTTCGGTCC
Rarβ	NM_011243	5'-CAAGTTCAAGTGGGAATATAGCAGA
		5'-ACTGACTGACTCCACTGTT
Bcmo1	NM_021486	5'-ATGAAATGTGGAGAAGACTTCTAT
		5'-CTTTGTCCACGACGGAT
Bcmo2	NM_133217	5'-AGGACCAGGGCTGTATTGTG
		5'-CGCTGGCTGAAGAATAGGAC

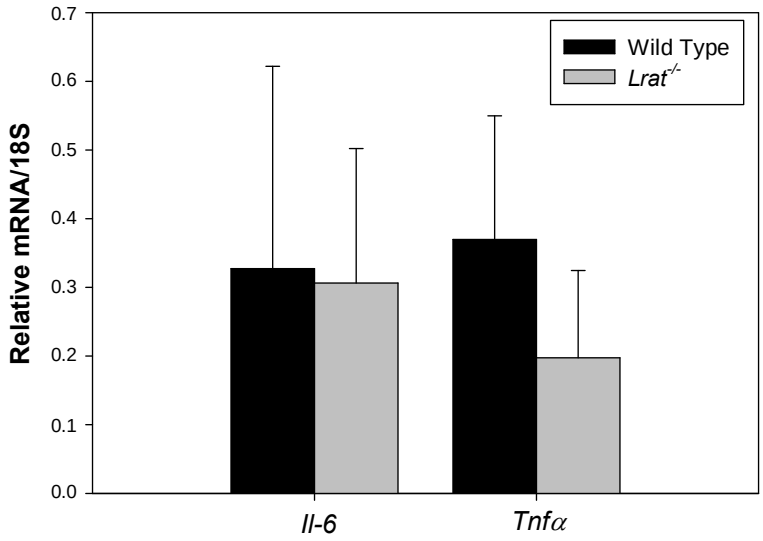
Pparα	NM_011144	5'-ACTGGATGACAGTGACATTTC
		5'-CTCCTGCAACTTCTCAATGTAG
Pparβ/δ	NM_011145	5'-GGGTCAGAAGCTAGACAGCGAG
		5'-AGAAAGAACAGCTATGGTCCAGTTCC
Pparγ	NM_011146	5'-TCTCCAGCATTTCTGCTCCACAC
		5'-CAGGTTCTACTTTGATCGCACTTTGGTAT
Cb1	NM_007726	5'-CGTGTTCCACCGCAAAGATAGTC
		5'-GTACCTGTCGATGGCCGT
Cb2	NM_009924	5'-TGTGGGTCCTCTCAGCATTGATT
		5'-CCAGCCCAGTAGGTAGTCGTT
Pdk4	NM_013743	5'-TCGAACTCTTCAAGAATGCC
		5'-GGTCAGTAATCCTCAGAGGAACA
αSma	NM_007392	5'-TCTGGCACCACTCTTTCTATAAC
		5'-TAGCCACATACATGGCGG
Col1A1	NM_007742	5'-CCTCAGAAGAACTGGTACATCA
		5'-GGCCTCGGTGGACATTA
18S		5'-CCATCCAATCGGTAGTAGCG
		5'-GTAACCCGTTGAACCCCATT



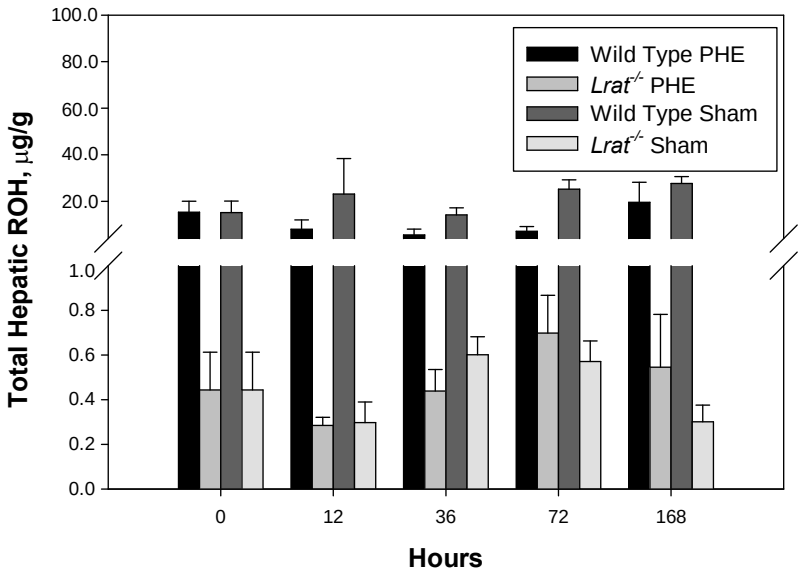
Supplementary Figure 1. Serum alanine aminotransferase (ALT) activity for wild type and Lrat$^{-/-}$ mice following sham operation. Values are given as the mean ± 1 S.D., n = 10 for each time and genotype.



Supplementary Figure 2. Hgf, Tgfα and Tgfβ mRNA expression in the livers of wild type and Lrat$^{-/-}$ mice following PHE. Values are given as the mean ± 1 S.D., n = 10 for each genotype. Values marked with different letters (a, b, c) are significantly different, $P < 0.05$.

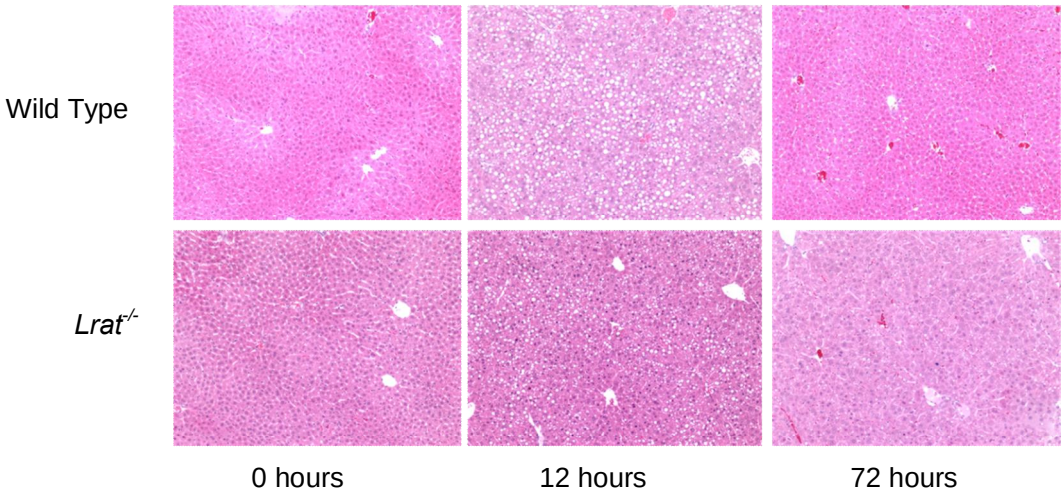


Supplementary Figure 3. Il-6 and Tnfα mRNA expression in the livers of wild type and Lrat$^{-/-}$ mice 12 h following PHE. Values are given as the mean ± 1 S.D., n = 10 for each genotype.

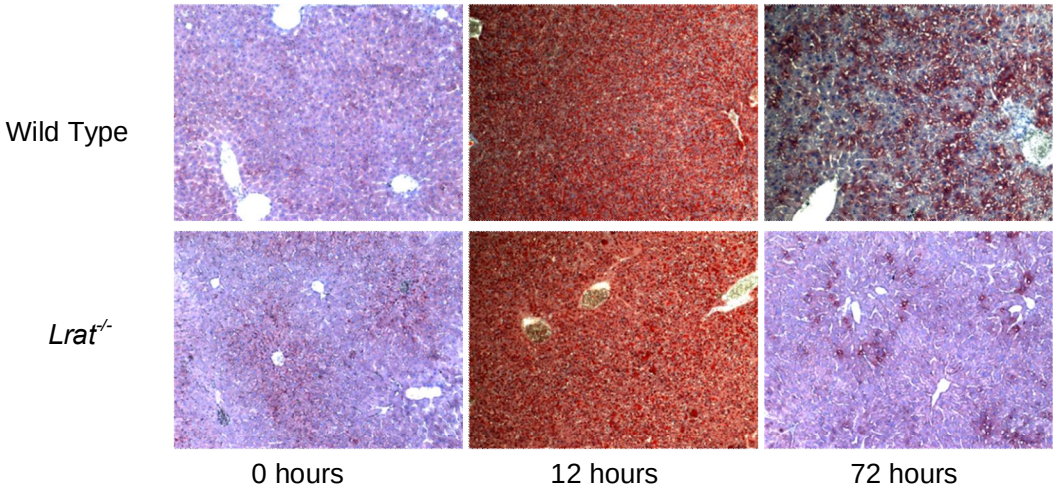


Supplementary Figure 4. Hepatic retinol levels in wild type and Lrat$^{-/-}$ mice following PHE and sham operation. Values are given as the mean ± 1 S.D., n = 10 for each time and genotype.

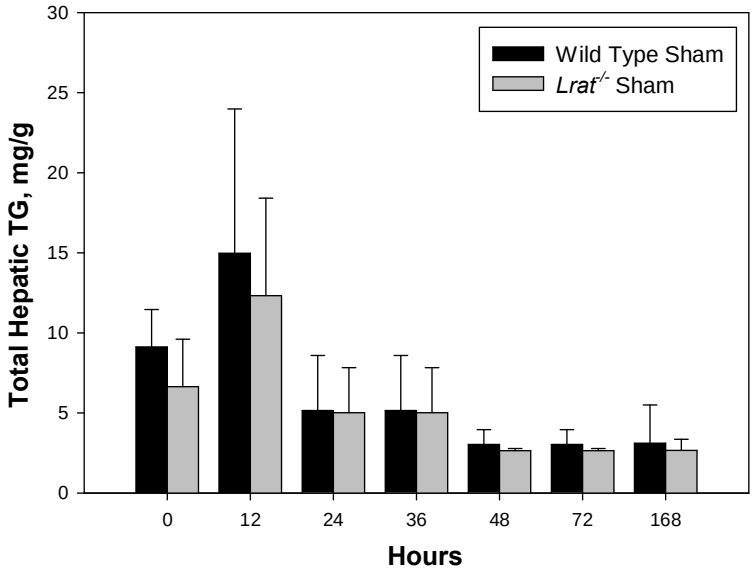
A.



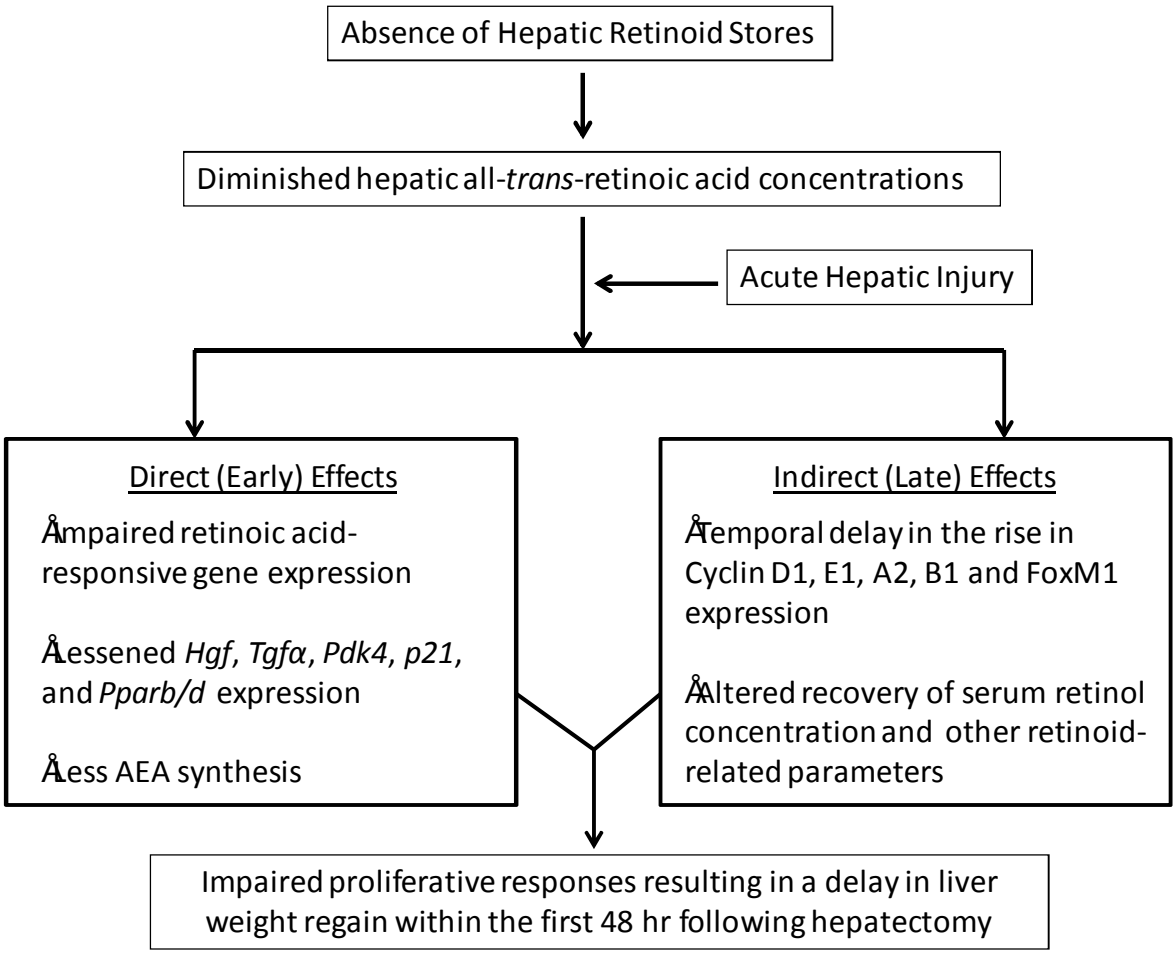
B.



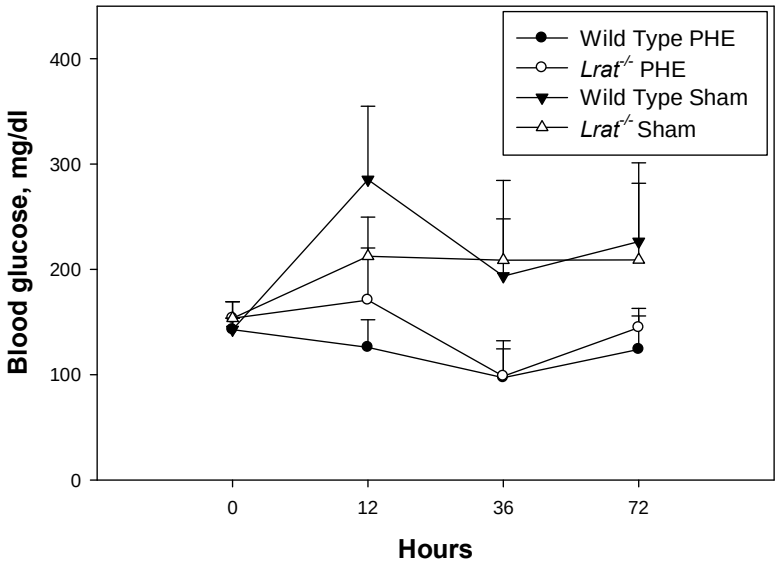
Supplementary Figure 5. Hepatic triglyceride accumulation in livers of wild type and Lrat$^{-/-}$ mice following PHE. **Panel A.** Representative H&E stained liver sections from wild type and *Lrat*$^{-/-}$ mice, 0, 12, and 72 h after PHE. **Panel B.** Representative oil red O stained liver sections from wild type and *Lrat*$^{-/-}$ mice, 0, 12, and 72 h after PHE.



Supplementary Figure 6. Hepatic triglyceride concentrations for wild type and Lrat$^{-/-}$ mice following sham operation. Values are given as the mean ± 1 S.D., n = 10 for each time and genotype.



Supplementary Figure 7. Summary of the effects identified in Lrat$^{-/-}$ mice which give rise to impaired liver regeneration.



Supplementary Figure 8. Blood glucose levels in wild type and Lrat$^{-/-}$ mice following PHE and sham operation. Values are given as the mean ± 1 S.D., n = 10 for each time and genotype.