

SUPPLEMENTARY DATA

Adaption of oxidative phosphorylation machinery compensates hepatic lipotoxicity in early stages of MAFLD

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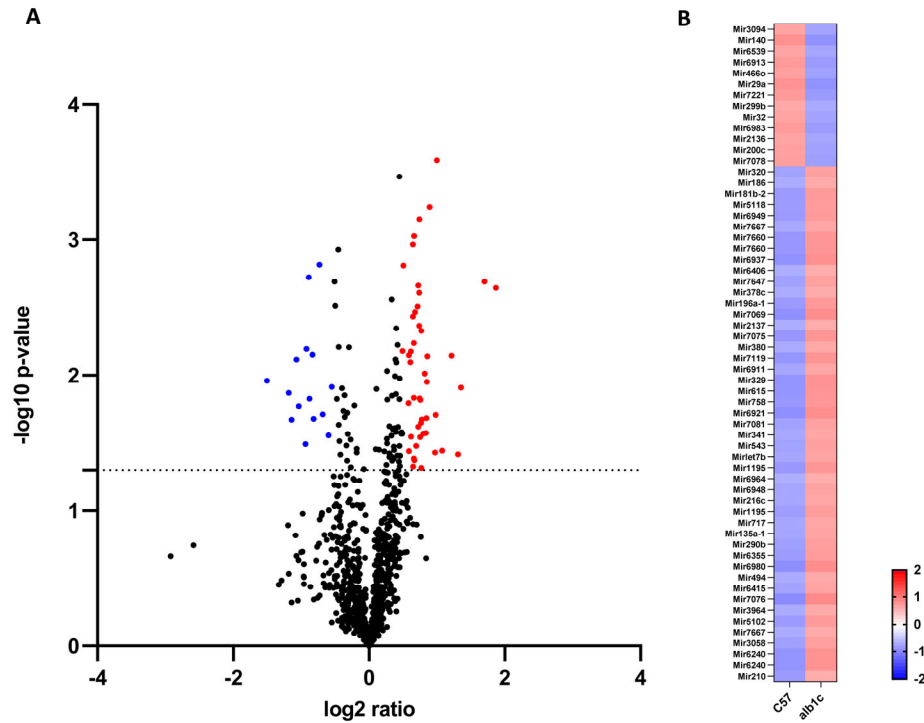
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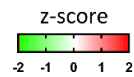
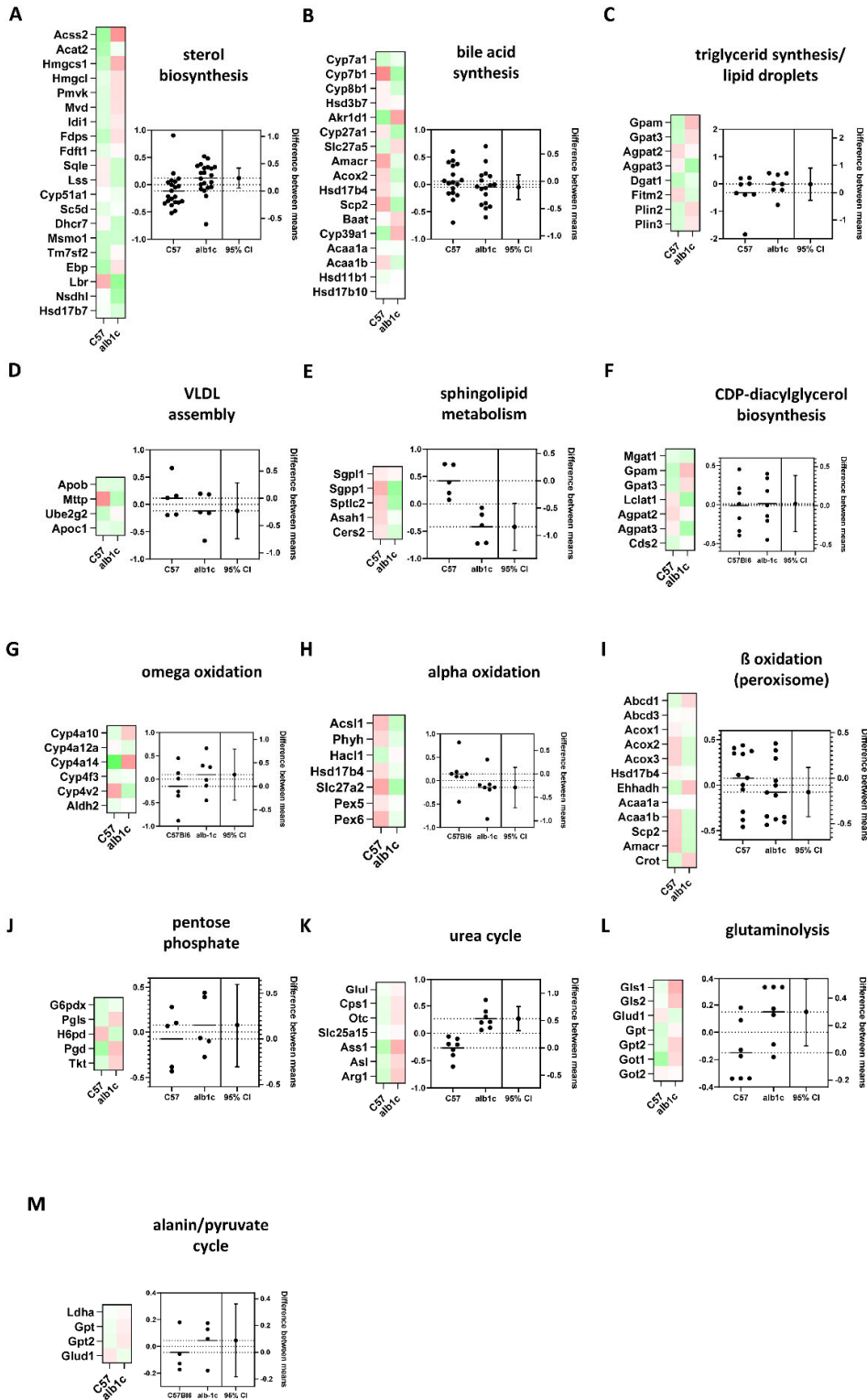
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Supplement



Supplementary Figure S1. Impact of constitutive overexpression of SREBP-1c to hepatic miRNA. (A) The log₂ fold changes of miRNA abundance in alb-SREBP-1c vs C57Bl6 mice (n = 8 animals per condition). 1067 differentially abundant miRNA species were detected. Upregulated (red; n = 55) or downregulated proteins (blue; n = 22) were determined by Student's t-test (p > 0.05) with a 1.5 fold regulation. (B) Differentially regulated miRNAs. Red identifies upregulation and blue identifies downregulation of miRNAs.



Supplementary Figure S2: Changes in biosynthesis processes in early stage MAFLD. Heat maps resulting from z-score analyses and estimation plots for each pathway are included: **(A)** Sterol biosynthesis, **(B)** bile acid synthesis, **(C)** triglyceride synthesis/ lipid droplets, **(D)** VLDL assembly, **(E)** sphingolipid metabolism, **(F)** CDP-diacylglycerol biosynthesis, **(G)** omega oxidation, **(H)** alpha oxidation, **(I)** β oxidation (peroxisome), **(J)** pentose phosphate, **(K)** urea cycle, **(L)** glutaminolysis and **(M)** alanine/pyruvate cycle. Estimation plots show differences between means of alb-SREBP-1c vs C57Bl6 ($\pm 95\%$ CI) (mean z-score: left axis, effect size: right axis).

Supplementary Table S1: Body composition and metabolic-related parameters of C57Bl6 and alb-SREBP-1c mice. Data presented as means with 95% CI of mean. Statistical analyses were done by Wilcoxon and Mann-Whitney test.

	C57Bl6	alb-SREBP-1c	p-value
N (male)	10	10	
Body weight (g)	32.10 (30.28; 33.92)	35.95 (34.80; 37.08)	0.0015
Liver weight (g)	1.57 (1.43; 1.71)	1.93 (1.81; 2.05)	0.0005
Liver weight/body weight (%)	4.92 (4.46; 5.37)	5.38 (4.95; 5.82)	0.1715
Total fatty acid (TFA) (mg/g liver)	25.35 (22.51; 28.19)	65.80 (55.01; 76.59)	0.0001
TFA/liver weight (%)	1.63 (1.42; 1.83)	3.29 (2.95; 3.83)	0.0001
Visceral fat (g)	0.89 (0.77; 1.02)	2.37 (2.03; 2.71)	0.0001
Fasted blood glucose (mg/dl)	126.8 (117.2; 136.4)	150.2 (137.8; 162.6)	0.0028
Serum triglycerides (mg/dl)	127.5 (106.0; 149.0)	237.4 (193.1; 281.7)	0.0001
Serum NEFA (mg/dl)	1.07 (0.89; 1.24)	2.38 (2.09; 2.66)	0.0001