

Supplemental Table 1. Gene Sets Altered in LIRKO livers

RANK	NAME	FDR q-val
1	CHOLESTEROL_BIOSYNTHESIS	0.000
2	BIOSYNTHESIS_OF_STEROIDS	0.000
3	GLYCINE_SERINE_AND_THREONINE_METABOLISM	0.000
4	PROTEASOME	0.002
5	GAMMA_HEXACHLOROCYCLOHEXANE_DEGRADATION	0.007
6	AMINOACYL_TRNA_BIOSYNTHESIS	0.008
7	TRYPTOPHAN_METABOLISM	0.023
8	PORPHYRIN_AND_CHLOROPHYLL_METABOLISM	0.027
9	CIRCADIAN_EXERCISE	0.038
10	PENTOSE_PHOSPHATE_PATHWAY	0.067
11	UBIQUINONE_BIOSYNTHESIS	0.073
12	OXIDATIVE_PHOSPHORYLATION	0.069
13	PYRUVATE_METABOLISM	0.064
14	GLYCOLYSIS	0.063
15	GLUCONEOGENESIS	0.064
16	GLYCEROPHOSPHOLIPID_METABOLISM	0.064
17	NUCLEOTIDE_METABOLISM	0.082
18	UBIQUITIN_MEDIATED_PROTEOLYSIS	0.109
19	VALINE_LEUCINE_AND_ISOLEUCINE_DEGRADATION	0.111
20	GLYCOSPHINGOLIPID_METABOLISM	0.148
21	N_GLYCAN_BIOSYNTHESIS	0.170
22	BILE_ACID_BIOSYNTHESIS	0.185
23	HISTIDINE_METABOLISM	0.190
24	LYSINE_DEGRADATION	0.190
25	ATP_SYNTHESIS	0.229
26	BLOOD_CLOTTING_CASCADE	0.241
27	FLAGELLAR_ASSEMBLY	0.233
28	STARCH_AND_SUCROSE_METABOLISM	0.233
29	TYPE_III_SECRETION_SYSTEM	0.235
30	TYROSINE_METABOLISM	0.232
31	GLUTATHIONE_METABOLISM	0.233
32	GLOBOSIDE_METABOLISM	0.226
33	FRUCTOSE_AND_MANNOSE_METABOLISM	0.237
34	BUTANOATE_METABOLISM	0.244
35	PROPANOATE_METABOLISM	0.247
36	CITRATE_CYCLE_TCA_CYCLE	0.241
37	ALANINE_AND_ASPARTATE_METABOLISM	0.239
38	GLYCOLYSIS_AND_GLCONEOGENESIS	0.245

39	UREA_CYCLE_AND_METABOLISM_OF_AMINO_GROUPS	0.239
40	STATIN_PATHWAY_PHARMGKB	0.373
41	PHOTOSYNTHESIS	0.410
42	METHANE_METABOLISM	0.461
43	KREBS_TCA_CYCLE	0.475
44	ARGININE_AND_PROLINE_METABOLISM	0.512
45	CARBON_FIXATION	0.543
46	RIBOSOMAL_PROTEINS	0.576
47	TRANSLATION_FACTORS	0.575
48	PROSTAGLANDIN_AND_LEUKOTRIENE_METABOLISM	0.594
49	MRNA_PROCESSING_REACTOME	0.586
50	GALACTOSE_METABOLISM	0.577
51	RNA_TRANSCRIPTION_REACTOME	0.588
52	BETA_ALANINE_METABOLISM	0.581
53	GLYCEROLIPID_METABOLISM	0.654
54	PURINE_METABOLISM	0.648
55	BIOGENIC_AMINE_SYNTHESIS	0.761
56	DNA_REPLICATION_REACTOME	0.832
57	RNA_POLYMERASE	0.933
58	INTEGRIN_MEDIATED_CELL_ADHESION_KEGG	0.946

Supplemental Table 2. Primer Sequences

Primer	Sequence
Srebp-1c-F	GGCCCGGGAAGTCACTGT
Srebp-1c-R	GGAGCCATGGATTGCACATT
Srebp-1a-F	GGCCGAGATGTGCGAACT
Srebp-1a-R	TTGTTGATGAGCTGGAGCATGT
Srebp2-F	GCGTTCTGGAGACCATGGA
Srebp2-R	ACAAAGTTGCTCTGAAAACAAATCA
Insig1-F	TCACAGTGACTGAGCTTCAGCA
Insig1-R	TCATCTTCATCACACCCAGGAC
Insig2a-F	CCCTCAATGAATGTACTGAAGGATT
Insig2a-R	TGTGAAGTGAAGCAGACCAATGT
Insig2b-F	CCGGGCAGAGCTCAGGAT
Insig2b-R	GAAGCAGACCAATGTTTCAATGG
Hmgcr-F	CTTGTGGAATGCCTTGTGATTG
Hmgcr-R	AGCCGAAGCAGCACATGAT
Fdps-F	ATGGAGATGGGCGAGTTCTTC
Fdps-R	CCGACCTTTCCCGTCACA
Fdft1-F	CCAACCTCAATGGGTCTGTTCCCT
Fdft1-R	TGGCTTAGCAAAGTCTTCCAACCT
Cyp51-F	AGCTGTACGCAGACCTGGAT
Cyp51-R	ACGCCCGTCCTTGTATGTAG
Ldlr-F	GAGGAGCAGCCACATGGTAT
Ldlr-R	GCTCGTCCTCTGTGGTCTTC
18S-F	GTAACCCGTTGAACCCATT
18S-R	CCATCCAATCGGTAGTAGCG
Pcsk9-F	CCCCATGTGGAGTACATTGA
Pcsk9-R	GTGGAAGCGTGTCCCATC
Idol-F	ACCGCCAATACAGCTATGA
Idol-R	GTTCTCCATCGCTGACACAA
Fasn-F	GCTGCGGAAACTTCAGGAAAT
Fasn-R	AGAGACGTGTCACTCCTGGACTT
Scd1-F	CATCATTCTCATGGTCCTGCT
Scd1-R	CCCAGTCGTACACGTCATTT

Supplemental Information

Supplemental Figure S1. *Statin/ezetimibe treatment lowers HDL and non-HDL cholesterol in LIRKO mice.* LIRKO and control mice were fed a diet with or without supplementation with statin/ezetimibe (**S/E**, 0.1% Lovastatin and 0.025% ezetimibe) for one week. Equal amounts of serum were pooled from four to six mice from each group, and subjected to FPLC fractionation. Cholesterol was measured in each fraction.

Supplemental Figure S1

