

Table S1. Significantly enriched pathway following the intervention.

Pathway	DEGs with pathway annotation	All Genes with Pathway Annotation	P value	FDR	Pathway id
HF vs NC					
Metabolic pathways	103	1295	0.00000	0.00000	rno01100
Fatty acid metabolism	15	53	0.00000	0.00001	rno01212
PPAR signaling pathway	17	79	0.00000	0.00001	rno03320
Steroid biosynthesis	8	20	0.00001	0.00048	rno00100
Biosynthesis of unsaturated fatty acids	8	27	0.00005	0.00216	rno01040
Fatty acid degradation	9	47	0.00030	0.01002	rno00071
Carbon metabolism	14	121	0.00085	0.01982	rno01200
Steroid hormone biosynthesis	10	80	0.00271	0.03957	rno00140
Fatty acid elongation	5	27	0.00758	0.07716	rno00062
Citrate cycle (TCA cycle)	5	32	0.01399	0.13094	rno00020
Glycolysis / Gluconeogenesis	8	75	0.01586	0.13743	rno00010
alpha-Linolenic acid metabolism	4	25	0.02538	0.18560	rno00592
Glyoxylate and dicarboxylate metabolism	4	25	0.02538	0.18560	rno00630
Linoleic acid metabolism	5	40	0.03042	0.20935	rno00591
Bile secretion	7	72	0.03486	0.22180	rno04976
Propanoate metabolism	4	29	0.03871	0.22647	rno00640
Glycerophospholipid metabolism	8	92	0.04232	0.23577	rno00564
AMPK signaling pathway	10	130	0.04851	0.25924	rno04152
HF vs GB					
PPAR signaling pathway	4	79	0.00552	0.15730	rno03320
Bile secretion	3	27	0.02612	0.27447	rno04976
Steroid hormone biosynthesis	3	80	0.03384	0.27559	rno00140
GB vs NB					
Steroid hormone biosynthesis	10	80	0.00000	0.00040	rno00140
Biosynthesis of unsaturated fatty acids	6	27	0.00002	0.00130	rno01040
PPAR signaling pathway	8	79	0.00016	0.00695	rno03320
Fatty acid metabolism	5	53	0.00363	0.06393	rno01212
Linoleic acid metabolism	4	40	0.00757	0.12107	rno00591
Bile secretion	5	72	0.01193	0.13998	rno04976
Metabolic pathways	35	1295	0.01330	0.14632	rno01100
Arachidonic acid metabolism	5	78	0.01610	0.14910	rno00590
Primary bile acid biosynthesis	2	16	0.03980	0.28664	rno00120

NC: normal diet group; HF: high-fat diet group; NB: high-fat diet containing untreated bran; GB: high-fat diet containing GABA-enrich wheat bran.