

Supplementary materials

Table S1 Primer sequences for qRT-PCR (related to Materials and methods 2.13 and Figure S1)

Gene name	Forward sequence	Reverse sequence
Cyp7a1	GCTGTGGTAGTGAGCTGTTG	GTTGTCCAAAGGAGGTTCCACC
Cyp8b1	CACGGGGATGTCTTCACGG	TGAGCACCAGTTCTTTTGCATAG
Cyp27a1	GCACAGGAGAGTACGGAGG	CGGGCAAGTGCAGCACATA
Cyp7b1	GGAGCCACGACCCTAGATG	GCCATGCCAAGATAAGGAAGC
Gapdh	AGGTCGGTGTGAACGGATTTG	GGGGTCGTTGATGGCAACA

Table S2

Bile Acids	Ctrl	LOP	LOPL	LOPP	LOPLP
Lithocholic Acid	980.85	329.56	354.51	509.79	481.42
Chenodeoxycholic Acid	168.28	27.46	9.29	43.39	38.56
Deoxycholic Acid	24473.75	12261.93	9069.43	10086.58	12292.09
Ursodeoxycholic Acid	1205.34	423.37	150.55	208.27	246.57
Cholic Acid	20897.20	8321.88	1356.13	4069.40	1674.32
Deoxycholic Acid Glycine Conjugate	27.17	7.55	4.17	5.68	7.75
Glycocholic Acid	29.23	25.23	26.49	24.19	25.63
Lithocholytaurine	19.83	7.29	2.00	4.17	3.73
Tauroursodeoxycholic Acid	928.09	16.58	9.00	15.08	14.59
Taurodeoxycholic Acid	164.45	26.22	10.91	20.67	17.45
Taurochenodesoxycholic Acid	3.78	1.22	0.60	15.34	2.02
Taurocholic Acid	3731.13	177.25	68.95	157.00	91.30
Epiallolithocholic Acid	328.85	136.91	141.98	140.39	177.48
23-Norcholic Acid	11.03	29.24	28.45	33.03	22.83
Hyodeoxycholic Acid	10431.40	2988.91	3716.45	934.07	9977.49
α Muricholic Acid	33837.44	24703.06	18697.91	17508.09	17151.03
12-Ketolithocholic Acid	3073.78	798.12	587.31	851.04	930.62
Glycohyodeoxycholic Acid	9.35	4.95	3.81	4.32	5.96
6,7-Diketolithocholic Acid	4.93	4.87	2.29	3.62	2.15
β -Muricholic Acid	17726.31	16321.57	4769.01	5002.49	6843.23
Tauro- α -Muricholic Acid	6357.30	281.98	77.22	110.33	115.81
7,12-Diketolithocholic Acid	23.30	15.19	4.76	9.25	4.79
Taurohyodeoxycholic Acid	503.51	11.58	4.37	/	33.96
3 β -Cholic Acid	1236.47	467.91	20.66	257.16	261.34
Ursocholic Acid	286.61	213.88	39.00	116.25	74.87
Isolithocholic Acid	277.79	88.98	97.65	114.79	130.05

Murideoxycholic Acid	4630.00	1449.66	724.19	400.57	2389.75
Hyochoolic Acid	369.67	229.86	88.55	333.59	118.90
Allochoolic Acid	1893.01	2161.27	728.21	743.27	856.82
Tauro- β -Muricholic Acid (Sodium Salt)	6089.54	281.19	79.58	112.98	112.60
Nor-Desoxycholic Acid	38.46	16.47	11.59	3.71	11.63

Table S3

Bile Acids	Ctrl	LOP	LOPL	LOPP	LOPLP
Chenodeoxycholic Acid	2824.26	17.42	7295.77	8.38	16865.67
Ursodeoxycholic Acid	4775.68	/	2705.89	/	6009.59
Cholic Acid	29.59	/	9.63	/	13.51
Glycocholic Acid	60.84	25.21	47.95	42.29	67.75
Tauroursodeoxycholic Acid	9060.71	15269.42	20980.06	27432.5 5	23517.51
Taurochenodesoxycholic Acid	5784.63	16245.65	13986.94	33117.3 5	12695.09
Taurocholic Acid	91111.75	115986.6 4	130690.5 2	196543.54	168895.3 1
Epiallolithocholic Acid	12551.83	4701.97	8302.82	10150.4 2	17916.85
23-Norcholeic Acid	101.02	120.33	127.10	153.83	149.13
Alpha Muricholic Acid	35585.65	46.59	1604.86	58.35	2745.15
6,7-Diketolithocholic Acid	15.62	/	9.53	/	15.36
Beta-Muricholic Acid	162686.0 2	469.58	24826.81	566.21	48448.89
Tauro-Alpha-Muricholic Acid	14804.92	37939.66	44450.13	53134.6 5	56000.59
7-Ketolithocholic Acid	1608.63	/	752.93	/	/
Ursocholic Acid	/	15.14	38.39	26.83	60.95
Murideoxycholic Acid	1159.16	/	/	/	/
Hyochoolic Acid	252462.1 5	1629.77	272244.1 0	1030.28	745491.3 1
Allochoolic Acid	10747.22	/	/	/	/
Tauro-Beta-Muricholic Acid (Sodium Salt)	20591.35	39569.39	48635.92	55357.5 8	57079.90
3-oxodeoxycholic acid	179.57	/	282.41	/	544.80
3-Oxocholeic acid	2580.86	/	2052.48	/	5387.06
12-Oxochenodeoxycholic acid	3.81	/	0.21	/	1.17
choleic acid 7 sulfate	49351.55	11884.24	9942.06	11741.5 7	16487.61
7-Ketodeoxycholic acid	798.07	207.15	583.41	275.83	877.82

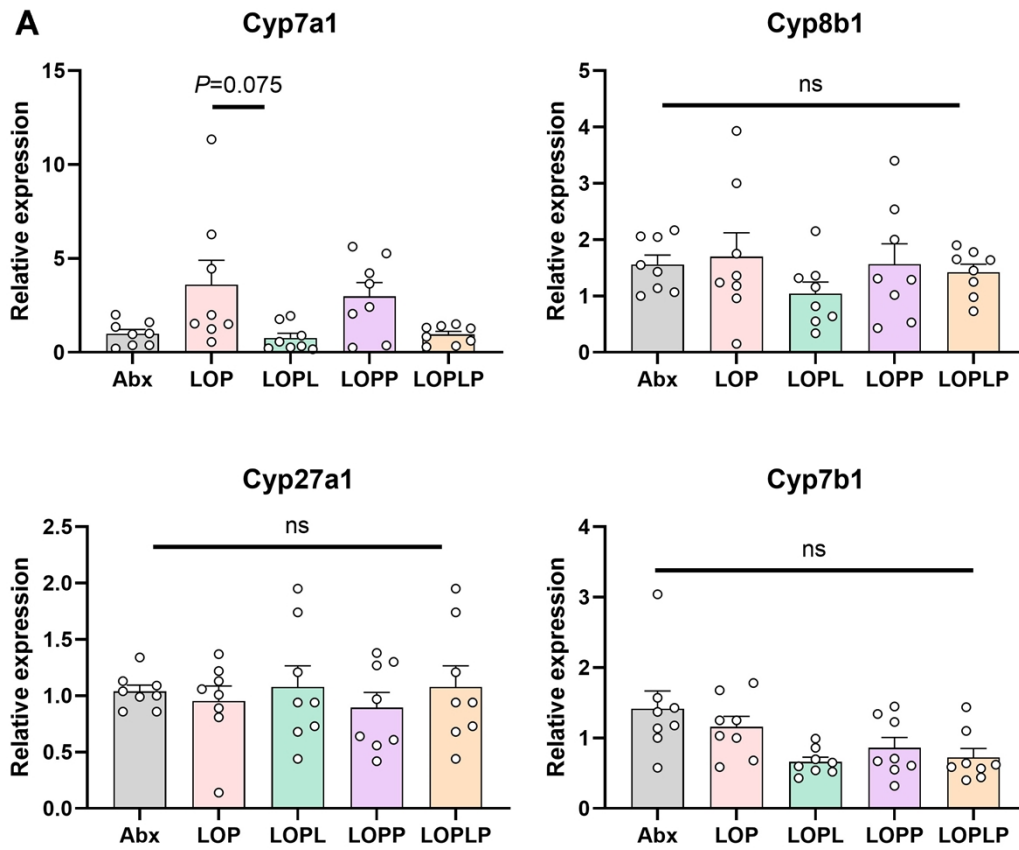


Figure S1. Gene expression related to hepatic bile acid synthetase in constipated mice after Abx intervention. (A) The expression of Cyp7a1, Cyp8b1, Cyp27a1 and Cyp7b1.