

Supplementary table 1: Identified metabolites with raw p-value below 0.05

Metabolites	IV-Alcohol self-administration (IV-ASA)								IV-Alcohol clamp (IV-AC)								
	Area Under the Curve (AUC)		IV-Ghrelin or Placebo						Area Under the Curve (AUC)		IV-Ghrelin or Placebo						
	p	q	Baseline	IV-ASA			BrAC=0	p	q	Baseline	Post-LD	IV-AC			Post-AC	BrAC=0	
		d	d	d	d	d			d	d	d	d	d	d			
Steroids and steroid derivatives																	
Cortisol	1.39E-07	0.00032	2.68	0.09	3.21	2.39	4.93	-0.49	4.63E-12	1.21E-08	3.01	-0.11	2.86	3.38	3.14	2.96	-0.30
Corticosterone	0.00017	0.02513	3.16	-0.14	7.54	3.50	6.77	-0.38	4.59E-08	3.46E-05	4.11	-0.24	5.40	4.05	4.93	5.03	-0.31
Cortisone	0.00037	0.03522	0.51	0.18	0.39	0.74	1.36	-0.55	0.07717	0.52368	0.49	-0.02	-0.05	0.32	0.93	1.03	-0.01
Glycochenodeoxycholic acid	0.00042	0.03749	0.81	0.10	1.15	0.91	1.23	1.05	5.04E-06	0.00132	0.44	-0.23	0.65	0.88	0.41	0.40	-0.41
Glycocholic acid	0.03954	0.31968	0.38	-0.09	0.80	0.44	0.76	0.64	2.12E-08	0.00002	0.59	-0.21	0.76	1.27	0.59	0.55	-0.28
Glycolithocholic acid	7.04E-06	0.00436	1.56	1.34	1.86	1.83	0.90	4.97	0.01742	0.28131	1.56	0.60	2.89	1.99	1.28	0.82	-0.13
Chenodeoxycholic acid	0.63258	0.84427	-0.18	0.48	-0.01	-0.20	-0.02	-0.59	0.01788	0.28587	1.46	0.12	0.75	1.89	2.80	2.53	1.04
Deoxycholic acid	0.03963	0.31968	0.37	0.56	0.49	0.27	0.54	0.27	0.10005	0.57198	0.69	-0.12	0.48	0.90	1.08	1.15	1.18
Murocholic acid	0.00066	0.04994	0.78	0.69	1.06	0.72	0.98	0.44	0.22094	0.73754	0.53	-0.07	0.46	0.65	0.72	0.77	0.63
Taurocholic acid	0.05473	0.35632	0.73	-0.07	2.05	0.63	0.65	0.62	0.02734	0.34682	0.95	-0.37	1.24	2.25	0.82	0.74	-0.46
Cholesterol	0.62083	0.83900	-0.16	0.90	-0.06	-0.38	0.47	-0.16	0.04047	0.40966	-0.32	-0.04	-0.02	-0.48	-0.35	-0.31	-0.49
7-Ketocholesterol	0.0421	0.22592	-0.61	-0.43	-0.24	-0.41	-0.77	-0.17	0.03366	0.37697	-0.36	-0.40	-0.38	-0.38	-0.29	-0.39	-0.39
7α-Hydroxy-3-oxo-4-cholestenoic acid	0.00425	0.13262	-0.82	-0.51	-0.44	-0.47	-0.24	-0.94	0.00238	0.09584	-0.49	-0.17	-0.24	-0.70	-0.56	-0.52	-0.55
Fatty acids and conjugates																	
FA 18:1	0.00047	0.04061	1.91	0.01	0.58	1.50	3.92	-0.27	0.80154	0.96981	-0.09	-0.21	0.31	-0.27	-0.06	-0.18	-0.04
FA 18:2	0.00081	0.05743	1.52	-0.10	0.57	1.13	2.57	-0.06	0.48437	0.89681	-0.20	-0.29	0.19	-0.35	-0.20	-0.29	-0.11
FA 18:3	0.00029	0.03203	1.62	-0.14	0.61	1.08	2.85	0.06	0.89308	0.98433	-0.07	-0.02	0.38	-0.21	-0.16	-0.16	-0.09
FA 20:1	0.00140	0.07596	1.31	0.09	0.22	0.73	4.50	-0.03	0.75971	0.96233	0.06	-0.28	0.33	-0.03	0.37	-0.19	0.02
FA 20:2	0.00199	0.08952	1.44	0.01	0.43	1.08	3.27	0.19	0.78288	0.96604	-0.18	-0.26	0.01	-0.27	-0.10	-0.22	0.02
FA 20:3	0.00905	0.18722	1.27	0.08	0.29	0.90	2.92	-0.07	0.48923	0.89833	-0.23	-0.33	0.00	-0.39	-0.15	-0.22	-0.10
FA 22:4	0.00311	0.11456	1.31	0.14	0.44	0.93	3.00	0.13	0.81367	0.97170	-0.12	-0.23	0.23	-0.34	-0.06	-0.06	-0.06
FA 22:5	0.00160	0.08127	1.48	0.10	1.28	0.67	2.77	0.05	0.75052	0.96177	0.11	-0.01	0.47	-0.09	0.16	0.10	-0.10
Pimelic acid	0.06411	0.37337	-0.49	0.34	0.30	-0.38	-0.59	0.32	0.00765	0.18480	1.08	-0.21	0.64	0.25	1.45	1.46	-0.02
Azelaic acid	0.05760	0.36190	-0.73	-0.05	0.60	0.21	-0.52	0.61	0.00721	0.17915	0.33	0.20	0.27	0.07	0.53	0.53	1.69
2-Ethyl-2-hydroxybutyric acid	0.82674	0.93452	0.17	0.35	0.57	0.26	0.26	-0.27	0.02628	0.34210	1.00	0.59	1.20	1.13	0.92	0.55	0.33
2-Hydroxystearic acid	0.86435	0.94948	0.04	0.29	0.30	1.11	3.80	-0.02	0.00069	0.04500	0.21	0.57	0.59	0.50	0.77	0.17	0.03
Glycerophospholipids																	
Glycerophosphocholine																	
LPC 15:0	0.01057	0.19956	-0.33	-0.07	0.12	-0.26	-0.03	-0.36	0.71154	0.95307	-0.04	-0.16	-0.05	0.08	0.16	0.06	-0.26
LPC 16:0	0.01576	0.23335	-0.53	-0.13	-0.21	-0.52	-0.39	-0.16	0.26683	0.77916	-0.21	-0.31	-0.07	-0.18	-0.20	-0.23	-0.23
LPC 17:0	0.03435	0.30469	-0.43	0.04	0.05	-0.20	-0.40	-0.40	0.10729	0.58531	-0.15	-0.13	0.01	-0.13	-0.13	-0.18	-0.35
LPC 18:0	0.01644	0.23740	-0.56	-0.10	-0.33	-0.50	-0.40	-0.30	0.64867	0.93906	0.05	0.02	-0.04	0.04	0.14	0.25	-0.13
LPC 18:1	0.02538	0.27880	-0.43	0.05	-0.11	-0.36	-0.20	-0.46	0.40358	0.85894	0.03	0.12	0.03	0.03	0.20	-0.02	-0.25
LPC 18:2	0.01107	0.20358	-0.41	-0.07	-0.14	-0.31	-0.16	-0.40	0.64755	0.93902	0.16	0.22	0.19	0.16	0.26	0.11	-0.04
LPC 18:3	0.02339	0.27047	-0.44	-0.21	-0.11	-0.17	-0.17	-0.55	0.60172	0.92848	0.08	0.11	0.10	0.05	0.21	0.09	-0.26
LPC 18:3	0.35667	0.67579	-0.12	-0.01	0.06	0.10	0.15	-0.04	0.01723	0.28048	1.09	0.49	0.91	1.59	1.06	0.74	0.45
LPC 20:1	0.01287	0.21626	-0.46	-0.15	-0.18	-0.41	-0.30	-0.47	0.68682	0.94918	0.03	0.15	0.04	0.06	0.15	-0.07	-0.14
LPC 20:2	0.02272	0.26757	-0.42	-0.14	-0.18	-0.25	-0.16	-0.39	0.31952	0.81506	-0.06	0.04	-0.03	-0.04	-0.01	0.00	-0.26
LPC 20:4	0.03081	0.29558	-0.35	-0.04	-0.06	-0.14	0.01	-0.62	0.74943	0.96150	0.21	0.17	0.24	0.17	0.22	0.22	0.03
LPC 22:4	0.00145	0.07706	-0.25	-0.06	-0.14	-0.10	0.10	-0.39	0.69698	0.95100	0.22	0.33	0.25	0.14	0.35	0.23	0.03
LPC 22:5	0.00643	0.15780	-0.32	-0.09	-0.16	-0.26	0.16	-0.29	0.91664	0.98809	0.14	0.21	0.17	0.02	0.26	0.24	-0.12
LPC 22:6	0.00739	0.16879	-0.44	-0.24	-0.26	-0.45	-0.04	-0.58	0.43129	0.87439	0.14	0.18	0.32	0.11	0.14	0.24	-0.20
LPC O-16:1	0.02131	0.26291	-0.42	-0.03	-0.16	-0.31	-0.26	-0.41	0.53462	0.91346	0.06	0.18	0.12	0.01	0.25	-0.06	-0.09
LPC O-18:1	0.03162	0.29806	-0.50	-0.06	-0.12	-0.42	-0.32	-0.35	0.77340	0.96458	0.05	0.15	0.13	0.02	0.18	-0.07	-0.11
LPE 16:0	0.01432	0.22637	-0.43	-0.09	-0.07	-0.35	-0.37	-0.38	0.45306	0.88306	-0.10	-0.15	-0.07	-0.03	0.14	-0.02	-0.40
LPE 16:1e	0.02315	0.26959	-0.46	-0.10	-0.30	-0.42	-0.28	-0.36	0.67237	0.94613	0.29	0.47	0.41	0.38	0.20	0.22	-0.06
LPE 18:1e	0.01806	0.24514	-0.44	-0.04	-0.40	-0.37	-0.25	-0.39	0.87557	0.98217	0.15	0.30	0.21	0.19	0.13	0.15	-0.15
LPE O-16:1	0.01915	0.25205	-0.47	-0.11	-0.30	-0.41	-0.32	-0.41	0.62871	0.93494	0.30	0.45	0.44	0.32	0.26	0.22	0.00
LPE O-18:1	0.02624	0.28103	-0.41	-0.02	-0.24	-0.41	-0.25	-0.39	0.66040	0.94253	0.10	0.21	0.18	0.14	0.14	0.10	-0.21
PC 36:2	0.04954	0.34580	-0.43	0.15	-0.13	-0.79	0.51	-0.49	0.84513	0.97699	-0.12	0.21	-0.26	-0.09	-0.34	0.13	0.23
PC 37:4 (17:0_20:4)	0.03434	0.30469	-0.52	-0.07	-0.42	-0.39	-0.02	-0.43	0.64563	0.93826	0.21	0.88	0.05	0.16	0.13	-0.10	0.86
PC 38:3	0.04520	0.33570	-0.46	-0.29	-0.11	-0.68	-0.19	0.41	0.42644	0.87132	-0.29	-0.25	-0.53	0.00	0.09	-0.13	-0.46
SM 32:1	0.17401	0.51940	-0.30	0.37	-0.25	-0.61	0.16	-0.23	0.03407	0.37841	-0.38	-0.38	-0.13	-0.44	-0.28	-0.37	-0.59
SM 33:1	0.52486	0.79035	-0.18	0.39	-0.14	-0.42	0.29	0.10	0.02823	0.35068	-0.28	-0.14	-0.07	-0.37	-0.26	-0.24	-0.45
SM 36:3	0.02904	0.28980	-0.32	0.27	-0.24	-0.47	-0.07	-0.11	0.26468	0.77684	0.21	0.10	0.14	0.18	0.25	0.29	0.01
SM 30:1	0.19487	0.54004	-0.24	0.04	-0.18	-0.35	0.04	-0.33	0.01155	0.22902	-0.54	-0.64	-0.60	-0.58	-0.47	-0.62	-0.58
SM 32:1	0.11990	0.45565	-0.32	0.33	-0.18	-0.63	0.02	-0.22	0.04140	0.41354	-0.37	-0.36	-0.23	-0.40	-0.27	-0.32	-0.57
SM 36:2	0.52666	0.79154	-0.06	0.59	-0.49	0.44	-0.45	0.70	0.00847	0.19719	-0.20	-0.23	0.35	-0.23	-0.20	-0.11	-0.41
DG 34:2	0.72954	0.88980	-0.01	0.48	0.02	-0.29	0.51	-0.10	0.00197	0.08610	-0.22	-0.27	-0.31	-0.43	-0.01	-0.17	-0.20
Amino acids and amino acid metabolites																	
1-Methylhistidine	0.03058	0.29493	1.02	0.41	1.18	0.33	0.52	-0.02	0.13836	0.63846	-0.60	-1.99	-0.86	0.64	0.07	-0.24	-0.07
3-Methyl-2-oxovaleric acid	0.38086	0.69511	0.22	0.56	1.30	0.47	0.23	-0.21	0.02030	0.30170	0.55	0.24	0.33	0.51	1.03	0.50	-0.06
Asparagine	0.66795	0.86123	0.09	0.20	0.67	0.42	-0.03	-0.66	0.00266	0.10318	0.55	0.					