Supplemental Table 1.

Behavioral Paradigm	Abbrev	Measurement	Comparison	F	° of freedom	p	*	Fig.
Contextual Fear Conditioning (3-shock)	CFC D1	Freezing	Drug	3.528	1,68	0.0776	-	1B
			Time	33.644	4,68	<0.0001	***	
			Drug x Time	2.275	4,68	0.0701	-	
	CFC D2	Freezing	Drug	5.191	1,68	0.0359	*	1C
			Time	27.495	4,68	<0.0001	***	
			Drug x Time	0.519	4,68	0.5996	-	
Contextual Fear Conditioning (No shock)	CFC D1	Freezing	Drug	0.679	1,64	0.0422	-	S5B
			Time	3.402	4,64	0.0138	*	
			Drug x Time	1.579	4,64	0.2621	-	
	CFC D2	Freezing	Drug	0.402	1,64	0.5353	-	S5C
			Time	4.3	4,64	0.0038	**	
			Drug x Time	0.528	4,64	0.7159	-	

Mouse ID	CFC	Drug	Left PFC Weight (g)	Right PFC Weight (g)	Total PFC Weight (g)	Left HPC Weight (g)	Right HPC Weight (g)	Total HPC Weight (g)
1	3-shock	Sal	0.0156	0.0132	0.0288	0.0156	0.0146	0.0302
2	3-shock	Sal	0.0151	0.0160	0.0311	0.0209	0.0190	0.0399
3	3-shock	Sal	0.0200	0.0200	0.0400	0.0107	0.0254	0.0361
4	3-shock	Sal	0.0284	0.0223	0.0507	0.0141	0.0168	0.0309
5	3-shock	Sal	0.0221	0.0210	0.0431	0.0162	0.0191	0.0353
6	3-shock	Sal	0.0122	0.0100	0.0222	0.0160	0.0150	0.0310
7	3-shock	Sal	0.0150	0.0110	0.0260	0.0128	0.0170	0.0298
8	3-shock	Sal	0.0140	0.0134	0.0274	0.0125	0.0145	0.0270
9	3-shock	Sal	0.0140	0.0150	0.0290	0.0157	0.0124	0.0281
10	3-shock	Sal	0.0130	0.0120	0.0250	0.0132	0.0115	0.0247
11	3-shock	K	0.0195	0.0205	0.0400	0.0150	0.0155	0.0305
12	3-shock	K	0.0270	0.0272	0.0542	0.0219	0.0207	0.0426
13	3-shock	K	0.0170	0.0130	0.0300	0.0140	0.0140	0.0280
14	3-shock	K	0.0248	0.0223	0.0471	0.0155	0.0144	0.0299
15	3-shock	K	0.0195	0.0174	0.0369	0.0139	0.0123	0.0262
16	3-shock	K	0.0137	0.0110	0.0247	0.0160	0.0147	0.0307

17	3-shock	K	0.0130	0.0150	0.0280	0.0124	0.0135	0.0259
18	3-shock	K	0.0200	0.0200	0.0400	0.0143	0.0130	0.0273
19	3-shock	K	0.0150	0.0150	0.0300	0.0190	0.0159	0.0349
20	No shock	Sal	0.0150	0.0129	0.0279	0.0155	0.0177	0.0332
21	No shock	K	0.0183	0.0213	0.0396	0.0137	0.0133	0.027
22	No shock	Sal	0.0205	0.0181	0.0386	0.0221	0.0139	0.036
23	No shock	Sal	0.0152	0.0146	0.0298	0.017	0.0138	0.0308
24	No shock	Sal	0.0208	0.0200	0.0408	0.019	0.017	0.036
25	No shock	K	0.0180	0.0238	0.0418	0.019	0.015	0.034
26	No shock	K	0.0166	0.0183	0.0349	0.0178	0.015	0.0328
27	No shock	K	0.0250	0.0193	0.0443	0.01	0.0133	0.0233
28	No shock	Sal	0.0197	0.0238	0.0435	0.0144	0.0153	0.0297
29	No shock	Sal	0.0278	0.0227	0.0505	0.0176	0.017	0.0346
30	No shock	Sal	0.0190	0.0242	0.0432	0.0159	0.0134	0.0293
31	No shock	Sal	0.0200	0.0219	0.0419	0.0158	0.0132	0.029
32	No shock	Sal	0.0143	0.0161	0.0304	0.0157	0.0142	0.0299
33	No shock	K	0.0236	0.0213	0.0449	0.0175	0.0157	0.0332
34	No shock	K	0.0136	0.0168	0.0304	0.0148	0.0123	0.0271
35	No shock	K	0.0211	0.0167	0.0378	0.0145	0.0137	0.0282
36	No shock	K	0.0137	0.0150	0.0287	0.0157	0.0102	0.0259
37	No shock	K	0.1690	0.0166	0.1856	0.0183	0.0122	0.0305

Stressed Mice

Region	Mode	Metabolite	Left PFC p value	Right PFC p value
		1-Methylhistidine	0.0004	0.0032
		11-Hydroxyandrosterone	0.0387	0.6853
		13-HOTE	0.0021	0.2243
		19-Norandrosterone	0.0377	0.3451
		2-Hexenoylcarnitine	0.9272	0.3088
		2-Methoxyestradiol	0.2216	0.4853
		3--5-Tetradecadiencarnitine	0.9217	0.0457
		3-5-Diiodothyronine	0.5416	0.1165
		3-Aminoisobutanoic-acid	0.0000	0.0000
		3-Methylcrotonylglycine	0.0212	0.0007
		3-Methylhistidine	0.0023	0.0091
		3-Methyluridine	0.1794	0.2124
		5--Methylthioadenosine	0.0084	0.1503

5-6-Dihydrouridine	0.6656	0.0929
5-Methylcytidine	0.6431	0.3072
8-Hydroxyguanine	0.1223	0.0251
9-12-Hexadecadienoylcarnitine	0.2105	0.0618
9-Decenoylcarnitine	0.4361	0.4361
Acetoacetic-acid	0.0000	0.0038
Adenosine-triphosphate	0.0291	0.1557
Alanyl-Proline	0.0025	0.0180
Aminoadipic-acid	0.4701	0.5719
Argininosuccinic-acid	0.0274	0.0424
Asymmetric-dimethylarginine	0.0050	0.0363
Carnosine	0.0406	0.0337
Citrulline	0.0019	0.0050
Cyclic-AMP	0.3953	0.4846
Cystathionine-ketimine	0.0310	0.2109
Cytidine	0.6916	0.6714
D-Serine	0.0011	0.0092
D-Tryptophan	0.0056	0.0129
Deoxycytidine	0.0165	0.0477
Deoxyuridine	0.0017	0.5072
Dihydrothymine	0.0054	0.0095
Dodecanoylcarnitine	0.1678	0.0547
dUDP	0.0002	0.0003
Erythronic-acid	0.0096	0.0077
Estradiol	0.0027	0.1554
Glucosylgalactosyl-hydroxylysine	0.0050	0.0123
Glycine	0.0136	0.0061
Glycylproline	0.0028	0.0100
Guanosine-diphosphate	0.6691	0.3997
Guanosine-monophosphate	0.3745	0.0330
Guanosine-triphosphate	0.0433	0.0544
Hexanoylcarnitine	0.6060	0.0104
Homo-L-arginine	0.0485	0.0871
Homocarnosine	0.0069	0.0309
Hypoxanthine	0.0188	0.0096
IMP	0.0031	0.0218
Inosine	0.0127	0.0086

	Positive	Isobutyryl-L-carnitine	0.1272	0.0332
		Isoleucine	0.0027	0.0105
		Isovalerylcarnitine	0.5210	0.2595
		Isovalerylglucuronide	0.0302	0.0336
		Ketoprofen-glucuronide	0.0018	0.0019
		L-Allothreonine	0.0023	0.0024
		L-Cystathionine	0.2210	0.6509
		L-Cysteinylglycine-disulfide	0.0001	0.0010
		L-Homoserine	0.0021	0.0289
		L-Octanoylcarnitine	0.5390	0.0150
		L-Tyrosine	0.0022	0.0059
		Leucine	0.0000	0.0046
		Malonylcarnitine	0.0091	0.2928
		MET-ENKEPHELIN	0.1336	0.0035
		methionine	0.0153	0.0830
		N--Phosphoguanidinoethyl methyl phosphate	0.2092	0.1060
		N-Acetyl-L-methionine	0.0325	0.0206
		N-Acetylcystathionine	0.0758	0.0198
		N-Acetylglutamine	0.0154	0.1573
		N-Acetylneuraminic-acid	0.0045	0.2486
		N-acetyltryptophan	0.0206	0.1415
		N-Acetylvanilalanine	0.1695	0.1871
		N-Formyl-L-methionine	0.7312	0.0085
		N4-Acetylaminobutanal	0.0043	0.0518
		NAD	0.2233	0.0431
		NAD+	0.2640	0.0482
		NADH	0.0171	0.0150
		Nicotinamide	0.0018	0.0597
		Nonanoylcarnitine	0.0013	0.0198
		p-Cresol-glucuronide	0.1964	0.1882
		Phenylalanine	0.0064	0.0337
		Phenylpyruvic-acid	0.0011	0.0031
		Pipecolic-acid	0.0143	0.0630
		Progesterone	0.1866	0.6845
		Proline-betaine	0.1691	0.4450
		Prolylhydroxyproline	0.0577	0.0509
		S-adenosyl-L-homoCysteine	0.0246	0.1132

		S-Adenosylmethionine	0.1136	0.0061
		Suberylglycine	0.1818	0.1991
		Succinyladenosine	0.0941	0.0405
		Taurocholic-acid	0.0033	0.0510
		Taurodeoxycholic-acid	0.0000	0.0006
		Testosterone	0.0698	0.0089
		Thiamine-monophosphate	0.0128	0.0223
		Thyroxine	0.1623	0.1869
		trans-2-Dodecenoylcarnitine	0.4636	0.0027
		Trimethylamine-N-oxide	0.4867	0.3878
		Uracil	0.0840	0.0423
		Urolithin-C	0.0410	0.7105
		Xanthine	0.0392	0.0515
		Xanthurenic-acid	0.6185	0.0141
		(S)-Lactaldehyde	0.0553	0.0019
		11b-Hydroxyprogesterone	0.0083	0.3228
		12-13-DHOME	0.0068	0.4807
		1-Methylxanthine	0.6021	0.0000
PFC		2-Arachidonylglycerol	0.0127	0.3843
		2-Hexenoylcarnitine	0.0308	0.5644
		2-Hydroxyadipic-acid	0.2927	0.0028
		2-Phenylpropionate	0.0569	0.6244
		3-Chlorotyrosine	0.0009	0.2610
		3-Dehydrocarnitine	0.0834	0.9597
		3-Hydroxydodecanoic-acid	0.0022	0.6950
		3-Hydroxytetradecanedioic-acid	0.0037	0.9384
		3-Sulfinoalanine	0.5418	0.6465
		5-6-Dihydrouridine	0.6066	0.0001
		5-Methylcytidine	0.1470	0.0123
		5-Tetradecenoic-acid	0.0467	0.8897
		6-Hydroxydaidzein	0.0013	0.7263
		Adenine	0.3341	0.0044
		Adenosine	0.3086	0.0045
		Adenosine-monophosphate	0.0318	0.0011
		Adenosine-triphosphate	0.0142	0.0164
		ADP	0.5191	0.0143
		ADP-Glucose	0.8177	0.0002

	Negative	Aminoadipic-acid	0.1931	0.0000
		Butyrylcarnitine	0.0027	0.8076
		CDP	0.7795	0.0271
		Cyclic-AMP	0.7048	0.0044
		Cytidine	0.1892	0.0205
		Cytidine-monophosphate	0.9227	0.0051
		Cytosine	0.2507	0.0030
		D-Alanine	0.0178	0.0000
		Dihydrothymine	0.0200	0.0001
		Dihydroxyacetone-phosphate	0.4940	0.0052
		D-Lysine	0.6999	0.0077
		Dodecanedioic-acid	0.0021	0.9179
		Dodecanoic-acid	0.0447	0.8702
		D-Serine	0.1125	0.0000
		D-Tryptophan	0.0220	0.2810
		Enkephalin-L	0.1345	0.0007
		FAD	0.3991	0.0503
		Fructose-1-6-bisphosphate	0.1661	0.0415
		Gamma-Aminobutyric-acid	0.5252	0.0000
		Gamma-Glutamyl-Glutamine	0.0651	0.3903
		Glucosamine-phosphate	0.0037	0.0044
		glutathione	0.4697	0.0422
		Glyceric-acid	0.6690	0.0000
		Glycerol-3-phosphate	0.4140	0.0071
		GMP	0.2672	0.0225
		Guanosine-diphosphate	0.0445	0.0004
		Guanosine-triphosphate	0.0194	0.0041
		Hexanoylcarnitine	0.0339	0.8636
		Homocarnosine	0.8750	0.0000
		Homocitrulline	0.0019	0.3921
		Hydroxyhexanoycarnitine	0.0037	0.2976
		Hydroxyoctanoic-acid	0.0048	0.6490
		Hydroxypyruvic-acid	0.0214	0.0003
		IMP	0.0168	0.6032
		Inosine	0.0416	0.4426
		Isovaleric-acid	0.5087	0.0045
		L-2-Hydroxyglutaric-acid	0.3218	0.0096

L-3-Phenyllactic-acid	0.8600	0.0032
L-Acetylcarnitine	0.0060	0.7490
L-Carnitine	0.2011	0.0038
L-Glutamic-acid	0.3732	0.0000
Linoleic-acid	0.0115	0.5766
L-Lactic-acid	0.0348	0.0081
L-Malic-acid	0.0373	0.3364
L-Tyrosine	0.0077	0.7414
Malonate	0.0214	0.0003
Methionine	0.2286	0.0330
Methylmalonic-acid	0.0426	0.0032
N-Acetylglutamine	0.0694	0.6250
NAD+	0.0739	0.0043
NADH	0.0125	0.0021
N-Formyl-L-methionine	0.0092	0.0496
Nicotinamide-ribotide	0.1333	0.0083
Octulose-phosphate	0.0093	0.0043
Oleic-acid	0.0317	0.1234
O-Phosphoethanolamine	0.3872	0.0000
Oxidized-glutathione	0.1284	0.0001
Oxoadipic-acid	0.0041	0.1049
Oxoglutaric-acid	0.0274	0.0001
Palmitic-acid	0.0261	0.5972
Palmitoleic-acid	0.0024	0.6231
p-Cresol-sulfate	0.0018	0.4236
Phenylalanine	0.1502	0.0007
Phenylpropionylglycine	0.0071	0.3014
Phosphoenolpyruvic-acid	0.0404	0.1528
Propionylcarnitine	0.0018	0.2549
Propionylglycine	0.2466	0.0000
Ribothymidine	0.0000	0.1674
Sarcosine	0.1092	0.0251
Sphingosine-1-phosphate	0.9527	0.0042
Stearic-acid	0.0727	0.2743
Taurine	0.8738	0.0000
Testosterone-sulfate	0.0009	0.9284
Tetradecanedioic-acid	0.0035	0.7318

		Thiamine-pyrophosphate	0.2380	0.0001
		Thymine	0.0016	0.0733
		Uracil	0.2300	0.5986
		Uric-acid	0.5679	0.0024
		Uridine	0.1539	0.0332
		Uridine-diphosphate-glucose	0.3417	0.0100
		Uridine-diphosphate-N-acetylglucosamine	0.0536	0.0170
		Uridine-triphosphate	0.0085	0.0202
		Urolithin-C	0.0011	0.2275
		Valeric-acid	0.2847	0.0003
		Valerylcarnitine	0.0133	0.9297
		Xanthine	0.0661	0.6403
		Xanthosine-5-phosphate	0.3232	0.0042
Region	**Mode**	**Metabolite**	**Left HPC p value**	**Right HPC p value**
		1-Methylhistidine	0.0416	0.1744
		11-Hydroxyandrosterone	0.5556	0.5952
		13-HOTE	0.0421	0.0242
		19-Norandrosterone	0.8228	0.6511
		2-Hexenoylcarnitine	0.6606	0.9663
		2-Methoxyestradiol	0.4757	0.9931
		3--5-Tetradecadiencarnitine	0.0588	0.1658
		3-5-Diiodothyronine	0.3726	0.6775
		3-Aminoisobutanoic-acid	0.0345	0.0605
		3-Methylcrotonylglycine	0.0648	0.7030
		3-Methylhistidine	0.0127	0.0598
		3-Methyluridine	0.2461	0.8378
		5--Methylthioadenosine	0.6837	0.0074
		5-6-Dihydrouridine	0.0022	0.0030
		5-Methylcytidine	0.0540	0.3678
		8-Hydroxyguanine	0.0152	0.0405
		9-12-Hexadecadienoylcarnitine	0.0984	0.7821
		9-Decenoylcarnitine	0.0880	0.1751
		Acetoacetic-acid	0.7095	0.8305
		Adenosine-triphosphate	0.0704	0.1266
		Alanyl-Proline	0.0296	0.1327
		Aminoadipic-acid	0.0690	0.2016

		Argininosuccinic-acid	0.3259	0.4922
		Asymmetric-dimethylarginine	0.8378	0.6567
		Carnosine	0.6346	0.8656
		Citrulline	0.1826	0.5655
		Cyclic-AMP	0.0875	0.1405
		Cystathionine-ketimine	0.0443	0.8138
		Cytidine	0.1426	0.2717
		D-Serine	0.1869	0.8959
		D-Tryptophan	0.2462	0.4534
		Deoxycytidine	0.4804	0.3590
		Deoxyuridine	0.2250	0.6074
		Dihydrothymine	0.0808	0.1165
		Dodecanoylcarnitine	0.4180	0.8433
		dUDP	0.0029	0.0051
		Erythronic-acid	0.0185	0.1153
		Estradiol	0.4064	0.9947
		Glucosylgalactosyl-hydroxylysine	0.2679	0.1711
		Glycine	0.2668	0.8485
		Glycylproline	0.0892	0.2478
		Guanosine-diphosphate	0.0363	0.0685
		Guanosine-monophosphate	0.6696	0.2641
		Guanosine-triphosphate	0.0319	0.0736
		Hexanoylcarnitine	0.0342	0.0942
		Homo-L-arginine	0.1317	0.4405
		Homocarnosine	0.9057	0.3667
		Hypoxanthine	0.0287	0.1542
		IMP	0.0134	0.0204
		Inosine	0.0146	0.0621
	Positive	Isobutyryl-L-carnitine	0.1058	0.0577
		Isoleucine	0.1750	0.4787
		Isovalerylcarnitine	0.1611	0.3156
		Isovalerylglucuronide	0.2864	0.8821
		Ketoprofen-glucuronide	0.0010	0.0564
		L-Allothreonine	0.1602	0.8601
		L-Cystathionine	0.0878	0.0344
		L-Cysteinylglycine-disulfide	0.3245	0.4862
		L-Homoserine	0.8507	0.1369

L-Octanoylcarnitine	0.0014	0.0234
L-Tyrosine	0.0522	0.2079
Leucine	0.1488	0.2082
Malonylcarnitine	0.9241	0.8249
MET-ENKEPHELIN	0.0795	0.7499
Methionine	0.7775	0.8700
N--Phosphoguanidinoethyl methyl phosphate	0.2701	0.4484
N-Acetyl-L-methionine	0.3115	0.9274
N-Acetylcystathionine	0.2693	0.1513
N-Acetylglutamine	0.5036	0.9774
N-Acetylneuraminic-acid	0.6110	0.5381
N-acetyltryptophan	0.0594	0.1616
N-Acetylvanilalanine	0.3890	0.4706
N-Formyl-L-methionine	0.0885	0.7685
N4-Acetylaminobutanal	0.6462	0.6132
NAD	0.0278	0.0430
NAD+	0.0301	0.0461
NADH	0.0075	0.0877
Nicotinamide	0.0743	0.0159
Nonanoylcarnitine	0.1313	0.0383
p-Cresol-glucuronide	0.6377	0.8879
Phenylalanine	0.7497	0.8954
Phenylpyruvic-acid	0.0685	0.2399
Pipecolic-acid	0.9596	0.7845
Progesterone	0.2279	0.3776
Proline-betaine	0.2189	0.4441
Prolylhydroxyproline	0.2644	0.6170
S-adenosyl-L-homoCysteine	0.2590	0.5549
S-Adenosylmethionine	0.1013	0.0063
Suberylglycine	0.8441	0.1883
Succinyladenosine	0.1831	0.4121
Taurocholic-acid	0.7990	0.7520
Taurodeoxycholic-acid	0.5248	0.1932
Testosterone	0.0018	0.0128
Thiamine-monophosphate	0.0608	0.0215
Thyroxine	0.5634	0.4695
trans-2-Dodecenoylcarnitine	0.0218	0.1847

		Trimethylamine-N-oxide	0.4533	0.0275
		Uracil	0.0917	0.4630
		Urolithin-C	0.5196	0.2006
		Xanthine	0.0628	0.3702
		Xanthurenic-acid	0.3880	0.9391
		(S)-Lactaldehyde	0.0064	0.0042
		11b-Hydroxyprogesterone	0.3488	0.5851
		12-13-DHOME	0.4395	0.0008
		1-Methylxanthine	0.3016	0.2375
HPC		2-Arachidonylglycerol	0.2196	0.0671
		2-Hexenoylcarnitine	0.2634	0.0004
		2-Hydroxyadipic-acid	0.8925	0.0000
		2-Phenylpropionate	0.7219	0.3278
		3-Chlorotyrosine	0.7517	0.0182
		3-Dehydrocarnitine	0.6270	0.0066
		3-Hydroxydodecanoic-acid	0.7606	0.0327
		3-Hydroxytetradecanedioic-acid	0.2857	0.0021
		3-Sulfinoalanine	0.0589	0.0003
		5-6-Dihydrouridine	0.1574	0.0085
		5-Methylcytidine	0.0284	0.1033
		5-Tetradecenoic-acid	0.1464	0.3673
		6-Hydroxydaidzein	0.9145	0.0097
		Adenine	0.0130	0.0550
		Adenosine	0.0128	0.0612
		Adenosine-monophosphate	0.0150	0.0258
		Adenosine-triphosphate	0.0747	0.0670
		ADP	0.0247	0.0051
		ADP-Glucose	0.2876	0.0094
		Aminoadipic-acid	0.1148	0.0009
		Butyrylcarnitine	0.4150	0.0148
		CDP	0.0327	0.0073
		Cyclic-AMP	0.0554	0.0227
		Cytidine	0.0969	0.0899
		Cytidine-monophosphate	0.7747	0.1819
		Cytosine	0.0670	0.0331
		D-Alanine	0.0025	0.0000
		Dihydrothymine	0.4422	0.0076

	Negative	Dihydroxyacetone-phosphate	0.3423	0.0431
		D-Lysine	0.1333	0.0004
		Dodecanedioic-acid	0.3113	0.0040
		Dodecanoic-acid	0.4542	0.9220
		D-Serine	0.2479	0.0008
		D-Tryptophan	0.4039	0.1403
		Enkephalin-L	0.0776	0.0319
		FAD	0.6285	0.0449
		Fructose-1-6-bisphosphate	0.5368	0.1262
		Gamma-Aminobutyric-acid	0.0042	0.0001
		Gamma-Glutamyl-Glutamine	0.1732	0.3545
		Glucosamine-phosphate	0.9447	0.0011
		glutathione	0.4302	0.2151
		Glyceric-acid	0.9877	0.0015
		Glycerol-3-phosphate	0.0328	0.0855
		GMP	0.5653	0.2310
		Guanosine-diphosphate	0.0169	0.0099
		Guanosine-triphosphate	0.0475	0.0131
		Hexanoylcarnitine	0.7981	0.0055
		Homocarnosine	0.2542	0.2154
		Homocitrulline	0.0975	0.0036
		Hydroxyhexanoycarnitine	0.5054	0.9992
		Hydroxyoctanoic-acid	0.1974	0.0429
		Hydroxypyruvic-acid	0.8104	0.0068
		IMP	0.0172	0.1582
		Inosine	0.0899	0.9878
		Isovaleric-acid	0.2710	0.2508
		L-2-Hydroxyglutaric-acid	0.0346	0.0060
		L-3-Phenyllactic-acid	0.2768	0.0227
		L-Acetylcarnitine	0.4143	0.5135
		L-Carnitine	0.4812	0.1800
		L-Glutamic-acid	0.0100	0.0001
		Linoleic-acid	0.1818	0.8592
		L-Lactic-acid	0.1026	0.0003
		L-Malic-acid	0.6960	0.0005
		L-Tyrosine	0.0993	0.5132
		Malonate	0.8104	0.0068

Methionine	0.8526	0.0036
Methylmalonic-acid	0.0070	0.0051
N-Acetylglutamine	0.1734	0.0489
NAD+	0.0360	0.0356
NADH	0.0092	0.0830
N-Formyl-L-methionine	0.4225	0.0019
Nicotinamide-ribotide	0.3209	0.0089
Octulose-phosphate	0.0722	0.0685
Oleic-acid	0.3155	0.0284
O-Phosphoethanolamine	0.0097	0.0043
Oxidized-glutathione	0.1527	0.0094
Oxoadipic-acid	0.7109	0.0104
Oxoglutaric-acid	0.4281	0.0126
Palmitic-acid	0.2218	0.0018
Palmitoleic-acid	0.2921	0.9979
p-Cresol-sulfate	0.6283	0.1339
Phenylalanine	0.9799	0.0041
Phenylpropionylglycine	0.5040	0.0057
Phosphoenolpyruvic-acid	0.0974	0.0335
Propionylcarnitine	0.4493	0.0091
Propionylglycine	0.2793	0.0001
Ribothymidine	0.0099	0.9998
Sarcosine	0.4234	0.0000
Sphingosine-1-phosphate	0.4054	0.0005
Stearic-acid	0.0657	0.0000
Taurine	0.0022	0.0000
Testosterone-sulfate	0.2940	0.0078
Tetradecanedioic-acid	0.1047	0.0024
Thiamine-pyrophosphate	0.2377	0.0688
Thymine	0.4149	0.9098
Uracil	0.2814	0.5391
Uric-acid	0.5572	0.0086
Uridine	0.7700	0.1794
Uridine-diphosphate-glucose	0.0561	0.0606
Uridine-diphosphate-N-acetylglucosamine	0.2481	0.3630
Uridine-triphosphate	0.1983	0.1072
Urolithin-C	0.8878	0.0469

		Valeric-acid	0.1203	0.0099
		Valerylcarnitine	0.2109	0.0014
		Xanthine	0.0667	0.8798
		Xanthosine-5-phosphate	0.0218	0.0671
Region	**Mode**	**Metabolite**	**p value**	
Plasma	N/A	(R)-lipoic acid	0.0298	-
		2-Methylcitric acid	0.0003	-
		3-Methyluridine	0.0043	-
		3-Phosphoglyceric acid	0.0001	-
		4-Methylcatechol	0.0002	-
		5-6-Dihydrouridine	0.0083	-
		5-Hydroxy-L-tryptophan	0.0086	-
		Adenine	0.0031	-
		Adenosine monophosphate	0.0057	-
		Adenosine triphosphate	0.0103	-
		Allantoin	0.0301	-
		Argininic acid	0.0470	-
		Cysteineglutathione disulfide	0.0041	-
		Cytidine monophosphate	0.0007	-
		D-Aspartic acid	0.0032	-
		Dihydrothymine	0.0058	-
		DL-2-Aminooctanoic acid	0.0003	-
		D-Ribose 5-phosphate	0.0004	-
		D-Ribulose 5-phosphate	0.0005	-
		D-Serine	0.0178	-
		Erythronic acid	0.0469	-
		Gamma-Aminobutyric acid	0.0194	-
		Glycerol 3-phosphate	0.0213	-
		Guanosine diphosphate	0.0236	-
		Guanosine monophosphate	0.0103	-
		Homocarnosine	0.0072	-
		Hypotaurine	0.0527	-
		Hypoxanthine	0.0545	-
		Inosine	0.0511	-
		L-Cystathionine	0.0044	-
		L-Glutamic acid	0.0223	-
		L-Malic acid	0.0005	-

		Malonylcarnitine	0.0020	-
		Methylmalonylcarnitine	0.0045	-
		N-Acetylglutamic acid	0.0084	-
		N-Acetyl-L-tyrosine	0.0438	-
		N-Acetylneuraminic acid	0.0399	-
		Nicotinamide N-oxide	0.0084	-
		Octulose phosphate	0.0275	-
		O-Phosphoethanolamine	0.0012	-
		Oxidized glutathione	0.0260	-
		Pantothenate	0.0539	-
		Phenylpyruvic acid	0.0107	-
		Phosphoenolpyruvic acid	0.0390	-
		Phosphoribosyl pyrophosphate	0.0008	-
		S-Adenosylmethionine	0.0476	-
		Thiamine pyrophosphate	0.0039	-
		Threonic acid	0.0206	-
		trans-Aconitic acid	0.0081	-
		Tryptophanamide	0.0002	-
		Uridine 5--diphosphate	0.0002	-
		Uridine 5--monophosphate	0.0010	-
		Uridine diphosphate glucose	0.0017	-
Non-Stressed Mice				
Region	**Purine or Pyrimidine**	**Metabolite**	**Left PFC p value**	**Right PFC p value**
PFC	Purines	Adenosine monophosphate	0.2928	0.4380
		Adenosine triphosphate	0.6485	0.5829
		Guanosine diphosphate	0.8918	0.3221
		Guanosine triphosphate	0.0500	0.0689
		Hypoxanthine	0.0339	0.9303
		Inosine	0.0458	0.6518
		Inosine monophosphate	0.4642	0.1102
	Pyrimidines	dUDP	0.4351	0.0853
		3-Aminoisobutanoic acid	0.0029	0.2381
		Dihydrothymine	0.7843	0.7012
		Deoxycytidine	0.9995	0.2264
		Uridine triphosphate	0.6823	0.1330

Region	Purine or Pyrimidine	Metabolite	Left HPC p value	Right HPC p value
HPC	Purines	Adenosine-diphosphate	0.2328	0.9157
		Adenosine-monophosphate	0.9061	0.6704
		Guanosine-diphosphate	0.9460	0.2914
		Guanosine-triphosphate	0.2320	0.1292
		Inosine-monophosphate	0.9894	0.0222
	Pyrimidines	Deoxyuridine-diphosphate	0.7517	0.0049
		5-6-Dihydrouridine	0.4247	0.4329
		Cytidine-diphosphate	0.5557	0.4807
Region	**Purine or Pyrimidine**	**Metabolite**	**p value**	
Plasma	Purines	Adenine	0.5871	-
		Adenosine monophosphate	0.8697	-
		Adenosine triphosphate	0.7528	-
		D-Ribose-5-phosphate	0.6598	-
		D-Ribulose-5-phosphate	0.1537	-
		Guanosine monophosphate	0.2434	-
		Guanosine diphosphate	0.4332	-
		Hypoxanthine	0.4893	-
		Inosine	0.1620	-
		Phosphoribosyl pyrophosphate	0.1417	-
	Pyrimidines	5-6-Dihydrouridine	0.6810	-
		Cytidine monophosphate	0.8047	-
		Dihydrothymine	0.4706	-
		Uridine 5'-monophosphate	0.1286	-
		Uridine 5'-diphosphate	0.3336	-