

SUPPORTING INFORMATION

Effect of gender on biomarker response in a mouse model of the hematopoietic acute radiation syndrome.

Jace W. Jones*, Jenna Alloush*, Rajendran Sellamuthu†, Hui Lin Chua†, Thomas J. MacVittie‡, Christie M. Orschell†, Maureen A. Kane*⁺.

*University of Maryland, School of Pharmacy, Department of Pharmaceutical Sciences, Baltimore, MD; †Indiana University School of Medicine, Indianapolis, IN; ‡University of Maryland, School of Medicine, Department of Radiation Oncology, Baltimore, MD

Correspondence:

Maureen A. Kane
University of Maryland, School of Pharmacy
Department of Pharmaceutical Sciences
20 N. Pine Street, Room 723
Baltimore, MD 21201
Phone: (410) 706-5097
Fax: (410) 706-0886
Email: mkane@rx.umaryland.edu

Supplemental Table 1. Plasma metabolites assayed at 3 days post-8.72 Gy TBI. All metabolites assayed from 3 mo. old C57BL/6 mice; n=10 for each cohort (Naïve, TBI). Each n=10 cohort had n=5 each of female and male.

Supplemental Table 2. Basal differences in plasma metabolites between naïve female and male C57BL/6 mice. Metabolites assayed from 3 mo. old C57BL/6 mice; n=5 for each cohort of female and male. $p < 0.05$ between grouped cohorts of naïve and TBI.

Supplemental Table 3. Plasma metabolites in naïve female and male C57BL/6 mice. All metabolites assayed from 3 mo. old C57BL/6 mice; n=5 for each cohort of female and male.

Supplemental Table 4. Plasma metabolites assayed at 3 days post-8.72 Gy TBI: Female single-sex cohort. All metabolites assayed from 3 mo. old C57BL/6 mice; n=5 for each cohort (Naïve, TBI).

Supplemental Table 5. Plasma metabolites assayed at 3 days post-8.72 Gy TBI: Male single-sex cohort. All metabolites assayed from 3 mo. old C57BL/6 mice; n=5 for each cohort (Naïve, TBI).

Supplemental Table 1. Plasma metabolites assayed at 3 days post-8.72 Gy TBI

Metabolites assayed from 3 mo. old C57BL/6 mice; n=10 for each cohort (Naïve, TBI). Each n=10 cohort had n=5 each of female and male.

Metabolite		Naïve F and M					TBI_F and M					p value Naïve vs TBI	Differential Expression (up)	* FDR <5%	Class
		Mean	SD	SEM	%CV	N	Mean	SD	SEM	%CV	N				
1	C0	22.01	3.13	0.99	14.23	10	18.70	2.66	0.84	14.24	10	0.0202	Naïve		AC
2	C10	0.26	0.07	0.02	25.99	10	0.26	0.08	0.02	30.37	10	0.9484	Naïve		AC
3	C10-1	0.12	0.03	0.01	27.30	10	0.13	0.03	0.01	27.31	10	0.8762	TBI		AC
4	C10-2	0.14	0.03	0.01	20.89	10	0.14	0.03	0.01	24.18	10	0.9874	TBI		AC
5	C12	0.29	0.12	0.04	39.99	10	0.31	0.13	0.04	42.88	10	0.7105	TBI		AC
6	C12-DC	0.46	0.05	0.02	10.33	10	0.49	0.05	0.02	10.65	10	0.2587	TBI		AC
7	C12-1	0.28	0.05	0.01	16.66	10	0.28	0.06	0.02	22.08	10	0.9747	Naïve		AC
8	C14	0.16	0.05	0.02	30.58	10	0.15	0.05	0.01	31.13	10	0.7975	Naïve		AC
9	C14-1	0.07	0.02	0.01	28.85	10	0.08	0.02	0.01	31.61	10	0.8004	TBI		AC
10	C14-1 OH	0.08	0.03	0.01	41.86	10	0.08	0.03	0.01	42.08	10	0.9135	TBI		AC
11	C14-2	0.05	0.01	0.00	31.36	10	0.05	0.02	0.00	32.33	10	0.8256	TBI		AC
12	C14-2 OH	0.10	0.03	0.01	26.11	10	0.10	0.03	0.01	31.09	10	0.7754	TBI		AC
13	C16	0.24	0.05	0.02	20.17	10	0.21	0.05	0.02	23.37	10	0.2407	Naïve		AC
14	C16-OH	0.10	0.04	0.01	37.07	10	0.11	0.05	0.01	41.87	10	0.6735	TBI		AC
15	C16-1	0.14	0.03	0.01	23.83	10	0.12	0.04	0.01	37.60	10	0.2555	Naïve		AC
16	C16-1 OH	0.09	0.04	0.01	43.27	10	0.09	0.04	0.01	46.59	10	0.6659	TBI		AC
17	C16-2	0.05	0.01	0.00	26.83	10	0.05	0.02	0.01	30.49	10	0.7807	TBI		AC
18	C16-2 OH	0.07	0.02	0.01	31.26	10	0.07	0.02	0.01	34.34	10	0.8510	TBI		AC
19	C18	0.11	0.03	0.01	26.15	10	0.11	0.04	0.01	33.71	10	0.6452	TBI		AC
20	C18-1	0.19	0.08	0.02	41.05	10	0.18	0.07	0.02	37.34	10	0.8173	Naïve		AC
21	C18-1 OH	0.07	0.02	0.01	31.59	10	0.07	0.02	0.01	33.42	10	0.6086	TBI		AC
22	C18-2	0.08	0.02	0.01	25.67	10	0.08	0.02	0.01	23.20	10	0.5767	Naïve		AC
23	C2	15.40	2.58	0.82	16.75	10	13.02	1.66	0.53	12.76	10	0.0247	Naïve		AC
24	C3	0.47	0.12	0.04	25.04	10	0.45	0.10	0.03	22.85	10	0.6182	Naïve		AC
25	C3-DC_C4-OH	0.22	0.07	0.02	31.66	10	0.19	0.05	0.02	25.57	10	0.2631	Naïve		AC

Supplemental Table 1. (continued)

Metabolite		Naïve F and M					TBI_F and M					p value Naïve vs TBI	Differential Expression (up)	* FDR <5%	Class
		Mean	SD	SEM	%CV	N	Mean	SD	SEM	%CV	N				
26	C3-OH	0.14	0.04	0.01	29.05	10	0.14	0.05	0.01	31.99	10	0.6705	TBI		AC
27	C3-1	0.09	0.04	0.01	41.87	10	0.10	0.05	0.01	45.26	10	0.4414	TBI		AC
28	C4	0.39	0.12	0.04	31.06	10	0.36	0.11	0.03	30.55	10	0.5043	Naïve		AC
29	C4-1	0.10	0.03	0.01	28.65	10	0.11	0.03	0.01	28.18	10	0.4941	TBI		AC
30	C5	0.17	0.06	0.02	32.38	10	0.16	0.06	0.02	34.15	10	0.7230	Naïve		AC
31	C5-DC_C6-OH	0.25	0.12	0.04	49.89	10	0.26	0.14	0.04	51.80	10	0.8443	TBI		AC
32	C5-M-DC	0.18	0.07	0.02	39.35	10	0.19	0.08	0.03	43.08	10	0.8281	TBI		AC
33	C5-OH_C3-DC-M	0.15	0.04	0.01	27.79	10	0.15	0.05	0.02	32.17	10	0.8095	Naïve		AC
34	C5-1	0.09	0.03	0.01	38.15	10	0.09	0.04	0.01	40.13	10	0.8547	TBI		AC
35	C5-1 DC	0.49	0.28	0.09	56.26	10	0.52	0.31	0.10	59.25	10	0.8502	TBI		AC
36	C6_C4-1 DC	0.21	0.10	0.03	48.66	10	0.22	0.11	0.04	51.10	10	0.8196	TBI		AC
37	C6-1	0.14	0.07	0.02	48.36	10	0.15	0.08	0.02	50.37	10	0.7418	TBI		AC
38	C7-DC	0.06	0.03	0.01	46.20	10	0.06	0.02	0.01	38.80	10	0.8214	Naïve		AC
39	C8	0.12	0.04	0.01	34.87	10	0.12	0.03	0.01	26.52	10	0.8193	Naïve		AC
40	C9	0.25	0.06	0.02	24.26	10	0.25	0.06	0.02	25.65	10	0.8525	TBI		AC
41	Ala	719.30	160.40	50.72	22.30	10	840.30	226.37	71.58	26.94	10	0.1847	TBI		AA
42	Arg	106.11	21.95	6.94	20.68	10	93.75	18.20	5.75	19.41	10	0.1872	Naïve		AA
43	Asn	64.19	19.43	6.14	30.26	10	65.96	19.52	6.17	29.60	10	0.8412	TBI		AA
44	Asp	8.79	2.28	0.72	25.95	10	9.04	3.52	1.11	38.90	10	0.8496	TBI		AA
45	Cit	71.37	13.61	4.31	19.08	10	36.04	9.09	2.88	25.23	10	0.0000	Naïve	*	AA
46	Gln	718.00	125.45	39.67	17.47	10	768.20	89.45	28.29	11.64	10	0.3165	TBI		AA
47	Glu	43.20	11.61	3.67	26.88	10	38.08	8.71	2.75	22.88	10	0.2794	Naïve		AA
48	Gly	244.90	37.94	12.00	15.49	10	249.10	49.78	15.74	19.98	10	0.8343	TBI		AA
49	Ile	126.45	18.03	5.70	14.26	10	129.37	29.02	9.18	22.43	10	0.7900	TBI		AA
50	Leu	285.40	72.64	22.97	25.45	10	320.10	105.91	33.49	33.09	10	0.4041	TBI		AA

Supplemental Table 1. (continued)

Metabolite		Naïve F and M					TBI_F and M					p value Naïve vs TBI	Differential Expression (up)	* FDR <5%	Class
		Mean	SD	SEM	%CV	N	Mean	SD	SEM	%CV	N				
51	Lys	328.50	73.86	23.36	22.48	10	383.60	61.08	19.3 1	15.92	10	0.0857	TBI		AA
52	Met	81.66	33.54	10.61	41.07	10	82.40	25.69	8.12	31.18	10	0.9564	TBI		AA
53	Orn	61.00	19.29	6.10	31.62	10	60.26	14.35	4.54	23.81	10	0.9235	Naïve		AA
54	Phe	79.11	12.74	4.03	16.10	10	84.10	14.51	4.59	17.25	10	0.4244	TBI		AA
55	Pro	158.44	51.58	16.31	32.56	10	176.45	66.70	21.0 9	37.80	10	0.5080	TBI		AA
56	Ser	172.70	48.67	15.39	28.18	10	215.70	74.06	23.4 2	34.33	10	0.1423	TBI		AA
57	Thr	209.50	51.21	16.19	24.45	10	244.00	33.24	10.5 1	13.62	10	0.0908	TBI		AA
58	Trp	87.83	22.28	7.05	25.37	10	102.41	22.35	7.07	21.82	10	0.1613	TBI		AA
59	Tyr	91.94	18.97	6.00	20.63	10	106.02	30.46	9.63	28.73	10	0.2306	TBI		AA
60	Val	212.00	40.76	12.89	19.23	10	213.50	37.34	11.8 1	17.49	10	0.9326	TBI		AA
61	Ac-Orn	2.18	0.33	0.11	15.28	10	1.56	0.53	0.17	33.83	10	0.0053	Naïve		BA
62	ADMA	0.73	0.14	0.04	18.78	10	0.62	0.11	0.03	17.29	10	0.0621	Naïve		BA
63	alpha-AAA	10.46	3.11	0.98	29.76	10	6.96	1.63	0.51	23.37	10	0.0055	Naïve		BA
64	Creatinine	6.34	1.07	0.34	16.85	10	5.41	0.86	0.27	15.94	10	0.0463	Naïve		BA
65	Kynurenine	1.10	0.25	0.08	22.39	10	1.29	0.36	0.11	27.65	10	0.1802	TBI		BA
66	Met-SO	2.45	1.27	0.40	51.93	10	2.32	0.80	0.25	34.51	10	0.7851	Naïve		BA
67	Spermidine	1.07	0.25	0.08	23.03	10	0.66	0.16	0.05	24.21	10	0.0004	Naïve	*	BA
68	Spermine	0.45	0.10	0.03	22.50	10	0.42	0.13	0.04	31.37	10	0.5488	Naïve		BA
69	Taurine	521.20	90.15	28.51	17.30	10	458.40	64.44	20.3 8	14.06	10	0.0899	Naïve		BA
70	total DMA	0.59	0.05	0.02	8.34	10	0.52	0.04	0.01	7.79	10	0.0060	Naïve		BA
71	LPC_14-0	3.03	0.47	0.15	15.61	10	2.82	0.33	0.11	11.84	10	0.2784	Naïve		LPC
72	LPC_16-0	146.40	31.12	9.84	21.26	10	149.02	23.48	7.42	15.75	10	0.8338	TBI		LPC
73	LPC_16-1	3.25	0.85	0.27	26.23	10	3.06	0.48	0.15	15.69	10	0.5457	Naïve		LPC
74	LPC_17-0	2.19	0.43	0.14	19.77	10	2.20	0.44	0.14	19.89	10	0.9620	TBI		LPC
75	LPC_18-0	63.82	9.62	3.04	15.08	10	65.07	7.02	2.22	10.79	10	0.7450	TBI		LPC

Supplemental Table 1. (continued)

		Naïve F and M					TBI_F and M					p value Naïve vs TBI	Differential Expression (up)	* FDR <5%	Class
Metabolite		Mean	SD	SEM	%CV	N	Mean	SD	SEM	%CV	N				
76	LPC_18-1	28.43	5.66	1.79	19.91	10	25.07	3.57	1.13	14.25	10	0.1294	Naïve		LPC
77	LPC_18-2	117.78	18.4 1	5.82	15.63	10	109.31	16.04	5.07	14.67	10	0.2875	Naïve		LPC
78	LPC_20-3	5.32	1.65	0.52	30.99	10	3.74	0.97	0.31	25.80	10	0.0173	Naïve		LPC
79	LPC_20-4	29.08	6.20	1.96	21.33	10	29.23	2.72	0.86	9.29	10	0.9449	TBI		LPC
80	LPC_24-0	0.40	0.11	0.03	27.08	10	0.43	0.07	0.02	16.72	10	0.4021	TBI		LPC
81	LPC_26-0	0.21	0.04	0.01	20.52	10	0.24	0.05	0.01	19.97	10	0.2011	TBI		LPC
82	LPC_26-1	0.10	0.03	0.01	24.99	10	0.12	0.03	0.01	22.73	10	0.2635	TBI		LPC
83	LPC_28-0	0.26	0.05	0.02	19.96	10	0.30	0.07	0.02	24.88	10	0.1991	TBI		LPC
84	LPC_28-1	0.18	0.04	0.01	23.05	10	0.20	0.04	0.01	22.07	10	0.4099	TBI		LPC
85	PC_24-0	0.12	0.03	0.01	22.25	10	0.11	0.02	0.01	16.01	10	0.5484	Naïve		PC
86	PC_26-0	0.71	0.13	0.04	18.08	10	0.80	0.13	0.04	16.51	10	0.1467	TBI		PC
87	PC_28-1	0.22	0.04	0.01	17.95	10	0.25	0.05	0.02	21.12	10	0.3336	TBI		PC
88	PC_30-0	0.71	0.15	0.05	20.38	10	0.73	0.13	0.04	17.80	10	0.8474	TBI		PC
89	PC_30-2	0.07	0.02	0.01	29.23	10	0.07	0.02	0.01	24.06	10	0.6783	TBI		PC
90	PC_32-0	11.82	2.88	0.91	24.41	10	13.04	2.33	0.74	17.86	10	0.3100	TBI		PC
91	PC_32-1	3.49	1.24	0.39	35.43	10	3.75	1.08	0.34	28.80	10	0.6261	TBI		PC
92	PC_32-2	1.15	0.30	0.10	26.33	10	1.23	0.27	0.08	21.57	10	0.5472	TBI		PC
93	PC_32-3	0.17	0.04	0.01	24.20	10	0.16	0.03	0.01	17.63	10	0.3871	Naïve		PC
94	PC_34-1	82.99	25.8 9	8.19	31.20	10	74.80	20.46	6.47	27.35	10	0.4428	Naïve		PC
95	PC_34-2	337.49	61.6 3	19.49	18.26	10	344.27	57.18	18.08	16.61	10	0.8015	TBI		PC
96	PC_34-3	13.56	4.92	1.55	36.25	10	15.28	4.83	1.53	31.61	10	0.4406	TBI		PC
97	PC_34-4	0.52	0.19	0.06	36.22	10	0.58	0.18	0.06	31.03	10	0.5076	TBI		PC
98	PC_36-0	2.03	0.42	0.13	20.42	10	2.12	0.24	0.08	11.50	10	0.5655	TBI		PC
99	PC_36-1	20.45	5.28	1.67	25.81	10	17.17	4.04	1.28	23.54	10	0.1361	Naïve		PC
100	PC_36-2	222.95	38.6 3	12.22	17.33	10	211.10	32.01	10.12	15.17	10	0.4650	Naïve		PC

Supplemental Table 1. (continued)

Metabolite		Naïve F and M					TBI_F and M					p value Naïve vs TBI	Differential Expression (up)	* FDR <5%	Class
		Mean	SD	SEM	%CV	N	Mean	SD	SEM	%CV	N				
101	PC_36-3	88.00	23.55	7.45	26.76	10	79.29	18.14	5.74	22.88	10	0.3666	Naïve		PC
102	PC_36-4	137.69	39.93	12.63	29.00	10	151.80	32.37	10.23	21.32	10	0.3970	TBI		PC
103	PC_36-5	7.41	2.56	0.81	34.56	10	8.25	2.53	0.80	30.64	10	0.4730	TBI		PC
104	PC_36-6	0.35	0.12	0.04	33.43	10	0.39	0.11	0.03	27.25	10	0.4230	TBI		PC
105	PC_38-0	1.54	0.44	0.14	28.72	10	1.38	0.21	0.07	15.46	10	0.3173	Naïve		PC
106	PC_38-1	0.45	0.14	0.05	31.93	10	0.39	0.05	0.02	13.25	10	0.2580	Naïve		PC
107	PC_38-3	22.51	6.57	2.08	29.19	10	18.24	5.14	1.62	28.17	10	0.1222	Naïve		PC
108	PC_38-4	90.16	19.12	6.05	21.21	10	98.82	13.51	4.27	13.67	10	0.2570	TBI		PC
109	PC_38-5	29.19	8.92	2.82	30.54	10	30.18	8.07	2.55	26.72	10	0.7977	TBI		PC
110	PC_38-6	107.02	33.67	10.65	31.46	10	119.71	27.17	8.59	22.70	10	0.3661	TBI		PC
111	PC_40-1	0.32	0.06	0.02	17.44	10	0.31	0.03	0.01	11.15	10	0.6040	Naïve		PC
112	PC_40-2	0.34	0.14	0.04	40.13	10	0.28	0.09	0.03	31.30	10	0.2809	Naïve		PC
113	PC_40-3	0.43	0.23	0.07	54.27	10	0.36	0.16	0.05	45.39	10	0.4782	Naïve		PC
114	PC_40-4	1.93	0.89	0.28	46.32	10	1.64	0.69	0.22	42.10	10	0.4329	Naïve		PC
115	PC_40-5	3.52	1.09	0.35	31.00	10	3.16	1.03	0.32	32.48	10	0.4583	Naïve		PC
116	PC_40-6	35.77	7.28	2.30	20.36	10	38.15	5.17	1.64	13.55	10	0.4096	TBI		PC
117	PC_42-0	0.21	0.04	0.01	18.10	10	0.20	0.03	0.01	13.26	10	0.6915	Naïve		PC
118	PC_42-1	0.14	0.02	0.01	16.95	10	0.15	0.02	0.01	11.32	10	0.7785	TBI		PC
119	PC_42-2	0.20	0.05	0.02	25.53	10	0.18	0.04	0.01	23.21	10	0.3822	Naïve		PC
120	PC_42-4	0.20	0.06	0.02	32.80	10	0.18	0.04	0.01	22.01	10	0.5833	Naïve		PC
121	PC_42-5	0.26	0.09	0.03	33.71	10	0.25	0.07	0.02	27.09	10	0.8141	Naïve		PC
122	PC_42-6	0.70	0.34	0.11	48.34	10	0.63	0.27	0.09	43.29	10	0.6403	Naïve		PC
123	PC_O-30-0	0.13	0.02	0.01	18.70	10	0.14	0.03	0.01	20.80	10	0.6131	TBI		PC
124	PC_O-30-1	0.12	0.04	0.01	33.50	10	0.12	0.03	0.01	26.62	10	0.8074	TBI		PC
125	PC_O-30-2	0.06	0.01	0.00	22.56	10	0.06	0.01	0.00	20.33	10	0.8895	Naïve		PC

Supplemental Table 1. (continued)

		Naïve F and M					TBI_F and M					p value Naïve vs TBI	Differential Expression (up)	* FDR <5%	Class
Metabolite		Mean	SD	SEM	%CV	N	Mean	SD	SEM	%CV	N				
126	PC_O-32-1	0.51	0.14	0.05	27.88	10	0.57	0.11	0.03	18.60	10	0.3004	TBI		PC
127	PC_O-32-2	0.22	0.08	0.03	37.37	10	0.19	0.05	0.02	26.89	10	0.3668	Naïve		PC
128	PC_O-34-0	0.41	0.09	0.03	21.41	10	0.46	0.12	0.04	25.78	10	0.3066	TBI		PC
129	PC_O-34-1	2.57	0.74	0.23	28.82	10	2.50	0.50	0.16	19.93	10	0.7866	Naïve		PC
130	PC_O-34-2	3.82	1.21	0.38	31.65	10	3.64	1.06	0.33	29.07	10	0.7285	Naïve		PC
131	PC_O-34-3	1.13	0.38	0.12	33.53	10	0.88	0.24	0.08	27.61	10	0.0989	Naïve		PC
132	PC_O-36-0	0.43	0.10	0.03	22.32	10	0.46	0.10	0.03	22.09	10	0.6138	TBI		PC
133	PC_O-36-1	1.98	0.44	0.14	22.48	10	1.81	0.41	0.13	22.69	10	0.3927	Naïve		PC
134	PC_O-36-2	9.79	2.67	0.84	27.29	10	8.98	2.13	0.67	23.72	10	0.4603	Naïve		PC
135	PC_O-36-3	2.11	0.65	0.20	30.68	10	2.07	0.57	0.18	27.82	10	0.8741	Naïve		PC
136	PC_O-36-4	3.48	1.20	0.38	34.47	10	3.27	0.70	0.22	21.43	10	0.6380	Naïve		PC
137	PC_O-36-5	1.77	0.50	0.16	28.06	10	1.72	0.28	0.09	16.28	10	0.7981	Naïve		PC
138	PC_O-38-0	2.39	1.02	0.32	42.84	10	2.63	0.80	0.25	30.44	10	0.5666	TBI		PC
139	PC_O-38-1	0.69	0.22	0.07	31.41	10	0.58	0.14	0.05	24.81	10	0.1968	Naïve		PC
140	PC_O-38-2	5.84	2.62	0.83	44.90	10	4.54	1.75	0.55	38.40	10	0.2086	Naïve		PC
141	PC_O-38-3	1.74	0.50	0.16	28.82	10	1.48	0.35	0.11	23.61	10	0.1972	Naïve		PC
142	PC_O-38-4	3.95	1.07	0.34	27.16	10	4.07	0.77	0.24	18.93	10	0.7789	TBI		PC
143	PC_O-38-5	3.04	0.98	0.31	32.23	10	2.74	0.55	0.17	19.87	10	0.4142	Naïve		PC
144	PC_O-38-6	2.24	0.81	0.25	35.91	10	2.10	0.50	0.16	23.66	10	0.6254	Naïve		PC
145	PC_O-40-1	3.03	1.25	0.40	41.25	10	3.44	1.27	0.40	36.86	10	0.4694	TBI		PC
146	PC_O-40-2	0.66	0.17	0.05	26.21	10	0.64	0.17	0.05	26.10	10	0.7497	Naïve		PC
147	PC_O-40-3	0.57	0.18	0.06	31.82	10	0.49	0.10	0.03	20.73	10	0.2456	Naïve		PC
148	PC_O-40-4	1.63	0.61	0.19	37.25	10	1.62	0.48	0.15	29.58	10	0.9901	Naïve		PC
149	PC_O-40-5	0.94	0.24	0.08	25.85	10	0.88	0.15	0.05	17.01	10	0.5616	Naïve		PC
150	PC_O-40-6	2.53	0.68	0.22	26.90	10	2.52	0.45	0.14	17.73	10	0.9661	Naïve		PC

Supplemental Table 1. (continued)

Metabolite		Naïve F and M					TBI_F and M					P value Naïve vs TBI	Differential Expression (up)	* FDR<5%	Class
		Mean	SD	SEM	%CV	N	Mean	SD	SEM	%CV	N				
151	PC_O-42-0	1.03	0.24	0.08	23.60	10	0.97	0.22	0.07	23.02	10	0.5875	Naïve		PC
152	PC_O-42-1	0.51	0.14	0.05	28.15	10	0.54	0.12	0.04	21.93	10	0.6051	TBI		PC
153	PC_O-42-2	0.39	0.13	0.04	32.79	10	0.38	0.12	0.04	30.83	10	0.8216	Naïve		PC
154	PC_O-42-3	1.00	0.39	0.12	39.12	10	1.07	0.34	0.11	31.41	10	0.6919	TBI		PC
155	PC_O-42-4	0.24	0.07	0.02	27.66	10	0.20	0.05	0.02	24.18	10	0.1321	Naïve		PC
156	PC_O-42-5	0.58	0.09	0.03	14.72	10	0.57	0.07	0.02	13.17	10	0.6933	Naïve		PC
157	PC_O-44-3	0.13	0.02	0.01	14.91	10	0.14	0.01	0.00	8.06	10	0.2690	TBI		PC
158	PC_O-44-4	0.14	0.03	0.01	21.90	10	0.13	0.02	0.01	14.39	10	0.4145	Naïve		PC
159	PC_O-44-5	0.24	0.05	0.02	21.93	10	0.24	0.03	0.01	14.14	10	0.9744	TBI		PC
160	PC_O-44-6	0.18	0.04	0.01	24.84	10	0.17	0.03	0.01	16.91	10	0.5068	Naïve		PC
161	SM_32-2 OH	1.22	0.21	0.07	17.09	10	1.28	0.18	0.06	13.89	10	0.4353	TBI		SM
162	SM_34-2 OH	0.31	0.04	0.01	13.96	10	0.34	0.03	0.01	8.77	10	0.0976	TBI		SM
163	SM_40-2 OH	1.70	0.32	0.10	18.94	10	1.77	0.16	0.05	9.01	10	0.5200	TBI		SM
164	SM_40-3 OH	1.21	0.31	0.10	25.73	10	1.17	0.17	0.05	14.67	10	0.7042	Naïve		SM
165	SM_42-2 OH	0.21	0.05	0.02	25.28	10	0.22	0.03	0.01	12.34	10	0.4468	TBI		SM
166	SM_34-1	17.47	2.83	0.89	16.19	10	19.76	1.28	0.41	6.50	10	0.0320	TBI		SM
167	SM_34-2	2.78	0.83	0.26	29.94	10	3.05	0.53	0.17	17.46	10	0.4036	TBI		SM
168	SM_36-1	1.91	0.39	0.12	20.31	10	2.32	0.44	0.14	19.13	10	0.0424	TBI		SM
169	SM_36-2	0.77	0.10	0.03	13.65	10	0.91	0.07	0.02	7.68	10	0.0020	TBI		SM
170	SM_38-3	0.08	0.02	0.01	27.96	10	0.08	0.02	0.01	25.27	10	0.9303	Naïve		SM
171	SM_40-1	0.27	0.17	0.05	61.86	10	0.22	0.14	0.04	60.94	10	0.5237	Naïve		SM
172	SM_42-1	5.15	1.63	0.52	31.68	10	4.70	1.57	0.50	33.41	10	0.5376	Naïve		SM
173	SM_42-2	10.05	2.13	0.67	21.15	10	11.18	1.66	0.53	14.86	10	0.2009	TBI		SM
174	SM_44-1	0.03	0.01	0.00	45.16	10	0.03	0.02	0.01	53.19	10	0.7004	TBI		SM
175	H1	10731.33	1361.13	430.43	12.68	10	12070.51	2065.34	653.12	17.11	10	0.1041	TBI		S

Supplemental Table 1. (continued)

Metabolite	Naïve F and M					TBI_F and M					p value Naïve vs TBI	Differential Expression (up)	* FDR <5%	Class
	Mean	SD	SEM	%CV	N	Mean	SD	SEM	%CV	N				
176 C2,C3 / C0	0.73	0.12	0.04	16.85	10	0.73	0.11	0.03	15.14	10	0.9708	TBI		AC
177 AAA	258.88	40.51	12.81	15.65	10	292.53	62.30	19.70	21.30	10	0.1693	TBI		BA
178 ADMA / Arg	0.01	0.00	0.00	32.78	10	0.01	0.00	0.00	18.52	10	0.5714	Naïve		BA/AA
179 BCAA	623.85	122.13	38.62	19.58	10	662.97	158.54	50.14	23.91	10	0.5442	TBI		AA
180 C2 / C0	0.71	0.12	0.04	17.10	10	0.70	0.11	0.04	15.76	10	0.9940	Naïve		AC
181 Cit / Arg	0.69	0.14	0.04	19.89	10	0.39	0.11	0.03	28.05	10	0.0000	Naïve	*	AA
182 Cit / Orn	1.27	0.41	0.13	32.14	10	0.63	0.22	0.07	34.77	10	0.0003	Naïve	*	AA
183 CPT-I ratio	0.02	0.00	0.00	19.13	10	0.02	0.00	0.00	18.16	10	0.2773	TBI		AC
184 Essential AA	1410.45	269.27	85.15	19.09	10	1559.48	267.96	84.74	17.18	10	0.2307	TBI		AA
185 Fisher ratio	2.41	0.31	0.10	12.88	10	2.27	0.27	0.08	11.78	10	0.2929	Naïve		AA
186 Glucogenic AA	1136.90	223.27	70.60	19.64	10	1305.10	325.01	102.78	24.90	10	0.1941	TBI		AA
187 Kynurenine / Trp	0.01	0.00	0.00	20.78	10	0.01	0.00	0.00	20.91	10	0.8311	Naïve		AA
188 Met-SO / Met	0.03	0.01	0.00	20.17	10	0.03	0.00	0.00	16.21	10	0.6371	Naïve		AA
189 MUFA_PC	117.03	34.89	11.03	29.81	10	105.98	27.63	8.74	26.07	10	0.4428	Naïve		PC
190 MUFA_PC / SFA_PC	5.38	0.60	0.19	11.20	10	4.55	0.58	0.18	12.68	10	0.0059	Naïve		PC
191 Non essential AA	2221.46	278.37	88.03	12.53	10	2468.85	461.27	145.87	18.68	10	0.1637	TBI		AA
192 Orn / Arg	0.57	0.12	0.04	20.92	10	0.65	0.13	0.04	20.07	10	0.1910	TBI		AA
193 PUFA_PC	1149.94	253.68	80.22	22.06	10	1168.93	206.39	65.27	17.66	10	0.8564	TBI		PC
194 PUFA_PC / MUFA_PC	10.11	1.31	0.41	12.91	10	11.28	1.32	0.42	11.69	10	0.0608	TBI		PC
195 PUFA_PC / SFA_PC	53.73	3.54	1.12	6.59	10	50.86	4.34	1.37	8.54	10	0.1231	Naïve		PC
196 SFA_PC	21.54	5.27	1.67	24.48	10	23.04	3.90	1.23	16.93	10	0.4780	TBI		PC
197 Spermine / Spermidine	0.43	0.08	0.03	18.79	10	0.64	0.16	0.05	24.29	10	0.0012	TBI		BA
198 Total_PC,SM	1331.41	298.51	94.40	22.42	10	1344.78	239.63	75.78	17.82	10	0.9133	TBI		PC,SM
199 Total AA	3870.39	564.23	178.42	14.58	10	4218.38	731.91	231.45	17.35	10	0.2492	TBI		AA
200 Total AC / C0	1.01	0.17	0.05	16.90	10	1.06	0.10	0.03	9.74	10	0.4496	TBI		AC

Supplemental Table 1. (continued)

Metabolite		Naïve F and M					TBI_F and M					p value Naïve vs TBI	Differential Expression (up)	* FDR <5%	Class
		Mean	SD	SEM	%C V	N	Mean	SD	SEM	%C V	N				
201	Total AC-DC / Total AC	0.06	0.02	0.01	28.80	10	0.08	0.02	0.01	30.20	10	0.2530	TBI		AC
202	Total AC-OH / Total AC	0.04	0.01	0.00	22.71	10	0.04	0.01	0.00	24.57	10	0.2886	TBI		AC
203	Total LPC	400.44	69.81	22.07	17.43	10	390.80	52.46	16.59	13.42	10	0.7309	Naïve		LPC
204	Total LPC / Total PC	0.32	0.04	0.01	12.17	10	0.30	0.03	0.01	11.13	10	0.5092	Naïve		LPC,PC
205	Total PC	1288.50	291.91	92.31	22.65	10	1297.95	235.99	74.63	18.18	10	0.9375	TBI		PC
206	Total PC_diacyl	1226.28	272.96	86.32	22.26	10	1238.95	222.01	70.21	17.92	10	0.9106	TBI		PC
207	Total PC_ether	62.22	19.24	6.08	30.92	10	59.00	14.29	4.52	24.22	10	0.6754	Naïve		PC
208	Total SM	42.91	7.65	2.42	17.83	10	46.83	4.50	1.42	9.61	10	0.1792	TBI		SM
209	Total SM / Total_SM,PC	0.03	0.00	0.00	13.27	10	0.04	0.00	0.00	11.91	10	0.1815	TBI		SM,PC
210	Total SM / Total PC	0.03	0.00	0.00	13.77	10	0.04	0.00	0.00	12.37	10	0.1829	TBI		SM/PC
211	Total SM-non OH	38.27	7.08	2.24	18.49	10	42.05	4.25	1.34	10.10	10	0.1647	TBI		SM
212	Total SM-OH	4.64	0.81	0.26	17.46	10	4.78	0.43	0.13	8.89	10	0.6257	TBI		SM
213	Total SM-OH / Total SM-non OH	0.12	0.02	0.01	14.86	10	0.11	0.01	0.00	8.82	10	0.2226	Naïve		SM
214	Tyr / Phe	1.16	0.14	0.05	12.38	10	1.24	0.20	0.06	16.37	10	0.3027	TBI		AA

Supplemental Table 2. Basal differences in plasma metabolites between naïve female and male C57BL/6 mice.

Metabolites assayed from 3 mo. old C57BL/6 mice; n=5 for each cohort of female and male.

		Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
	Metabolite	Mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
1	PC_40-2	0.21	0.01	0.02	4.27	5	0.47	0.04	0.00	9.19	5	<0.0001	Male	*	PC
2	PC_42-6	0.38	0.05	0.05	11.89	5	1.01	0.10	0.02	10.16	5	<0.0001	Male	*	PC
3	PC_40-3	0.21	0.04	0.03	16.79	5	0.64	0.07	0.02	10.75	5	<0.0001	Male	*	PC
4	SM_42-1	3.66	0.50	0.21	13.73	5	6.63	0.46	0.22	6.98	5	<0.0001	Male	*	SM
5	PC_40-4	1.12	0.13	0.18	11.71	5	2.73	0.41	0.06	14.91	5	<0.0001	Male	*	PC
6	PC_O-32-2	0.14	0.02	0.02	14.61	5	0.29	0.04	0.01	12.99	5	0.0001	Male	*	PC
7	PC_42-5	0.18	0.02	0.02	8.92	5	0.34	0.05	0.01	13.43	5	0.0001	Male	*	PC
8	PC_O-42-0	0.82	0.06	0.06	6.84	5	1.25	0.12	0.03	9.89	5	0.0001	Male	*	PC
9	PC_O-34-2	2.76	0.31	0.27	11.36	5	4.88	0.60	0.14	12.36	5	0.0001	Male	*	PC
10	PC_34-1	60.31	10.47	4.77	17.36	5	105.66	10.65	4.68	10.08	5	0.0001	Male	*	PC
11	PC_O-34-3	0.80	0.13	0.08	16.26	5	1.46	0.18	0.06	12.58	5	0.0002	Male	*	PC
12	PC_42-2	0.16	0.01	0.01	8.96	5	0.25	0.03	0.01	11.34	5	0.0002	Male	*	PC
13	PC_34-3	9.33	1.08	1.30	11.58	5	17.79	2.90	0.48	16.30	5	0.0003	Male	*	PC
14	PC_42-4	0.14	0.02	0.02	13.31	5	0.25	0.04	0.01	14.80	5	0.0004	Male	*	PC
15	MUFA_PC	87.31	15.74	7.51	18.03	5	146.75	16.80	7.04	11.45	5	0.0004	Male	*	PC
16	PC_O-38-2	3.61	0.56	0.74	15.45	5	8.08	1.66	0.25	20.51	5	0.0005	Male	*	PC
17	Total SM-OH/ Total SM-non OH	0.14	0.01	0.00	5.73	5	0.11	0.01	0.00	8.98	5	0.0006	Female	*	SM
18	PC_O-36-3	1.57	0.19	0.18	11.82	5	2.65	0.41	0.08	15.53	5	0.0007	Male	*	PC
19	PC_40-5	2.61	0.41	0.30	15.72	5	4.43	0.66	0.18	14.97	5	0.0008	Male	*	PC
20	PC_34-2	286.15	31.65	13.82	11.06	5	388.82	30.91	14.15	7.95	5	0.0008	Male	*	PC
21	PC_42-0	0.18	0.01	0.01	7.22	5	0.24	0.03	0.01	10.64	5	0.0013	Male	*	PC
22	PC_O-32-1	0.40	0.08	0.03	19.85	5	0.63	0.08	0.04	12.15	5	0.0014	Male	*	PC
23	PC_O-36-4	2.51	0.29	0.40	11.75	5	4.45	0.89	0.13	19.98	5	0.0017	Male	*	PC
24	PC_40-1	0.28	0.02	0.02	6.95	5	0.37	0.04	0.01	11.19	5	0.0022	Male	*	PC
25	PC_O-34-1	1.98	0.20	0.25	9.84	5	3.17	0.57	0.09	17.93	5	0.0022	Male	*	PC

Supplemental Table 2. (continued)

		Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
	Metabolite	Mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
26	LPC_26-0	0.17	0.01	0.00	3.05	5	0.24	0.03	0.02	14.42	5	0.0027	Male	*	LPC
27	Total_PC_ether	47.10	5.08	2.27	10.78	5	77.35	15.34	6.86	19.83	5	0.0031	Male	*	PC
28	Total PC	1060.60	126.90	56.75	11.96	5	1516.40	213.96	95.68	14.11	5	0.0035	Male	*	PC
29	PC_32-1	2.52	0.61	0.27	24.01	5	4.45	0.86	0.39	19.35	5	0.0035	Male	*	PC
30	Total_PC_diacyl	1013.50	122.10	54.60	12.05	5	1439.06	198.87	88.94	13.82	5	0.0035	Male	*	PC
31	LPC_16-0	122.14	8.71	3.89	7.13	5	170.65	25.14	11.24	14.73	5	0.0035	Male	*	LPC
32	Total_PC,SM	1098.80	128.16	57.31	11.66	5	1564.02	220.92	98.80	14.13	5	0.0036	Male	*	PC, SM
33	PC_O-40-2	0.53	0.04	0.02	7.55	5	0.80	0.14	0.06	18.00	5	0.0036	Male	*	PC
34	PC_O-38-6	1.62	0.19	0.09	11.92	5	2.87	0.67	0.30	23.28	5	0.0038	Male	*	PC
35	PC_38-6	81.05	8.55	3.82	10.55	5	133.00	28.12	12.58	21.15	5	0.0042	Male	*	PC
36	SM_44-1	0.04	0.01	0.01	28.11	5	0.02	0.00	0.00	17.71	5	0.0043	Female	*	SM
37	PC_36-4	106.93	13.93	6.23	13.03	5	168.46	32.06	14.34	19.03	5	0.0043	Male	*	PC
38	PC_38-3	17.46	3.08	1.38	17.65	5	27.56	4.89	2.19	17.74	5	0.0045	Male	*	PC
39	PUFA_PC	955.73	111.17	49.72	11.63	5	1344.15	195.30	87.34	14.53	5	0.0048	Male	*	PC
40	PC_O-44-5	0.20	0.02	0.01	8.66	5	0.28	0.04	0.02	15.54	5	0.0049	Male	*	PC
41	PC_O-40-1	2.07	0.22	0.10	10.57	5	3.98	1.09	0.49	27.37	5	0.0050	Male	*	PC
42	PC_O-42-3	0.70	0.06	0.03	8.99	5	1.30	0.34	0.15	26.37	5	0.0050	Male	*	PC
43	PC_O-38-1	0.52	0.12	0.05	22.02	5	0.85	0.15	0.07	18.15	5	0.0051	Male	*	PC
44	PC_O-40-4	1.17	0.13	0.06	10.76	5	2.09	0.53	0.24	25.35	5	0.0053	Male	*	PC
45	PC_36-3	70.13	10.66	4.77	15.20	5	105.87	18.32	8.19	17.31	5	0.0055	Male	*	PC
46	PC_O-30-0	0.11	0.02	0.01	15.43	5	0.15	0.01	0.01	9.09	5	0.0057	Male	*	PC
47	PC_O-36-1	1.64	0.24	0.11	14.74	5	2.31	0.32	0.14	13.95	5	0.0059	Male	*	PC
48	SM_34-2	2.15	0.18	0.08	8.24	5	3.41	0.74	0.33	21.58	5	0.0059	Male	*	SM
49	PC_O-42-2	0.29	0.02	0.01	8.15	5	0.48	0.11	0.05	23.44	5	0.0060	Male	*	PC
50	PC_O-40-3	0.44	0.05	0.02	10.52	5	0.71	0.16	0.07	22.51	5	0.0061	Male	*	PC

Supplemental Table 2. (continued)

		Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
Metabolite		Mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
51	SFA_PC	17.57	2.25	1.01	12.79	5	25.51	4.26	1.90	16.69	5	0.0062	Female	*	PC
52	PC_O-36-2	7.80	1.10	0.49	14.05	5	11.78	2.22	0.99	18.85	5	0.0070	Female	*	PC
53	PC_32-0	9.67	1.47	0.66	15.24	5	13.96	2.24	1.00	16.03	5	0.0071	Female	*	PC
54	PC_O-30-2	0.05	0.00	0.00	9.52	5	0.07	0.01	0.00	16.74	5	0.0073	Female	*	PC
55	LPC_28-1	0.15	0.01	0.01	8.48	5	0.21	0.04	0.02	17.55	5	0.0079	Female	*	LPC
56	PC_34-4	0.39	0.04	0.02	11.20	5	0.66	0.18	0.08	26.51	5	0.0089	Female	*	PC
57	PUFA_PC/ MUFA_PC	11.06	1.04	0.46	9.38	5	9.15	0.69	0.31	7.57	5	0.0091	Male	*	PC
58	LPC_26-1	0.08	0.01	0.01	14.52	5	0.12	0.02	0.01	18.06	5	0.0107	Female	*	LPC
59	PC_36-5	5.57	0.88	0.40	15.89	5	9.26	2.34	1.04	25.23	5	0.0108	Female	*	PC
60	PC_O-42-1	0.41	0.07	0.03	16.29	5	0.61	0.12	0.05	20.09	5	0.0108	Female	*	PC
61	PC_O-44-4	0.12	0.01	0.00	5.70	5	0.16	0.03	0.01	17.95	5	0.0108	Female	*	PC
62	PC_O-38-0	1.65	0.18	0.08	10.97	5	3.12	0.98	0.44	31.44	5	0.0109	Female	*	PC
63	PC_O-42-5	0.52	0.02	0.01	4.78	5	0.64	0.08	0.04	12.53	5	0.0117	Female	*	PC
64	PC_O-30-1	0.09	0.02	0.01	24.79	5	0.15	0.03	0.01	22.16	5	0.0125	Female	*	PC
65	PC_32-2	0.94	0.11	0.05	11.86	5	1.37	0.28	0.13	20.49	5	0.0126	Female	*	PC
66	PC_O-44-6	0.15	0.02	0.01	16.69	5	0.21	0.04	0.02	17.41	5	0.0126	Female	*	PC
67	PC_36-1	16.73	3.95	1.77	23.61	5	24.16	3.55	1.59	14.70	5	0.0141	Female	*	PC
68	PC_38-0	1.23	0.14	0.06	11.74	5	1.84	0.42	0.19	23.00	5	0.0152	Female	*	PC
69	MUFA_PC/ SFA_PC	4.96	0.48	0.22	9.78	5	5.80	0.37	0.17	6.44	5	0.0154	Female	*	PC
70	PC_32-3	0.14	0.03	0.01	20.96	5	0.20	0.03	0.01	15.12	5	0.0161	Female	*	PC
71	PC_O-38-5	2.36	0.25	0.11	10.53	5	3.72	0.97	0.44	26.16	5	0.0165	Female	*	PC
72	PC_42-1	0.13	0.02	0.01	12.16	5	0.16	0.02	0.01	12.46	5	0.0186	Female		PC
73	LPC_24-0	0.32	0.03	0.02	10.66	5	0.47	0.11	0.05	22.61	5	0.0186	Female		LPC
74	PC_O-40-5	0.77	0.09	0.04	11.40	5	1.10	0.24	0.11	21.52	5	0.0194	Female		PC
75	PC_O-38-3	1.40	0.21	0.09	14.73	5	2.08	0.48	0.22	23.15	5	0.0195	Female		PC

Supplemental Table 2. (continued)

	Metabolite	Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
		Mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
76	PC_36-2	196.68	29.26	13.09	14.88	5	249.21	27.87	12.47	11.18	5	0.0197	Female		PC
77	LPC_20-3	4.22	0.53	0.24	12.50	5	6.43	1.67	0.75	25.99	5	0.0225	Female		LPC
78	Total SM-non OH	33.56	4.36	1.95	13.00	5	42.98	6.18	2.76	14.37	5	0.0238	Female		SM
79	LPC_16-1	2.68	0.25	0.11	9.39	5	3.81	0.88	0.39	22.95	5	0.0238	Female		LPC
80	LPC_28-0	0.22	0.05	0.02	21.26	5	0.29	0.03	0.01	9.83	5	0.0258	Female		LPC
81	PC_O-44-3	0.12	0.01	0.00	5.64	5	0.14	0.02	0.01	14.00	5	0.0269	Female		PC
82	PC_O-34-0	0.36	0.07	0.03	18.43	5	0.47	0.07	0.03	14.88	5	0.0270	Female		PC
83	PC_38-5	23.38	3.45	1.54	14.74	5	35.01	9.08	4.06	25.93	5	0.0280	Female		PC
84	PC_36-6	0.27	0.04	0.02	13.01	5	0.42	0.12	0.05	28.98	5	0.0302	Female		PC
85	PC_O-36-0	0.37	0.05	0.02	13.99	5	0.49	0.09	0.04	19.18	5	0.0357	Female		PC
86	PC_O-38-4	3.27	0.43	0.19	13.17	5	4.63	1.12	0.50	24.26	5	0.0360	Female		PC
87	Total LPC / Total PC	0.34	0.04	0.02	10.91	5	0.29	0.02	0.01	7.51	5	0.0362	Male		LPC, PC
88	Total SM	38.20	5.05	2.26	13.23	5	47.62	7.12	3.18	14.94	5	0.0423	Female		SM
89	Total LPC	357.48	21.28	9.52	5.95	5	443.41	76.78	34.34	17.32	5	0.0424	Female		LPC
90	PC_O-42-4	0.20	0.03	0.01	13.89	5	0.28	0.07	0.03	25.23	5	0.0445	Female		PC
91	SM_42-2	8.76	1.83	0.82	20.92	5	11.33	1.63	0.73	14.43	5	0.0474	Female		SM
92	PC_O-40-6	2.12	0.26	0.12	12.44	5	2.95	0.74	0.33	25.20	5	0.0474	Female		PC

Supplemental Table 3. Plasma metabolites in naïve female and male C57BL/6 mice.
Metabolites assayed from 3 mo. old C57BL/6 mice; n=5 for each cohort of female and male.

	Metabolite	Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
1	C0	21.25	2.33	1.04	10.95	5	22.77	3.90	1.74	17.13	5	0.4762	Male_Naive	AC	
2	C10	0.25	0.06	0.03	25.17	5	0.26	0.08	0.03	29.55	5	0.8528	Male_Naive	AC	
3	C10-1	0.12	0.04	0.02	30.39	5	0.13	0.03	0.02	26.30	5	0.5356	Male_Naive	AC	
4	C10-2	0.15	0.03	0.01	18.78	5	0.14	0.04	0.02	25.19	5	0.9086	Female_Naive	AC	
5	C12	0.28	0.12	0.05	43.66	5	0.30	0.12	0.05	40.86	5	0.7705	Male_Naive	AC	
6	C12-DC	0.45	0.04	0.02	9.07	5	0.48	0.05	0.02	11.10	5	0.3070	Male_Naive	AC	
7	C12-1	0.26	0.05	0.02	19.21	5	0.30	0.04	0.02	13.58	5	0.2759	Male_Naive	AC	
8	C14	0.15	0.05	0.02	32.33	5	0.16	0.05	0.02	32.41	5	0.8527	Male_Naive	AC	
9	C14-1	0.07	0.02	0.01	28.94	5	0.07	0.02	0.01	32.46	5	0.8816	Female_Naive	AC	
10	C14-1 OH	0.08	0.03	0.02	45.74	5	0.08	0.04	0.02	42.75	5	0.7740	Male_Naive	AC	
11	C14-2	0.04	0.01	0.01	31.16	5	0.05	0.02	0.01	33.84	5	0.6452	Male_Naive	AC	
12	C14-2 OH	0.10	0.03	0.01	27.57	5	0.10	0.03	0.01	27.53	5	0.9645	Female_Naive	AC	
13	C16	0.24	0.04	0.02	15.22	5	0.24	0.06	0.03	25.96	5	0.8901	Male_Naive	AC	
14	C16-OH	0.10	0.04	0.02	40.35	5	0.11	0.04	0.02	37.82	5	0.7692	Male_Naive	AC	
15	C16-1	0.14	0.04	0.02	27.01	5	0.14	0.03	0.01	23.01	5	0.8419	Female_Naive	AC	
16	C16-1 OH	0.08	0.04	0.02	47.25	5	0.09	0.04	0.02	44.19	5	0.8265	Male_Naive	AC	
17	C16-2	0.05	0.01	0.01	26.34	5	0.05	0.02	0.01	30.51	5	0.9499	Male_Naive	AC	
18	C16-2 OH	0.07	0.02	0.01	33.10	5	0.07	0.02	0.01	33.01	5	0.9564	Male_Naive	AC	
19	C18	0.11	0.03	0.01	25.48	5	0.11	0.03	0.01	29.49	5	1.0000	Male_Naive	AC	
20	C18-1	0.21	0.09	0.04	44.76	5	0.17	0.06	0.03	36.25	5	0.4345	Female_Naive	AC	
21	C18-1 OH	0.07	0.02	0.01	34.84	5	0.07	0.02	0.01	31.45	5	0.8491	Male_Naive	AC	
22	C18-2	0.09	0.02	0.01	21.16	5	0.08	0.03	0.01	32.61	5	0.7866	Female_Naive	AC	
23	C2	16.01	1.50	0.67	9.39	5	14.79	3.43	1.53	23.20	5	0.4861	Female_Naive	AC	
24	C3	0.47	0.14	0.06	29.40	5	0.48	0.11	0.05	23.42	5	0.9203	Male_Naive	AC	
25	C3-DC_C4-OH	0.21	0.07	0.03	30.76	5	0.23	0.08	0.04	35.40	5	0.7262	Male_Naive	AC	

Supplemental Table 3. (continued)

	Metabolite	Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
26	C3-OH	0.13	0.05	0.02	33.89	5	0.14	0.04	0.02	27.64	5	0.8040	Male_Naive	AC	
27	C3-1	0.08	0.04	0.02	46.74	5	0.09	0.04	0.02	42.02	5	0.7605	Male_Naive	AC	
28	C4	0.41	0.13	0.06	32.63	5	0.38	0.12	0.06	32.80	5	0.7342	Female_Naive	AC	
29	C4-1	0.09	0.03	0.01	29.49	5	0.10	0.03	0.01	30.93	5	0.7784	Male_Naive	AC	
30	C5	0.17	0.06	0.03	38.27	5	0.18	0.05	0.02	30.16	5	0.8764	Male_Naive	AC	
31	C5-DC_C6-OH	0.24	0.13	0.06	55.34	5	0.26	0.13	0.06	50.47	5	0.8744	Male_Naive	AC	
32	C5-M-DC	0.19	0.09	0.04	48.55	5	0.17	0.06	0.02	31.86	5	0.8026	Female_Naive	AC	
33	C5-OH_C3-DC-M	0.15	0.04	0.02	29.64	5	0.16	0.05	0.02	29.25	5	0.8341	Male_Naive	AC	
34	C5-1	0.09	0.04	0.02	42.29	5	0.09	0.03	0.02	38.40	5	0.9376	Male_Naive	AC	
35	C5-1 DC	0.48	0.29	0.13	61.14	5	0.51	0.29	0.13	58.11	5	0.8889	Male_Naive	AC	
36	C6_C4-1 DC	0.21	0.11	0.05	52.50	5	0.22	0.11	0.05	50.52	5	0.9286	Male_Naive	AC	
37	C6-1	0.14	0.07	0.03	52.54	5	0.14	0.07	0.03	49.95	5	0.9622	Male_Naive	AC	
38	C7-DC	0.06	0.03	0.01	52.93	5	0.07	0.03	0.01	43.13	5	0.4698	Male_Naive	AC	
39	C8	0.12	0.05	0.02	39.88	5	0.12	0.04	0.02	34.00	5	0.8872	Male_Naive	AC	
40	C9	0.25	0.06	0.03	23.74	5	0.24	0.07	0.03	27.36	5	0.7553	Female_Naive	AC	
41	Ala	773.20	188.96	84.51	24.44	5	665.40	122.14	54.62	18.36	5	0.3153	Female_Naive	AA	
42	Arg	108.94	28.60	12.79	26.26	5	103.28	15.67	7.01	15.17	5	0.7081	Female_Naive	AA	
43	Asn	69.16	21.77	9.74	31.48	5	59.22	17.70	7.92	29.89	5	0.4512	Female_Naive	AA	
44	Asp	10.04	2.51	1.12	24.95	5	7.54	1.22	0.55	16.25	5	0.0793	Female_Naive	AA	
45	Cit	77.36	17.77	7.95	22.97	5	65.38	3.41	1.52	5.21	5	0.1770	Female_Naive	AA	
46	Gln	712.80	99.78	44.62	14.00	5	723.20	159.33	71.25	22.03	5	0.9046	Male_Naive	AA	
47	Glu	41.52	14.87	6.65	35.82	5	44.88	8.67	3.88	19.33	5	0.6741	Male_Naive	AA	
48	Gly	236.40	28.85	12.90	12.20	5	253.40	47.18	21.10	18.62	5	0.5113	Male_Naive	AA	
49	Ile	126.80	20.24	9.05	15.96	5	126.10	17.93	8.02	14.22	5	0.9553	Female_Naive	AA	
50	Leu	272.20	72.81	32.56	26.75	5	298.60	78.32	35.03	26.23	5	0.5960	Male_Naive	AA	

Supplemental Table 3. (continued)

		Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
	Metabolite	mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
51	Lys	319.00	84.41	37.75	26.46	5	338.00	70.16	31.38	20.76	5	0.7088	Male_Naive		AA
52	Met	74.00	27.78	12.42	37.54	5	89.32	40.16	17.96	44.96	5	0.5028	Male_Naive		AA
53	Orn	55.56	15.67	7.01	28.20	5	66.44	22.75	10.17	34.24	5	0.4042	Male_Naive		AA
54	Phe	76.56	11.92	5.33	15.58	5	81.66	14.37	6.43	17.60	5	0.5584	Male_Naive		AA
55	Pro	146.66	51.69	23.11	35.24	5	170.22	54.48	24.36	32.00	5	0.5029	Male_Naive		AA
56	Ser	183.60	56.04	25.06	30.52	5	161.80	43.49	19.45	26.88	5	0.5114	Female_Naive		AA
57	Thr	216.00	62.55	27.97	28.96	5	203.00	43.39	19.40	21.37	5	0.7125	Female_Naive		AA
58	Trp	99.20	17.19	7.69	17.32	5	76.46	22.33	9.99	29.21	5	0.1088	Female_Naive		AA
59	Tyr	94.24	24.63	11.02	26.14	5	89.64	13.77	6.16	15.36	5	0.7249	Female_Naive		AA
60	Val	209.00	43.66	19.53	20.89	5	215.00	42.54	19.03	19.79	5	0.8313	Male_Naive		AA
61	Ac-Orn	2.38	0.34	0.15	14.18	5	1.98	0.20	0.09	9.84	5	0.0527	Female_Naive		BA
62	ADMA	0.74	0.20	0.09	26.80	5	0.72	0.05	0.02	7.11	5	0.8238	Female_Naive		BA
63	alpha-AAA	11.38	4.13	1.85	36.32	5	9.54	1.62	0.72	16.94	5	0.3811	Female_Naive		BA
64	Creatinine	6.56	0.67	0.30	10.18	5	6.13	1.42	0.63	23.14	5	0.5585	Female_Naive		BA
65	Kynurenine	1.17	0.26	0.12	22.60	5	1.03	0.24	0.11	22.86	5	0.4227	Female_Naive		BA
66	Met-SO	2.10	0.96	0.43	45.91	5	2.80	1.55	0.69	55.30	5	0.4118	Male_Naive		BA
67	Spermidine	1.05	0.24	0.11	22.78	5	1.08	0.28	0.12	25.78	5	0.8534	Male_Naive		BA
68	Spermine	0.49	0.14	0.06	28.17	5	0.41	0.03	0.02	8.29	5	0.2915	Female_Naive		BA
69	Taurine	512.20	110.31	49.33	21.54	5	530.20	76.92	34.40	14.51	5	0.7723	Male_Naive		BA
70	total DMA	0.61	0.04	0.02	7.30	5	0.56	0.04	0.02	7.74	5	0.1167	Female_Naive		BA
71	LPC_14-0	3.20	0.43	0.19	13.34	5	2.86	0.50	0.22	17.38	5	0.2724	Female_Naive		LPC
72	LPC_16-0	122.14	8.71	3.89	7.13	5	170.65	25.14	11.24	14.73	5	0.0035	Male_Naive	*	LPC
73	LPC_16-1	2.68	0.25	0.11	9.39	5	3.81	0.88	0.39	22.95	5	0.0238	Male_Naive		LPC
74	LPC_17-0	1.97	0.19	0.08	9.47	5	2.40	0.52	0.23	21.68	5	0.1212	Male_Naive		LPC
75	LPC_18-0	59.83	5.48	2.45	9.17	5	67.81	11.77	5.26	17.36	5	0.2064	Male_Naive		LPC

Supplemental Table 3. (continued)

	Metabolite	Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
76	LPC_18-1	25.51	3.19	1.43	12.51	5	31.35	6.37	2.85	20.33	5	0.1044	Male_Naive		LPC
77	LPC_18-2	108.72	7.70	3.44	7.08	5	126.84	22.32	9.98	17.59	5	0.1245	Male_Naive		LPC
78	LPC_20-3	4.22	0.53	0.24	12.50	5	6.43	1.67	0.75	25.99	5	0.0225	Male_Naive		LPC
79	LPC_20-4	28.24	2.72	1.21	9.62	5	29.91	8.80	3.93	29.41	5	0.6951	Male_Naive		LPC
80	LPC_24-0	0.32	0.03	0.02	10.66	5	0.47	0.11	0.05	22.61	5	0.0186	Male_Naive		LPC
81	LPC_26-0	0.17	0.01	0.00	3.05	5	0.24	0.03	0.02	14.42	5	0.0027	Male_Naive	*	LPC
82	LPC_26-1	0.08	0.01	0.01	14.52	5	0.12	0.02	0.01	18.06	5	0.0107	Male_Naive	*	LPC
83	LPC_28-0	0.22	0.05	0.02	21.26	5	0.29	0.03	0.01	9.83	5	0.0258	Male_Naive		LPC
84	LPC_28-1	0.15	0.01	0.01	8.48	5	0.21	0.04	0.02	17.55	5	0.0079	Male_Naive	*	LPC
85	PC_24-0	0.13	0.03	0.01	24.71	5	0.11	0.02	0.01	20.12	5	0.4828	Female_Naive		PC
86	PC_26-0	0.65	0.07	0.03	11.49	5	0.78	0.14	0.06	18.49	5	0.1043	Male_Naive		PC
87	PC_28-1	0.22	0.06	0.02	25.29	5	0.23	0.02	0.01	9.62	5	0.6074	Male_Naive		PC
88	PC_30-0	0.63	0.12	0.05	19.06	5	0.80	0.12	0.05	15.09	5	0.0524	Male_Naive		PC
89	PC_30-2	0.07	0.02	0.01	25.93	5	0.06	0.02	0.01	35.22	5	0.5933	Female_Naive		PC
90	PC_32-0	9.67	1.47	0.66	15.24	5	13.96	2.24	1.00	16.03	5	0.0071	Male_Naive	*	PC
91	PC_32-1	2.52	0.61	0.27	24.01	5	4.45	0.86	0.39	19.35	5	0.0035	Male_Naive	*	PC
92	PC_32-2	0.94	0.11	0.05	11.86	5	1.37	0.28	0.13	20.49	5	0.0126	Male_Naive	*	PC
93	PC_32-3	0.14	0.03	0.01	20.96	5	0.20	0.03	0.01	15.12	5	0.0161	Male_Naive	*	PC
94	PC_34-1	60.31	10.47	4.68	17.36	5	105.66	10.65	4.77	10.08	5	0.0001	Male_Naive	*	PC
95	PC_34-2	286.15	31.65	14.15	11.06	5	388.82	30.91	13.82	7.95	5	0.0008	Male_Naive	*	PC
96	PC_34-3	9.33	1.08	0.48	11.58	5	17.79	2.90	1.30	16.30	5	0.0003	Male_Naive	*	PC
97	PC_34-4	0.39	0.04	0.02	11.20	5	0.66	0.18	0.08	26.51	5	0.0089	Male_Naive	*	PC
98	PC_36-0	1.79	0.15	0.07	8.39	5	2.28	0.46	0.21	20.17	5	0.0511	Male_Naive		PC
99	PC_36-1	16.73	3.95	1.77	23.61	5	24.16	3.55	1.59	14.70	5	0.0141	Male_Naive	*	PC
100	PC_36-2	196.68	29.26	13.09	14.88	5	249.21	27.87	12.47	11.18	5	0.0197	Male_Naive		PC

Supplemental Table 3. (continued)

		Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR<5%	Class
Metabolite		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
101	PC_36-3	70.13	10.66	4.77	15.20	5	105.87	18.32	8.19	17.31	5	0.0055	Male_Naive	*	PC
102	PC_36-4	106.93	13.93	6.23	13.03	5	168.46	32.06	14.34	19.03	5	0.0043	Male_Naive	*	PC
103	PC_36-5	5.57	0.88	0.40	15.89	5	9.26	2.34	1.04	25.23	5	0.0108	Male_Naive	*	PC
104	PC_36-6	0.27	0.04	0.02	13.01	5	0.42	0.12	0.05	28.98	5	0.0302	Male_Naive		PC
105	PC_38-0	1.23	0.14	0.06	11.74	5	1.84	0.42	0.19	23.00	5	0.0152	Male_Naive	*	PC
106	PC_38-1	0.36	0.04	0.02	11.92	5	0.53	0.16	0.07	30.67	5	0.0572	Male_Naive		PC
107	PC_38-3	17.46	3.08	1.38	17.65	5	27.56	4.89	2.19	17.74	5	0.0045	Male_Naive	*	PC
108	PC_38-4	82.79	11.31	5.06	13.66	5	97.53	23.64	10.57	24.24	5	0.2439	Male_Naive		PC
109	PC_38-5	23.38	3.45	1.54	14.74	5	35.01	9.08	4.06	25.93	5	0.0280	Male_Naive		PC
110	PC_38-6	81.05	8.55	3.82	10.55	5	133.00	28.12	12.58	21.15	5	0.0042	Male_Naive	*	PC
111	PC_40-1	0.28	0.02	0.01	6.95	5	0.37	0.04	0.02	11.19	5	0.0022	Male_Naive	*	PC
112	PC_40-2	0.21	0.01	0.00	4.27	5	0.47	0.04	0.02	9.19	5	0.0000	Male_Naive	*	PC
113	PC_40-3	0.21	0.04	0.02	16.79	5	0.64	0.07	0.03	10.75	5	0.0000	Male_Naive	*	PC
114	PC_40-4	1.12	0.13	0.06	11.71	5	2.73	0.41	0.18	14.91	5	0.0000	Male_Naive	*	PC
115	PC_40-5	2.61	0.41	0.18	15.72	5	4.43	0.66	0.30	14.97	5	0.0008	Male_Naive	*	PC
116	PC_40-6	32.82	4.62	2.07	14.07	5	38.71	8.74	3.91	22.56	5	0.2189	Male_Naive		PC
117	PC_42-0	0.18	0.01	0.01	7.22	5	0.24	0.03	0.01	10.64	5	0.0013	Male_Naive	*	PC
118	PC_42-1	0.13	0.02	0.01	12.16	5	0.16	0.02	0.01	12.46	5	0.0186	Male_Naive		PC
119	PC_42-2	0.16	0.01	0.01	8.96	5	0.25	0.03	0.01	11.34	5	0.0002	Male_Naive	*	PC
120	PC_42-4	0.14	0.02	0.01	13.31	5	0.25	0.04	0.02	14.80	5	0.0004	Male_Naive	*	PC
121	PC_42-5	0.18	0.02	0.01	8.92	5	0.34	0.05	0.02	13.43	5	0.0001	Male_Naive	*	PC
122	PC_42-6	0.38	0.05	0.02	11.89	5	1.01	0.10	0.05	10.16	5	0.0000	Male_Naive	*	PC
123	PC_O-30-0	0.11	0.02	0.01	15.43	5	0.15	0.01	0.01	9.09	5	0.0057	Male_Naive	*	PC
124	PC_O-30-1	0.09	0.02	0.01	24.79	5	0.15	0.03	0.01	22.16	5	0.0125	Male_Naive	*	PC
125	PC_O-30-2	0.05	0.00	0.00	9.52	5	0.07	0.01	0.00	16.74	5	0.0073	Male_Naive	*	PC

Supplemental Table 3. (continued)

	Metabolite	Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
126	PC_O-32-1	0.40	0.08	0.04	19.85	5	0.63	0.08	0.03	12.15	5	0.0014	Male_Naive	*	PC
127	PC_O-32-2	0.14	0.02	0.01	14.61	5	0.29	0.04	0.02	12.99	5	0.0001	Male_Naive	*	PC
128	PC_O-34-0	0.36	0.07	0.03	18.43	5	0.47	0.07	0.03	14.88	5	0.0270	Male_Naive		PC
129	PC_O-34-1	1.98	0.20	0.09	9.84	5	3.17	0.57	0.25	17.93	5	0.0022	Male_Naive	*	PC
130	PC_O-34-2	2.76	0.31	0.14	11.36	5	4.88	0.60	0.27	12.36	5	0.0001	Male_Naive	*	PC
131	PC_O-34-3	0.80	0.13	0.06	16.26	5	1.46	0.18	0.08	12.58	5	0.0002	Male_Naive	*	PC
132	PC_O-36-0	0.37	0.05	0.02	13.99	5	0.49	0.09	0.04	19.18	5	0.0357	Male_Naive		PC
133	PC_O-36-1	1.64	0.24	0.11	14.74	5	2.31	0.32	0.14	13.95	5	0.0059	Male_Naive	*	PC
134	PC_O-36-2	7.80	1.10	0.49	14.05	5	11.78	2.22	0.99	18.85	5	0.0070	Male_Naive	*	PC
135	PC_O-36-3	1.57	0.19	0.08	11.82	5	2.65	0.41	0.18	15.53	5	0.0007	Male_Naive	*	PC
136	PC_O-36-4	2.51	0.29	0.13	11.75	5	4.45	0.89	0.40	19.98	5	0.0017	Male_Naive	*	PC
137	PC_O-36-5	1.48	0.27	0.12	18.53	5	2.06	0.52	0.23	25.10	5	0.0567	Male_Naive		PC
138	PC_O-38-0	1.65	0.18	0.08	10.97	5	3.12	0.98	0.44	31.44	5	0.0109	Male_Naive	*	PC
139	PC_O-38-1	0.52	0.12	0.05	22.02	5	0.85	0.15	0.07	18.15	5	0.0051	Male_Naive	*	PC
140	PC_O-38-2	3.61	0.56	0.25	15.45	5	8.08	1.66	0.74	20.51	5	0.0005	Male_Naive	*	PC
141	PC_O-38-3	1.40	0.21	0.09	14.73	5	2.08	0.48	0.22	23.15	5	0.0195	Male_Naive		PC
142	PC_O-38-4	3.27	0.43	0.19	13.17	5	4.63	1.12	0.50	24.26	5	0.0360	Male_Naive		PC
143	PC_O-38-5	2.36	0.25	0.11	10.53	5	3.72	0.97	0.44	26.16	5	0.0165	Male_Naive	*	PC
144	PC_O-38-6	1.62	0.19	0.09	11.92	5	2.87	0.67	0.30	23.28	5	0.0038	Male_Naive	*	PC
145	PC_O-40-1	2.07	0.22	0.10	10.57	5	3.98	1.09	0.49	27.37	5	0.0050	Male_Naive	*	PC
146	PC_O-40-2	0.53	0.04	0.02	7.55	5	0.80	0.14	0.06	18.00	5	0.0036	Male_Naive	*	PC
147	PC_O-40-3	0.44	0.05	0.02	10.52	5	0.71	0.16	0.07	22.51	5	0.0061	Male_Naive	*	PC
148	PC_O-40-4	1.17	0.13	0.06	10.76	5	2.09	0.53	0.24	25.35	5	0.0053	Male_Naive	*	PC
149	PC_O-40-5	0.77	0.09	0.04	11.40	5	1.10	0.24	0.11	21.52	5	0.0194	Male_Naive		PC
150	PC_O-40-6	2.12	0.26	0.12	12.44	5	2.95	0.74	0.33	25.20	5	0.0474	Male_Naive		PC

Supplemental Table 3. (continued)

	Metabolite	Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
151	PC_O-42-0	0.82	0.06	0.03	6.84	5	1.25	0.12	0.06	9.89	5	0.0001	Male_Naive	*	PC
152	PC_O-42-1	0.41	0.07	0.03	16.29	5	0.61	0.12	0.05	20.09	5	0.0108	Male_Naive	*	PC
153	PC_O-42-2	0.29	0.02	0.01	8.15	5	0.48	0.11	0.05	23.44	5	0.0060	Male_Naive	*	PC
154	PC_O-42-3	0.70	0.06	0.03	8.99	5	1.30	0.34	0.15	26.37	5	0.0050	Male_Naive	*	PC
155	PC_O-42-4	0.20	0.03	0.01	13.89	5	0.28	0.07	0.03	25.23	5	0.0445	Male_Naive		PC
156	PC_O-42-5	0.52	0.02	0.01	4.78	5	0.64	0.08	0.04	12.53	5	0.0117	Male_Naive	*	PC
157	PC_O-44-3	0.12	0.01	0.00	5.64	5	0.14	0.02	0.01	14.00	5	0.0269	Male_Naive		PC
158	PC_O-44-4	0.12	0.01	0.00	5.70	5	0.16	0.03	0.01	17.95	5	0.0108	Male_Naive	*	PC
159	PC_O-44-5	0.20	0.02	0.01	8.66	5	0.28	0.04	0.02	15.54	5	0.0049	Male_Naive	*	PC
160	PC_O-44-6	0.15	0.02	0.01	16.69	5	0.21	0.04	0.02	17.41	5	0.0126	Male_Naive	*	PC
161	SM_32-2 OH	1.28	0.12	0.05	9.01	5	1.15	0.27	0.12	23.45	5	0.3387	Female_Naive		SM
162	SM_34-2 OH	0.30	0.04	0.02	12.09	5	0.31	0.05	0.02	16.91	5	0.7230	Male_Naive		SM
163	SM_40-2 OH	1.77	0.39	0.17	22.11	5	1.62	0.26	0.11	15.84	5	0.5079	Female_Naive		SM
164	SM_40-3 OH	1.06	0.19	0.09	18.36	5	1.37	0.35	0.16	25.47	5	0.1202	Male_Naive		SM
165	SM_42-2 OH	0.23	0.04	0.02	15.91	5	0.19	0.06	0.03	33.52	5	0.2701	Female_Naive		SM
166	SM_34-1	15.96	1.75	0.78	10.96	5	18.99	3.04	1.36	15.99	5	0.0894	Male_Naive		SM
167	SM_34-2	2.15	0.18	0.08	8.24	5	3.41	0.74	0.33	21.58	5	0.0059	Male_Naive	*	SM
168	SM_36-1	2.09	0.37	0.17	17.75	5	1.73	0.35	0.15	19.97	5	0.1493	Female_Naive		SM
169	SM_36-2	0.77	0.10	0.04	12.92	5	0.77	0.12	0.05	15.84	5	0.9824	Male_Naive		SM
170	SM_38-3	0.08	0.02	0.01	25.32	5	0.07	0.02	0.01	32.73	5	0.5212	Female_Naive		SM
171	SM_40-1	0.22	0.12	0.05	54.82	5	0.32	0.20	0.09	63.61	5	0.3583	Male_Naive		SM
172	SM_42-1	3.66	0.50	0.22	13.73	5	6.63	0.46	0.21	6.98	5	0.0000	Male_Naive	*	SM
173	SM_42-2	8.76	1.83	0.82	20.92	5	11.33	1.63	0.73	14.43	5	0.0474	Male_Naive		SM
174	SM_44-1	0.04	0.01	0.01	28.11	5	0.02	0.00	0.00	17.71	5	0.0043	Female_Naive	*	SM
175	H1	10145.06	948.80	424.31	9.35	5	11317.60	1552.10	694.12	13.71	5	0.1875	Male_Naive		S

Supplemental Table 3. (continued)

	Metabolite	Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
176	C2,C3 / C0	0.78	0.12	0.06	15.87	5	0.67	0.10	0.05	15.08	5	0.1497	Female_Naive		AC
177	AAA	270.00	43.99	19.67	16.29	5	247.76	38.06	17.02	15.36	5	0.4175	Female_Naive		AA
178	ADMA / Arg	0.01	0.00	0.00	46.42	5	0.01	0.00	0.00	18.11	5	0.9061	Female_Naive		BA, AA
179	BCAA	608.00	127.71	57.11	21.00	5	639.70	128.93	57.66	20.15	5	0.7063	Male_Naive		AA
180	C2 / C0	0.76	0.12	0.06	16.24	5	0.65	0.10	0.04	14.93	5	0.1458	Female_Naive		AC
181	Cit / Arg	0.73	0.17	0.07	22.86	5	0.64	0.10	0.04	14.89	5	0.3335	Female_Naive		AA
182	Cit / Orn	1.44	0.32	0.14	21.97	5	1.10	0.45	0.20	40.81	5	0.1994	Female_Naive		AA
183	CPT-I ratio	0.02	0.00	0.00	20.66	5	0.02	0.00	0.00	17.00	5	0.5414	Female_Naive		AC
184	Essential AA	1392.76	285.24	127.56	20.48	5	1428.14	284.60	127.28	19.93	5	0.8492	Male_Naive		AA
185	Fisher ratio	2.24	0.21	0.09	9.30	5	2.58	0.32	0.14	12.41	5	0.0845	Male_Naive		AA
186	Glucogenic AA	1193.20	258.25	115.49	21.64	5	1080.60	193.76	86.65	17.93	5	0.4579	Female_Naive		AA
187	Kynurenine / Trp	0.01	0.00	0.00	19.33	5	0.01	0.00	0.00	21.37	5	0.2646	Male_Naive		AA
188	Met-SO / Met	0.03	0.01	0.00	23.69	5	0.03	0.01	0.00	18.14	5	0.5204	Male_Naive		AA
189	MUFA_PC	87.31	15.74	7.04	18.03	5	146.75	16.80	7.51	11.45	5	0.0004	Male_Naive	*	PC
190	MUFA_PC / SFA_PC	4.96	0.48	0.22	9.78	5	5.80	0.37	0.17	6.44	5	0.0154	Male_Naive	*	PC
191	Non essential AA	2267.62	314.19	140.51	13.86	5	2175.30	265.17	118.59	12.19	5	0.6291	Female_Naive		AA
192	Orn / Arg	0.51	0.05	0.02	10.34	5	0.63	0.14	0.06	22.57	5	0.1153	Male_Naive		AA
193	PUFA_PC	955.73	111.17	49.72	11.63	5	1344.15	195.30	87.34	14.53	5	0.0048	Male_Naive	*	PC
194	PUFA_PC / MUFA_PC	11.06	1.04	0.46	9.38	5	9.15	0.69	0.31	7.57	5	0.0091	Female_Naive	*	PC
195	PUFA_PC / SFA_PC	54.56	4.33	1.94	7.94	5	52.90	2.78	1.24	5.25	5	0.4894	Female_Naive		PC
196	SFA_PC	17.57	2.25	1.01	12.79	5	25.51	4.26	1.90	16.69	5	0.0062	Male_Naive	*	PC
197	Spermine / Spermidine	0.46	0.07	0.03	14.28	5	0.40	0.09	0.04	22.43	5	0.2549	Female_Naive		BA, AA
198	Total_PC,SM	1098.80	128.16	57.31	11.66	5	1564.02	220.92	98.80	14.13	5	0.0036	Male_Naive	*	PC,SM
199	Total AA	3902.24	609.58	272.61	15.62	5	3838.54	584.95	261.60	15.24	5	0.8703	Female_Naive		AA
200	Total AC / C0	1.07	0.18	0.08	16.46	5	0.95	0.16	0.07	16.45	5	0.2615	Female_Naive		AC

Supplemental Table 3. (continued)

Metabolite		Female_Naive					Male_Naive					P value F vs. M	Differential Expression (up)	* FDR <5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
201	Total AC-DC / Total AC	0.06	0.02	0.01	33.03	5	0.07	0.02	0.01	26.82	5	0.5918	Male_Naive		AC
202	Total AC-OH / Total AC	0.04	0.01	0.00	25.53	5	0.04	0.01	0.00	21.76	5	0.5264	Male_Naive		AC
203	Total LPC	357.48	21.28	9.52	5.95	5	443.41	76.78	34.34	17.32	5	0.0424	Male_Naive		LPC
204	Total LPC / Total PC	0.34	0.04	0.02	10.91	5	0.29	0.02	0.01	7.51	5	0.0362	Female_Naive		LPC,P C
205	Total PC	1060.60	126.90	56.75	11.96	5	1516.40	213.96	95.68	14.11	5	0.0035	Male_Naive	*	PC
206	Total PC_diacyl	1013.50	122.10	54.60	12.05	5	1439.06	198.87	88.94	13.82	5	0.0035	Male_Naive	*	PC
207	Total PC_ether	47.10	5.08	2.27	10.78	5	77.35	15.34	6.86	19.83	5	0.0031	Male_Naive	*	PC
208	Total SM	38.20	5.05	2.26	13.23	5	47.62	7.12	3.18	14.94	5	0.0423	Male_Naive		SM
209	Total SM / Total_SM,PC	0.04	0.01	0.00	15.35	5	0.03	0.00	0.00	2.94	5	0.0857	Female_Naive		SM,PC
210	Total SM / Total PC	0.04	0.01	0.00	15.00	5	0.03	0.00	0.00	2.85	5	0.0779	Female_Naive		SM,PC
211	Total SM-non OH	33.56	4.36	1.95	13.00	5	42.98	6.18	2.76	14.37	5	0.0238	Male_Naive		SM
212	Total SM-OH	4.64	0.73	0.32	15.65	5	4.64	0.98	0.44	21.01	5	0.9952	Male_Naive		SM
213	Total SM-OH / Total SM-non OH	0.14	0.01	0.00	5.73	5	0.11	0.01	0.00	8.98	5	0.0006	Female_Naive	*	SM
214	Tyr / Phe	1.21	0.16	0.07	13.04	5	1.11	0.12	0.05	10.70	5	0.2582	Female_Naive		AA

Supplemental Table 4. Plasma metabolites assayed at 3 days post-8.72 Gy TBI: Female single-sex cohort.
 Metabolites assayed from 3 mo. old C57BL/6 mice; n=5 for each cohort (Naïve, TBI).

Metabolite	Female_Naive					Female_TBI					P value Naive vs. TBI	Differential Expression (Up)	* FDR<5%	Class
	mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
1 C0	21.25	2.33	1.04	10.95	5	19.25	3.14	1.40	16.30	5	0.2851	Female_Naive	AC	
2 C10	0.25	0.06	0.03	25.17	5	0.25	0.08	0.04	32.42	5	0.9699	Female_Naive	AC	
3 C10-1	0.12	0.04	0.02	30.39	5	0.13	0.04	0.02	30.23	5	0.5589	Female_TBI	AC	
4 C10-2	0.15	0.03	0.01	18.78	5	0.14	0.03	0.01	20.98	5	0.7380	Female_Naive	AC	
5 C12	0.28	0.12	0.05	43.66	5	0.31	0.15	0.07	48.73	5	0.7454	Female_TBI	AC	
6 C12-DC	0.45	0.04	0.02	9.07	5	0.50	0.05	0.02	10.93	5	0.1322	Female_TBI	AC	
7 C12-1	0.26	0.05	0.02	19.21	5	0.28	0.07	0.03	23.48	5	0.6081	Female_TBI	AC	
8 C14	0.15	0.05	0.02	32.33	5	0.15	0.05	0.02	36.06	5	0.8406	Female_Naive	AC	
9 C14-1	0.07	0.02	0.01	28.94	5	0.07	0.03	0.01	35.23	5	0.9386	Female_Naive	AC	
10 C14-1 OH	0.08	0.03	0.02	45.74	5	0.08	0.04	0.02	49.22	5	0.8820	Female_TBI	AC	
11 C14-2	0.04	0.01	0.01	31.16	5	0.05	0.02	0.01	37.10	5	0.7569	Female_TBI	AC	
12 C14-2 OH	0.10	0.03	0.01	27.57	5	0.10	0.03	0.01	31.13	5	0.8784	Female_TBI	AC	
13 C16	0.24	0.04	0.02	15.22	5	0.20	0.05	0.02	26.60	5	0.1890	Female_Naive	AC	
14 C16-OH	0.10	0.04	0.02	40.35	5	0.11	0.05	0.02	47.21	5	0.6300	Female_TBI	AC	
15 C16-1	0.14	0.04	0.02	27.01	5	0.11	0.03	0.01	25.38	5	0.1615	Female_Naive	AC	
16 C16-1 OH	0.08	0.04	0.02	47.25	5	0.09	0.05	0.02	53.54	5	0.7717	Female_TBI	AC	
17 C16-2	0.05	0.01	0.01	26.34	5	0.05	0.02	0.01	33.13	5	0.8299	Female_TBI	AC	
18 C16-2 OH	0.07	0.02	0.01	33.10	5	0.07	0.03	0.01	37.52	5	0.9593	Female_TBI	AC	
19 C18	0.11	0.03	0.01	25.48	5	0.11	0.04	0.02	35.83	5	0.8698	Female_TBI	AC	
20 C18-1	0.21	0.09	0.04	44.76	5	0.16	0.06	0.03	39.47	5	0.3663	Female_Naive	AC	
21 C18-1 OH	0.07	0.02	0.01	34.84	5	0.08	0.03	0.01	38.49	5	0.6034	Female_TBI	AC	
22 C18-2	0.09	0.02	0.01	21.16	5	0.07	0.02	0.01	29.24	5	0.3168	Female_Naive	AC	
23 C2	16.01	1.50	0.67	9.39	5	13.14	1.88	0.84	14.28	5	0.0282	Female_Naive	AC	
24 C3	0.47	0.14	0.06	29.40	5	0.43	0.09	0.04	20.27	5	0.5890	Female_Naive	AC	
25 C3-DC_C4-OH	0.21	0.07	0.03	30.76	5	0.18	0.05	0.02	28.78	5	0.4042	Female_Naive	AC	

Supplemental Table 4. (continued)

Metabolite	Female_Naive					Female_TBI					P value Naive vs. TBI	Differential Expression (Up)	* FDR<5%	Class
	mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
26	C3-OH	0.13	0.05	0.02	33.89	5	0.15	0.05	0.02	34.65	5	0.6194	Female_TBI	AC
27	C3-1	0.08	0.04	0.02	46.74	5	0.10	0.05	0.02	48.71	5	0.5484	Female_TBI	AC
28	C4	0.41	0.13	0.06	32.63	5	0.37	0.10	0.05	27.96	5	0.6609	Female_Naive	AC
29	C4-1	0.09	0.03	0.01	29.49	5	0.10	0.04	0.02	33.97	5	0.6139	Female_TBI	AC
30	C5	0.17	0.06	0.03	38.27	5	0.16	0.06	0.03	36.69	5	0.7884	Female_Naive	AC
31	C5-DC_C6-OH	0.24	0.13	0.06	55.34	5	0.26	0.15	0.07	57.04	5	0.8474	Female_TBI	AC
32	C5-M-DC	0.19	0.09	0.04	48.55	5	0.19	0.08	0.04	45.00	5	1.0000	Female_TBI	AC
33	C5-OH_C3-DC-M	0.15	0.04	0.02	29.64	5	0.15	0.05	0.02	34.39	5	0.9338	Female_Naive	AC
34	C5-1	0.09	0.04	0.02	42.29	5	0.09	0.04	0.02	43.09	5	0.9346	Female_TBI	AC
35	C5-1 DC	0.48	0.29	0.13	61.14	5	0.51	0.34	0.15	66.72	5	0.8871	Female_TBI	AC
36	C6_C4-1 DC	0.21	0.11	0.05	52.50	5	0.22	0.13	0.06	60.39	5	0.9018	Female_TBI	AC
37	C6-1	0.14	0.07	0.03	52.54	5	0.15	0.08	0.04	56.65	5	0.8568	Female_TBI	AC
38	C7-DC	0.06	0.03	0.01	52.93	5	0.06	0.03	0.01	44.56	5	0.7753	Female_TBI	AC
39	C8	0.12	0.05	0.02	39.88	5	0.11	0.04	0.02	30.84	5	0.7992	Female_Naive	AC
40	C9	0.25	0.06	0.03	23.74	5	0.25	0.05	0.02	20.81	5	1.0000	Female_TBI	AC
41	Ala	773.20	188.96	84.51	24.44	5	963.60	248.24	111.02	25.76	5	0.2095	Female_TBI	AA
42	Arg	108.94	28.60	12.79	26.26	5	96.80	21.59	9.66	22.31	5	0.4705	Female_Naive	AA
43	Asn	69.16	21.77	9.74	31.48	5	71.50	23.81	10.65	33.30	5	0.8752	Female_TBI	AA
44	Asp	10.04	2.51	1.12	24.95	5	9.58	3.40	1.52	35.54	5	0.8114	Female_Naive	AA
45	Cit	77.36	17.77	7.95	22.97	5	38.84	10.27	4.59	26.45	5	0.0030	Female_Naive	AA
46	Gln	712.80	99.78	44.62	14.00	5	764.00	104.55	46.76	13.68	5	0.4511	Female_TBI	AA
47	Glu	41.52	14.87	6.65	35.82	5	36.80	10.72	4.79	29.13	5	0.5807	Female_Naive	AA
48	Gly	236.40	28.85	12.90	12.20	5	235.40	58.22	26.04	24.73	5	0.9734	Female_Naive	AA
49	Ile	126.80	20.24	9.05	15.96	5	146.60	30.66	13.71	20.91	5	0.2626	Female_TBI	AA
50	Leu	272.20	72.81	32.56	26.75	5	374.40	127.86	57.18	34.15	5	0.1590	Female_TBI	AA

Supplemental Table 4. (continued)

Metabolite	Female_Naive					Female_TBI					P value Naïve vs. TBI	Differential Expression (Up)	* FDR<5%	Class
	mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
51	Lys	319.00	84.41	37.75	26.46	5	381.40	68.43	30.60	17.94	5	0.2350	Female_TBI	AA
52	Met	74.00	27.78	12.42	37.54	5	94.44	26.83	12.00	28.41	5	0.2706	Female_TBI	AA
53	Orn	55.56	15.67	7.01	28.20	5	58.84	16.03	7.17	27.24	5	0.7519	Female_TBI	AA
54	Phe	76.56	11.92	5.33	15.58	5	89.26	17.37	7.77	19.46	5	0.2147	Female_TBI	AA
55	Pro	146.66	51.69	23.11	35.24	5	196.00	81.62	36.50	41.64	5	0.2865	Female_TBI	AA
56	Ser	183.60	56.04	25.06	30.52	5	248.60	95.30	42.62	38.34	5	0.2251	Female_TBI	AA
57	Thr	216.00	62.55	27.97	28.96	5	249.20	37.53	16.79	15.06	5	0.3386	Female_TBI	AA
58	Trp	99.20	17.19	7.69	17.32	5	120.50	16.14	7.22	13.39	5	0.0780	Female_TBI	AA
59	Tyr	94.24	24.63	11.02	26.14	5	120.94	30.62	13.70	25.32	5	0.1672	Female_TBI	AA
60	Val	209.00	43.66	19.53	20.89	5	225.40	47.47	21.23	21.06	5	0.5852	Female_TBI	AA
61	Ac-Orn	2.38	0.34	0.15	14.18	5	1.61	0.59	0.26	36.58	5	0.0357	Female_Naive	BA
62	ADMA	0.74	0.20	0.09	26.80	5	0.65	0.12	0.05	18.74	5	0.4210	Female_Naive	BA
63	alpha-AAA	11.38	4.13	1.85	36.32	5	6.59	2.03	0.91	30.78	5	0.0483	Female_Naive	BA
64	Creatinine	6.56	0.67	0.30	10.18	5	5.64	0.75	0.33	13.27	5	0.0760	Female_Naive	BA
65	Kynurenine	1.17	0.26	0.12	22.60	5	1.51	0.32	0.14	21.03	5	0.0991	Female_TBI	BA
66	Met-SO	2.10	0.96	0.43	45.91	5	2.45	0.94	0.42	38.47	5	0.5704	Female_TBI	BA
67	Spermidine	1.05	0.24	0.11	22.78	5	0.65	0.22	0.10	33.31	5	0.0243	Female_Naive	BA
68	Spermine	0.49	0.14	0.06	28.17	5	0.44	0.17	0.08	39.61	5	0.6649	Female_Naive	BA
69	Taurine	512.20	110.31	49.33	21.54	5	461.20	55.76	24.93	12.09	5	0.3832	Female_Naive	BA
70	total DMA	0.61	0.04	0.02	7.30	5	0.53	0.05	0.02	9.75	5	0.0344	Female_Naive	BA
71	LPC_14-0	3.20	0.43	0.19	13.34	5	2.99	0.39	0.17	13.04	5	0.4392	Female_Naive	LPC
72	LPC_16-0	122.14	8.71	3.89	7.13	5	133.95	15.75	7.04	11.76	5	0.1806	Female_TBI	LPC
73	LPC_16-1	2.68	0.25	0.11	9.39	5	2.76	0.32	0.14	11.43	5	0.6595	Female_TBI	LPC
74	LPC_17-0	1.97	0.19	0.08	9.47	5	1.97	0.36	0.16	18.41	5	0.9635	Female_Naive	LPC
75	LPC_18-0	59.83	5.48	2.45	9.17	5	61.46	5.25	2.35	8.54	5	0.6439	Female_TBI	LPC

Supplemental Table 4. (continued)

Metabolite	Female_Naive					Female_TBI					P value Naive vs. TBI	Differential Expression (Up)	* FDR<5%	Class
	mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
76	LPC_18-1	25.51	3.19	1.43	12.51	5	22.95	2.85	1.27	12.42	5	0.2177	Female_Naive	LPC
77	LPC_18-2	108.72	7.70	3.44	7.08	5	102.28	14.69	6.57	14.36	5	0.4105	Female_Naive	LPC
78	LPC_20-3	4.22	0.53	0.24	12.50	5	2.91	0.36	0.16	12.51	5	0.0018	Female_Naive	LPC
79	LPC_20-4	28.24	2.72	1.21	9.62	5	28.82	2.63	1.18	9.13	5	0.7423	Female_TBI	LPC
80	LPC_24-0	0.32	0.03	0.02	10.66	5	0.38	0.05	0.02	12.90	5	0.0720	Female_TBI	LPC
81	LPC_26-0	0.17	0.01	0.00	3.05	5	0.22	0.04	0.02	15.98	5	0.0204	Female_TBI	LPC
82	LPC_26-1	0.08	0.01	0.01	14.52	5	0.11	0.02	0.01	19.21	5	0.0467	Female_TBI	LPC
83	LPC_28-0	0.22	0.05	0.02	21.26	5	0.25	0.03	0.01	10.74	5	0.2557	Female_TBI	LPC
84	LPC_28-1	0.15	0.01	0.01	8.48	5	0.18	0.01	0.00	3.06	5	0.0056	Female_TBI	LPC
85	PC_24-0	0.13	0.03	0.01	24.71	5	0.11	0.01	0.00	8.88	5	0.3259	Female_Naive	PC
86	PC_26-0	0.65	0.07	0.03	11.49	5	0.80	0.05	0.02	6.47	5	0.0060	Female_TBI	PC
87	PC_28-1	0.22	0.06	0.02	25.29	5	0.23	0.03	0.01	11.33	5	0.6071	Female_TBI	PC
88	PC_30-0	0.63	0.12	0.05	19.06	5	0.70	0.17	0.08	24.93	5	0.4612	Female_TBI	PC
89	PC_30-2	0.07	0.02	0.01	25.93	5	0.07	0.01	0.01	16.78	5	0.8556	Female_TBI	PC
90	PC_32-0	9.67	1.47	0.66	15.24	5	11.43	1.81	0.81	15.80	5	0.1293	Female_TBI	PC
91	PC_32-1	2.52	0.61	0.27	24.01	5	3.18	1.15	0.51	36.13	5	0.2937	Female_TBI	PC
92	PC_32-2	0.94	0.11	0.05	11.86	5	1.04	0.17	0.08	16.31	5	0.3110	Female_TBI	PC
93	PC_32-3	0.14	0.03	0.01	20.96	5	0.14	0.03	0.01	19.28	5	0.9916	Female_TBI	PC
94	PC_34-1	60.31	10.47	4.68	17.36	5	56.24	3.60	1.61	6.41	5	0.4347	Female_Naive	PC
95	PC_34-2	286.15	31.65	14.15	11.06	5	304.13	38.87	17.38	12.78	5	0.4457	Female_TBI	PC
96	PC_34-3	9.33	1.08	0.48	11.58	5	11.03	0.98	0.44	8.92	5	0.0314	Female_TBI	PC
97	PC_34-4	0.39	0.04	0.02	11.20	5	0.43	0.04	0.02	8.76	5	0.1189	Female_TBI	PC
98	PC_36-0	1.79	0.15	0.07	8.39	5	1.97	0.15	0.07	7.51	5	0.0821	Female_TBI	PC
99	PC_36-1	16.73	3.95	1.77	23.61	5	13.52	1.17	0.53	8.68	5	0.1194	Female_Naive	PC

Supplemental Table 4. (continued)

Metabolite	Female_Naive					Female_TBI					P value Naive vs. TBI	Differential Expression (Up)	* FDR<5%	Class
	mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
100	PC_36-2	196.68	29.26	13.09	14.88	5	185.32	17.74	7.94	9.57	5	0.4791	Female_Naive	PC
101	PC_36-3	70.13	10.66	4.77	15.20	5	64.34	9.41	4.21	14.62	5	0.3895	Female_Naive	PC
102	PC_36-4	106.93	13.93	6.23	13.03	5	123.30	9.53	4.26	7.73	5	0.0620	Female_TBI	PC
103	PC_36-5	5.57	0.88	0.40	15.89	5	6.11	0.63	0.28	10.36	5	0.2994	Female_TBI	PC
104	PC_36-6	0.27	0.04	0.02	13.01	5	0.31	0.04	0.02	11.96	5	0.1649	Female_TBI	PC
105	PC_38-0	1.23	0.14	0.06	11.74	5	1.22	0.18	0.08	14.47	5	0.9197	Female_Naive	PC
106	PC_38-1	0.36	0.04	0.02	11.92	5	0.36	0.02	0.01	5.67	5	0.9066	Female_Naive	PC
107	PC_38-3	17.46	3.08	1.38	17.65	5	13.62	0.86	0.39	6.33	5	0.0278	Female_Naive	PC
108	PC_38-4	82.79	11.31	5.06	13.66	5	89.40	3.66	1.63	4.09	5	0.2489	Female_TBI	PC
109	PC_38-5	23.38	3.45	1.54	14.74	5	23.73	1.92	0.86	8.07	5	0.8474	Female_TBI	PC
110	PC_38-6	81.05	8.55	3.82	10.55	5	96.84	8.22	3.67	8.48	5	0.0177	Female_TBI	PC
111	PC_40-1	0.28	0.02	0.01	6.95	5	0.29	0.02	0.01	6.43	5	0.3645	Female_TBI	PC
112	PC_40-2	0.21	0.01	0.00	4.27	5	0.20	0.02	0.01	10.74	5	0.3183	Female_Naive	PC
113	PC_40-3	0.21	0.04	0.02	16.79	5	0.22	0.03	0.01	12.24	5	0.8680	Female_TBI	PC
114	PC_40-4	1.12	0.13	0.06	11.71	5	1.01	0.08	0.04	8.20	5	0.1474	Female_Naive	PC
115	PC_40-5	2.61	0.41	0.18	15.72	5	2.26	0.11	0.05	5.09	5	0.1002	Female_Naive	PC
116	PC_40-6	32.82	4.62	2.07	14.07	5	34.97	3.12	1.40	8.93	5	0.4135	Female_TBI	PC
117	PC_42-0	0.18	0.01	0.01	7.22	5	0.19	0.03	0.01	15.23	5	0.4051	Female_TBI	PC
118	PC_42-1	0.13	0.02	0.01	12.16	5	0.14	0.02	0.01	12.31	5	0.1735	Female_TBI	PC
119	PC_42-2	0.16	0.01	0.01	8.96	5	0.15	0.02	0.01	10.41	5	0.4099	Female_Naive	PC
120	PC_42-4	0.14	0.02	0.01	13.31	5	0.15	0.02	0.01	12.00	5	0.5124	Female_TBI	PC
121	PC_42-5	0.18	0.02	0.01	8.92	5	0.19	0.02	0.01	10.10	5	0.3621	Female_TBI	PC
122	PC_42-6	0.38	0.05	0.02	11.89	5	0.38	0.04	0.02	9.91	5	0.7752	Female_Naive	PC
123	PC_O-30-0	0.11	0.02	0.01	15.43	5	0.12	0.01	0.00	7.16	5	0.3097	Female_TBI	PC
124	PC_O-30-1	0.09	0.02	0.01	24.79	5	0.11	0.02	0.01	20.51	5	0.1268	Female_TBI	PC
125	PC_O-30-2	0.05	0.00	0.00	9.52	5	0.05	0.00	0.00	8.31	5	0.5690	Female_TBI	PC

Supplemental Table 4. (continued)

Metabolite	Female_Naive					Female_TBI					P value Naive vs. TBI	Differential Expression (Up)	* FDR<5%	Class
	mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
126	PC_O-32-1	0.40	0.08	0.04	19.85	5	0.48	0.06	0.03	12.41	5	0.0873	Female_TBI	PC
127	PC_O-32-2	0.14	0.02	0.01	14.61	5	0.14	0.02	0.01	13.08	5	0.9878	Female_TBI	PC
128	PC_O-34-0	0.36	0.07	0.03	18.43	5	0.39	0.04	0.02	11.53	5	0.3530	Female_TBI	PC
129	PC_O-34-1	1.98	0.20	0.09	9.84	5	2.07	0.19	0.08	9.14	5	0.4960	Female_TBI	PC
130	PC_O-34-2	2.76	0.31	0.14	11.36	5	2.76	0.58	0.26	21.13	5	0.9864	Female_TBI	PC
131	PC_O-34-3	0.80	0.13	0.06	16.26	5	0.66	0.09	0.04	13.85	5	0.0889	Female_Naive	PC
132	PC_O-36-0	0.37	0.05	0.02	13.99	5	0.37	0.03	0.02	9.04	5	0.9777	Female_TBI	PC
133	PC_O-36-1	1.64	0.24	0.11	14.74	5	1.44	0.17	0.08	11.80	5	0.1736	Female_Naive	PC
134	PC_O-36-2	7.80	1.10	0.49	14.05	5	7.19	1.09	0.49	15.12	5	0.4041	Female_Naive	PC
135	PC_O-36-3	1.57	0.19	0.08	11.82	5	1.57	0.24	0.11	15.11	5	0.9782	Female_TBI	PC
136	PC_O-36-4	2.51	0.29	0.13	11.75	5	2.64	0.32	0.14	11.94	5	0.5039	Female_TBI	PC
137	PC_O-36-5	1.48	0.27	0.12	18.53	5	1.52	0.22	0.10	14.34	5	0.7908	Female_TBI	PC
138	PC_O-38-0	1.65	0.18	0.08	10.97	5	1.96	0.16	0.07	8.11	5	0.0215	Female_TBI	PC
139	PC_O-38-1	0.52	0.12	0.05	22.02	5	0.46	0.08	0.04	17.62	5	0.3259	Female_Naive	PC
140	PC_O-38-2	3.61	0.56	0.25	15.45	5	2.94	0.36	0.16	12.37	5	0.0546	Female_Naive	PC
141	PC_O-38-3	1.40	0.21	0.09	14.73	5	1.19	0.16	0.07	13.14	5	0.1024	Female_Naive	PC
142	PC_O-38-4	3.27	0.43	0.19	13.17	5	3.44	0.36	0.16	10.44	5	0.5306	Female_TBI	PC
143	PC_O-38-5	2.36	0.25	0.11	10.53	5	2.25	0.20	0.09	8.77	5	0.4714	Female_Naive	PC
144	PC_O-38-6	1.62	0.19	0.09	11.92	5	1.66	0.22	0.10	13.42	5	0.7846	Female_TBI	PC
145	PC_O-40-1	2.07	0.22	0.10	10.57	5	2.36	0.27	0.12	11.65	5	0.1089	Female_TBI	PC
146	PC_O-40-2	0.53	0.04	0.02	7.55	5	0.50	0.04	0.02	8.83	5	0.3181	Female_Naive	PC
147	PC_O-40-3	0.44	0.05	0.02	10.52	5	0.41	0.04	0.02	10.66	5	0.4001	Female_Naive	PC
148	PC_O-40-4	1.17	0.13	0.06	10.76	5	1.21	0.13	0.06	10.61	5	0.6448	Female_TBI	PC
149	PC_O-40-5	0.77	0.09	0.04	11.40	5	0.77	0.08	0.04	10.68	5	0.9253	Female_Naive	PC
150	PC_O-40-6	2.12	0.26	0.12	12.44	5	2.18	0.28	0.13	13.00	5	0.7513	Female_TBI	PC

Supplemental Table 4. (continued)

Metabolite	Female_Naive					Female_TBI					P value Naïve vs. TBI	Differential Expression (Up)	* FDR<5%	Class
	mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
151	PC_O-42-0	0.82	0.06	0.03	6.84	5	0.78	0.05	0.02	6.86	5	0.2785	Female_Naive	PC
152	PC_O-42-1	0.41	0.07	0.03	16.29	5	0.45	0.06	0.03	12.79	5	0.2622	Female_TBI	PC
153	PC_O-42-2	0.29	0.02	0.01	8.15	5	0.28	0.02	0.01	8.80	5	0.4417	Female_Naive	PC
154	PC_O-42-3	0.70	0.06	0.03	8.99	5	0.79	0.08	0.03	9.89	5	0.0899	Female_TBI	PC
155	PC_O-42-4	0.20	0.03	0.01	13.89	5	0.16	0.02	0.01	11.99	5	0.0531	Female_Naive	PC
156	PC_O-42-5	0.52	0.02	0.01	4.78	5	0.51	0.03	0.01	6.30	5	0.5616	Female_Naive	PC
157	PC_O-44-3	0.12	0.01	0.00	5.64	5	0.13	0.01	0.00	5.63	5	0.0197	Female_TBI	PC
158	PC_O-44-4	0.12	0.01	0.00	5.70	5	0.12	0.01	0.00	9.64	5	0.9467	Female_TBI	PC
159	PC_O-44-5	0.20	0.02	0.01	8.66	5	0.22	0.01	0.01	5.99	5	0.1359	Female_TBI	PC
160	PC_O-44-6	0.15	0.02	0.01	16.69	5	0.14	0.02	0.01	15.13	5	0.8943	Female_Naive	PC
161	SM_32-2 OH	1.28	0.12	0.05	9.01	5	1.39	0.20	0.09	14.03	5	0.3117	Female_TBI	SM
162	SM_34-2 OH	0.30	0.04	0.02	12.09	5	0.35	0.04	0.02	12.09	5	0.1267	Female_TBI	SM
163	SM_40-2 OH	1.77	0.39	0.17	22.11	5	1.78	0.18	0.08	10.39	5	0.9688	Female_TBI	SM
164	SM_40-3 OH	1.06	0.19	0.09	18.36	5	1.05	0.11	0.05	10.30	5	0.9487	Female_Naive	SM
165	SM_42-2 OH	0.23	0.04	0.02	15.91	5	0.23	0.03	0.02	14.37	5	0.7935	Female_TBI	SM
166	SM_34-1	15.96	1.75	0.78	10.96	5	19.47	1.72	0.77	8.84	5	0.0126	Female_TBI	SM
167	SM_34-2	2.15	0.18	0.08	8.24	5	2.60	0.21	0.09	7.91	5	0.0065	Female_TBI	SM
168	SM_36-1	2.09	0.37	0.17	17.75	5	2.62	0.46	0.21	17.64	5	0.0823	Female_TBI	SM
169	SM_36-2	0.77	0.10	0.04	12.92	5	0.95	0.08	0.04	8.83	5	0.0143	Female_TBI	SM
170	SM_38-3	0.08	0.02	0.01	25.32	5	0.08	0.02	0.01	26.52	5	0.7713	Female_Naive	SM
171	SM_40-1	0.22	0.12	0.05	54.82	5	0.16	0.10	0.04	61.01	5	0.4022	Female_Naive	SM
172	SM_42-1	3.66	0.50	0.22	13.73	5	3.33	0.32	0.14	9.67	5	0.2512	Female_Naive	SM
173	SM_42-2	8.76	1.83	0.82	20.92	5	9.91	0.75	0.34	7.58	5	0.2319	Female_TBI	SM
174	SM_44-1	0.04	0.01	0.01	28.11	5	0.04	0.01	0.01	36.54	5	0.9055	Female_Naive	SM
175	H1	10145.06	948.80	424.31	9.35	5	11496.55	1208.79	540.59	10.51	5	0.0848	Female_TBI	S

Supplemental Table 4. (continued)

Metabolite	Female_Naive					Female_TBI					P value Naïve vs. TBI	Differential Expression (Up)	* FDR<5%	Class
	mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
176 C2,C3 / C0	0.78	0.12	0.06	15.87	5	0.71	0.13	0.06	18.21	5	0.4165	Female_Naive	AC	
177 AAA	270.00	43.99	19.67	16.29	5	330.70	60.30	26.97	18.23	5	0.1065	Female_TBI	AA	
178 ADMA / Arg	0.01	0.00	0.00	46.42	5	0.01	0.00	0.00	21.81	5	0.7292	Female_Naive	BA,AA	
179 BCAA	608.00	127.71	57.11	21.00	5	746.40	187.12	83.68	25.07	5	0.2091	Female_TBI	AA	
180 C2 / C0	0.76	0.12	0.06	16.24	5	0.69	0.13	0.06	18.80	5	0.4153	Female_Naive	AC	
181 Cit / Arg	0.73	0.17	0.07	22.86	5	0.42	0.15	0.07	36.74	5	0.0154	Female_Naive	AA	
182 Cit / Orn	1.44	0.32	0.14	21.97	5	0.70	0.28	0.13	40.48	5	0.0046	Female_Naive	AA	
183 CPT-I ratio	0.02	0.00	0.00	20.66	5	0.02	0.00	0.00	16.72	5	0.7599	Female_Naive	AA	
184 Essential AA	1392.76	285.24	127.56	20.48	5	1681.20	314.85	140.80	18.73	5	0.1675	Female_TBI	AA	
185 Fisher ratio	2.24	0.21	0.09	9.30	5	2.24	0.30	0.13	13.21	5	0.9971	Female_TBI	AA	
186 Glucogenic AA	1193.20	258.25	115.49	21.64	5	1447.60	398.75	178.33	27.55	5	0.2654	Female_TBI	AA	
187 Kynurenine / Trp	0.01	0.00	0.00	19.33	5	0.01	0.00	0.00	26.68	5	0.6713	Female_TBI	AA	
188 Met-SO / Met	0.03	0.01	0.00	23.69	5	0.03	0.00	0.00	18.86	5	0.5314	Female_Naive	AA	
189 MUFA_PC	87.31	15.74	7.04	18.03	5	80.98	5.29	2.36	6.53	5	0.4191	Female_Naive	PC	
190 MUFA_PC / SFA_PC	4.96	0.48	0.22	9.78	5	4.06	0.31	0.14	7.56	5	0.0084	Female_Naive	PC	
191 Non essential AA	2267.62	314.19	140.51	13.86	5	2646.42	549.71	245.84	20.77	5	0.2178	Female_TBI	AA	
192 Orn / Arg	0.51	0.05	0.02	10.34	5	0.60	0.04	0.02	7.31	5	0.0167	Female_TBI	AA	
193 PUFA_PC	955.73	111.17	49.72	11.63	5	994.69	91.53	40.93	9.20	5	0.5619	Female_TBI	PC	
194 PUFA_PC / MUFA_PC	11.06	1.04	0.46	9.38	5	12.29	0.99	0.44	8.03	5	0.0910	Female_TBI	PC	
195 PUFA_PC / SFA_PC	54.56	4.33	1.94	7.94	5	50.04	6.05	2.70	12.08	5	0.2107	Female_Naive	PC	
196 SFA_PC	17.57	2.25	1.01	12.79	5	20.04	2.26	1.01	11.29	5	0.1212	Female_TBI	PC	
197 Spermine / Spermidine	0.46	0.07	0.03	14.28	5	0.70	0.20	0.09	29.13	5	0.0370	Female_TBI	BA	
198 Total_PC,SM	1098.80	128.16	57.31	11.66	5	1139.53	96.55	43.18	8.47	5	0.5859	Female_TBI	PC,SM	
199 Total AA	3902.24	609.58	272.61	15.62	5	4522.10	858.83	384.08	18.99	5	0.2246	Female_TBI	AA	
200 Total AC / C0	1.07	0.18	0.08	16.46	5	1.03	0.13	0.06	12.76	5	0.6725	Female_Naive	AC	

Supplemental Table 4. (continued)

Metabolite	Female_Naive					Female_TBI					P value Naïve vs. TBI	Differential Expression (Up)	* FDR<5%	Class
	mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
201 Total AC-DC / Total AC	0.06	0.02	0.01	33.03	5	0.08	0.02	0.01	30.23	5	0.3394	Female_TBI	AC	
202 Total AC-OH / Total AC	0.04	0.01	0.00	25.53	5	0.04	0.01	0.00	25.67	5	0.3646	Female_TBI	AC	
203 Total LPC	357.48	21.28	9.52	5.95	5	361.22	41.12	18.39	11.38	5	0.8609	Female_TBI	LPC	
204 Total LPC / Total PC	0.34	0.04	0.02	10.91	5	0.33	0.03	0.01	7.88	5	0.6282	Female_Naive	LPC,PC	
205 Total PC	1060.60	126.90	56.75	11.96	5	1095.71	95.09	42.52	8.68	5	0.6339	Female_TBI	PC	
206 Total PC_diacyl	1013.50	122.10	54.60	12.05	5	1049.29	90.84	40.62	8.66	5	0.6133	Female_TBI	PC	
207 Total PC_ether	47.10	5.08	2.27	10.78	5	46.42	5.42	2.42	11.68	5	0.8434	Female_Naive	PC	
208 Total SM	38.20	5.05	2.26	13.23	5	43.82	3.50	1.57	8.00	5	0.0752	Female_TBI	SM	
209 Total SM / Total_SM,PC	0.04	0.01	0.00	15.35	5	0.04	0.00	0.00	8.71	5	0.2664	Female_TBI	SM,PC	
210 Total SM / Total PC	0.04	0.01	0.00	15.00	5	0.04	0.00	0.00	9.21	5	0.2336	Female_TBI	SM,PC	
211 Total SM-non OH	33.56	4.36	1.95	13.00	5	39.02	3.00	1.34	7.68	5	0.0499	Female_TBI	SM	
212 Total SM-OH	4.64	0.73	0.32	15.65	5	4.80	0.54	0.24	11.17	5	0.7032	Female_TBI	SM	
213 Total SM-OH / Total SM-non OH	0.14	0.01	0.00	5.73	5	0.12	0.01	0.00	4.71	5	0.0079	Female_Naive	SM	
214 Tyr / Phe	1.21	0.16	0.07	13.04	5	1.35	0.18	0.08	13.27	5	0.2495	Female_TBI	AA	

Supplemental Table 5. Plasma metabolites assayed at 3 days post-8.72 Gy TBI: Male single-sex cohort.
 Metabolites assayed from 3 mo. old C57BL/6 mice; n=5 for each cohort (Naïve, TBI).

	Metabolite	Male_Naive					Male_TBI					P value Naive vs. TBI	Differential Expression (Up)	* FDR<5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
1	C0	22.77	3.90	1.74	17.13	5	18.15	2.31	1.03	12.73	5	0.0521	Male_Naive		AC
2	C10	0.26	0.08	0.03	29.49	5	0.26	0.08	0.04	31.85	5	0.9675	Male_Naive		AC
3	C10-1	0.13	0.03	0.02	26.21	5	0.12	0.03	0.01	26.58	5	0.6578	Male_Naive		AC
4	C10-2	0.14	0.04	0.02	25.18	5	0.15	0.04	0.02	28.48	5	0.7913	Male_TBI		AC
5	C12	0.30	0.12	0.05	40.81	5	0.31	0.13	0.06	42.07	5	0.8757	Male_TBI		AC
6	C12-DC	0.48	0.05	0.02	11.10	5	0.48	0.05	0.02	11.27	5	0.9693	Male_TBI		AC
7	C12-1	0.30	0.04	0.02	13.55	5	0.27	0.06	0.03	23.26	5	0.5349	Male_Naive		AC
8	C14	0.16	0.05	0.02	32.41	5	0.16	0.05	0.02	29.61	5	0.8929	Male_Naive		AC
9	C14-1	0.07	0.02	0.01	32.21	5	0.08	0.02	0.01	31.31	5	0.6840	Male_TBI		AC
10	C14-1 OH	0.08	0.04	0.02	42.66	5	0.08	0.03	0.01	39.96	5	0.9895	Male_Naive		AC
11	C14-2	0.05	0.02	0.01	33.70	5	0.05	0.02	0.01	31.83	5	0.9765	Male_Naive		AC
12	C14-2 OH	0.10	0.03	0.01	27.65	5	0.10	0.04	0.02	34.78	5	0.8450	Male_TBI		AC
13	C16	0.24	0.06	0.03	25.93	5	0.23	0.05	0.02	20.31	5	0.7252	Male_Naive		AC
14	C16-OH	0.10	0.04	0.02	37.79	5	0.11	0.04	0.02	40.79	5	0.9668	Male_TBI		AC
15	C16-1	0.14	0.03	0.01	23.18	5	0.13	0.06	0.03	46.01	5	0.7801	Male_Naive		AC
16	C16-1 OH	0.09	0.04	0.02	44.08	5	0.10	0.04	0.02	45.50	5	0.7892	Male_TBI		AC
17	C16-2	0.05	0.02	0.01	30.33	5	0.05	0.02	0.01	31.31	5	0.8629	Male_TBI		AC
18	C16-2 OH	0.07	0.02	0.01	32.85	5	0.07	0.03	0.01	35.17	5	0.8512	Male_TBI		AC
19	C18	0.11	0.03	0.01	29.57	5	0.12	0.04	0.02	35.44	5	0.6773	Male_TBI		AC
20	C18-1	0.17	0.06	0.03	36.11	5	0.20	0.07	0.03	36.04	5	0.4578	Male_TBI		AC
21	C18-1 OH	0.07	0.02	0.01	31.81	5	0.07	0.02	0.01	30.66	5	0.8911	Male_TBI		AC
22	C18-2	0.08	0.03	0.01	32.47	5	0.08	0.01	0.01	16.80	5	0.8129	Male_TBI		AC
23	C2	14.79	3.43	1.53	23.20	5	12.91	1.63	0.73	12.63	5	0.3006	Male_Naive		AC
24	C3	0.48	0.11	0.05	23.43	5	0.47	0.12	0.05	26.19	5	0.9054	Male_Naive		AC
25	C3-DC_C4-OH	0.23	0.08	0.04	35.34	5	0.20	0.05	0.02	24.38	5	0.5044	Male_Naive		AC

Supplemental Table 5. (continued)

	Metabolite	Male_Naive					Male_TBI					P value Naive vs. TBI	Differential Expression (Up)	* FDR<5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
26	C3-OH	0.14	0.04	0.02	27.45	5	0.14	0.05	0.02	32.76	5	0.9708	Male_TBI		AC
27	C3-1	0.09	0.04	0.02	41.94	5	0.10	0.05	0.02	47.30	5	0.6826	Male_TBI		AC
28	C4	0.38	0.12	0.06	32.78	5	0.34	0.12	0.06	36.27	5	0.6554	Male_Naive		AC
29	C4-1	0.10	0.03	0.01	30.93	5	0.11	0.03	0.01	25.31	5	0.7003	Male_TBI		AC
30	C5	0.18	0.05	0.02	30.14	5	0.17	0.06	0.03	35.39	5	0.8482	Male_Naive		AC
31	C5-DC_C6-OH	0.26	0.13	0.06	50.46	5	0.26	0.14	0.06	52.77	5	0.9503	Male_TBI		AC
32	C5-M-DC	0.17	0.06	0.02	31.88	5	0.19	0.09	0.04	46.35	5	0.7522	Male_TBI		AC
33	C5-OH_C3-DC-M	0.16	0.05	0.02	29.31	5	0.15	0.05	0.02	33.73	5	0.8197	Male_Naive		AC
34	C5-1	0.09	0.03	0.02	38.52	5	0.09	0.04	0.02	41.98	5	0.8762	Male_TBI		AC
35	C5-1 DC	0.51	0.29	0.13	58.14	5	0.53	0.31	0.14	58.92	5	0.9168	Male_TBI		AC
36	C6_C4-1 DC	0.22	0.11	0.05	50.59	5	0.23	0.11	0.05	47.77	5	0.8615	Male_TBI		AC
37	C6-1	0.14	0.07	0.03	50.00	5	0.15	0.08	0.03	50.08	5	0.7991	Male_TBI		AC
38	C7-DC	0.07	0.03	0.01	42.83	5	0.06	0.02	0.01	37.49	5	0.5311	Male_Naive		AC
39	C8	0.12	0.04	0.02	33.85	5	0.12	0.03	0.01	24.89	5	0.9654	Male_Naive		AC
40	C9	0.24	0.07	0.03	27.44	5	0.25	0.08	0.04	32.46	5	0.8312	Male_TBI		AC
41	Ala	665.40	122.14	54.62	18.36	5	717.00	125.17	55.98	17.46	5	0.5280	Male_TBI		AA
42	Arg	103.28	15.67	7.01	15.17	5	90.70	15.98	7.15	17.62	5	0.2443	Male_Naive		AA
43	Asn	59.22	17.70	7.92	29.89	5	60.42	14.63	6.54	24.22	5	0.9099	Male_TBI		AA
44	Asp	7.54	1.22	0.55	16.25	5	8.51	3.94	1.76	46.34	5	0.6116	Male_TBI		AA
45	Cit	65.38	3.41	1.52	5.21	5	33.24	7.80	3.49	23.48	5	0.0000	Male_Naive	*	AA
46	Gln	723.20	159.33	71.25	22.03	5	772.40	83.83	37.49	10.85	5	0.5581	Male_TBI		AA
47	Glu	44.88	8.67	3.88	19.33	5	39.36	7.19	3.22	18.27	5	0.3052	Male_Naive		AA
48	Gly	253.40	47.18	21.10	18.62	5	262.80	41.43	18.53	15.76	5	0.7464	Male_TBI		AA
49	Ile	126.10	17.93	8.02	14.22	5	112.14	14.57	6.52	12.99	5	0.2136	Male_Naive		AA
50	Leu	298.60	78.32	35.03	26.23	5	265.80	38.94	17.42	14.65	5	0.4261	Male_Naive		AA

Supplemental Table 5. (continued)

Metabolite		Male_Naive					Male_TBI					P value Naive vs. TBI	Differential Expression (Up)	* FDR<5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
51	Lys	338.00	70.16	31.38	20.76	5	385.80	60.82	27.20	15.76	5	0.2829	Male_TBI		AA
52	Met	89.32	40.16	17.96	44.96	5	70.36	20.08	8.98	28.53	5	0.3727	Male_Naive		AA
53	Orn	66.44	22.75	10.17	34.24	5	61.68	14.19	6.34	23.00	5	0.7017	Male_Naive		AA
54	Phe	81.66	14.37	6.43	17.60	5	78.94	10.26	4.59	13.00	5	0.7394	Male_Naive		AA
55	Pro	170.22	54.48	24.36	32.00	5	156.90	48.91	21.87	31.18	5	0.6948	Male_Naive		AA
56	Ser	161.80	43.49	19.45	26.88	5	182.80	23.49	10.50	12.85	5	0.3699	Male_TBI		AA
57	Thr	203.00	43.39	19.40	21.37	5	238.80	31.78	14.21	13.31	5	0.1749	Male_TBI		AA
58	Trp	76.46	22.33	9.99	29.21	5	84.32	6.73	3.01	7.98	5	0.4727	Male_TBI		AA
59	Tyr	89.64	13.77	6.16	15.36	5	91.10	24.36	10.90	26.74	5	0.9100	Male_TBI		AA
60	Val	215.00	42.54	19.03	19.79	5	201.60	23.03	10.30	11.42	5	0.5529	Male_Naive		AA
61	Ac-Orn	1.98	0.20	0.09	9.84	5	1.50	0.52	0.23	34.51	5	0.0872	Male_Naive		BA
62	ADMA	0.72	0.05	0.02	7.11	5	0.59	0.09	0.04	15.63	5	0.0242	Male_Naive		BA
63	alpha-AAA	9.54	1.62	0.72	16.94	5	7.33	1.22	0.55	16.69	5	0.0403	Male_Naive		BA
64	Creatinine	6.13	1.42	0.63	23.14	5	5.18	0.99	0.44	19.12	5	0.2564	Male_Naive		BA
65	Kynurenine	1.03	0.24	0.11	22.86	5	1.07	0.25	0.11	23.73	5	0.8130	Male_TBI		BA
66	Met-SO	2.80	1.55	0.69	55.30	5	2.18	0.71	0.32	32.50	5	0.4398	Male_Naive		BA
67	Spermidine	1.08	0.28	0.12	25.78	5	0.67	0.10	0.05	15.15	5	0.0146	Male_Naive		BA
68	Spermine	0.41	0.03	0.02	8.29	5	0.39	0.08	0.04	20.93	5	0.6408	Male_Naive		BA
69	Taurine	530.20	76.92	34.40	14.51	5	455.60	78.84	35.26	17.31	5	0.1684	Male_Naive		BA
70	total DMA	0.56	0.04	0.02	7.74	5	0.51	0.03	0.01	5.60	5	0.0766	Male_Naive		BA
71	LPC_14-0	2.86	0.50	0.22	17.37	5	2.66	0.17	0.08	6.49	5	0.4220	Male_Naive		LPC
72	LPC_16-0	170.65	25.14	11.24	14.73	5	164.10	20.59	9.21	12.55	5	0.6639	Male_Naive		LPC
73	LPC_16-1	3.81	0.87	0.39	22.94	5	3.35	0.45	0.20	13.43	5	0.3231	Male_Naive		LPC
74	LPC_17-0	2.40	0.52	0.23	21.69	5	2.43	0.40	0.18	16.64	5	0.9277	Male_TBI		LPC
75	LPC_18-0	67.81	11.77	5.26	17.36	5	68.67	7.13	3.19	10.39	5	0.8925	Male_TBI		LPC

Supplemental Table 5. (continued)

Metabolite		Male_Naive					Male_TBI					P value Naïve vs. TBI	Differential Expression (Up)	* FDR<5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
76	LPC_18-1	31.35	6.37	2.85	20.33	5	27.18	3.07	1.37	11.29	5	0.2241	Male_Naive		LPC
77	LPC_18-2	126.84	22.32	9.98	17.59	5	116.35	15.47	6.92	13.30	5	0.4131	Male_Naive		LPC
78	LPC_20-3	6.43	1.67	0.75	25.99	5	4.57	0.49	0.22	10.75	5	0.0441	Male_Naive		LPC
79	LPC_20-4	29.91	8.80	3.93	29.41	5	29.64	3.04	1.36	10.27	5	0.9489	Male_Naive		LPC
80	LPC_24-0	0.47	0.11	0.05	22.58	5	0.49	0.05	0.02	9.68	5	0.7795	Male_TBI		LPC
81	LPC_26-0	0.24	0.03	0.02	14.42	5	0.25	0.06	0.03	22.64	5	0.8102	Male_TBI		LPC
82	LPC_26-1	0.12	0.02	0.01	18.05	5	0.12	0.03	0.01	26.02	5	0.9392	Male_TBI		LPC
83	LPC_28-0	0.29	0.03	0.01	9.79	5	0.34	0.08	0.04	24.91	5	0.2843	Male_TBI		LPC
84	LPC_28-1	0.21	0.04	0.02	17.49	5	0.22	0.05	0.02	23.87	5	0.7571	Male_TBI		LPC
85	PC_24-0	0.11	0.02	0.01	20.07	5	0.12	0.03	0.01	21.60	5	0.8559	Male_TBI		PC
86	PC_26-0	0.78	0.14	0.06	18.51	5	0.81	0.19	0.09	23.74	5	0.8055	Male_TBI		PC
87	PC_28-1	0.23	0.02	0.01	9.65	5	0.26	0.07	0.03	27.10	5	0.4409	Male_TBI		PC
88	PC_30-0	0.80	0.12	0.05	15.09	5	0.75	0.07	0.03	9.75	5	0.4560	Male_Naive		PC
89	PC_30-2	0.06	0.02	0.01	34.98	5	0.07	0.02	0.01	32.13	5	0.7168	Male_TBI		PC
90	PC_32-0	13.96	2.24	1.00	16.03	5	14.65	1.57	0.70	10.71	5	0.5897	Male_TBI		PC
91	PC_32-1	4.45	0.86	0.39	19.36	5	4.32	0.70	0.31	16.23	5	0.7882	Male_Naive		PC
92	PC_32-2	1.37	0.28	0.13	20.50	5	1.43	0.18	0.08	12.93	5	0.7056	Male_TBI		PC
93	PC_32-3	0.20	0.03	0.01	15.15	5	0.17	0.02	0.01	12.03	5	0.1265	Male_Naive		PC
94	PC_34-1	105.66	10.65	4.76	10.08	5	93.36	8.23	3.68	8.81	5	0.0752	Male_Naive		PC
95	PC_34-2	388.82	30.91	13.82	7.95	5	384.41	42.64	19.07	11.09	5	0.8561	Male_Naive		PC
96	PC_34-3	17.79	2.90	1.30	16.30	5	19.53	2.53	1.13	12.94	5	0.3428	Male_TBI		PC
97	PC_34-4	0.66	0.18	0.08	26.55	5	0.73	0.12	0.06	16.86	5	0.5047	Male_TBI		PC
98	PC_36-0	2.28	0.46	0.21	20.17	5	2.27	0.24	0.11	10.41	5	0.9704	Male_Naive		PC
99	PC_36-1	24.16	3.55	1.59	14.70	5	20.81	1.46	0.65	7.00	5	0.0870	Male_Naive		PC
100	PC_36-2	249.21	27.87	12.47	11.18	5	236.89	18.15	8.12	7.66	5	0.4314	Male_Naive		PC

Supplemental Table 5. (continued)

Metabolite		Male_Naive					Male_TBI					P value Naive vs. TBI	Differential Expression (Up)	* FDR<5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
101	PC_36-3	105.87	18.32	8.19	17.31	5	94.24	9.65	4.32	10.24	5	0.2448	Male_Naive		PC
102	PC_36-4	168.46	32.06	14.34	19.03	5	180.30	15.34	6.86	8.51	5	0.4777	Male_TBI		PC
103	PC_36-5	9.26	2.34	1.04	25.23	5	10.39	1.58	0.71	15.25	5	0.3974	Male_TBI		PC
104	PC_36-6	0.42	0.12	0.05	29.01	5	0.47	0.09	0.04	18.59	5	0.5102	Male_TBI		PC
105	PC_38-0	1.84	0.42	0.19	22.99	5	1.54	0.09	0.04	5.71	5	0.1499	Male_Naive		PC
106	PC_38-1	0.53	0.16	0.07	30.65	5	0.42	0.06	0.03	13.77	5	0.1934	Male_Naive		PC
107	PC_38-3	27.56	4.89	2.19	17.74	5	22.85	2.34	1.05	10.24	5	0.0875	Male_Naive		PC
108	PC_38-4	97.53	23.64	10.57	24.24	5	108.25	13.23	5.92	12.22	5	0.4020	Male_TBI		PC
109	PC_38-5	35.01	9.08	4.06	25.93	5	36.64	6.21	2.78	16.95	5	0.7493	Male_TBI		PC
110	PC_38-6	133.00	28.12	12.58	21.15	5	142.58	16.93	7.57	11.87	5	0.5324	Male_TBI		PC
111	PC_40-1	0.37	0.04	0.02	11.15	5	0.34	0.03	0.02	10.02	5	0.1924	Male_Naive		PC
112	PC_40-2	0.47	0.04	0.02	9.13	5	0.36	0.03	0.01	8.16	5	0.0022	Male_Naive		PC
113	PC_40-3	0.64	0.07	0.03	10.70	5	0.51	0.08	0.04	16.51	5	0.0246	Male_Naive		PC
114	PC_40-4	2.73	0.41	0.18	14.91	5	2.27	0.28	0.13	12.51	5	0.0714	Male_Naive		PC
115	PC_40-5	4.43	0.66	0.30	14.97	5	4.07	0.56	0.25	13.68	5	0.3742	Male_Naive		PC
116	PC_40-6	38.71	8.74	3.91	22.57	5	41.33	5.01	2.24	12.12	5	0.5768	Male_TBI		PC
117	PC_42-0	0.24	0.03	0.01	10.66	5	0.21	0.02	0.01	9.32	5	0.1310	Male_Naive		PC
118	PC_42-1	0.16	0.02	0.01	12.59	5	0.15	0.02	0.01	11.12	5	0.4064	Male_Naive		PC
119	PC_42-2	0.25	0.03	0.01	11.34	5	0.22	0.03	0.01	14.60	5	0.1501	Male_Naive		PC
120	PC_42-4	0.25	0.04	0.02	14.71	5	0.22	0.02	0.01	9.89	5	0.1070	Male_Naive		PC
121	PC_42-5	0.34	0.05	0.02	13.41	5	0.31	0.04	0.02	13.19	5	0.3374	Male_Naive		PC
122	PC_42-6	1.01	0.10	0.05	10.16	5	0.88	0.07	0.03	8.27	5	0.0610	Male_Naive		PC
123	PC_O-30-0	0.15	0.01	0.01	9.16	5	0.15	0.03	0.02	22.78	5	0.8823	Male_TBI		PC
124	PC_O-30-1	0.15	0.03	0.01	22.10	5	0.13	0.04	0.02	31.53	5	0.5026	Male_Naive		PC
125	PC_O-30-2	0.07	0.01	0.00	16.75	5	0.06	0.01	0.01	18.50	5	0.7072	Male_Naive		PC

Supplemental Table 5. (continued)

Metabolite		Male_Naive					Male_TBI					P value Naive vs. TBI	Differential Expression (Up)	* FDR<5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
126	PC_O-32-1	0.63	0.08	0.03	12.15	5	0.67	0.04	0.02	5.82	5	0.3999	Male_TBI		PC
127	PC_O-32-2	0.29	0.04	0.02	13.01	5	0.23	0.02	0.01	10.72	5	0.0241	Male_Naive		PC
128	PC_O-34-0	0.47	0.07	0.03	14.85	5	0.53	0.13	0.06	24.37	5	0.3646	Male_TBI		PC
129	PC_O-34-1	3.17	0.57	0.25	17.93	5	2.92	0.25	0.11	8.57	5	0.4087	Male_Naive		PC
130	PC_O-34-2	4.88	0.60	0.27	12.35	5	4.52	0.50	0.22	11.04	5	0.3295	Male_Naive		PC
131	PC_O-34-3	1.46	0.18	0.08	12.59	5	1.10	0.06	0.03	5.91	5	0.0034	Male_Naive		PC
132	PC_O-36-0	0.49	0.09	0.04	19.21	5	0.54	0.07	0.03	12.34	5	0.4135	Male_TBI		PC
133	PC_O-36-1	2.31	0.32	0.14	13.96	5	2.18	0.12	0.06	5.74	5	0.4006	Male_Naive		PC
134	PC_O-36-2	11.78	2.22	0.99	18.85	5	10.76	1.02	0.46	9.52	5	0.3773	Male_Naive		PC
135	PC_O-36-3	2.65	0.41	0.18	15.53	5	2.56	0.27	0.12	10.50	5	0.6878	Male_Naive		PC
136	PC_O-36-4	4.45	0.89	0.40	19.98	5	3.90	0.16	0.07	4.09	5	0.2065	Male_Naive		PC
137	PC_O-36-5	2.06	0.52	0.23	25.08	5	1.93	0.17	0.07	8.68	5	0.5892	Male_Naive		PC
138	PC_O-38-0	3.12	0.98	0.44	31.44	5	3.29	0.54	0.24	16.47	5	0.7400	Male_TBI		PC
139	PC_O-38-1	0.85	0.15	0.07	18.13	5	0.70	0.06	0.03	8.19	5	0.0702	Male_Naive		PC
140	PC_O-38-2	8.08	1.66	0.74	20.51	5	6.15	0.55	0.25	9.01	5	0.0388	Male_Naive		PC
141	PC_O-38-3	2.08	0.48	0.22	23.15	5	1.78	0.18	0.08	10.14	5	0.2221	Male_Naive		PC
142	PC_O-38-4	4.63	1.12	0.50	24.25	5	4.70	0.46	0.21	9.77	5	0.8955	Male_TBI		PC
143	PC_O-38-5	3.72	0.97	0.44	26.16	5	3.23	0.17	0.08	5.29	5	0.3040	Male_Naive		PC
144	PC_O-38-6	2.87	0.67	0.30	23.28	5	2.54	0.14	0.06	5.66	5	0.3056	Male_Naive		PC
145	PC_O-40-1	3.98	1.09	0.49	27.38	5	4.53	0.77	0.35	17.10	5	0.3857	Male_TBI		PC
146	PC_O-40-2	0.80	0.14	0.06	17.99	5	0.78	0.11	0.05	14.17	5	0.8036	Male_Naive		PC
147	PC_O-40-3	0.71	0.16	0.07	22.51	5	0.58	0.07	0.03	11.54	5	0.1227	Male_Naive		PC
148	PC_O-40-4	2.09	0.53	0.24	25.35	5	2.04	0.25	0.11	12.30	5	0.8699	Male_Naive		PC
149	PC_O-40-5	1.10	0.24	0.11	21.54	5	1.00	0.10	0.04	9.97	5	0.4050	Male_Naive		PC
150	PC_O-40-6	2.95	0.74	0.33	25.20	5	2.87	0.27	0.12	9.48	5	0.8287	Male_Naive		PC

Supplemental Table 5. (continued)

Metabolite		Male_Naive					Male_TBI					P value Naïve vs. TBI	Differential Expression (Up)	* FDR<5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
151	PC_O-42-0	1.25	0.12	0.06	9.90	5	1.17	0.12	0.05	9.94	5	0.3479	Male_Naive		PC
152	PC_O-42-1	0.61	0.12	0.06	20.12	5	0.63	0.10	0.04	15.42	5	0.8409	Male_TBI		PC
153	PC_O-42-2	0.48	0.11	0.05	23.41	5	0.47	0.08	0.04	17.19	5	0.8456	Male_Naive		PC
154	PC_O-42-3	1.30	0.34	0.15	26.38	5	1.35	0.23	0.10	17.11	5	0.8144	Male_TBI		PC
155	PC_O-42-4	0.28	0.07	0.03	25.26	5	0.23	0.04	0.02	18.96	5	0.2376	Male_Naive		PC
156	PC_O-42-5	0.64	0.08	0.04	12.52	5	0.63	0.06	0.03	8.98	5	0.6954	Male_Naive		PC
157	PC_O-44-3	0.14	0.02	0.01	14.16	5	0.14	0.01	0.00	5.83	5	0.7434	Male_TBI		PC
158	PC_O-44-4	0.16	0.03	0.01	17.83	5	0.14	0.02	0.01	11.87	5	0.2313	Male_Naive		PC
159	PC_O-44-5	0.28	0.04	0.02	15.51	5	0.27	0.03	0.01	11.23	5	0.5508	Male_Naive		PC
160	PC_O-44-6	0.21	0.04	0.02	17.48	5	0.19	0.01	0.00	4.55	5	0.2593	Male_Naive		PC
161	SM_32-2 OH	1.15	0.27	0.12	23.46	5	1.18	0.07	0.03	5.86	5	0.8224	Male_TBI		SM
162	SM_34-2 OH	0.31	0.05	0.02	16.78	5	0.33	0.01	0.00	2.04	5	0.5315	Male_TBI		SM
163	SM_40-2 OH	1.62	0.26	0.11	15.83	5	1.76	0.15	0.07	8.60	5	0.3226	Male_TBI		SM
164	SM_40-3 OH	1.37	0.35	0.16	25.45	5	1.29	0.14	0.06	10.92	5	0.6442	Male_Naive		SM
165	SM_42-2 OH	0.19	0.06	0.03	33.47	5	0.21	0.02	0.01	8.20	5	0.4522	Male_TBI		SM
166	SM_34-1	18.99	3.04	1.36	15.99	5	20.04	0.73	0.33	3.66	5	0.4711	Male_TBI		SM
167	SM_34-2	3.41	0.74	0.33	21.58	5	3.50	0.29	0.13	8.18	5	0.8012	Male_TBI		SM
168	SM_36-1	1.73	0.35	0.15	19.96	5	2.02	0.07	0.03	3.31	5	0.1044	Male_TBI		SM
169	SM_36-2	0.77	0.12	0.05	15.86	5	0.87	0.03	0.01	3.11	5	0.0935	Male_TBI		SM
170	SM_38-3	0.07	0.02	0.01	32.83	5	0.08	0.02	0.01	26.68	5	0.8700	Male_TBI		SM
171	SM_40-1	0.32	0.20	0.09	63.64	5	0.29	0.15	0.07	50.18	5	0.8109	Male_Naive		SM
172	SM_42-1	6.63	0.46	0.21	6.98	5	6.06	0.88	0.39	14.51	5	0.2363	Male_Naive		SM
173	SM_42-2	11.33	1.63	0.73	14.43	5	12.45	1.26	0.57	10.16	5	0.2607	Male_TBI		SM
174	SM_44-1	0.02	0.00	0.00	16.66	5	0.03	0.02	0.01	73.12	5	0.4658	Male_TBI		SM
175	H1	11317.60	1552.10	694.12	13.71	5	12644.47	2704.24	1209.37	21.39	5	0.3692	Male_TBI		S

Supplemental Table 5. (continued)

	Metabolite	Male_Naive					Male_TBI					P value Naïve vs. TBI	Differential Expression (Up)	* FDR<5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
176	C2,C3 / C0	0.67	0.10	0.05	15.05	5	0.74	0.10	0.04	13.44	5	0.2851	Male_TBI		AC
177	AAA	247.76	38.06	17.02	15.36	5	254.36	38.15	17.06	15.00	5	0.7911	Male_TBI		AA
178	ADMA / Arg	0.01	0.00	0.00	17.40	5	0.01	0.00	0.00	18.74	5	0.5454	Male_Naive		BA,AA
179	BCAA	639.70	128.93	57.66	20.15	5	579.54	64.35	28.78	11.10	5	0.3778	Male_Naive		AA
180	C2 / C0	0.65	0.10	0.04	14.98	5	0.72	0.10	0.05	14.26	5	0.3116	Male_TBI		AC
181	Cit / Arg	0.64	0.10	0.04	14.91	5	0.36	0.04	0.02	11.02	5	0.0003	Male_Naive	*	AA
182	Cit / Orn	1.10	0.45	0.20	40.82	5	0.55	0.11	0.05	19.49	5	0.0289	Male_Naive		AA
183	CPT-I ratio	0.02	0.00	0.00	18.02	5	0.02	0.00	0.00	15.74	5	0.0792	Male_TBI		AA
184	Essential AA	1428.14	284.60	127.28	19.93	5	1437.76	159.34	71.26	11.08	5	0.9490	Male_TBI		AA
185	Fisher ratio	2.58	0.32	0.14	12.43	5	2.30	0.27	0.12	11.62	5	0.1699	Male_Naive		AA
186	Glucogenic AA	1080.60	193.76	86.65	17.93	5	1162.60	167.01	74.69	14.37	5	0.4939	Male_TBI		AA
187	Kynurenine / Trp	0.01	0.00	0.00	19.88	5	0.01	0.00	0.00	19.87	5	0.4538	Male_Naive		AA
188	Met-SO / Met	0.03	0.01	0.00	18.09	5	0.03	0.00	0.00	9.15	5	0.9419	Male_TBI		AA
189	MUFA_PC	146.75	16.80	7.51	11.45	5	130.98	11.25	5.03	8.59	5	0.1195	Male_Naive		PC
190	MUFA_PC / SFA_PC	5.80	0.37	0.17	6.44	5	5.04	0.24	0.11	4.82	5	0.0053	Male_Naive		PC
191	Non essential AA	2175.30	265.17	118.59	12.19	5	2291.29	312.62	139.81	13.64	5	0.5446	Male_TBI		AA
192	Orn / Arg	0.63	0.14	0.06	22.57	5	0.69	0.18	0.08	25.68	5	0.5794	Male_TBI		AA
193	PUFA_PC	1344.15	195.30	87.34	14.53	5	1343.16	107.56	48.10	8.01	5	0.9923	Male_Naive		PC
194	PUFA_PC / MUFA_PC	9.15	0.69	0.31	7.57	5	10.27	0.62	0.28	6.06	5	0.0279	Male_TBI		PC
195	PUFA_PC / SFA_PC	52.90	2.78	1.24	5.25	5	51.69	2.05	0.92	3.96	5	0.4566	Male_Naive		PC
196	SFA_PC	25.51	4.26	1.90	16.69	5	26.04	2.57	1.15	9.88	5	0.8166	Male_TBI		PC
197	Spermine / Spermidine	0.40	0.09	0.04	22.42	5	0.59	0.07	0.03	12.54	5	0.0068	Male_TBI		BA
198	Total_PC,SM	1564.02	220.92	98.80	14.13	5	1550.03	120.67	53.97	7.79	5	0.9041	Male_Naive		PC,SM
199	Total AA	3838.54	584.95	261.60	15.24	5	3914.67	486.95	217.77	12.44	5	0.8286	Male_TBI		AA
200	Total AC / C0	0.95	0.16	0.07	16.45	5	1.09	0.07	0.03	6.30	5	0.1016	Male_TBI		AC

Supplemental Table 5. (continued)

	Metabolite	Male_Naive					Male_TBI					P value Naïve vs. TBI	Differential Expression (Up)	* FDR<5%	Class
		mean	SD	SEM	%CV	N	mean	SD	SEM	%CV	N				
201	Total AC-DC / Total AC	0.07	0.02	0.01	27.05	5	0.08	0.03	0.01	33.52	5	0.5833	Male_TBI		AC
202	Total AC-OH / Total AC	0.04	0.01	0.00	21.42	5	0.04	0.01	0.01	26.08	5	0.6372	Male_TBI		AC
203	Total LPC	443.41	76.78	34.34	17.32	5	420.37	48.12	21.52	11.45	5	0.5853	Male_Naive		LPC
204	Total LPC / Total PC	0.29	0.02	0.01	7.45	5	0.28	0.02	0.01	6.85	5	0.3969	Male_Naive		LPC,PC
205	Total PC	1516.40	213.96	95.68	14.11	5	1500.18	118.39	52.95	7.89	5	0.8857	Male_Naive		PC
206	Total PC_diacyl	1439.06	198.87	88.94	13.82	5	1428.61	112.80	50.45	7.90	5	0.9211	Male_Naive		PC
207	Total PC_ether	77.35	15.34	6.86	19.83	5	71.57	5.88	2.63	8.22	5	0.4545	Male_Naive		PC
208	Total SM	47.62	7.12	3.18	14.94	5	49.84	3.26	1.46	6.54	5	0.5430	Male_TBI		SM
209	Total SM / Total_SM,PC	0.03	0.00	0.00	3.11	5	0.03	0.00	0.00	5.88	5	0.0930	Male_TBI		SM,PC
210	Total SM / Total PC	0.03	0.00	0.00	3.21	5	0.03	0.00	0.00	6.08	5	0.0931	Male_TBI		SM,PC
211	Total SM-non OH	42.98	6.18	2.76	14.37	5	45.07	2.95	1.32	6.55	5	0.5131	Male_TBI		SM
212	Total SM-OH	4.64	0.98	0.44	21.01	5	4.77	0.35	0.15	7.25	5	0.7894	Male_TBI		SM
213	Total SM-OH / Total SM-non OH	0.11	0.01	0.00	8.93	5	0.11	0.00	0.00	3.67	5	0.7690	Male_Naive		SM
214	Tyr / Phe	1.11	0.12	0.05	10.70	5	1.14	0.19	0.08	16.37	5	0.7340	Male_TBI		AA