

**S5 Table.Selected metabolites.**

These have significant correlation (P<0.01) based on factor loadings between the PC2 scores and variables in the metabolome data for irradiated mice administered sake.

Sample No	1	2	3	4	5	6	7	8	9	10	11	12			
PC2 scores	-4.64	-5.89	-2.02	-7.94	1.44	1.48	-5.19	-5.08	-1.51	11.88	9.03	8.45			
Metabolites	Relative area values												factor loading	p-value	
XA0013	N.D.	N.D.	N.D.	1.7E-04	N.D.	N.D.	N.D.	N.D.	4.6E-04	N.D.	N.D.	N.D.	1.0E+00	1.3E-79	
Cytosine	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	4.3E-05	5.7E-05	8.7E-05	N.D.	N.D.	N.D.	9.5E-01	1.4E-06	
AMP	1.1E-01	1.1E-01	1.2E-01	9.7E-02	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.2E-01	1.7E-01	1.6E-01	1.6E-01	9.5E-01	2.5E-06
Gly-Gly	4.0E-04	4.0E-04	3.8E-04	3.5E-04	4.5E-04	3.9E-04	3.9E-04	4.2E-04	4.5E-04	7.5E-04	6.1E-04	6.5E-04	9.3E-01	1.3E-05	
3'-Dephospho CoA	1.8E-04	1.2E-04	1.7E-04	2.0E-04	2.0E-04	2.8E-04	1.6E-04	2.0E-04	2.7E-04	4.8E-04	3.8E-04	4.8E-04	9.1E-01	3.1E-05	
Cys	1.6E-04	1.3E-04	1.4E-04	2.0E-04	2.2E-04	2.6E-04	1.5E-04	2.4E-04	2.3E-04	4.2E-04	4.5E-04	4.0E-04	9.1E-01	4.5E-05	
Glutathione (GSH)	3.8E-01	3.4E-01	4.5E-01	4.5E-01	5.0E-01	5.1E-01	4.0E-01	3.9E-01	5.0E-01	5.8E-01	6.4E-01	5.5E-01	9.0E-01	6.7E-05	
Ala-Ala	7.2E-04	6.1E-04	7.2E-04	4.9E-04	7.3E-04	7.4E-04	7.2E-04	7.5E-04	8.1E-04	9.6E-04	9.1E-04	9.3E-04	8.9E-01	1.1E-04	
Nicotinamide	6.2E-02	6.3E-02	7.6E-02	7.8E-02	8.5E-02	7.6E-02	7.6E-02	8.3E-02	6.5E-02	1.2E-01	1.2E-01	1.2E-01	8.9E-01	1.3E-04	
Trimethylamine	6.2E-04	9.1E-04	8.6E-04	3.6E-04	8.2E-04	6.6E-04	1.5E-03	9.6E-04	1.3E-03	3.0E-03	3.5E-03	3.3E-03	8.6E-01	3.3E-04	
Cysteine glutathione c	1.6E-04	1.4E-04	1.3E-04	1.3E-04	1.8E-04	1.5E-04	1.7E-04	1.9E-04	2.1E-04	2.9E-04	2.5E-04	2.5E-04	8.5E-01	4.5E-04	
CMP	7.5E-04	8.9E-04	7.0E-04	5.6E-04	9.8E-04	9.2E-04	8.1E-04	7.9E-04	7.4E-04	1.1E-03	1.1E-03	1.0E-03	8.4E-01	5.6E-04	
GMP	9.9E-03	8.4E-03	9.7E-03	6.5E-03	9.5E-03	8.6E-03	9.4E-03	1.0E-02	1.1E-02	1.2E-02	1.2E-02	1.3E-02	8.4E-01	6.7E-04	
Gly	1.2E-01	1.1E-01	1.2E-01	1.2E-01	1.5E-01	1.5E-01	1.1E-01	1.3E-01	1.2E-01	1.6E-01	1.4E-01	1.4E-01	8.3E-01	8.1E-04	
Octanoic acid	N.D.	N.D.	N.D.	N.D.	N.D.	1.3E-04	3.8E-04	5.4E-04	4.2E-04	N.D.	N.D.	N.D.	-8.3E-01	9.0E-04	
6-Phosphogluconic ac	1.7E-03	1.8E-03	2.0E-03	1.7E-03	2.0E-03	2.2E-03	1.3E-03	1.7E-03	1.6E-03	2.2E-03	2.4E-03	2.1E-03	8.2E-01	1.1E-03	
Ascorbic acid	1.6E-02	2.0E-02	2.3E-02	2.0E-02	2.8E-02	3.6E-02	1.5E-02	1.7E-02	2.7E-02	3.6E-02	3.1E-02	2.8E-02	8.1E-01	1.3E-03	
CoA_divalent	5.5E-03	4.2E-03	6.2E-03	5.9E-03	6.1E-03	7.6E-03	5.1E-03	6.3E-03	7.1E-03	8.0E-03	8.0E-03	7.3E-03	8.1E-01	1.4E-03	
XC0137	5.6E-03	5.5E-03	6.5E-03	5.3E-03	5.8E-03	5.6E-03	5.6E-03	5.2E-03	6.0E-03	2.9E-03	3.2E-03	3.3E-03	-8.1E-01	1.5E-03	
XC0016	9.2E-04	7.4E-04	8.4E-04	6.4E-04	1.0E-03	9.5E-04	7.2E-04	6.7E-04	7.6E-04	1.1E-03	9.8E-04	8.8E-04	7.9E-01	2.4E-03	
Sedoheptulose 7-pho	7.5E-03	5.4E-03	5.3E-03	4.0E-03	3.5E-03	3.8E-03	6.0E-03	6.1E-03	6.8E-03	2.3E-03	2.2E-03	2.2E-03	-7.9E-01	2.5E-03	
Thiamine phosphate	8.1E-04	7.9E-04	8.8E-04	6.8E-04	8.6E-04	1.0E-03	6.5E-04	5.4E-04	7.3E-04	9.8E-04	9.6E-04	1.0E-03	7.8E-01	2.5E-03	
S-Methylglutathione	1.9E-03	1.6E-03	1.5E-03	1.5E-03	2.1E-03	1.8E-03	1.5E-03	1.3E-03	2.0E-03	2.2E-03	2.1E-03	2.0E-03	7.8E-01	2.6E-03	
Lactic acid	4.0E-01	4.0E-01	4.8E-01	4.6E-01	5.4E-01	5.6E-01	4.4E-01	4.0E-01	4.7E-01	5.4E-01	5.8E-01	5.2E-01	7.8E-01	2.7E-03	
UMP	1.9E-02	1.9E-02	2.0E-02	1.1E-02	1.7E-02	1.5E-02	1.9E-02	2.0E-02	1.9E-02	2.5E-02	2.5E-02	2.6E-02	7.7E-01	3.6E-03	
XC0132	5.6E-04	5.9E-04	6.5E-04	5.7E-04	6.8E-04	6.4E-04	5.2E-04	5.6E-04	5.7E-04	6.5E-04	6.9E-04	6.6E-04	7.6E-01	4.0E-03	
Glucose 6-phosphate	3.5E-02	2.2E-02	3.1E-02	3.4E-02	2.4E-02	2.9E-02	3.1E-02	3.4E-02	3.5E-02	1.2E-02	2.5E-02	2.0E-02	-7.6E-01	4.5E-03	
Ribose 5-phosphate	3.1E-03	2.9E-03	4.3E-03	3.4E-03	4.2E-03	3.6E-03	2.4E-03	3.1E-03	3.4E-03	4.5E-03	4.2E-03	3.9E-03	7.6E-01	4.5E-03	
IMP	3.9E-03	5.0E-03	4.5E-03	4.1E-03	2.8E-03	3.0E-03	5.0E-03	5.3E-03	4.9E-03	3.5E-03	2.5E-03	2.4E-03	-7.4E-01	5.4E-03	
Glycerol 3-phosphate	7.4E-02	6.7E-02	7.6E-02	8.2E-02	7.3E-02	8.1E-02	6.3E-02	6.8E-02	7.4E-02	8.7E-02	9.1E-02	8.1E-02	7.3E-01	7.3E-03	
Gly-Asp	2.1E-04	2.0E-04	2.5E-04	1.8E-04	2.8E-04	2.1E-04	2.0E-04	1.9E-04	2.3E-04	2.7E-04	2.3E-04	2.4E-04	7.1E-01	9.7E-03	