

Supplementary table 1. Result from ingenuity pathway analysis

No.	Pathway Name	Total	Expected	Hits	Raw p	Impact
1	D-Glutamine and D-glutamate metabolism	11	0.01828	1	0.018166	0.02674
2	Alanine, aspartate and glutamate metabolism	24	0.039884	1	0.039315	0.20703
3	Phenylalanine, tyrosine and tryptophan biosynthesis	27	0.044869	1	0.044147	0
4	Nitrogen metabolism	39	0.064811	1	0.063291	0
5	Phenylalanine metabolism	45	0.074782	1	0.072755	0.04875
6	Pyrimidine metabolism	60	0.099709	1	0.0961	0
7	Arachidonic acid metabolism	62	0.10303	1	0.099179	0
8	Aminoacyl-tRNA biosynthesis	75	0.12464	1	0.119	0
9	Arginine and proline metabolism	77	0.12796	1	0.12202	0
10	Purine metabolism	92	0.15289	1	0.14443	0
11	Steroid hormone biosynthesis	99	0.16452	1	0.15474	0.00479

Note: Total is the total number of compounds in the pathway; the Hits is the actually matched number from the user uploaded data; the Raw p is the original p value calculated from the enrichment analysis; the Impact is the pathway impact value calculated from pathway topology analysis.