Full Run 1 – Diet

Pyrtinidine metabolism	Pathway Name	Match Status	p	-log(p)	Holm p	FDR	Impact
Glycorophospholipid metabolism	Pyrimidine metabolism	21/41	6.4775E-134	306.68	4.6638E-132	4.6638E-132	0.64309
Alanine, aspartate and glutamate metabolism	Arachidonic acid metabolism	33/36	5.7657E-65	147.92	4.0936E-63	2.0756E-63	0.97927
Taurine and hypotaurine metabolism 5/8	Glycerophospholipid metabolism	11/30	2.5948E-44	100.36	1.8164E-42	6.2275E-43	0.67254
Citrate cycle (TCA cycle) 11/20 6.4445E-29 64.912 4.3178E-27 7.7334E-28 0.52411 Steroid hormone biosynthesis 32/72 1.6476E-28 63.973 1.0875E-26 1.6947E-27 0.30607 Dring metabolism - other enzymes 6/30 5.994E-28 68.243 3.3147E-26 4.586E-27 0.14815 Linoleic acid metabolism 4/6 1.1105E-26 59.762 7.1069E-25 8.8836E-26 1.0 Retinol metabolism 13/16 2.9041E-24 54.196 1.8295E-22 2.091E-23 1.0 Lysine degradation 6/23 6.0631E-22 48.855 3.759E-22 2.091E-23 1.0 Lysine degradation 6/23 6.06225E-21 46.644 4.0397E-19 3.9735E-20 0.17392 Glyoxylate and dicarboxylate metabolism 10/18 1.9247E-16 36.187 1.1548E-14 1.066E-15 0.58064 Synthesis and degradation of ketone bodies 2/5 2.4009E-16 35.565 1.4166E-14 1.2338E-15 0.6 N-Glycan biosynthesis 3/36 4.808E-16	Alanine, aspartate and glutamate metabolism	14/24	1.1954E-36	82.715	8.2482E-35	2.1516E-35	0.84598
Steroid hormone biosynthesis 32/72	Taurine and hypotaurine metabolism	5/8	4.0960E-29	65.365	2.7853E-27	5.8984E-28	0.99999
Drug metabolism - other enzymes	Citrate cycle (TCA cycle)	11/20	6.4445E-29	64.912	4.3178E-27	7.7334E-28	0.52411
Linoleic acid metabolism	Steroid hormone biosynthesis	32/72	1.6476E-28	63.973	1.0875E-26	1.6947E-27	0.30607
Retinol metabolism	Drug metabolism - other enzymes	6/30	5.0994E-28	62.843	3.3147E-26	4.5896E-27	0.14815
Lysine degradation	Linoleic acid metabolism	4/6	1.1105E-26	59.762	7.1069E-25	8.8836E-26	1.0
Butanoate metabolism 12/22 6.6225E-21 46.464 4.0397E-19 3.9735E-20 0.17392 Glyoxylate and dicarboxylate metabolism 10/18 1.9247E-16 36.187 1.1548E-14 1.066E-15 0.58064 Synthesis and degradation of ketone bodies 2/5 2.4009E-16 35.965 1.4166E-14 1.2348E-15 0.6 N-Glycan biosynthesis 3/36 4.8088E-16 35.271 2.7891E-14 2.348E-15 0.01801 Arginine and proline metabolism 20/14 2.267FE-14 31.417 1.2926E-12 9.6582E-14 0.50347 Tyrosine metabolism 14/44 2.2804E-14 30.45 3.2828E-12 2.3875E-13 0.8 Propanoate metabolism 7/9 5.9687E-14 30.45 3.2828E-12 2.3575E-13 0.8 Propanoate metabolism 9/15 1.928E-13 29.277 1.0218E-11 6.9408E-13 0.46775 D-Glutamine and D-glutamate metabolism 5/5 2.09E-13 29.196 1.0868E-11 7.1656E-13 1.0 Pyruvate metabolism 9/23 7.488E	Retinol metabolism	13/16	2.9041E-24	54.196	1.8295E-22	2.091E-23	1.0
Glyoxylate and dicarboxylate metabolism 10/18 1.9247E-16 36.187 1.1548E-14 1.066E-15 0.58064 Synthesis and degradation of ketone bodies 2/5 2.4009E-16 35.965 1.4166E-14 1.2348E-15 0.6 N.Glycan biosynthesis 3/36 4.8088E-16 35.271 2.7891E-14 2.3082E-15 0.01801 Arginine and proline metabolism 20/44 2.2677E-14 31.417 1.2926E-12 9.6582E-14 0.50347 Tyrosine metabolism 14/44 2.2804E-14 31.412 1.2926E-12 9.6582E-14 0.49607 Ascorbate and aldarate metabolism 7/9 5.9687E-14 30.35 3.2828E-12 2.3875E-13 0.8 Propanoate metabolism 8/20 6.6643E-14 30.339 3.5987E-12 2.5254E-13 0.0 Histidine metabolism 9/15 1.928E-13 29.277 1.0218E-11 6.9408E-13 0.46775 D-Glutamine and D-glutamate metabolism 5/5 2.09E-13 29.196 1.0868E-11 7.1656E-13 1.0 Pyruvate metabolism 9/23 7.488E-12 25.618 3.8189E-10 2.4506E-11 0.45792 alpha-Linolenic acid metabolism 8/17 1.6837E-10 22.505 8.2503E-9 5.0512E-10 0.79629 Steroid biosynthesis 7/35 4.1894E-10 21.593 2.0109E-8 1.2356E-10 0.70629 Steroid biosynthesis 9/40 8.2033E-10 20.921 3.8556E-8 2.2717E-9 0.59635 Pythophan metabolism 9/40 8.2033E-10 20.921 3.8556E-8 2.2717E-9 0.59635 Pythophan metabolism 10/27 7.2729E-9 18.739 3.2431E-7 1.8057E-8 0.0 Cysteine and methionine metabolism 10/27 7.2729E-9 18.739 3.2431E-7 1.8057E-8 0.0 Glycine, serine and threonine metabolism 16/31 6.4192E-8 16.561 2.6961E-6 1.4909E-7 0.74853 Biosynthesis 6/21 1.6332E-7 15.458 7.5447E-6 4.0967E-7 0.72244 Nitrogen metabolism 5/9 3.1979E-7 15.458 7.5447E-6 4.0967E-7 0.72244 Nitrogen metabolism 11/38 1.2273E-6 13.611 4.5408E-5 2.4545E-6 0.11705 Fatty acid metabolism 11/38 1.2273E-6 13.611 4.5408E-5 2.4545E-6 0.11705 Fatty acid metabolism 11/39 8.8567E-6 13.611 4.5408E-5 2.4561E-5 0.07061	Lysine degradation	6/23	6.0631E-22	48.855	3.7592E-20	3.9686E-21	0.10295
Synthesis and degradation of ketone bodies 2/5 2.4009E-16 35.965 1.4166E-14 1.2348E-15 0.6 N-Glycan biosynthesis 3/36 4.8088E-16 35.271 2.7891E-14 2.3082E-15 0.01801 Arginine and proline metabolism 20/44 2.2677E-14 31.417 1.2926E-12 9.6582E-14 0.50347 Tyrosine metabolism 7/9 5.9687E-14 31.412 1.2926E-12 9.6582E-14 0.46067 Ascorbate and aldarate metabolism 7/9 5.9687E-14 30.345 3.2828E-12 2.3875E-13 0.8 Propanoate metabolism 8/20 6.6643E-14 30.339 3.5987E-12 2.5254E-13 0.0 Histidine metabolism 9/15 1.928E-13 29.277 1.0218E-11 6.9408E-13 0.46775 D-Glutamine and D-glutamate metabolism 5/5 2.09E-13 29.196 1.0868E-11 7.1656E-13 1.0 Pyruvate metabolism 3/9 3.9471E-11 23.955 1.9736E-9 1.2356E-10 1.0 beta-Alanine metabolism 8/17 1.6837E-10	Butanoate metabolism	12/22	6.6225E-21	46.464	4.0397E-19	3.9735E-20	0.17392
N-Glycan biosynthesis 3/36	Glyoxylate and dicarboxylate metabolism	10/18	1.9247E-16	36.187	1.1548E-14	1.066E-15	0.58064
Arginine and proline metabolism 20/44 2.2677E-14 31.417 1.2926E-12 9.6582E-14 0.50347 Tyrosine metabolism 14/44 2.2804E-14 31.412 1.2926E-12 9.6582E-14 0.49607 Ascorbate and aldarate metabolism 7/9 5.9687E-14 30.45 3.2828E-12 2.3875E-13 0.8 Propanoate metabolism 8/20 6.6643E-14 30.33 3.5987E-12 2.5254E-13 0.0 Histidine metabolism 9/15 1.928E-13 29.277 1.0218E-11 6.9408E-13 0.46775 D-Glutamine and D-glutamate metabolism 5/5 2.09E-13 29.196 1.0868E-11 7.1656E-13 1.0 Pyruvate metabolism 9/23 7.488E-12 25.618 3.8189E-10 2.4506E-11 0.45792 alpha-Linolenic acid metabolism 3/9 3.9471E-11 23.955 1.9736E-9 1.2356E-10 1.0 Steroid biosynthesis 7/35 4.1894E-10 22.505 8.2503E-9 5.0512E-10 0.79629 Steroid biosynthesis 7/40 8.2033E-10	Synthesis and degradation of ketone bodies	2/5	2.4009E-16	35.965	1.4166E-14	1.2348E-15	0.6
Arginine and proline metabolism 20/44 2.2677E-14 31.417 1.2926E-12 9.6582E-14 0.50347 Tyrosine metabolism 14/44 2.2804E-14 31.412 1.2926E-12 9.6582E-14 0.49607 Ascorbate and aldarate metabolism 7/9 5.9687E-14 30.45 3.2828E-12 2.3875E-13 0.8 Propanoate metabolism 8/20 6.6643E-14 30.33 3.5987E-12 2.5254E-13 0.0 Histidine metabolism 9/15 1.928E-13 29.277 1.0218E-11 6.9408E-13 0.46775 D-Glutamine and D-glutamate metabolism 5/5 2.09E-13 29.196 1.0868E-11 7.1656E-13 1.0 Pyruvate metabolism 9/23 7.488E-12 25.618 3.8189E-10 2.4506E-11 0.45792 alpha-Linolenic acid metabolism 3/9 3.9471E-11 23.955 1.9736E-9 1.2356E-10 1.0 beta-Alanine metabolism 8/17 1.6837E-10 22.505 8.2503E-9 5.0512E-10 0.79629 Steroid biosynthesis 7/35 4.1894E-10 <	N-Glycan biosynthesis	3/36	4.8088E-16	35.271	2.7891E-14	2.3082E-15	0.01801
Ascorbate and aldarate metabolism 7/9 5.9687E-14 30.45 3.2828E-12 2.3875E-13 0.8 Propanoate metabolism 8/20 6.6643E-14 30.339 3.5987E-12 2.5254E-13 0.0 Histidine metabolism 9/15 1.928E-13 29.277 1.0218E-11 6.9408E-13 0.46775 D-Glutamine and D-glutamate metabolism 5/5 2.09E-13 29.196 1.0868E-11 7.1656E-13 1.0 Pyruvate metabolism 9/23 7.488E-12 25.618 3.8189E-10 2.4506E-11 0.45792 alpha-Linolenic acid metabolism 3/9 3.9471E-11 23.955 1.9736E-9 1.2356E-10 1.0 beta-Alanine metabolism 8/17 1.6837E-10 22.505 8.2503E-9 5.0512E-10 0.79629 Steroid biosynthesis 7/35 4.1894E-10 21.593 2.0109E-8 1.2065E-9 0.13485 Tryptophan metabolism 9/40 8.2033E-10 20.921 3.856E-8 2.2717E-9 0.59635 Pentose and glucuronate interconversions 13/16 3.4626E-9		20/44			1.2926E-12	9.6582E-14	0.50347
Propanoate metabolism		14/44			1.2926E-12	9.6582E-14	0.49607
Histidine metabolism 9/15 1.928E-13 29.277 1.0218E-11 6.9408E-13 0.46775 D-Glutamine and D-glutamate metabolism 5/5 2.09E-13 29.196 1.0868E-11 7.1656E-13 1.0 Pyruvate metabolism 9/23 7.488E-12 25.618 3.8189E-10 2.4506E-11 0.45792 alpha-Linolenic acid metabolism 3/9 3.9471E-11 23.955 1.9736E-9 1.2356E-10 1.0 beta-Alanine metabolism 8/17 1.6837E-10 22.505 8.2503E-9 5.0512E-10 0.79629 Steroid biosynthesis 7/35 4.1894E-10 21.593 2.0109E-8 1.2065E-9 0.13485 Tryptophan metabolism 9/40 8.2033E-10 20.921 3.8556E-8 2.2717E-9 0.59635 Pentose and glucuronate interconversions 13/16 3.4626E-9 19.481 1.5928E-7 9.2336E-9 0.86667 Lysine biosynthesis 4/4 7.2068E-9 18.748 3.2431E-7 1.8057E-8 0.0 Cysteine and methionine metabolism 10/27 7.2729E-9	Ascorbate and aldarate metabolism	7/9	5.9687E-14	30.45	3.2828E-12	2.3875E-13	0.8
D-Glutamine and D-glutamate metabolism 5/5 2.09E-13 29.196 1.0868E-11 7.1656E-13 1.0 Pyruvate metabolism 9/23 7.488E-12 25.618 3.8189E-10 2.4506E-11 0.45792 alpha-Linolenic acid metabolism 3/9 3.9471E-11 23.955 1.9736E-9 1.2356E-10 1.0 beta-Alanine metabolism 8/17 1.6837E-10 22.505 8.2503E-9 5.0512E-10 0.79629 Steroid biosynthesis 7/35 4.1894E-10 21.593 2.0109E-8 1.2065E-9 0.13485 Tryptophan metabolism 9/40 8.2033E-10 20.921 3.8556E-8 2.2717E-9 0.59635 Pentose and glucuronate interconversions 13/16 3.4626E-9 19.481 1.5928E-7 9.2336E-9 0.86667 Lysine biosynthesis 4/4 7.2068E-9 18.748 3.2431E-7 1.8057E-8 0.0 Cysteine and methionine metabolism 10/27 7.2729E-9 18.739 3.2431E-7 1.8057E-8 0.3854 Biosynthesis of unsaturated fatty acids 8/42 9.0	Propanoate metabolism	8/20	6.6643E-14	30.339	3.5987E-12	2.5254E-13	0.0
Pyruvate metabolism 9/23 7.488E-12 25.618 3.8189E-10 2.4506E-11 0.45792 alpha-Linolenic acid metabolism 3/9 3.9471E-11 23.955 1.9736E-9 1.2356E-10 1.0 beta-Alanine metabolism 8/17 1.6837E-10 22.505 8.2503E-9 5.0512E-10 0.79629 Steroid biosynthesis 7/35 4.1894E-10 21.593 2.0109E-8 1.2065E-9 0.13485 Tryptophan metabolism 9/40 8.2033E-10 20.921 3.8556E-8 2.2717E-9 0.59635 Pentose and glucuronate interconversions 13/16 3.4626E-9 19.481 1.5928E-7 9.2336E-9 0.86667 Lysine biosynthesis 4/4 7.2068E-9 18.748 3.2431E-7 1.8057E-8 0.0 Cysteine and methionine metabolism 10/27 7.2729E-9 18.739 3.2431E-7 1.8057E-8 0.0 Glycine, serine and threonine metabolism 16/31 6.4192E-8 16.561 2.6961E-6 1.4909E-7 0.74853 Riboflavin metabolism 2/11 1.3372E-7	Histidine metabolism	9/15	1.928E-13	29.277	1.0218E-11	6.9408E-13	0.46775
$ \begin{array}{c} \text{alpha-Linolenic acid metabolism} & 3/9 & 3.9471E-11 & 23.955 & 1.9736E-9 & 1.2356E-10 & 1.0 \\ \text{beta-Alanine metabolism} & 8/17 & 1.6837E-10 & 22.505 & 8.2503E-9 & 5.0512E-10 & 0.79629 \\ \text{Steroid biosynthesis} & 7/35 & 4.1894E-10 & 21.593 & 2.0109E-8 & 1.2065E-9 & 0.13485 \\ \text{Tryptophan metabolism} & 9/40 & 8.2033E-10 & 20.921 & 3.8556E-8 & 2.2717E-9 & 0.59635 \\ \text{Pentose and glucuronate interconversions} & 13/16 & 3.4626E-9 & 19.481 & 1.5928E-7 & 9.2336E-9 & 0.86667 \\ \text{Lysine biosynthesis} & 4/4 & 7.2068E-9 & 18.748 & 3.2431E-7 & 1.8057E-8 & 0.0 \\ \text{Cysteine and methionine metabolism} & 10/27 & 7.2729E-9 & 18.739 & 3.2431E-7 & 1.8057E-8 & 0.3854 \\ \text{Biosynthesis of unsaturated fatty acids} & 8/42 & 9.0115E-9 & 18.525 & 3.8749E-7 & 2.1628E-8 & 0.0 \\ \text{Glycine, serine and threonine metabolism} & 16/31 & 6.4192E-8 & 16.561 & 2.6961E-6 & 1.4909E-7 & 0.74853 \\ \text{Riboflavin metabolism} & 2/11 & 1.3372E-7 & 15.828 & 5.4826E-6 & 3.0087E-7 & 0.16667 \\ \text{Sphingolipid metabolism} & 6/21 & 1.6323E-7 & 15.628 & 6.529E-6 & 3.5613E-7 & 0.43108 \\ \text{Amino sugar and nucleotide sugar metabolism} & 25/37 & 1.9345E-7 & 15.458 & 7.5447E-6 & 4.0967E-7 & 0.72244 \\ \text{Nitrogen metabolism} & 5/9 & 3.1979E-7 & 14.956 & 1.2152E-5 & 6.5785E-7 & 0.0 \\ \text{Valine, leucine and isoleucine degradation} & 11/38 & 1.2273E-6 & 13.611 & 4.5408E-5 & 2.4545E-6 & 0.11705 \\ \text{Fatty acid metabolism} & 8/27 & 1.0812E-5 & 11.435 & 3.7842E-4 & 2.0486E-5 & 0.29701 \\ \text{Fructose and mannose metabolism} & 12/21 & 1.1137E-5 & 11.405 & 3.7866E-4 & 2.0561E-5 & 0.7061 \\ \end{array}$	D-Glutamine and D-glutamate metabolism	5/5	2.09E-13		1.0868E-11	7.1656E-13	1.0
beta-Alanine metabolism 8/17 1.6837E-10 22.505 8.2503E-9 5.0512E-10 0.79629 Steroid biosynthesis 7/35 4.1894E-10 21.593 2.0109E-8 1.2065E-9 0.13485 Tryptophan metabolism 9/40 8.2033E-10 20.921 3.8556E-8 2.2717E-9 0.59635 Pentose and glucuronate interconversions 13/16 3.4626E-9 19.481 1.5928E-7 9.2336E-9 0.86667 Lysine biosynthesis 4/4 7.2068E-9 18.748 3.2431E-7 1.8057E-8 0.0 Cysteine and methionine metabolism 10/27 7.2729E-9 18.739 3.2431E-7 1.8057E-8 0.3854 Biosynthesis of unsaturated fatty acids 8/42 9.0115E-9 18.525 3.8749E-7 2.1628E-8 0.0 Glycine, serine and threonine metabolism 16/31 6.4192E-8 16.561 2.6961E-6 1.4909E-7 0.74853 Riboflavin metabolism 2/11 1.3372E-7 15.828 5.4826E-6 3.0087E-7 0.16667 Sphingolipid metabolism 6/21 1.632	Pyruvate metabolism	9/23	7.488E-12	25.618	3.8189E-10	2.4506E-11	0.45792
Steroid biosynthesis 7/35 4.1894E-10 21.593 2.0109E-8 1.2065E-9 0.13485 Tryptophan metabolism 9/40 8.2033E-10 20.921 3.8556E-8 2.2717E-9 0.59635 Pentose and glucuronate interconversions 13/16 3.4626E-9 19.481 1.5928E-7 9.2336E-9 0.86667 Lysine biosynthesis 4/4 7.2068E-9 18.748 3.2431E-7 1.8057E-8 0.0 Cysteine and methionine metabolism 10/27 7.2729E-9 18.739 3.2431E-7 1.8057E-8 0.3854 Biosynthesis of unsaturated fatty acids 8/42 9.0115E-9 18.525 3.8749E-7 2.1628E-8 0.0 Glycine, serine and threonine metabolism 16/31 6.4192E-8 16.561 2.6961E-6 1.4909E-7 0.74853 Riboflavin metabolism 2/11 1.3372E-7 15.828 5.4826E-6 3.0087E-7 0.16667 Sphingolipid metabolism 6/21 1.6323E-7 15.628 6.529E-6 3.5613E-7 0.43108 Amino sugar and nucleotide sugar metabolism 25/37	alpha-Linolenic acid metabolism	3/9	3.9471E-11	23.955	1.9736E-9	1.2356E-10	1.0
$ \begin{array}{c} \text{Tryptophan metabolism} & 9/40 & 8.2033\text{E-}10 & 20.921 & 3.8556\text{E-8} & 2.2717\text{E-9} & 0.59635 \\ \text{Pentose and glucuronate interconversions} & 13/16 & 3.4626\text{E-9} & 19.481 & 1.5928\text{E-7} & 9.2336\text{E-9} & 0.86667 \\ \text{Lysine biosynthesis} & 4/4 & 7.2068\text{E-9} & 18.748 & 3.2431\text{E-7} & 1.8057\text{E-8} & 0.0 \\ \text{Cysteine and methionine metabolism} & 10/27 & 7.2729\text{E-9} & 18.739 & 3.2431\text{E-7} & 1.8057\text{E-8} & 0.3854 \\ \text{Biosynthesis of unsaturated fatty acids} & 8/42 & 9.0115\text{E-9} & 18.525 & 3.8749\text{E-7} & 2.1628\text{E-8} & 0.0 \\ \text{Glycine, serine and threonine metabolism} & 16/31 & 6.4192\text{E-8} & 16.561 & 2.6961\text{E-6} & 1.4909\text{E-7} & 0.74853 \\ \text{Riboflavin metabolism} & 2/11 & 1.3372\text{E-7} & 15.828 & 5.4826\text{E-6} & 3.0087\text{E-7} & 0.16667 \\ \text{Sphingolipid metabolism} & 6/21 & 1.6323\text{E-7} & 15.628 & 6.529\text{E-6} & 3.5613\text{E-7} & 0.43108 \\ \text{Amino sugar and nucleotide sugar metabolism} & 25/37 & 1.9345\text{E-7} & 15.458 & 7.5447\text{E-6} & 4.0967\text{E-7} & 0.72244 \\ \text{Nitrogen metabolism} & 5/9 & 3.1979\text{E-7} & 14.956 & 1.2152\text{E-5} & 6.5785\text{E-7} & 0.0 \\ \text{Valine, leucine and isoleucine degradation} & 11/38 & 1.2273\text{E-6} & 13.611 & 4.5408\text{E-5} & 2.4545\text{E-6} & 0.11705 \\ \text{Fatty acid metabolism} & 8/27 & 1.0812\text{E-5} & 11.435 & 3.7842\text{E-4} & 2.0486\text{E-5} & 0.29701 \\ \text{Fructose and mannose metabolism} & 12/21 & 1.1137\text{E-5} & 11.405 & 3.7866\text{E-4} & 2.0561\text{E-5} & 0.7061 \\ \end{array}$	beta-Alanine metabolism	8/17	1.6837E-10	22.505	8.2503E-9	5.0512E-10	0.79629
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Steroid biosynthesis	7/35	4.1894E-10	21.593	2.0109E-8	1.2065E-9	0.13485
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Tryptophan metabolism	9/40	8.2033E-10	20.921	3.8556E-8	2.2717E-9	0.59635
$ \begin{array}{c} \text{Cysteine and methionine metabolism} & 10/27 & 7.2729\text{E-9} & 18.739 & 3.2431\text{E-7} & 1.8057\text{E-8} & 0.3854 \\ \text{Biosynthesis of unsaturated fatty acids} & 8/42 & 9.0115\text{E-9} & 18.525 & 3.8749\text{E-7} & 2.1628\text{E-8} & 0.0 \\ \text{Glycine, serine and threonine metabolism} & 16/31 & 6.4192\text{E-8} & 16.561 & 2.6961\text{E-6} & 1.4909\text{E-7} & 0.74853 \\ \text{Riboflavin metabolism} & 2/11 & 1.3372\text{E-7} & 15.828 & 5.4826\text{E-6} & 3.0087\text{E-7} & 0.16667 \\ \text{Sphingolipid metabolism} & 6/21 & 1.6323\text{E-7} & 15.628 & 6.529\text{E-6} & 3.5613\text{E-7} & 0.43108 \\ \text{Amino sugar and nucleotide sugar metabolism} & 25/37 & 1.9345\text{E-7} & 15.458 & 7.5447\text{E-6} & 4.0967\text{E-7} & 0.72244 \\ \text{Nitrogen metabolism} & 5/9 & 3.1979\text{E-7} & 14.956 & 1.2152\text{E-5} & 6.5785\text{E-7} & 0.0 \\ \text{Valine, leucine and isoleucine degradation} & 11/38 & 1.2273\text{E-6} & 13.611 & 4.5408\text{E-5} & 2.4545\text{E-6} & 0.11705 \\ \text{Fatty acid metabolism} & 1/39 & 8.8567\text{E-6} & 11.634 & 3.1884\text{E-4} & 1.7235\text{E-5} & 0.0 \\ \text{Porphyrin and chlorophyll metabolism} & 8/27 & 1.0812\text{E-5} & 11.435 & 3.7842\text{E-4} & 2.0486\text{E-5} & 0.29701 \\ \text{Fructose and mannose metabolism} & 12/21 & 1.1137\text{E-5} & 11.405 & 3.7866\text{E-4} & 2.0561\text{E-5} & 0.7061 \\ \end{array}$	Pentose and glucuronate interconversions	13/16	3.4626E-9	19.481	1.5928E-7	9.2336E-9	0.86667
Biosynthesis of unsaturated fatty acids 8/42 9.0115E-9 18.525 3.8749E-7 2.1628E-8 0.0 Glycine, serine and threonine metabolism 16/31 6.4192E-8 16.561 2.6961E-6 1.4909E-7 0.74853 Riboflavin metabolism 2/11 1.3372E-7 15.828 5.4826E-6 3.0087E-7 0.16667 Sphingolipid metabolism 6/21 1.6323E-7 15.628 6.529E-6 3.5613E-7 0.43108 Amino sugar and nucleotide sugar metabolism 25/37 1.9345E-7 15.458 7.5447E-6 4.0967E-7 0.72244 Nitrogen metabolism 5/9 3.1979E-7 14.956 1.2152E-5 6.5785E-7 0.0 Valine, leucine and isoleucine degradation 11/38 1.2273E-6 13.611 4.5408E-5 2.4545E-6 0.11705 Fatty acid metabolism 1/39 8.8567E-6 11.634 3.1884E-4 1.7235E-5 0.0 Porphyrin and chlorophyll metabolism 8/27 1.0812E-5 11.435 3.7842E-4 2.0486E-5 0.29701 Fructose and mannose metabolism	Lysine biosynthesis	4/4	7.2068E-9	18.748	3.2431E-7	1.8057E-8	0.0
Glycine, serine and threonine metabolism 16/31 6.4192E-8 16.561 2.6961E-6 1.4909E-7 0.74853 Riboflavin metabolism 2/11 1.3372E-7 15.828 5.4826E-6 3.0087E-7 0.16667 Sphingolipid metabolism 6/21 1.6323E-7 15.628 6.529E-6 3.5613E-7 0.43108 Amino sugar and nucleotide sugar metabolism 25/37 1.9345E-7 15.458 7.5447E-6 4.0967E-7 0.72244 Nitrogen metabolism 5/9 3.1979E-7 14.956 1.2152E-5 6.5785E-7 0.0 Valine, leucine and isoleucine degradation 11/38 1.2273E-6 13.611 4.5408E-5 2.4545E-6 0.11705 Fatty acid metabolism 1/39 8.8567E-6 11.634 3.1884E-4 1.7235E-5 0.0 Porphyrin and chlorophyll metabolism 8/27 1.0812E-5 11.435 3.7842E-4 2.0486E-5 0.29701 Fructose and mannose metabolism 12/21 1.1137E-5 11.405 3.7866E-4 2.0561E-5 0.7061	Cysteine and methionine metabolism	10/27	7.2729E-9	18.739	3.2431E-7	1.8057E-8	0.3854
Riboflavin metabolism 2/11 1.3372E-7 15.828 5.4826E-6 3.0087E-7 0.16667 Sphingolipid metabolism 6/21 1.6323E-7 15.628 6.529E-6 3.5613E-7 0.43108 Amino sugar and nucleotide sugar metabolism 25/37 1.9345E-7 15.458 7.5447E-6 4.0967E-7 0.72244 Nitrogen metabolism 5/9 3.1979E-7 14.956 1.2152E-5 6.5785E-7 0.0 Valine, leucine and isoleucine degradation 11/38 1.2273E-6 13.611 4.5408E-5 2.4545E-6 0.11705 Fatty acid metabolism 1/39 8.8567E-6 11.634 3.1884E-4 1.7235E-5 0.0 Porphyrin and chlorophyll metabolism 8/27 1.0812E-5 11.435 3.7842E-4 2.0486E-5 0.29701 Fructose and mannose metabolism 12/21 1.1137E-5 11.405 3.7866E-4 2.0561E-5 0.7061	Biosynthesis of unsaturated fatty acids	8/42	9.0115E-9	18.525	3.8749E-7	2.1628E-8	0.0
Sphingolipid metabolism 6/21 1.6323E-7 15.628 6.529E-6 3.5613E-7 0.43108 Amino sugar and nucleotide sugar metabolism 25/37 1.9345E-7 15.458 7.5447E-6 4.0967E-7 0.72244 Nitrogen metabolism 5/9 3.1979E-7 14.956 1.2152E-5 6.5785E-7 0.0 Valine, leucine and isoleucine degradation 11/38 1.2273E-6 13.611 4.5408E-5 2.4545E-6 0.11705 Fatty acid metabolism 1/39 8.8567E-6 11.634 3.1884E-4 1.7235E-5 0.0 Porphyrin and chlorophyll metabolism 8/27 1.0812E-5 11.435 3.7842E-4 2.0486E-5 0.29701 Fructose and mannose metabolism 12/21 1.1137E-5 11.405 3.7866E-4 2.0561E-5 0.7061	Glycine, serine and threonine metabolism	16/31	6.4192E-8	16.561	2.6961E-6	1.4909E-7	0.74853
Amino sugar and nucleotide sugar metabolism 25/37 1.9345E-7 15.458 7.5447E-6 4.0967E-7 0.72244 Nitrogen metabolism 5/9 3.1979E-7 14.956 1.2152E-5 6.5785E-7 0.0 Valine, leucine and isoleucine degradation 11/38 1.2273E-6 13.611 4.5408E-5 2.4545E-6 0.11705 Fatty acid metabolism 1/39 8.8567E-6 11.634 3.1884E-4 1.7235E-5 0.0 Porphyrin and chlorophyll metabolism 8/27 1.0812E-5 11.435 3.7842E-4 2.0486E-5 0.29701 Fructose and mannose metabolism 12/21 1.1137E-5 11.405 3.7866E-4 2.0561E-5 0.7061	Riboflavin metabolism	2/11	1.3372E-7	15.828	5.4826E-6	3.0087E-7	0.16667
Amino sugar and nucleotide sugar metabolism 25/37 1.9345E-7 15.458 7.5447E-6 4.0967E-7 0.72244 Nitrogen metabolism 5/9 3.1979E-7 14.956 1.2152E-5 6.5785E-7 0.0 Valine, leucine and isoleucine degradation 11/38 1.2273E-6 13.611 4.5408E-5 2.4545E-6 0.11705 Fatty acid metabolism 1/39 8.8567E-6 11.634 3.1884E-4 1.7235E-5 0.0 Porphyrin and chlorophyll metabolism 8/27 1.0812E-5 11.435 3.7842E-4 2.0486E-5 0.29701 Fructose and mannose metabolism 12/21 1.1137E-5 11.405 3.7866E-4 2.0561E-5 0.7061	Sphingolipid metabolism	6/21	1.6323E-7	15.628	6.529E-6	3.5613E-7	0.43108
Valine, leucine and isoleucine degradation 11/38 1.2273E-6 13.611 4.5408E-5 2.4545E-6 0.11705 Fatty acid metabolism 1/39 8.8567E-6 11.634 3.1884E-4 1.7235E-5 0.0 Porphyrin and chlorophyll metabolism 8/27 1.0812E-5 11.435 3.7842E-4 2.0486E-5 0.29701 Fructose and mannose metabolism 12/21 1.1137E-5 11.405 3.7866E-4 2.0561E-5 0.7061	Amino sugar and nucleotide sugar metabolism		1.9345E-7	15.458	7.5447E-6	4.0967E-7	0.72244
Fatty acid metabolism 1/39 8.8567E-6 11.634 3.1884E-4 1.7235E-5 0.0 Porphyrin and chlorophyll metabolism 8/27 1.0812E-5 11.435 3.7842E-4 2.0486E-5 0.29701 Fructose and mannose metabolism 12/21 1.1137E-5 11.405 3.7866E-4 2.0561E-5 0.7061	Nitrogen metabolism	5/9	3.1979E-7	14.956	1.2152E-5	6.5785E-7	0.0
Porphyrin and chlorophyll metabolism 8/27 1.0812E-5 11.435 3.7842E-4 2.0486E-5 0.29701 Fructose and mannose metabolism 12/21 1.1137E-5 11.405 3.7866E-4 2.0561E-5 0.7061	Valine, leucine and isoleucine degradation	11/38	1.2273E-6	13.611	4.5408E-5	2.4545E-6	0.11705
Fructose and mannose metabolism 12/21 1.1137E-5 11.405 3.7866E-4 2.0561E-5 0.7061	Fatty acid metabolism	1/39	8.8567E-6	11.634	3.1884E-4	1.7235E-5	0.0
	Porphyrin and chlorophyll metabolism	8/27	1.0812E-5	11.435	3.7842E-4	2.0486E-5	0.29701
Primary bile acid biosynthesis 28/46 1.4844E-5 11.118 4.8984E-4 2.6719E-5 0.33532	Fructose and mannose metabolism	12/21	1.1137E-5	11.405	3.7866E-4	2.0561E-5	0.7061
	Primary bile acid biosynthesis	28/46	1.4844E-5	11.118	4.8984E-4	2.6719E-5	0.33532