

Pathos

A metabolomics tool from Glasgow Polyomics


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 Organism:

 Base Condition:

 Experimental Condition:

 Cut-offs for colour-flagging:

File: 'pathos_KEGGlist.txt'

Kegg Maps for All Organisms with compounds from input list

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 All maps ☒
☒ : View metabolites found for a particular map (or all maps) — toggles list on and off.

☒ : Link to a graph of results for a particular metabolite. Change indication scale — [increase decrease]

Arginine and proline metabolism: 17 metabolites out of 67 (13 changed) ☒


- ☒ (S)-1-Pyrroline-5-carboxylate C5H7NO2
- ☒ 1-Pyrroline-4-hydroxy-2-carboxylate C5H7NO3
- ☒ 2,5-Dioxopentanoate C5H6O4
- ☒ 4-Aminobutyraldehyde C4H9NO
- ☒ Creatine C4H9N3O2
- ☒ Creatinine C4H7N3O
- ☒ D-Proline C5H9NO2
- ☒ L-1-Pyrroline-3-hydroxy-5-carboxylate C5H7NO3
- ☒ L-Arginine C6H14N4O2
- ☒ L-Glutamate C5H9NO4
- ☒ L-Glutamate 5-semialdehyde C5H9NO3
- ☒ L-Ornithine C5H12N2O2
- ☒ L-Proline C5H9NO2
- ☒ N-Acetylputrescine C6H14N2O
- ☒ N-Carbamoylsarcosine C4H8N2O3
- ☒ N2-Succinyl-L-ornithine C9H16N2O5
- ☒ Phosphocreatine C4H10N3O5P

 Generate map of **Arginine and proline metabolism** highlighting potential metabolites.

Pyrimidine metabolism: 17 metabolites out of 55 (13 changed) ☒

- ☒ (S)-Dihydroorotate C5H6N2O4
- ☒ 3-Oxopropanoate C3H4O3
- ☒ 5-Methylcytosine C5H7N3O
- ☒ Carbamoyl phosphate CH4NO5P
- ☒ Cytidine C9H13N3O5
- ☒ Cytosine C4H5N3O
- ☒ Deoxycytidine C9H13N3O4
- ☒ Deoxyuridine C9H12N2O5
- ☒ FucoseMalonate C3H4O4
- ☒ L-Glutamine C5H10N2O3
- ☒ Orotate C5H4N2O4
- ☒ Pseudouridine C9H12N2O6
- ☒ Thymidine C10H14N2O5
- ☒ Thymine C5H6N2O2
- ☒ TrypsinUridine C9H12N2O6
- ☒ beta-Alanine C3H7NO2
- ☒ dTTP C10H17N2O14P3















Generate map of **Pyrimidine metabolism** highlighting potential metabolites.

Aminoacyl-tRNA biosynthesis: 12 metabolites out of 24 (11 changed) 

 L-Alanine C3H7NO2
 L-Arginine C6H14N4O2
 L-Asparagine C4H8N2O3
 L-Glutamate C5H9NO4
 L-Glutamine C5H10N2O3
 L-Histidine C6H9N3O2
 L-Leucine C6H13NO2
 L-Lysine C6H14N2O2
 L-Methionine C5H11NO2S
 L-Phenylalanine C9H11NO2
 L-Proline C5H9NO2
 L-Tryptophan C11H12N2O2












Generate map of **Aminoacyl-tRNA biosynthesis** highlighting potential metabolites.

Tyrosine metabolism: 14 metabolites out of 75 (11 changed) 

 2-Carboxy-2,3-dihydro-5,6-dihydroxyindole C9H9NO4
 2-Hydroxy-3-(4-hydroxyphenyl)propenoate C9H8O4
 3-(4-Hydroxyphenyl)lactate C9H10O4
 3-(4-Hydroxyphenyl)pyruvate C9H8O4
 3-Amino-3-(4-hydroxyphenyl)propanoate C9H11NO3
 4-Hydroxyphenylacetaldehyde C8H8O2
 4-Hydroxyphenylethanol C8H10O2
 5,6-Dihydroxyindole C8H7NO2
 Dopaquinone C9H9NO4
 Indole-5,6-quinone C8H5NO2
 L-Adrenaline C9H13NO3
 Succinate C4H6O4
 p-Benzenediol C6H6O2
 p-Hydroxyphenylacetyl glycine C10H11NO4











Generate map of **Tyrosine metabolism** highlighting potential metabolites.

Tryptophan metabolism: 11 metabolites out of 80 (10 changed) 

 2-Aminomuconate semialdehyde C6H7NO3
 2-Aminophenol C6H7NO
 2-Oxadipate C6H8O5
 3-Hydroxyanthranilate C7H7NO3
 3-Indoleacetonitrile C10H8N2
 4,6-Dihydroxyquinoline C9H7NO2
 5-Hydroxy-L-tryptophan C11H12N2O3
 5-Methoxyindoleacetate C11H11NO3
 Indole C8H7N
 Indolelactate C11H11NO3
 L-Tryptophan C11H12N2O2

Generate map of **Tryptophan metabolism** highlighting potential metabolites.

Glycine, serine and threonine metabolism: 12 metabolites out of 45 (9 changed) 

 (R)-1-Aminopropan-2-ol C3H9NO
 2-Oxobutanoate C4H6O3
 Aminoacetone C3H7NO
 Betaine C5H11NO2
 Betaine aldehyde C5H12NO
 Choline C5H14NO
 Creatine C4H9N3O2
 D-Glycerate C3H6O4
 L-2-Amino-3-oxobutanoic acid C4H7NO3
 L-Homoserine C4H9NO3
 L-Tryptophan C11H12N2O2
 N,N-Dimethylglycine C4H9NO2

Generate map of **Glycine, serine and threonine metabolism** highlighting potential metabolites.

Lysine degradation: 11 metabolites out of 42 (9 changed) 

G (S)-5-Amino-3-oxohexanoic acid C6H11NO3
G 2-Oxoadipate C6H8O5
G 5-Aminopentanamide C5H12N2O
G 5-Oxopentanoate C5H8O3
G Carnitine C7H16NO3
G L-2-Aminoadipate C6H11NO4
G L-Lysine C6H14N2O2
G N2-(D-1-Carboxyethyl)-L-lysine C9H18N2O4
G N6-Acetyl-N6-hydroxy-L-lysine C8H16N2O4
G N6-Hydroxy-L-lysine C6H14N2O3
G Piperidine C5H9N

Generate map of **Lysine degradation** highlighting potential metabolites.

Biosynthesis of unsaturated fatty acids: 12 metabolites out of 49 (8 changed) ▼

G (13Z)-Docosenoic acid C22H42O2
G (15Z)-Tetracosenoic acid C24H46O2
G (5Z,8Z,11Z,14Z)-Icosatetraenoic acid C20H32O2
G (9Z)-Octadecenoic acid C18H34O2
G Docosanoic acid C22H44O2
G Hexadecanoic acid C16H32O2
G Icosadienoic acid C20H36O2
G Icosanoic acid C20H40O2
G Icosenoic acid C20H38O2
G Linoleate C18H32O2
G Octadecanoic acid C18H36O2
G Tetracosanoic acid C24H48O2

Generate map of **Biosynthesis of unsaturated fatty acids** highlighting potential metabolites.

Cysteine and methionine metabolism: 10 metabolites out of 54 (8 changed) ▼

G 2-Aminoacrylate C3H5NO2
G 2-Oxobutanoate C4H6O3
G L-Alanine C3H7NO2
G L-Homoserine C4H9NO3
G L-Methionine C5H11NO2S
G L-Methionine S-oxide C5H11NO3S
G Mercaptopyruvate C3H4O3S
G O-Acetyl-L-homoserine C6H11NO4
G O-Succinyl-L-homoserine C8H13NO6
G Sulfate H2SO4

Generate map of **Cysteine and methionine metabolism** highlighting potential metabolites.

Glyoxylate and dicarboxylate metabolism: 9 metabolites out of 55 (8 changed) ▼

G (S)-Malate C4H6O5
G 2-Hydroxy-3-oxoadipate C6H8O6
G 4-Hydroxy-2-oxoglutarate C5H6O6
G D-Glycerate C3H6O4
G Isocitrate C6H8O7
G L-Glutamate C5H9NO4
G L-Glutamine C5H10N2O3
G Succinate C4H6O4
G cis-Aconitate C6H6O6


Generate map of **Glyoxylate and dicarboxylate metabolism** highlighting potential metabolites.

Phenylalanine metabolism: 10 metabolites out of 64 (8 changed) ▼

G 2-Hydroxy-2,4-pentadienoate C5H6O3
G 2-Phenylacetamide C8H9NO
G 3-(3-Hydroxy-phenyl)-propanoic acid C9H10O3
G 4-Hydroxybenzoate C7H6O3
G Hippurate C9H9NO3
G L-Phenylalanine C9H11NO2
G Phenylacetyl glycine C10H11NO3
G Phenylpropanoate C9H10O2
G Succinate C4H6O4

 **enol-Phenylpyruvate** C₉H₈O₃

Generate map of **Phenylalanine metabolism** highlighting potential metabolites.

Purine metabolism: 11 metabolites out of 90 (8 changed) 

 **3',5'-Cyclic AMP** C₁₀H₁₂N₅O₆P

 **Adenine** C₅H₅N₅

 **Carbamoyl phosphate** CH₄NO₅P

 **Guanine** C₅H₅N₅O

 **Guanosine** C₁₀H₁₃N₅O₅

 **Hypoxanthine** C₅H₄N₄O

 **Inosine** C₁₀H₁₂N₄O₅

 **L-Glutamine** C₅H₁₀N₂O₃

 **Sulfate** H₂SO₄

 **Urate** C₅H₄N₄O₃

 **Urate-3-ribonucleoside** C₁₀H₁₂N₄O₇

Generate map of **Purine metabolism** highlighting potential metabolites.

C5-Branched dibasic acid metabolism: 7 metabolites out of 32 (7 changed) 

 **2-Methylmaleate** C₅H₆O₄

 **2-Oxobutanoate** C₄H₆O₃

 **4-Hydroxy-4-methylglutamate** C₆H₁₁N₂O₅


 **L-Glutamate** C₅H₉N₂O₄


 **Methylxaloacetate** C₅H₆O₅

 **Propanoyl phosphate** C₃H₇O₅P

 **cis-Aconitate** C₆H₆O₆

Generate map of **C5-Branched dibasic acid metabolism** highlighting potential metabolites.

Lysine biosynthesis: 7 metabolites out of 26 (7 changed) 

 **(R)-2-Hydroxybutane-1,2,4-tricarboxylate** C₇H₁₀O₇

 **2,3,4,5-Tetrahydrodipicolinate** C₇H₉N₂O₄

 **2-Oxoadipate** C₆H₈O₅


 **L-2-Amino adipate** C₆H₁₁N₂O₄

 **L-Homoserine** C₄H₉N₂O₃

 **L-Lysine** C₆H₁₄N₂O₂

 **meso-2,6-Diaminoheptanedioate** C₇H₁₄N₂O₄

Generate map of **Lysine biosynthesis** highlighting potential metabolites.

Primary bile acid biosynthesis: 7 metabolites out of 47 (7 changed) 

 **3alpha,7alpha,12alpha,26-Tetrahydroxy-5beta-cholestane**
C₂₇H₄₈O₄

 **3alpha,7alpha,12alpha-Trihydroxy-5beta-cholanate**
C₂₄H₄₀O₅

 **Chenodeoxycholate** C₂₄H₄₀O₄

 **Glycocholate** C₂₆H₄₃N₂O₆

 **Taurine** C₂H₇N₂O₃S

 **Taurochenodeoxycholate** C₂₆H₄₅N₂O₆S

 **Taurocholate** C₂₆H₄₅N₂O₇S

Generate map of **Primary bile acid biosynthesis** highlighting potential metabolites.

Tropane, piperidine and pyridine alkaloid biosynthesis: 7 metabolites out of 61 (7 changed) 

 **1-Methylpyrrolinium** C₅H₁₀N

 **L-Lysine** C₆H₁₄N₂O₂

 **L-Phenylalanine** C₉H₁₁N₂O₂

 **Nicotinate** C₆H₅N₂O₂

 **Nicotine** C₁₀H₁₄N₂

 **Piperidine** C₅H₉N

 **Retronecine** C₈H₁₃N₂O₂

Generate map of **Tropane, piperidine and pyridine alkaloid biosynthesis** highlighting potential metabolites.

beta-Alanine metabolism: 10 metabolites out of 32 (7 changed) 

 **3-Aminopropanal** C₃H₇NO

 **3-Oxopropanoate** C₃H₄O₃

 **4-Aminobutyraldehyde** C₄H₉NO

 **Carnosine** C₉H₁₄N₂O₃

 **FucoseMalonate** C₃H₄O₄

- G L-Histidine C6H9N3O2
- G Pantothenate C9H17NO5
- G Propynoate C3H2O2
- G beta-Alanine C3H7NO2
- G beta-Aminopropionitrile C3H6N2

Generate map of **beta-Alanine metabolism** highlighting potential metabolites.

Alanine, aspartate and glutamate metabolism: 11 metabolites out of 25 (6 changed) v

- G (S)-1-Pyrroline-5-carboxylate C5H7NO2
- G 2-Oxoglutaramate C5H7NO4
- G Carbamoyl phosphate CH4NO5P
- G D-Aspartate C4H7NO4
- G D-Glucosamine 6-phosphate C6H14NO8P
- G L-Alanine C3H7NO2
- G L-Asparagine C4H8N2O3
- G L-Glutamate C5H9NO4
- G L-Glutamine C5H10N2O3
- G N-Acetyl-L-aspartate C6H9NO5
- G Succinate C4H6O4

Generate map of **Alanine, aspartate and glutamate metabolism** highlighting potential metabolites.

Amino sugar and nucleotide sugar metabolism: 7 metabolites out of 77 (6 changed) v

- G D-Glucosamine C6H13NO5
- G D-Glucosamine 6-phosphate C6H14NO8P
- G D-Glucuronate C6H10O7
- G L-Arabinose C5H10O5
- G N-Acetyl-D-glucosamine 6-phosphate C8H16NO9P
- G N-Acetylneuraminate C11H19NO9
- G UDP-N-acetyl-D-galactosamine C17H27N3O17P2

Generate map of **Amino sugar and nucleotide sugar metabolism** highlighting potential metabolites.

Butanoate metabolism: 7 metabolites out of 38 (6 changed) v

- G (R)-3-Hydroxybutanoate C4H8O3
- G 3-Butyn-1-ol C4H6O
- G 3-Butynoate C4H4O2
- G 4-Hydroxybutanoic acid C4H8O3
- G Butanal C4H8O
- G L-Glutamate C5H9NO4
- G Succinate C4H6O4

Generate map of **Butanoate metabolism** highlighting potential metabolites.

Glycerophospholipid metabolism: 6 metabolites out of 18 (6 changed) v

- G Choline C5H14NO
- G Choline phosphate C5H15NO4P
- G Ethanolamine phosphate C2H8NO4P
- G sn-Glycerol 3-phosphate C3H9O6P
- G sn-glycero-3-Phosphocholine C8H21NO6P
- G sn-glycero-3-Phosphoethanolamine C5H14NO6P

Generate map of **Glycerophospholipid metabolism** highlighting potential metabolites.

Histidine metabolism: 9 metabolites out of 44 (6 changed) v

- G 1H-Imidazole-4-ethanamine C5H9N3
- G Carnosine C9H14N4O3
- G Imidazol-5-yl-pyruvate C6H6N2O3
- G L-Glutamate C5H9NO4
- G L-Histidine C6H9N3O2
- G Methylimidazoleacetic acid C6H8N2O2
- G N(pi)-Methyl-L-histidine C7H11N3O2
- G N-Formimino-L-glutamate C6H10N2O4
- G Urocanate C6H6N2O2

Generate map of **Histidine metabolism** highlighting potential metabolites.

Propanoate metabolism: 8 metabolites out of 41 (6 changed) v

- G (S)-Methylmalonate semialdehyde C4H6O3
- G 2-Methylcitrate C7H10O7

- G 2-Oxobutanoate C4H6O3
- G 3-Oxopropanoate C3H4O3
- G Propanoyl phosphate C3H7O5P
- G Propynoate C3H2O2
- G Succinate C4H6O4
- G beta-Alanine C3H7NO2

Generate map of **Propanoate metabolism** highlighting potential metabolites.

1,4-Dichlorobenzene degradation: 6 metabolites out of 74 (5 changed) v

- G 2-Aminomuconate semialdehyde C6H7NO3
- G 2-Aminophenol C6H7NO
- G 3-Hydroxyanthranilate C7H7NO3
- G 4-Hydroxyaniline C6H7NO
- G 4-Hydroxybenzoate C7H6O3
- G p-Benzenediol C6H6O2

Generate map of **1,4-Dichlorobenzene degradation** highlighting potential metabolites.

Glucosinolate biosynthesis: 6 metabolites out of 72 (5 changed) v

- G (S)-3-Methyl-2-oxopentanoic acid C6H10O3
- G 3-Methyl-2-oxobutanoic acid C5H8O3
- G L-Leucine C6H13NO2
- G L-Methionine C5H11NO2S
- G L-Phenylalanine C9H11NO2
- G L-Tryptophan C11H12N2O2

Generate map of **Glucosinolate biosynthesis** highlighting potential metabolites.

Pentose and glucuronate interconversions: 6 metabolites out of 50 (5 changed) v

- G 2,5-Dioxopentanoate C5H6O4
- G D-Glucuronate C6H10O7
- G D-Xylulose C5H10O5
- G Glycerol C3H8O3
- G L-Arabinose C5H10O5
- G Xylitol C5H12O5

Generate map of **Pentose and glucuronate interconversions** highlighting potential metabolites.

Pentose phosphate pathway: 5 metabolites out of 34 (5 changed) v

- G 2-Deoxy-D-ribose 5-phosphate C5H11O7P
- G D-Gluconic acid C6H12O7
- G D-Glucono-1,5-lactone C6H10O6
- G D-Glycerate C3H6O4
- G beta-D-Glucose C6H12O6

Generate map of **Pentose phosphate pathway** highlighting potential metabolites.

Reductive carboxylate cycle (CO2 fixation): 6 metabolites out of 40 (5 changed) v

- G (S)-Malate C4H6O5
- G 3-Oxopropanoate C3H4O3
- G 4-Hydroxybutanoic acid C4H8O3
- G Isocitrate C6H8O7
- G Succinate C4H6O4
- G cis-Aconitate C6H6O6

Generate map of **Reductive carboxylate cycle (CO2 fixation)** highlighting potential metabolites.

Secondary bile acid biosynthesis: 5 metabolites out of 11 (5 changed) v

- G 3alpha,7alpha,12alpha-Trihydroxy-5beta-cholanate C24H40O5
- G Chenodeoxycholate C24H40O4
- G Glycocholate C26H43NO6
- G Taurochenodeoxycholate C26H45NO6S
- G Taurocholate C26H45NO7S

Generate map of **Secondary bile acid biosynthesis** highlighting potential metabolites.

Cyanoamino acid metabolism: 6 metabolites out of 24 (4 changed) v

- G (Z)-4-Hydroxyphenylacetaldehyde-oxime C8H9NO2
- G (Z)-Phenylacetaldehyde oxime C8H9NO
- G L-Asparagine C4H8N2O3

 L-Phenylalanine C₉H₁₁NO₂

 Phenylacetonitrile C₈H₇N

 beta-Aminopropionitrile C₃H₆N₂

Generate map of **Cyanoamino acid metabolism** highlighting potential metabolites.

D-Glutamine and D-glutamate metabolism: 4 metabolites out of 9 (4 changed) 

 D-Glutamate C₅H₉NO₄

 D-Glutamine C₅H₁₀N₂O₃

 L-Glutamate C₅H₉NO₄

 L-Glutamine C₅H₁₀N₂O₃

Generate map of **D-Glutamine and D-glutamate metabolism** highlighting potential metabolites.

Fatty acid biosynthesis: 8 metabolites out of 11 (4 changed) 

 (9Z)-Hexadecenoic acid C₁₆H₃₀O₂

 (9Z)-Octadecenoic acid C₁₈H₃₄O₂

 Decanoic acid C₁₀H₂₀O₂

 Dodecanoic acid C₁₂H₂₄O₂

 Hexadecanoic acid C₁₆H₃₂O₂

 Octadecanoic acid C₁₈H₃₆O₂

 Octanoic acid C₈H₁₆O₂

 Tetradecanoic acid C₁₄H₂₈O₂

Generate map of **Fatty acid biosynthesis** highlighting potential metabolites.

Galactose metabolism: 5 metabolites out of 41 (4 changed) 

 3-beta-D-Galactosyl-sn-glycerol C₉H₁₈O₈

 D-Sorbitol C₆H₁₄O₆

 Glycerol C₃H₈O₃

 Lactose C₁₂H₂₂O₁₁

 myo-Inositol C₆H₁₂O₆

Generate map of **Galactose metabolism** highlighting potential metabolites.

Glycerolipid metabolism: 4 metabolites out of 12 (4 changed) 

 3-beta-D-Galactosyl-sn-glycerol C₉H₁₈O₈

 D-Glycerate C₃H₆O₄

 Glycerol C₃H₈O₃

 sn-Glycerol 3-phosphate C₃H₉O₆P

Generate map of **Glycerolipid metabolism** highlighting potential metabolites.

Methane metabolism: 4 metabolites out of 60 (4 changed) 

 (S)-Malate C₄H₆O₅

 2-Oxoadipate C₆H₈O₅

 3-(4-Hydroxyphenyl)pyruvate C₉H₈O₄

 D-Glycerate C₃H₆O₄

Generate map of **Methane metabolism** highlighting potential metabolites.

Nicotinate and nicotinamide metabolism: 5 metabolites out of 46 (4 changed) 

 1-Methylpyrrolinium C₅H₁₀N

 2,3-Dimethylmaleate C₆H₈O₄

 Maleamate C₄H₅NO₃

 Nicotinamide C₆H₆N₂O

 Nicotinate C₆H₅NO₂

Generate map of **Nicotinate and nicotinamide metabolism** highlighting potential metabolites.

Phenylalanine, tyrosine and tryptophan biosynthesis: 4 metabolites out of 31 (4 changed) 

 3-(4-Hydroxyphenyl)pyruvate C₉H₈O₄

 Indole C₈H₇N

 L-Phenylalanine C₉H₁₁NO₂

 L-Tryptophan C₁₁H₁₂N₂O₂

Generate map of **Phenylalanine, tyrosine and tryptophan biosynthesis** highlighting potential metabolites.

Valine, leucine and isoleucine biosynthesis: 6 metabolites out of 23 (4 changed) 

 (2S)-2-Isopropylmalate C₇H₁₂O₅

 (S)-3-Methyl-2-oxopentanoic acid C₆H₁₀O₃

 2-Methylmaleate C₅H₆O₄

 2-Oxobutanoate C₄H₆O₃

 3-Methyl-2-oxobutanoic acid C₅H₈O₃

G L-Leucine C6H13NO2

Generate map of **Valine, leucine and isoleucine biosynthesis** highlighting potential metabolites.

Caffeine metabolism: 3 metabolites out of 21 (3 changed) **v**

G 1-Methyluric acid C6H6N4O3

G 5-Acetylamino-6-amino-3-methyluracil C7H10N4O3

G 7-Methylxanthine C6H6N4O2

Generate map of **Caffeine metabolism** highlighting potential metabolites.

Citrate cycle (TCA cycle): 4 metabolites out of 16 (3 changed) **v**

G (S)-Malate C4H6O5

G Isocitrate C6H8O7

G Succinate C4H6O4

G cis-Aconitate C6H6O6

Generate map of **Citrate cycle (TCA cycle)** highlighting potential metabolites.

Fructose and mannose metabolism: 3 metabolites out of 41 (3 changed) **v**

G 2(alpha-D-Mannosyl)-D-glycerate C9H16O9

G 2-Dehydro-3-deoxy-L-rhamnonate C6H10O5

G D-Sorbitol C6H14O6

Generate map of **Fructose and mannose metabolism** highlighting potential metabolites.

Peptidoglycan biosynthesis: 3 metabolites out of 26 (3 changed) **v**

G D-Alanine C3H7NO2

G D-Alanyl-D-alanine C6H12N2O3

G Orthophosphate H3PO4

Generate map of **Peptidoglycan biosynthesis** highlighting potential metabolites.

Porphyrin and chlorophyll metabolism: 4 metabolites out of 93 (3 changed) **v**

G (R)-1-Aminopropan-2-ol C3H9NO

G L-Glutamate C5H9NO4

G Porphobilinogen C10H14N2O4

G Precorrin 3B C43H50N4O17

Generate map of **Porphyrin and chlorophyll metabolism** highlighting potential metabolites.

Pyruvate metabolism: 5 metabolites out of 28 (3 changed) **v**

G (2S)-2-Isopropylmalate C7H12O5

G (R)-2-Hydroxybutane-1,2,4-tricarboxylate C7H10O7

G (R)-Lactate C3H6O3

G (S)-Malate C4H6O5

G Succinate C4H6O4

Generate map of **Pyruvate metabolism** highlighting potential metabolites.

Starch and sucrose metabolism: 4 metabolites out of 37 (3 changed) **v**

G D-Glucose 6-phosphate C6H13O9P

G D-Glucuronate C6H10O7

G alpha,alpha'-Trehalose 6-phosphate C12H23O14P

G beta-D-Glucose C6H12O6

Generate map of **Starch and sucrose metabolism** highlighting potential metabolites.

Styrene degradation: 4 metabolites out of 23 (3 changed) **v**

G (Z)-Phenylacetaldehyde oxime C8H9NO

G 2-Hydroxy-2,4-pentadienoate C5H6O3

G 2-Phenylacetamide C8H9NO

G Phenylacetonitrile C8H7N

Generate map of **Styrene degradation** highlighting potential metabolites.

Sulfur metabolism: 5 metabolites out of 21 (3 changed) **v**

G L-Homoserine C4H9NO3

G O-Succinyl-L-homoserine C8H13NO6

G Succinate C4H6O4

G Sulfate H2SO4

G Taurine C2H7NO3S

Generate map of **Sulfur metabolism** highlighting potential metabolites.

Taurine and hypotaurine metabolism: 5 metabolites out of 22 (3 changed) **v**

G 2-Hydroxyethanesulfonate C2H6O4S

 L-Alanine C3H7NO2

 L-Glutamate C5H9NO4

 Taurine C2H7NO3S

 Taurocholate C26H45NO7S

Generate map of **Taurine and hypotaurine metabolism** highlighting potential metabolites.

Valine, leucine and isoleucine degradation: 4 metabolites out of 32 (3 changed) 


 (S)-3-Methyl-2-oxopentanoic acid C6H10O3

 3-Methyl-2-oxobutanoic acid C5H8O3

 L-3-Amino-isobutanoate C4H9NO2

 L-Leucine C6H13NO2

Generate map of **Valine, leucine and isoleucine degradation** highlighting potential metabolites.

Arachidonic acid metabolism: 2 metabolites out of 74 (2 changed) 

 (5Z,8Z,11Z,14Z)-Icosatetraenoic acid C20H32O2

 2,3-Dinor-8-iso prostaglandin F2alpha C18H30O5

Generate map of **Arachidonic acid metabolism** highlighting potential metabolites.

Ascorbate and aldarate metabolism: 7 metabolites out of 45 (2 changed) 

 2,5-Dioxopentanoate C5H6O4

 D-Glucuronate C6H10O7

 L-Arabinonate C5H10O6

 L-Arabinose C5H10O5

 Monodehydroascorbate C6H7O6

 Threonate C4H8O5

 myo-Inositol C6H12O6

Generate map of **Ascorbate and aldarate metabolism** highlighting potential metabolites.


Benzoate degradation via hydroxylation: 3 metabolites out of 66 (2 changed) 

 2-Hydroxy-2,4-pentadienoate C5H6O3

 4-Hydroxybenzoate C7H6O3

 p-Benzenediol C6H6O2

Generate map of **Benzoate degradation via hydroxylation** highlighting potential metabolites.

Biotin metabolism: 3 metabolites out of 11 (2 changed) 

 6-Carboxyhexanoate C7H12O4

 Dethiobiotin C10H18N2O3

 L-Lysine C6H14N2O2

Generate map of **Biotin metabolism** highlighting potential metabolites.

Carbazole degradation: 2 metabolites out of 18 (2 changed) 

 2-Hydroxy-2,4-pentadienoate C5H6O3

 3-Hydroxyanthranilate C7H7NO3

Generate map of **Carbazole degradation** highlighting potential metabolites.

Clavulanic acid biosynthesis: 2 metabolites out of 10 (2 changed) 

 Dihydroclavaminic acid C8H12N2O4

 L-Arginine C6H14N4O2

Generate map of **Clavulanic acid biosynthesis** highlighting potential metabolites.

D-Alanine metabolism: 3 metabolites out of 4 (2 changed) 

 D-Alanine C3H7NO2

 D-Alanyl-D-alanine C6H12N2O3

 L-Alanine C3H7NO2

Generate map of **D-Alanine metabolism** highlighting potential metabolites.

D-Arginine and D-ornithine metabolism: 2 metabolites out of 9 (2 changed) 

 L-Arginine C6H14N4O2

 L-Ornithine C5H12N2O2

Generate map of **D-Arginine and D-ornithine metabolism** highlighting potential metabolites.

Ether lipid metabolism: 2 metabolites out of 2 (2 changed) 

 sn-glycero-3-Phosphocholine C8H21NO6P

 sn-glycero-3-Phosphoethanolamine C5H14NO6P


Generate map of **Ether lipid metabolism** highlighting potential metabolites.

Glutathione metabolism: 2 metabolites out of 29 (2 changed) 

 L-Glutamate C5H9NO4

 L-Ornithine C5H12N2O2

Generate map of **Glutathione metabolism** highlighting potential metabolites.

Inositol phosphate metabolism: 4 metabolites out of 30 (2 changed) 


 3-Oxopropanoate C3H4O3

 D-Glucose 6-phosphate C6H13O9P

 D-Glucuronate C6H10O7

 myo-Inositol C6H12O6

Generate map of **Inositol phosphate metabolism** highlighting potential metabolites.

Isoquinoline alkaloid biosynthesis: 2 metabolites out of 93 (2 changed) 

 3-(4-Hydroxyphenyl)pyruvate C9H8O4

 4-Hydroxyphenylacetaldehyde C8H8O2

Generate map of **Isoquinoline alkaloid biosynthesis** highlighting potential metabolites.

Linoleic acid metabolism: 6 metabolites out of 25 (2 changed) 

 (5Z,8Z,11Z,14Z)-Icosatetraenoic acid C20H32O2

 9(S)-HODE C18H32O3


 9(S)-HPODE C18H32O4

 9,10-DHOME C18H34O4

 9,12,13-TriHOME C18H34O5

 Linoleate C18H32O2

Generate map of **Linoleic acid metabolism** highlighting potential metabolites.

Nitrogen metabolism: 3 metabolites out of 16 (2 changed) 

 Carbamoyl phosphate CH4NO5P

 L-Glutamate C5H9NO4

 L-Glutamine C5H10N2O3

Generate map of **Nitrogen metabolism** highlighting potential metabolites.

Novobiocin biosynthesis: 2 metabolites out of 23 (2 changed) 

 3-(4-Hydroxyphenyl)pyruvate C9H8O4

 L-Proline C5H9NO2

Generate map of **Novobiocin biosynthesis** highlighting potential metabolites.

Pantothenate and CoA biosynthesis: 4 metabolites out of 25 (2 changed) 


 2-Acetolactate C5H8O4

 3-Methyl-2-oxobutanoic acid C5H8O3

 Pantothenate C9H17NO5

 beta-Alanine C3H7NO2

Generate map of **Pantothenate and CoA biosynthesis** highlighting potential metabolites.

Phenylpropanoid biosynthesis: 2 metabolites out of 51 (2 changed) 

 L-Phenylalanine C9H11NO2

 Sinapyl alcohol C11H14O4

Generate map of **Phenylpropanoid biosynthesis** highlighting potential metabolites.


Riboflavin metabolism: 3 metabolites out of 19 (2 changed) 

 Lumichrome C12H10N4O2

 Riboflavin C17H20N4O6

 p-Benzenediol C6H6O2

Generate map of **Riboflavin metabolism** highlighting potential metabolites.

Terpenoid backbone biosynthesis: 2 metabolites out of 30 (2 changed) 

 (R)-Mevalonate C6H12O4

 2-C-Methyl-D-erythritol 4-phosphate C5H13O7P

Generate map of **Terpenoid backbone biosynthesis** highlighting potential metabolites.

Thiamine metabolism: 2 metabolites out of 22 (2 changed) 

 Iminoglycine C2H3NO2

 Thiamine C12H17N4OS

Generate map of **Thiamine metabolism** highlighting potential metabolites.

Ubiquinone and other terpenoid-quinone biosynthesis: 3 metabolites out of 36 (2 changed) 

 3-(4-Hydroxyphenyl)lactate C9H10O4

 3-(4-Hydroxyphenyl)pyruvate C9H8O4

 4-Hydroxybenzoate C7H6O3


Generate map of **Ubiquinone and other terpenoid-quinone biosynthesis** highlighting potential metabolites.

Zeatin biosynthesis: 2 metabolites out of 36 (2 changed) 

 3-Methylbut-2-enal C5H8O


 Adenine C5H5N5

Generate map of **Zeatin biosynthesis** highlighting potential metabolites.

3-Chloroacrylic acid degradation: 1 metabolite out of 10 (1 changed) 

 3-Oxopropanoate C3H4O3

Generate map of **3-Chloroacrylic acid degradation** highlighting potential metabolites.

Benzoxazinoid biosynthesis: 1 metabolite out of 9 (1 changed) 

 Indole C8H7N

Generate map of **Benzoxazinoid biosynthesis** highlighting potential metabolites.

Betalain biosynthesis: 2 metabolites out of 24 (1 changed) 

 2-Carboxy-2,3-dihydro-5,6-dihydroxyindole C9H9NO4

 Dopaquinone C9H9NO4

Generate map of **Betalain biosynthesis** highlighting potential metabolites.

Biosynthesis of vancomycin group antibiotics: 1 metabolite out of 18 (1 changed) 

 3-(4-Hydroxyphenyl)pyruvate C9H8O4

Generate map of **Biosynthesis of vancomycin group antibiotics** highlighting potential metabolites.

Biphenyl degradation: 1 metabolite out of 29 (1 changed) 

 2-Hydroxy-2,4-pentadienoate C5H6O3

Generate map of **Biphenyl degradation** highlighting potential metabolites.

Bisphenol A degradation: 2 metabolites out of 21 (1 changed) 

 4-Hydroxybenzoate C7H6O3

 p-Benzenediol C6H6O2

Generate map of **Bisphenol A degradation** highlighting potential metabolites.

Carbon fixation in photosynthetic organisms: 2 metabolites out of 22 (1 changed) 

 (S)-Malate C4H6O5

 L-Alanine C3H7NO2

Generate map of **Carbon fixation in photosynthetic organisms** highlighting potential metabolites.

Diterpenoid biosynthesis: 1 metabolite out of 69 (1 changed) 

 Taxa-4(20),11(12)-dien-5alpha-yl acetate C22H34O2

Generate map of **Diterpenoid biosynthesis** highlighting potential metabolites.

Ethylbenzene degradation: 1 metabolite out of 14 (1 changed) 

 2-Hydroxy-2,4-pentadienoate C5H6O3


Generate map of **Ethylbenzene degradation** highlighting potential metabolites.

Fluorene degradation: 2 metabolites out of 36 (1 changed) 

 2-Hydroxy-2,4-pentadienoate C5H6O3


 Phthalate C8H6O4

Generate map of **Fluorene degradation** highlighting potential metabolites.

Glycolysis / Gluconeogenesis: 1 metabolite out of 28 (1 changed) 

 beta-D-Glucose C6H12O6

Generate map of **Glycolysis / Gluconeogenesis** highlighting potential metabolites.

Indole alkaloid biosynthesis: 1 metabolite out of 47 (1 changed) 

 L-Tryptophan C11H12N2O2

Generate map of **Indole alkaloid biosynthesis** highlighting potential metabolites.

Metabolism of xenobiotics by cytochrome P450: 1 metabolite out of 82 (1 changed) 

 Nicotine C10H14N2

Generate map of **Metabolism of xenobiotics by cytochrome P450** highlighting potential metabolites.

Oxidative phosphorylation: 2 metabolites out of 13 (1 changed) 

 Orthophosphate H3PO4

 Succinate C4H6O4

Generate map of **Oxidative phosphorylation** highlighting potential metabolites.

Penicillin and cephalosporin biosynthesis: 1 metabolite out of 16 (1 changed) 

 **L-2-Aminoadipate** C6H11NO4

Generate map of **Penicillin and cephalosporin biosynthesis** highlighting potential metabolites.

Phosphonate and phosphinate metabolism: 1 metabolite out of 39 (1 changed) 

 **Phosphonoacetaldehyde** C2H5O4P

Generate map of **Phosphonate and phosphinate metabolism** highlighting potential metabolites.

Photosynthesis: 1 metabolite out of 10 (1 changed) 

 **Orthophosphate** H3PO4

Generate map of **Photosynthesis** highlighting potential metabolites.

Puromycin biosynthesis: 1 metabolite out of 12 (1 changed) 

 **Puromycin** C22H29N7O5

Generate map of **Puromycin biosynthesis** highlighting potential metabolites.

Sphingolipid metabolism: 1 metabolite out of 11 (1 changed) 

 **Ethanolamine phosphate** C2H8NO4P

Generate map of **Sphingolipid metabolism** highlighting potential metabolites.

Streptomycin biosynthesis: 2 metabolites out of 23 (1 changed) 

 **D-Glucose 6-phosphate** C6H13O9P


 **myo-Inositol** C6H12O6

Generate map of **Streptomycin biosynthesis** highlighting potential metabolites.

Synthesis and degradation of ketone bodies: 1 metabolite out of 6 (1 changed) 


 **(R)-3-Hydroxybutanoate** C4H8O3

Generate map of **Synthesis and degradation of ketone bodies** highlighting potential metabolites.

Tetrachloroethene degradation: 1 metabolite out of 36 (1 changed) 


 **3-Oxopropanoate** C3H4O3

Generate map of **Tetrachloroethene degradation** highlighting potential metabolites.

Toluene and xylene degradation: 1 metabolite out of 38 (1 changed) 

 **2-Hydroxy-2,4-pentadienoate** C5H6O3

Generate map of **Toluene and xylene degradation** highlighting potential metabolites.

Trinitrotoluene degradation: 1 metabolite out of 20 (1 changed) 

 **(S)-Methylmalonate semialdehyde** C4H6O3

Generate map of **Trinitrotoluene degradation** highlighting potential metabolites.

Vitamin B6 metabolism: 1 metabolite out of 28 (1 changed) 

 **4-Pyridoxolactone** C8H7NO3

Generate map of **Vitamin B6 metabolism** highlighting potential metabolites.

gamma-Hexachlorocyclohexane degradation: 2 metabolites out of 72 (1 changed) 

 **Succinate** C4H6O4

 **p-Benzenediol** C6H6O2

Generate map of **gamma-Hexachlorocyclohexane degradation** highlighting potential metabolites.

Benzoate degradation via CoA ligation: 2 metabolites out of 57 

 **4-Hydroxybenzoate** C7H6O3

 **Succinate** C4H6O4

Generate map of **Benzoate degradation via CoA ligation** highlighting potential metabolites.

Limonene and pinene degradation: 2 metabolites out of 59 

 **(-)-Limonene** C10H16

 **(1S,4R)-1-Hydroxy-2-oxolimonene** C10H16O2

Generate map of **Limonene and pinene degradation** highlighting potential metabolites.

1- and 2-Methylnaphthalene degradation: 1 metabolite out of 64 


 **Phthalate** C8H6O4

Generate map of **1- and 2-Methylnaphthalene degradation** highlighting potential metabolites.

2,4-Dichlorobenzoate degradation: 1 metabolite out of 29 

 **4-Hydroxybenzoate** C7H6O3

Generate map of **2,4-Dichlorobenzoate degradation** highlighting potential metabolites.

Atrazine degradation: 1 metabolite out of 21 


 **Urea-1-carboxylate** C2H4N2O3

Generate map of **Atrazine degradation** highlighting potential metabolites.

Fatty acid elongation in mitochondria: 1 metabolite out of 28 

 Hexadecanoic acid C16H32O2

Generate map of **Fatty acid elongation in mitochondria** highlighting potential metabolites.

Fatty acid metabolism: 1 metabolite out of 39 

 Hexadecanoic acid C16H32O2

Generate map of **Fatty acid metabolism** highlighting potential metabolites.

Monoterpenoid biosynthesis: 1 metabolite out of 44 

 (-)-Limonene C10H16

Generate map of **Monoterpenoid biosynthesis** highlighting potential metabolites.

Phosphatidylinositol signaling system: 1 metabolite out of 16 

 myo-Inositol C6H12O6

Generate map of **Phosphatidylinositol signaling system** highlighting potential metabolites.

Selenoamino acid metabolism: 1 metabolite out of 14 

 L-Alanine C3H7NO2

Generate map of **Selenoamino acid metabolism** highlighting potential metabolites.

Stilbenoid, diarylheptanoid and gingerol biosynthesis: 1 metabolite out of 24 

 [6]-Gingerol C17H26O4

Generate map of **Stilbenoid, diarylheptanoid and gingerol biosynthesis** highlighting potential metabolites.

alpha-Linolenic acid metabolism: 1 metabolite out of 39 

 3-Hexenal C6H10O

Generate map of **alpha-Linolenic acid metabolism** highlighting potential metabolites.

Maps containing No Compounds from Data Set: [show](#)

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