



Change Current Database

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Compound Name Resolutions

Compound Pathway Coverage

Optimum Value of the Minimized Objective Function: 99

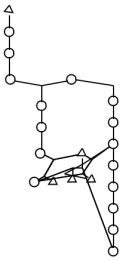

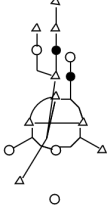
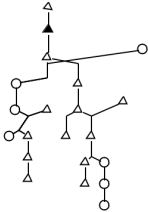
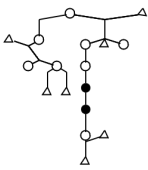
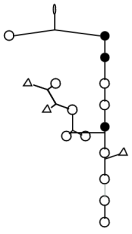


You utilized the cost function **Pathway Harmony**:

43 compound match results form the input to the covering algorithm.  
43 of the recognized compounds are substrates in 496 PGDB reactions.  
42 of the recognized compounds are substrates in 287 PGDB pathways;  
a pathway covering set of 18 pathways covers those 42 compounds:

This function favors pathways where either the 'input' substrates are metabolites that show an increase in abundance, and the 'output' substrates are metabolites that show a decrease, or vice versa.

Colored nodes are compounds in the covered set;  
Colored edges are reactions with side compounds in the covered set;  
BLUE - no indicated change in quantity; GREEN - an increase in quantity;  
RED - a decrease in quantity.

Pathway	Objective Function Value	Pathway Glyph	Covered Compounds
chlorogenic acid biosynthesis II	10		shikimate
glycerol degradation I	10		glycerol
glyoxylate cycle	6		(S)-malate citrate cis-aconitate succinate
L-alanine degradation II (to D-lactate)	4		L-glutamate 2-oxoglutarate (R)-lactate pyruvate L-alanine
L-ascorbate biosynthesis VII (plants, D-galacturonate pathway)	10		L-galactonate
phosphatidylethanolamine biosynthesis III	5		L-serine ethanolamine
photorespiration	4		L-serine glycine D-glycerate 2-oxoglutarate L-glutamate
putrescine degradation IV	5		4-aminobutanoate putrescine
sorbitol biosynthesis II	6		D-gluconate keto-D-fructose
superpathway of anaerobic sucrose degradation	4		β-D-fructofuranose sucrose (S)-lactate pyruvate

superpathway of branched chain amino acid biosynthesis	2		L-threonine pyruvate 2-oxoglutarate L-isoleucine L-glutamate L-valine L-leucine
superpathway of L-asparagine biosynthesis	2		L-aspartate L-asparagine L-glutamine
superpathway of L-citrulline metabolism	4		fumarate L-aspartate L-proline L-glutamate 2-oxoglutarate L-glutamine
superpathway of L-lysine, L-threonine and L-methionine biosynthesis II	4		L-lysine 2-oxoglutarate L-glutamate pyruvate L-aspartate L-cysteine L-threonine
superpathway of phenylalanine, tyrosine and tryptophan biosynthesis	4		L-phenylalanine L-tyrosine 2-oxoglutarate L-glutamate L-serine L-tryptophan L-glutamine pyruvate
superpathway of tetrahydrofolate biosynthesis	4		pyruvate L-glutamine L-glutamate formate
trehalose degradation II (cytosolic)	5		$\alpha$ , $\alpha$ -trehalose $\beta$ -D-glucopyranose $\alpha$ -D-glucopyranose
urate conversion to allantoin I	10		urate

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Arabidopsis thaliana col version 17.1.

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