TABLE S3: 12-MONTH LUMINAL

feature	coef	pval	qval	description	category
PPGPPMET.PWY	-0.5508761421	0.01123100342	0.06348797464	ppGpp biosynthesis	Metabolic-Regulators
PWY0.1261	-0.1459570701	0.0357194808	0.1609823176	anhydromuropeptides recycling	SECONDARY-METABOLITE-DEGRADATION
PWY.7234	-0.1088683543	0.04312955762	0.1796154995	inosine-5'-phosphate biosynthesis III	Nucleotide-Biosynthesis
PWY.7200	-0.0869414218	0.06706238976	0.2490239981	superpathway of pyrimidine deoxyribonucleoside salvage	Nucleotide-Biosynthesis
PWY.7200	-0.0869414218	0.06706238976	0.2490239981	superpathway of pyrimidine deoxyribonucleoside salvage	Super-Pathways
FASYN.ELONG.PWY	-0.08148658986	0.02652394511	0.1272066755	fatty acid elongation -- saturated	Lipid-Biosynthesis
DENOVOPURINE2.PWY	-0.08093870563	0.0618559005	0.2366347822	superpathway of purine nucleotides de novo biosynthesis II	Super-Pathways
DENOVOPURINE2.PWY	-0.08093870563	0.0618559005	0.2366347822	superpathway of purine nucleotides de novo biosynthesis II	Nucleotide-Biosynthesis
PWY.6122	-0.0484202216	0.014599104	0.07925916199	5-aminoimidazole ribonucleotide biosynthesis II	Nucleotide-Biosynthesis
PWY.6277	-0.0484202216	0.014599104	0.07925916199	superpathway of 5-aminoimidazole ribonucleotide biosynthesis	Super-Pathways
PWY.6277	-0.0484202216	0.014599104	0.07925916199	superpathway of 5-aminoimidazole ribonucleotide biosynthesis	Nucleotide-Biosynthesis
PWY.6121	-0.04824193883	0.009817611291	0.05607628671	5-aminoimidazole ribonucleotide biosynthesis I	Nucleotide-Biosynthesis
PWY.6123	-0.04283016331	0.007582197311	0.04535532573	inosine-5'-phosphate biosynthesis I	Nucleotide-Biosynthesis
PWY.5973	-0.0368747843	0.02145622999	0.1108581466	cis-vaccenate biosynthesis	Lipid-Biosynthesis
PWY.7663	-0.03145243878	0.04225453541	0.1768669485	gondoate biosynthesis (anaerobic)	Lipid-Biosynthesis
PWY0.1061	0.2902366852	0.00392728895	0.02587997226	superpathway of L-alanine biosynthesis	Amino-Acid-Biosynthesis
CALVIN.PWY	0.03313705214	0.06201226606	0.2366825468	Calvin-Benson-Bassham cycle	C1-COMPOUNDS
PWY.1861	0.1296586209	0.0196816249	0.1031091496	formaldehyde assimilation II (RuMP Cycle)	C1-COMPOUNDS
RUMP.PWY	0.1168975016	0.01613646413	0.0870310934	formaldehyde oxidation I	C1-COMPOUNDS
CALVIN.PWY	0.03313705214	0.06201226606	0.2366825468	Calvin-Benson-Bassham cycle	Carbohydrates-Biosynthesis
FUCCAT.PWY	0.195964064	0.02148649504	0.1108581466	fucose degradation	Carbohydrates-Degradation
GLUCOSE1PMETAB.PWY	0.4829588018	0.02784290565	0.1323745081	glucose and glucose-1-phosphate degradation	Carbohydrates-Degradation
GLUCUROCAT.PWY	0.07161366127	0.05788509488	0.2235289734	superpathway of β-D-glucuronide and D-glucuronate degradation	CARBOXYLATES-DEG
PWY.5837	0.7259970898	0.008380980788	0.04866923167	1,4-dihydroxy-2-naphthoate biosynthesis I	Cofactor-Biosynthesis
PWY.5861	0.7106362482	0.008101471582	0.04742676425	superpathway of demethylmenaquinol-8 biosynthesis	Cofactor-Biosynthesis
PWY.5897	0.702184886	0.008028673755	0.04716845831	superpathway of menaquinol-11 biosynthesis	Cofactor-Biosynthesis
PWY.5898	0.702184886	0.008028673755	0.04716845831	superpathway of menaquinol-12 biosynthesis	Cofactor-Biosynthesis
PWY.5899	0.702184886	0.008028673755	0.04716845831	superpathway of menaquinol-13 biosynthesis	Cofactor-Biosynthesis
PWY.5840	0.6977595672	0.007948710223	0.04716845831	superpathway of menaquinol-7 biosynthesis	Cofactor-Biosynthesis
PWY.5838	0.6956045908	0.007906246227	0.04712237335	superpathway of menaquinol-8 biosynthesis I	Cofactor-Biosynthesis
PWY.5863	0.7248700561	0.008346371978	0.04866923167	superpathway of phylloquinol biosynthesis	Cofactor-Biosynthesis
RUMP.PWY	0.1168975016	0.01613646413	0.0870310934	formaldehyde oxidation I	Energy-Metabolism
PWY.6728	0.3453100062	0.03913292048	0.1715769693	methylaspartate cycle	Energy-Metabolism
ANAEROFRUCAT.PWY	0.02207362847	0.03969342319	0.1720825046	homolactic fermentation	Fermentation
PWY.7094	0.2652796396	0.01459166715	0.07925916199	fatty acid salvage	Lipid-Biosynthesis
SO4ASSIM.PWY	0.1423507482	0.06150767	0.2358510889	sulfate reduction I (assimilatory)	Noncarbon-Nutrients
CALVIN.PWY	0.03313705214	0.06201226606	0.2366825468	Calvin-Benson-Bassham cycle	Photosynthesis
METH.ACETATE.PWY	0.2589119533	0.02385397397	0.118908446	methanogenesis from acetate	Respiration
P562.PWY	0.2988172388	0.03165112424	0.1470793767	myo-inositol degradation I	SECONDARY-METABOLITE-DEGRADATION
GLUCUROCAT.PWY	0.07161366127	0.05788509488	0.2235289734	superpathway of β-D-glucuronide and D-glucuronate degradation	SECONDARY-METABOLITE-DEGRADATION

ANAEROFRUCAT.PWY	0.02207362847	0.03969342319	0.1720825046	homolactic fermentation	Super-Pathways
SO4ASSIM.PWY	0.1423507482	0.06150767	0.2358510889	sulfate reduction I (assimilatory)	Super-Pathways
GLUCUROCAT.PWY	0.07161366127	0.05788509488	0.2235289734	superpathway of β-D-glucuronide and D-glucuronate degradation	Super-Pathways
PWY.5861	0.7106362482	0.008101471582	0.04742676425	superpathway of demethylmenaquinol-8 biosynthesis	Super-Pathways
PWY0.1061	0.2902366852	0.00392728895	0.02587997226	superpathway of L-alanine biosynthesis	Super-Pathways
PWY.5897	0.702184886	0.008028673755	0.04716845831	superpathway of menaquinol-11 biosynthesis	Super-Pathways
PWY.5898	0.702184886	0.008028673755	0.04716845831	superpathway of menaquinol-12 biosynthesis	Super-Pathways
PWY.5899	0.702184886	0.008028673755	0.04716845831	superpathway of menaquinol-13 biosynthesis	Super-Pathways
PWY.5840	0.6977595672	0.007948710223	0.04716845831	superpathway of menaquinol-7 biosynthesis	Super-Pathways
PWY.5838	0.6956045908	0.007906246227	0.04712237335	superpathway of menaquinol-8 biosynthesis I	Super-Pathways
PWY.5863	0.7248700561	0.008346371978	0.04866923167	superpathway of phylloquinol biosynthesis	Super-Pathways