

TABLE S4: 12-MONTH MUCOSAL

feature	coef	pval	qval	description	category
PWY.7234	-0.1197205064	0.02613123826	0.07537857191	inosine-5'-phosphate biosynthesis III	Nucleotide-Biosynthesis
PWY.7184	-0.1044344694	0.05774941942	0.1573839555	pyrimidine deoxyribonucleotides de novo biosynthesis I	Nucleotide-Biosynthesis
PWY.7184	-0.1044344694	0.05774941942	0.1573839555	pyrimidine deoxyribonucleotides de novo biosynthesis I	Nucleotide-Biosynthesis
PWY.7184	-0.1044344694	0.05774941942	0.1573839555	pyrimidine deoxyribonucleotides de novo biosynthesis I	Metabolic-Clusters
PWY.2941	-0.1032063947	0.04875851293	0.1352399582	L-lysine biosynthesis II	Amino-Acid-Biosynthesis
PWY.7197	-0.1014718125	0.06272105842	0.1696998334	pyrimidine deoxyribonucleotide phosphorylation	Nucleotide-Biosynthesis
PWY.7197	-0.1014718125	0.06272105842	0.1696998334	pyrimidine deoxyribonucleotide phosphorylation	Metabolic-Clusters
PWY.7196	-0.08804402921	0.06122986707	0.1661447189	superpathway of pyrimidine ribonucleosides salvage	Nucleotide-Biosynthesis
PWY.7196	-0.08804402921	0.06122986707	0.1661447189	superpathway of pyrimidine ribonucleosides salvage	Super-Pathways
PWY.7228	-0.08764367227	0.07218540504	0.1936303783	superpathway of guanosine nucleotides de novo biosynthesis I	Super-Pathways
PWY.7228	-0.08764367227	0.07218540504	0.1936303783	superpathway of guanosine nucleotides de novo biosynthesis I	Nucleotide-Biosynthesis
PWY.6125	-0.08139965848	0.07297719314	0.1954746245	superpathway of guanosine nucleotides de novo biosynthesis II	Super-Pathways
PWY.6125	-0.08139965848	0.07297719314	0.1954746245	superpathway of guanosine nucleotides de novo biosynthesis II	Nucleotide-Biosynthesis
PWY.7200	-0.07755808087	0.07406579578	0.1978253093	superpathway of pyrimidine deoxyribonucleoside salvage	Nucleotide-Biosynthesis
PWY.7200	-0.07755808087	0.07406579578	0.1978253093	superpathway of pyrimidine deoxyribonucleoside salvage	Super-Pathways
PWY0.162	-0.07624519076	0.05802992895	0.1579188923	superpathway of pyrimidine ribonucleotides de novo biosynthesis	Nucleotide-Biosynthesis
PWY0.162	-0.07624519076	0.05802992895	0.1579188923	superpathway of pyrimidine ribonucleotides de novo biosynthesis	Super-Pathways
PWY0.166	-0.07503903496	0.09701472218	0.2488407717	superpathway of pyrimidine deoxyribonucleotides de novo biosynthesis (E. coli)	Nucleotide-Biosynthesis
PWY0.166	-0.07503903496	0.09701472218	0.2488407717	superpathway of pyrimidine deoxyribonucleotides de novo biosynthesis (E. coli)	Super-Pathways
PWY0.166	-0.07503903496	0.09701472218	0.2488407717	superpathway of pyrimidine deoxyribonucleotides de novo biosynthesis (E. coli)	Nucleotide-Biosynthesis
PWY.7187	-0.07496492223	0.08732852726	0.2277343374	pyrimidine deoxyribonucleotides de novo biosynthesis II	Nucleotide-Biosynthesis
PWY.7187	-0.07496492223	0.08732852726	0.2277343374	pyrimidine deoxyribonucleotides de novo biosynthesis II	Nucleotide-Biosynthesis
DENOVOPURINE2.PWY	-0.07070018531	0.05643161779	0.1542409378	superpathway of purine nucleotides de novo biosynthesis II	Super-Pathways
DENOVOPURINE2.PWY	-0.07070018531	0.05643161779	0.1542409378	superpathway of purine nucleotides de novo biosynthesis II	Nucleotide-Biosynthesis
PWY.841	-0.07042416458	0.05917639493	0.160805421	superpathway of purine nucleotides de novo biosynthesis I	Nucleotide-Biosynthesis
PWY.841	-0.07042416458	0.05917639493	0.160805421	superpathway of purine nucleotides de novo biosynthesis I	Super-Pathways
FASYN.ELONG.PWY	-0.07018233925	0.04863063751	0.1350851042	fatty acid elongation -- saturated	Lipid-Biosynthesis
PWY.5088	0.4500994296	0.02901318937	0.0831800154	L-glutamate degradation VIII (to propanoate)	Amino-Acid-Degradation
PWY.1882	0.3392060786	0.08320947032	0.2175979872	superpathway of C1 compounds oxidation to CO2	C1-COMPOUNDS
PWY.6749	0.3259263014	0.04440767684	0.1235376767	CMP-legionaminat biosynthesis I	Carbohydrates-Biosynthesis
PWY.6897	0.04865136887	0.07893880935	0.2084880187	thiamin salvage II	Cofactor-Biosynthesis
FOLSYN.PWY	0.05245942723	0.02413390877	0.07004810982	superpathway of tetrahydrofolate biosynthesis and salvage	Cofactor-Biosynthesis
PWY.6612	0.0691851483	0.04242079623	0.1188923661	superpathway of tetrahydrofolate biosynthesis	Cofactor-Biosynthesis
PWY.7377	0.4925770223	0.09455151804	0.2435221103	cob(II)yrinate a,c-diamide biosynthesis I (early cobalt insertion)	Cofactor-Biosynthesis
PWY.5507	0.6496178914	0.02358443438	0.06855940227	adenosylcobalamin biosynthesis I (early cobalt insertion)	Cofactor-Biosynthesis
PWY.5741	0.5453314262	0.008032035721	0.02448791378	ethylmalonyl-CoA pathway	Energy-Metabolism
PWY.6728	1.374024239	0.001335409665	0.00436218314	methylaspartate cycle	Energy-Metabolism
PWY.5088	0.4500994296	0.02901318937	0.0831800154	L-glutamate degradation VIII (to propanoate)	Fermentation
METH.ACETATE.PWY	0.2784705787	0.08843731799	0.2293498911	methanogenesis from acetate	Respiration
PWY.7237	0.2137000538	0.04331254576	0.1212104825	myo-, chiro- and scillo-inositol degradation	SECONDARY-METABOLITE-DEGRADATION

P562.PWY	0.3332018527	0.01677014965	0.04983206115	myo-inositol degradation I	SECONDARY-METABOLITE-DEGRADATION
PWY.6897	0.04865136887	0.07893880935	0.2084880187	thiamin salvage II	Super-Pathways
FOLSYN.PWY	0.05245942723	0.02413390877	0.07004810982	superpathway of tetrahydrofolate biosynthesis and salvage	Super-Pathways
PWY.6612	0.0691851483	0.04242079623	0.1188923661	superpathway of tetrahydrofolate biosynthesis	Super-Pathways
PWY.7237	0.2137000538	0.04331254576	0.1212104825	myo-, chiro- and scillo-inositol degradation	Super-Pathways
PWY.1882	0.3392060786	0.08320947032	0.2175979872	superpathway of C1 compounds oxidation to CO2	Super-Pathways
PWY.5088	0.4500994296	0.02901318937	0.0831800154	L-glutamate degradation VIII (to propanoate)	Super-Pathways
PWY.5507	0.6496178914	0.02358443438	0.06855940227	adenosylcobalamin biosynthesis I (early cobalt insertion)	Super-Pathways