

S4 Table: List of differentially abundant pathways (identified between Cluster-1a, Cluster-1b and Cluster-2). Significantly different pathways were identified using Kruskal-Wallis rank sum test (with Benjamini-Hochberg corrected p-values < 0.001 at a False Discovery Rate of 0.0001) coupled with a bootstrap approach. Pathways with significantly different median abundances in at least 99% of iterations are shown in this table. For ease of readers, the corresponding pathway classes are also indicated. The last column titled ‘Vikodak Pathway Exclusion Cut-off (PEC) threshold’ indicates the PEC value thresholds at which the pathway was reported by Vikodak. Green indicates presence and red indicates absence.

Pathway Class	Pathways that significantly differentiate between the three clusters	Median Pathway Abundance (at PEC 70)			Vikodak Pathway Exclusion Cut-off (PEC) threshold				
		Cluster 1a	Cluster 1b	Cluster 2	5	6	7	8	9
Membrane transport	Phosphotransferase system PTS	1227	1147	742	0	0	0	0	0
Carbohydrate metabolism	Glycolysis or Gluconeogenesis	40270	49509	29060	0	0	0	0	0
Nucleotide metabolism	Pyrimidine metabolism	37800	46761	32265	0	0	0	0	0
Amino acid metabolism	Alanine aspartate and glutamate	28782	34174	18836	0	0	0	0	0
Carbohydrate	Pyruvate	20237	24359	14641	0	0	0	0	0
Energy metabolism	Carbon fixation pathways in prokaryotes	19114	23560	13591	0	0	0	0	0
Carbohydrate	Butanoate	18008	21509	11308	0	0	0	0	0
Translation	Aminoacyl tRNA	16815	19736	15286	0	0	0	0	0
Energy metabolism	Carbon fixation in photosynthetic organisms	15203	19199	10202	0	0	0	0	0
Metabolism of cofactors and vitamins	Pantothenate and CoA biosynthesis	14256	18111	11505	0	0	0	0	0
Carbohydrate metabolism	Citrate cycle TCA cycle	13957	17563	9960	0	0	0	0	0
Carbohydrate metabolism	Pentose phosphate pathway	13436	17101	9502	0	0	0	0	0

