

Analysis of metabolic evolution in bacteria using whole-genome metabolic models

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<http://www.theosysbio.bio.ic.ac.uk/bacterial-metabolism/>

Supplementary Table 1

Comparisons between the numbers of reactions in each bacterium in each lifestyle. Adjusted p-value represents the p-value of a Mann Whitney U test comparing each pair of lifestyles, corrected for multiple testing using the Benjamini-Hochberg method for controlling false discovery rate.

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A) Number of metabolic reactions in organisms having different habitats.

Group 1	Group 2	n_1	n_2	Adjusted p-values
Terrestrial	Aquatic	7	12	0.436
Terrestrial	Multiple	7	51	0.521
Terrestrial	Unclassified	7	7	0.715
Terrestrial	Host-Associated	7	57	0.102
Terrestrial	Specialized	7	7	0.133
Aquatic	Multiple	12	51	0.630
Aquatic	Unclassified	12	7	0.715
Aquatic	Host-Associated	12	57	0.133
Aquatic	Specialized	12	7	0.425
Multiple	Unclassified	51	7	0.906
Multiple	Host-Associated	51	57	0.00045
Multiple	Specialized	51	7	0.141
Unclassified	Host-Associated	7	57	0.102
Unclassified	Specialized	7	7	0.102
Host-Associated	Specialized	57	7	0.841

B) Number of metabolic reactions in organisms having different modes of respiration.

Group 1	Group 2	n_1	n_2	Adjusted p-values
Aerobic	Microaerophilic	52	5	0.193
Aerobic	Facultative Anaerobic	52	55	0.0763
Aerobic	Anaerobic	52	18	0.0188
Aerobic	Unclassified	52	11	0.0484
Microaerophilic	Facultative Anaerobic	5	55	0.0334
Microaerophilic	Anaerobic	5	18	1.0
Microaerophilic	Unclassified	5	11	1.0
Facultative Anaerobic	Anaerobic	55	18	0.000766
Facultative Anaerobic	Unclassified	55	11	0.0188
Anaerobic	Unclassified	18	11	0.539

C) Number of metabolic reactions in organisms having different pathogenic lifestyles.

Group 1	Group 2	n_1	n_2	Adjusted p-values
Free-living	Facultative Host-associated	103	27	0.0118
Free-living	Obligate Intracellular Mutualist	103	4	0.00281
Free-living	Obligate Intracellular Parasite	103	7	0.000169
Facultative Host-associated	Obligate Intracellular Mutualist	27	4	0.0118
Facultative Host-associated	Obligate Intracellular Parasite	27	7	0.0118
Obligate Intracellular Mutualist	Obligate Intracellular Parasite	4	7	0.449