S3 Table. Correlation analysis between bacterial families in the microbiome

Taxon1	Taxon2	Correlation	p-value
Aeromonadaceae	*Alteromonadaceae*	0.6239	0.0099
Aeromonadaceae	*Corynebacteriaceae*	–0.5153	0.0099
Aeromonadaceae	*Microbacteriaceae*	0.5154	0.0198
Aeromonadaceae	*Pasteurellaceae*	0.685	0.0099
Aeromonadaceae	*Rhodospirillaceae*	0.8169	0.0099
Alcaligenaceae	*Bradyrhizobiaceae*	–0.4432	0.0396
Alteromonadaceae	*Aeromonadaceae*	0.6239	0.0099
Alteromonadaceae	*Corynebacteriaceae*	–0.6207	0.0099
Alteromonadaceae	*Rhodospirillaceae*	0.4979	0.0396
Alteromonadaceae	*Staphylococcaceae*	–0.5578	0.0297
Bacillaceae	*Erwiniaceae*	0.4999	0.0099
Bacillaceae	*Thermoanaerobacteraceae*	0.8849	0.0099
Bacillaceae	*Vibrionaceae*	0.4954	0.0198
Bradyrhizobiaceae	*Alcaligenaceae*	–0.4432	0.0396
Bradyrhizobiaceae	*Burkholderiaceae*	–0.4767	0.0099
Bradyrhizobiaceae	*Caulobacteraceae*	0.4791	0.0297
Bradyrhizobiaceae	*Rhodobacteraceae*	0.5971	0.0198
Burkholderiaceae	*Bradyrhizobiaceae*	–0.4767	0.0099
Burkholderiaceae	*Micrococcaceae*	0.472	0.0198
Burkholderiaceae	*Oxalobacteraceae*	0.4161	0.0495
Caulobacteraceae	*Bradyrhizobiaceae*	0.4791	0.0297
Caulobacteraceae	*Microbacteriaceae*	0.8096	0.0099
Caulobacteraceae	*Micrococcaceae*	–0.4776	0.0495
Caulobacteraceae	*Rhodospirillaceae*	0.4334	0.0396
Comamonadaceae	*Erythrobacteraceae*	0.6331	0.0099
Comamonadaceae	*Halomonadaceae*	–0.4411	0.0495
Corynebacteriaceae	*Aeromonadaceae*	–0.5153	0.0099
Corynebacteriaceae	*Alteromonadaceae*	–0.6207	0.0099
Corynebacteriaceae	*Halomonadaceae*	0.5932	0.0198
Corynebacteriaceae	*Lactobacillaceae*	0.7895	0.0099
Corynebacteriaceae	*Rhodospirillaceae*	–0.4317	0.0396
Corynebacteriaceae	*Staphylococcaceae*	0.4734	0.0396
Enterobacteriaceae	*Propionibacteriaceae*	0.9945	0.0198
Enterobacteriaceae	*Thermoanaerobacteraceae*	–0.4702	0.0396

Enterobacteriaceae	*Yersiniaceae*	–0.4926	0.0198
Erwiniaceae	*Bacillaceae*	0.4999	0.0099
Erwiniaceae	*Halomonadaceae*	0.4685	0.0198
Erwiniaceae	*Pasteurellaceae*	0.6088	0.0198
Erwiniaceae	*Thermoanaerobacteraceae*	0.6157	0.0099
Erwiniaceae	*Vibrionaceae*	0.9693	0.0099
Erythrobacteraceae	*Comamonadaceae*	0.6331	0.0099
Erythrobacteraceae	*Halomonadaceae*	–0.49	0.0099
Erythrobacteraceae	*Rhodospirillaceae*	0.4486	0.0396
Hafniaceae	*Micrococcaceae*	0.4234	0.0396
Hafniaceae	*Staphylococcaceae*	0.6068	0.0198
Halomonadaceae	*Comamonadaceae*	–0.4411	0.0495
Halomonadaceae	*Corynebacteriaceae*	0.5932	0.0198
Halomonadaceae	*Erwiniaceae*	0.4685	0.0198
Halomonadaceae	*Erythrobacteraceae*	–0.49	0.0099
Halomonadaceae	*Lactobacillaceae*	0.5021	0.0099
Halomonadaceae	*Pectobacteriaceae*	0.821	0.0099
Halomonadaceae	*Thermoanaerobacteraceae*	0.3744	0.0495
Halomonadaceae	*Vibrionaceae*	0.4544	0.0198
Lactobacillaceae	*Corynebacteriaceae*	0.7895	0.0099
Lactobacillaceae	*Halomonadaceae*	0.5021	0.0099
Microbacteriaceae	*Aeromonadaceae*	0.5154	0.0198
Microbacteriaceae	*Caulobacteraceae*	0.8096	0.0099
Microbacteriaceae	*Rhodospirillaceae*	0.6134	0.0099
Micrococcaceae	*Burkholderiaceae*	0.472	0.0198
Micrococcaceae	*Caulobacteraceae*	–0.4776	0.0495
Micrococcaceae	*Hafniaceae*	0.4234	0.0396
Micrococcaceae	*Oxalobacteraceae*	0.4682	0.0297
Micrococcaceae	*Pectobacteriaceae*	–0.5856	0.0198
Micrococcaceae	*Pseudomonadaceae*	0.4137	0.0396
Micrococcaceae	*Staphylococcaceae*	0.4606	0.0297
Mycoplasmataceae	*Rhodobacteraceae*	0.5729	0.0198
Oxalobacteraceae	*Burkholderiaceae*	0.4161	0.0495
Oxalobacteraceae	*Micrococcaceae*	0.4682	0.0297
Oxalobacteraceae	*Rhizobiaceae*	–0.5834	0.0198
Oxalobacteraceae	*Staphylococcaceae*	0.4334	0.0396

Pasteurellaceae	*Aeromonadaceae*	0.685	0.0099
Pasteurellaceae	*Erwiniaceae*	0.6088	0.0198
Pasteurellaceae	*Rhodospirillaceae*	0.417	0.0495
Pasteurellaceae	*Vibrionaceae*	0.6241	0.0099
Pectobacteriaceae	*Halomonadaceae*	0.821	0.0099
Pectobacteriaceae	*Micrococcaceae*	–0.5856	0.0198
Peptoniphilaceae	*Xanthomonadaceae*	0.7184	0.0099
Propionibacteriaceae	*Enterobacteriaceae*	0.9945	0.0198
Propionibacteriaceae	*Sphingomonadaceae*	0.3814	0.0396
Propionibacteriaceae	*Thermoanaerobacteraceae*	–0.4923	0.0198
Propionibacteriaceae	*Yersiniaceae*	–0.5036	0.0396
Pseudomonadaceae	*Micrococcaceae*	0.4137	0.0396
Pseudomonadaceae	*Staphylococcaceae*	0.5192	0.0297
Rhizobiaceae	*Oxalobacteraceae*	–-0.5834	0.0198
Rhodobacteraceae	*Bradyrhizobiaceae*	0.5971	0.0198
Rhodobacteraceae	*Mycoplasmataceae*	0.5729	0.0198
Rhodospirillaceae	*Aeromonadaceae*	0.8169	0.0099
Rhodospirillaceae	*Alteromonadaceae*	0.4979	0.0396
Rhodospirillaceae	*Caulobacteraceae*	0.4334	0.0396
Rhodospirillaceae	*Corynebacteriaceae*	–0.4317	0.0396
Rhodospirillaceae	*Erythrobacteraceae*	0.4486	0.0396
Rhodospirillaceae	*Microbacteriaceae*	0.6134	0.0099
Rhodospirillaceae	*Pasteurellaceae*	0.417	0.0495
Sphingomonadaceae	*Propionibacteriaceae*	0.3814	0.0396
Staphylococcaceae	*Alteromonadaceae*	–0.5578	0.0297
Staphylococcaceae	*Corynebacteriaceae*	0.4734	0.0396
Staphylococcaceae	*Hafniaceae*	0.6068	0.0198
Staphylococcaceae	*Micrococcaceae*	0.4606	0.0297
Staphylococcaceae	*Oxalobacteraceae*	0.4334	0.0396
Staphylococcaceae	*Pseudomonadaceae*	0.5192	0.0297
Staphylococcaceae	*Streptococcaceae*	–0.4962	0.0297
Streptococcaceae	*Staphylococcaceae*	–0.4962	0.0297
Streptococcaceae	*Xanthomonadaceae*	–0.4984	0.0396
Thermoanaerobacteraceae	*Bacillaceae*	0.8849	0.0099
Thermoanaerobacteraceae	*Enterobacteriaceae*	–0.4702	0.0396
Thermoanaerobacteraceae	*Erwiniaceae*	0.6157	0.0099

Thermoanaerobacteraceae	*Halomonadaceae*	0.3744	0.0495
Thermoanaerobacteraceae	*Propionibacteriaceae*	–0.4923	0.0198
Thermoanaerobacteraceae	*Vibrionaceae*	0.6013	0.0198
Vibrionaceae	*Bacillaceae*	0.4954	0.0198
Vibrionaceae	*Erwiniaceae*	0.9693	0.0099
Vibrionaceae	*Halomonadaceae*	0.4544	0.0198
Vibrionaceae	*Pasteurellaceae*	0.6241	0.0099
Vibrionaceae	*Thermoanaerobacteraceae*	0.6013	0.0198
Xanthomonadaceae	*Peptoniphilaceae*	0.7184	0.0099
Xanthomonadaceae	*Streptococcaceae*	–0.4984	0.0396
Yersiniaceae	*Enterobacteriaceae*	–0.4926	0.0198
Yersiniaceae	*Propionibacteriaceae*	–0.5036	0.0396