

Table S16. List of bacterial families associated with edges identified by network analysis

Never	Recent	Past
053A03-B-DI-P58	67-14	27F-1492R
67-14	A21b	A4b
Blastocatellaceae	A4b	Beijerinckiaceae
Caulobacteraceae	Acidithiobacillaceae	Burkholderiaceae
Chitinophagaceae	Acidobacteriaceae_(Subgroup_1)	Caldilineaceae
Desulfarculaceae	Alicyclobacillaceae	Caulobacteraceae
Devosiaceae	Alteromonadaceae	Chitinophagaceae
Dongiaceae	Anaerolineaceae	Devosiaceae
Enterobacteriaceae	bac2nit3	Enterobacteriaceae
Erysipelotrichaceae	Blfdi19	Frankiaceae
Euzebyaceae	Caedibacteraceae	Gemmataceae
Flavobacteriaceae	Chlamydiaceae	Gemmatimonadaceae
Gaiellaceae	Chthoniobacteraceae	Geodermatophilaceae
Geminicoccaceae	Crocinitomicaceae	Gracilibacteraceae
Gemmataceae	Demequinaceae	Hyphomicrobiaceae
Halanaerobiaceae	Desulfarculaceae	Intrasporangiaceae
Hyphomicrobiaceae	Eubacteriaceae	JG30-KF-CM45
Hyphomonadaceae	Euzebyaceae	Kaistiaceae
Ilumatobacteraceae	Gaiellaceae	KD3-93
JG30-KF-AS9	Gemmataceae	Methylophilaceae
Kaistiaceae	Gemmatimonadaceae	Microbacteriaceae
Legionellaceae	Hymenobacteraceae	Micrococcaceae
Limnochordaceae	Hyphomicrobiaceae	Moraxellaceae
Microbacteriaceae	Hyphomonadaceae	Nakamurellaceae

Micrococcaceae	Intrasporangiaceae	Nitrosopumilaceae
Micromonosporaceae	KD3-10	Nocardioideaceae
Mycobacteriaceae	Leptospiraceae	Reyraneliaceae
Nakamurellaceae	Magnetospiraceae	Rhizobiaceae
Nitrosomonadaceae	Methyloleptaceae	Rhodanobacteraceae
Nocardioideaceae	Myxococcaceae	Rubritaleaceae
Pirellulaceae	Nitrososphaeraceae	Solirubrobacteraceae
Reyraneliaceae	Nitrospiraceae	Sphingobacteriaceae
Rhizobiales_Incertae_Sedis	Nocardioideaceae	Sphingomonadaceae
Rhodanobacteraceae	Pirellulaceae	WD2101_soil_group
Rhodobacteraceae	Pleomorphomonadaceae	A21b
Rhodomicrobiaceae	Rhizobiales_Incertae_Sedis	PHOS-HE36
Roseiflexaceae	Saccharimonadaceae	Xanthomonadaceae
Rubinisphaeraceae	Streptomycetaceae	Xanthobacteraceae
Sphingobacteriaceae	Solirubrobacteraceae	Flavobacteriaceae
Sphingomonadaceae	Parvibaculaceae	Sanguibacteraceae
Methanobacteriaceae	Bacteriovoracaceae	possible_family_01
Methanosarcinaceae	Weeksellaceae	Rhizobiales_Incertae_Sedis
Nocardiopsaceae	Chitinimonadaceae	Nocardiaceae
Pleomorphomonadaceae	Xanthobacteraceae	Sneathiellaceae
Solirubrobacteraceae	Peptostreptococcaceae	NS9_marine_group
Xanthobacteraceae	Rhodobiaceae	SC-I-84
Nitrososphaeraceae	Thermomonosporaceae	VHS-B4-70
Syntrophaceae	Deinococcaceae	Sandaracinaceae
Xanthomonadaceae	JG30-KF-AS9	Spirosomaceae

Pseudomonadaceae	Microbacteriaceae	
Sanguibacteraceae	Solibacteraceae_(Subgroup_3)	
Promicromonosporaceae	Waddliaceae	
Sporolactobacillaceae	Schlesneriaceae	
Thermoanaerobacteraceae	Pyrinomonadaceae	
Saprospiraceae	Ruminococcaceae	
WD2101_soil_group	UBA12411	