

Table S7. Degree of host association of genera.

Taxonomic Group	Strongly host associated	Weakly host associated	Predominantly environmental
Actinobacteria:			
	<i>Actinobaculum</i>	<i>Dietzia (O)</i>	<i>Arsenicococcus</i>
	<i>Actinomyces</i>		<i>Kocuria</i>
	<i>Atopobium</i>		<i>Microbacterium</i>
	<i>Bifidobacterium (D)</i>		
	<i>Corynebacterium</i>		
	<i>Cryptobacterium</i>		
	<i>Eggerthella</i>		
	<i>Gardnerella (V)</i>		
	<i>Mobiluncus (V)</i>		
	<i>Mycobacterium</i>		
	<i>Olsenella</i>		
	<i>Parascardovia</i>		
	<i>Propionibacterium</i>		
	<i>Rothia</i>		
	<i>Scardovia</i>		
	<i>Slackia</i>		
	<i>Turcella (E)</i>		
	<i>Arcanobacterium</i>		
	<i>Bifidobacteriaceae [G-1]</i>		
	<i>Bifidobacteriaceae [G-2]</i>		

Bacteroidetes:			
	<i>Bacteroides (G)</i>		
	<i>Bergeyella</i>		
	<i>Capnocytophaga</i>		
	<i>Prevotella</i>		
	<i>Porphyromonas</i>		
	<i>Tannerella</i>		
	<i>Bacteroidaceae [G-1]</i>		
	<i>Bacteroidales [G-2]</i>		
	<i>Bacteroidetes [G-3]</i>		
	<i>Bacteroidetes [G-4]</i>		
	<i>Bacteroidetes [G-5]</i>		
	<i>Bacteroidetes [G-6]</i>		
	<i>Flavobacteriales [G-1]</i>		
	<i>Flavobacteriales [G-2]</i>		
Chlamydia:			
	<i>Chlamydophilia</i>		
Chloroflexi:			
			<i>Chloroflexi [G-1]</i>
Firmicutes:			
Bacilli:			
	<i>Abiotrophia</i>	<i>Bacillus (T)</i>	
	<i>Alloicoccus (E)</i>		
	<i>Dolosigranulum (E)</i>		

	<i>Enterococcus (D)</i>		
	<i>Gemella</i>		
	<i>Granulicatella</i>		
	<i>Lactobacillus (D)</i>		
	<i>Lactococcus (D)</i>		
	<i>Listeria</i>		
	<i>Paenibacillus</i>		
	<i>Staphylococcus</i>		
	<i>Streptococcus</i>		
Clostridia:			
	<i>Anaeroglobus</i>	<i>Anaerococcus</i>	
	<i>Butyrivibrio (G)</i>	<i>Clostridium (T)</i>	
	<i>Catonella</i>	<i>Eubacterium (T)</i>	
	<i>Centipeda</i>		
	<i>Dialister</i>		
	<i>Filifactor</i>		
	<i>Johnsonella</i>		
	<i>Megasphaera</i>		
	<i>Mitsuokella</i>		
	<i>Mogibacterium</i>		
	<i>Oribacterium</i>		
	<i>Parvimonas</i>		
	<i>Peptococcus</i>		
	<i>Peptoniphilus</i>		

	<i>Peptostreptococcus</i>		
	<i>Pseudoramibacter</i>		
	<i>Selenomonas</i>		
	<i>Shuttleworthia</i>		
	<i>Veillonella</i>		
	<i>Clostridiales [F-1][G-1]</i>		
	<i>Clostridiales [F-1][G-2]</i>		
	<i>Clostridiales [F-2][G-1]</i>		
	<i>Clostridiales [F-2][G-2]</i>		
	<i>Clostridiales [F-2][G-3]</i>		
	<i>Eubacterium [XI][G-1]</i>		
	<i>Eubacterium [XI][G-3]</i>		
	<i>Eubacterium [XI][G-5]</i>		
	<i>Eubacterium [XI][G-6]</i>		
	<i>Eubacterium [XI][G-7]</i>		
	<i>Eubacterium [XIV][G-1]</i>		
	<i>Lachnospiraceae [G-1]</i>		
	<i>Lachnospiraceae [G-2]</i>		
	<i>Lachnospiraceae [G-3]</i>		
	<i>Lachnospiraceae [G-4]</i>		
	<i>Lachnospiraceae [G-5]</i>		
	<i>Lachnospiraceae [G-6]</i>		
	<i>Lachnospiraceae [G-7]</i>		
	<i>Lachnospiraceae [G-8]</i>		

	<i>Peptococcaceae [XI][G-1]</i>		
	<i>Peptococcaceae [XI][G-2]</i>		
	<i>Peptococcaceae [XI][G-3]</i>		
	<i>Peptococcaceae [XI][G-4]</i>		
	<i>Peptococcaceae [XI][G-5]</i>		
	<i>Peptococcaceae [XI][G-7]</i>		
	<i>Veillonellaceae [G-1]</i>		
Erysipelothrichi:			
	<i>Bulledia</i>		
	<i>Erysipelothrix</i>		
	<i>Solobacterium</i>		
	<i>Lactobacillus [XVII][G-1]</i>		
Tenericutes:			
	<i>Mycoplasma</i>		
	<i>Tenericutes [G-1]</i>		
Fusobacteria:			
	<i>Fusobacterium</i>		
	<i>Leptotrichia</i>		
	<i>Sneathia</i>		
	<i>Fusobacteria [G-1]</i>		
Proteobacteria:			
alpha:			
	<i>Bartonella (P)</i>	<i>Ochrobacterium (O)</i>	<i>Agrobacterium</i>
	<i>Afipia (P)</i>	<i>Sphingomonas (O)</i>	<i>Bradyrhizobium</i>

			<i>Brevundimonas</i>
			<i>Caulobacter</i>
			<i>Defluviibacter</i>
			<i>Erythromicrobium</i>
			<i>Rhizobium</i>
beta:			
	<i>Bordetella (P)</i>	<i>Achromobacter (O) (CF)</i>	<i>Delftia</i>
	<i>Eikenella</i>	<i>Burkholderia (O) (CF)</i>	<i>Leptothrix</i>
	<i>Kingella</i>		<i>Ralstonia</i>
	<i>Lautropia</i>		<i>Rhodocyclus</i>
	<i>Neisseria</i>		<i>Variovorax</i>
	<i>Simonsiella</i>		
gamma:			
	<i>Acinetobacter(O)</i>	<i>Pseudomonas (T) (O)</i>	<i>Xanthomonas</i>
	<i>Aggregatibacter</i>	<i>Stenotrophomonas (O)</i>	
	<i>Cardiobacterium</i>		
	<i>Enterobacter (G)</i>		
	<i>Escherichia (G)</i>		
	<i>Haemophilus</i>		
	<i>Klebsiella</i>		
	<i>Moraxella(O)</i>		
	<i>Proteus</i>		
	<i>Tetrahaemophilus (M)</i>		
	<i>Yersinia (P)</i>		

delta:			
		<i>Bdellovibrio (T)</i>	
	<i>Desulfovibrio (T)</i>		
	<i>Desulfomicrobium (T)</i>		
	<i>Desulfobulbus (T)</i>		
Epsilon:			
	<i>"Bacteroides" ureolyticus</i>		
	<i>Campylobacter</i>		
	<i>Helicobacter (G)(P)</i>		
Spirochaetes			
	<i>Treponema</i>		
SR1:			
	<i>SR1 [G-1]</i>		
Synergistetes:			
	<i>Jonquetella</i>		
	<i>Pyramidobacter</i>		
	<i>Synergistetes [G-3]</i>		
TM7:			
	<i>TM7 [G-1]</i>		
	<i>TM7 [G-2]</i>		
	<i>TM7 [G-3]</i>		
	<i>TM7 [G-4]</i>		
	<i>TM7 [G-5]</i>		

1 The following are used parenthetically in the table: (CF) Species found in cystic fibrosis patients; (D)
2 Found in dairy products; (E) Primarily ear species; (G) Primarily gut species, found in fecal
3 contaminated environments; (M) Misnamed, same as *Haemophilus parainfluenzae*; (O) Can be
4 opportunistic pathogen; (P) Pathogen, generally exogenous; (T) Taxonomy may need refining. Genus
5 broad or poorly defined, but clearly human associated species within genus; (V) Primarily vaginal
6 species