

Figure 1S. Quantification of *C. difficile* cells in mucus-associated bacterial communities from infected mice. We used 3 slides per paraffin block to image *C. difficile* cells labeled with Cd198 probe. At least 10 areas per slide were assessed to count *C. difficile* cells located not farther than 150 μm from the epithelium. Data are expressed as a boxplot, with 75th percentile, median and 25th percentile indicated, and with whiskers representing upper and lower adjacent values.

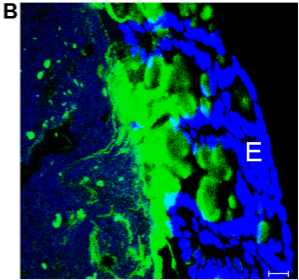
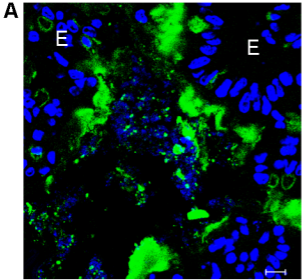
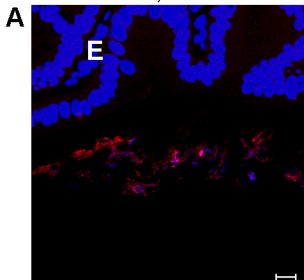
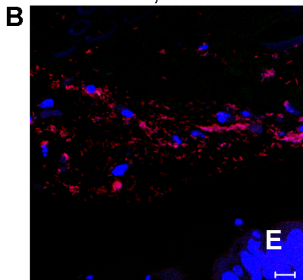


Fig.2S Immunodetection of mucin in cecum (A) and colon (B) of uninfected mice. E indicates epithelial cells. Scale bar indicates 10 μm .

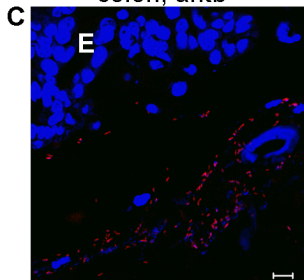
cecum, antb



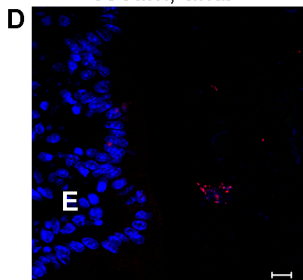
colon, antb



colon, antb



cecum, antb



colon, uninfected

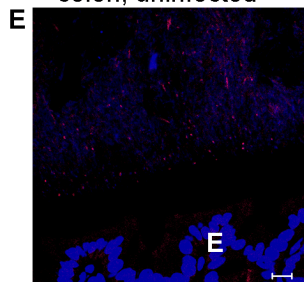


Figure 3S. Fluorescent *In-Situ* Hybridization analysis of diverse groups of bacteria in sections of cecum and colon, from non-infected mice. Cecum (A and D) or colon (B, C and E) sections were collected from animals which were an antibiotic treated, uninfected (antb) (A-D) or non-antibiotic treated (E). Hoechst 33342 was used to stain DNA (blue). The *C. difficile*-specific probe Cd198 (green) was not detected because there was no binding. Red staining indicates binding of the domain-specific probe Eub338 (A and B) and taxa-specific probes Lab158 (D), Erec482 (E) or Ent 183 (C). **E** indicates the locations of epithelial cells. Scale bar represents 10 μ m.

Table A1. Differentially abundant bacterial genera.

Genus	Group 1	Group 2	p-value
Blautia (0.1.7.2.1.4.2)	0.002±0.001	0.049±0.005	<0.01
Anaerostipes (0.1.7.2.1.4.1)	0	0.058±0.008	<0.01
unclassified (0.1.7.3.1.1.5)	0.024±0.005	0.001±0.001	<0.01
unclassified (0.1.7.1.2.2.2)	0	0.003±0.001	<0.01
Lactobacillus (0.1.7.1.2.2.1)	0.01±0.003	0.074±0.017	<0.01
Clostridium XVIII (0.1.7.3.1.1.2)	0.076±0.021	0	<0.01
Parabacteroides (0.1.3.1.1.1.2)	0.025±0.011	0.09±0.016	<0.01
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Genus	Group 2	Group 3	p-value
Bacteroides (0.1.3.1.1.4.1)	0.56±0.027	0.029±0.017	<0.01
Oscillibacter (0.1.7.2.1.6.6)	0	0.014±0.001	<0.01
unclassified (0.1.7.2.1.6.10)	0.001±0.0002	0.062±0.006	<0.01
Blautia (0.1.7.2.1.4.2)	0.049±0.005	0	<0.01
Proteus (0.1.4.3.1.1.4)	0.012±0.001	0.001±0.0001	<0.01
unclassified (0.1.7.2.1.7.1)	0.002±0.001	0.046±0.006	<0.01
Anaerostipes (0.1.7.2.1.4.1)	0.058±0.008	0	<0.01
unclassified (0.1.7.2.2.1.1)	0	0.001±0.0002	<0.01
unclassified (0.1.7.2.1.4.10)	0.002±0.002	0.224±0.04	<0.01
Dorea (0.1.7.2.1.4.5)	0	0.001±0.002	<0.01
unclassified (0.1.4.2.4.1.1)	0.041±0.007	0.004±0.003	<0.01
unclassified (0.1.8.1.1.1.1)	0.004±0.001	0.045±0.008	<0.01
Pseudoflavonifractor (0.1.7.2.1.6.7)	0	0.004±0.001	<0.01
Parabacteroides (0.1.3.1.1.1.2)	0.09±0.016	0.014±0.01	<0.01

Table A2. Abundance of bacterial taxons.

taxlevel	taxon	total	UI	day6-1	day2-1	day2-2	UI	day8-1	day8-2	day6-2	day4-2	day4-1	day1-1	day1-2	atbt
0	Root (0)	115836	8343	9001	8983	9076	8894	8971	8889	8775	9183	8642	9027	9032	9020
1	Bacteria (0.1)	115836	8343	9001	8983	9076	8894	8971	8889	8775	9183	8642	9027	9032	9020
2	Acidobacteria (0.1.1)	1	0	0	0	0	0	0	0	0	0	0	1	0	0
3	Acidobacteria Gp3 (0.1.1.1)	1	0	0	0	0	0	0	0	0	0	0	1	0	0
4	Acidobacteria Gp3_order incertae sedis (0.1.1.1.1)	1	0	0	0	0	0	0	0	0	0	0	1	0	0
5	Acidobacteria Gp3_family incertae sedis (0.1.1.1.1.1)	1	0	0	0	0	0	0	0	0	0	0	1	0	0
6	Gp3 (0.1.1.1.1.1.1)	1	0	0	0	0	0	0	0	0	0	0	1	0	0
2	Actinobacteria (0.1.2)	387	32	2	3	29	206	55	13	10	1	2	8	1	25
3	Actinobacteria (0.1.2.1)	387	32	2	3	29	206	55	13	10	1	2	8	1	25
4	Actinomycetales (0.1.2.1.1)	28	1	1	1	1	0	0	13	0	1	2	7	1	0
5	Actinomycetaceae (0.1.2.1.1.1)	3	1	0	0	0	0	0	0	0	0	1	1	0	0
6	Actinomyces (0.1.2.1.1.1.1)	3	1	0	0	0	0	0	0	0	0	1	1	0	0
5	Cellulomonadaceae (0.1.2.1.1.2)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6	Cellulomonas (0.1.2.1.1.2.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5	Corynebacteriaceae (0.1.2.1.1.3)	3	0	0	0	0	0	0	3	0	0	0	0	0	0
6	Corynebacterium (0.1.2.1.1.3.1)	3	0	0	0	0	0	0	3	0	0	0	0	0	0
5	Dermabacteraceae (0.1.2.1.1.4)	2	0	1	0	0	0	0	0	0	0	0	0	1	0
6	Dermabacter (0.1.2.1.1.4.1)	2	0	1	0	0	0	0	0	0	0	0	0	1	0
5	Microbacteriaceae (0.1.2.1.1.5)	3	0	0	0	0	0	0	2	0	1	0	0	0	0
6	unclassified (0.1.2.1.1.5.1)	3	0	0	0	0	0	0	2	0	1	0	0	0	0
5	Micrococcaceae (0.1.2.1.1.6)	2	0	0	0	0	0	0	1	0	0	0	1	0	0
6	Arthrobacter (0.1.2.1.1.6.1)	2	0	0	0	0	0	0	1	0	0	0	1	0	0
5	Nocardioideae (0.1.2.1.1.7)	2	0	0	0	0	0	0	0	0	0	0	2	0	0
6	Nocardioides (0.1.2.1.1.7.1)	2	0	0	0	0	0	0	0	0	0	0	2	0	0
5	Promicromonosporaceae (0.1.2.1.1.8)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6	Cellulosimicrobium (0.1.2.1.1.8.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5	Propionibacteriaceae (0.1.2.1.1.9)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6	Propionibacterium (0.1.2.1.1.9.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5	Pseudonocardiaceae (0.1.2.1.1.10)	2	0	0	0	0	0	0	1	0	0	0	1	0	0
6	unclassified (0.1.2.1.1.10.1)	2	0	0	0	0	0	0	1	0	0	0	1	0	0
5	Streptomycetaceae (0.1.2.1.1.11)	2	0	0	0	0	0	0	1	0	0	0	1	0	0
6	Streptomyces (0.1.2.1.1.11.1)	2	0	0	0	0	0	0	1	0	0	0	1	0	0
5	Streptosporangiaceae (0.1.2.1.1.12)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6	Thermopolyspora (0.1.2.1.1.12.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5	unclassified (0.1.2.1.1.13)	5	0	0	1	1	0	0	1	0	0	1	1	0	0
6	unclassified (0.1.2.1.1.13.1)	5	0	0	1	1	0	0	1	0	0	1	1	0	0
4	Bifidobacteriales (0.1.2.1.2)	227	0	1	1	28	181	1	0	10	0	0	1	0	4
5	Bifidobacteriaceae (0.1.2.1.2.1)	227	0	1	1	28	181	1	0	10	0	0	1	0	4
6	Bifidobacterium (0.1.2.1.2.1.1)	226	0	1	1	28	180	1	0	10	0	0	1	0	4
6	unclassified (0.1.2.1.2.1.2)	1	0	0	0	0	1	0	0	0	0	0	0	0	0
4	Coriobacteriales (0.1.2.1.3)	131	31	0	1	0	24	54	0	0	0	0	0	0	21
5	Coriobacteriaceae (0.1.2.1.3.1)	131	31	0	1	0	24	54	0	0	0	0	0	0	21
6	Asaccharobacter (0.1.2.1.3.1.1)	14	4	0	0	0	6	4	0	0	0	0	0	0	0
6	Atopobium (0.1.2.1.3.1.2)	1	0	0	1	0	0	0	0	0	0	0	0	0	0
6	Enterorhabdus (0.1.2.1.3.1.3)	56	0	0	0	0	0	38	0	0	0	0	0	0	18
6	Olsenella (0.1.2.1.3.1.4)	3	0	0	0	0	0	3	0	0	0	0	0	0	0
6	unclassified (0.1.2.1.3.1.5)	57	27	0	0	0	18	9	0	0	0	0	0	0	3
4	unclassified (0.1.2.1.4)	1	0	0	0	0	1	0	0	0	0	0	0	0	0
5	unclassified (0.1.2.1.4.1)	1	0	0	0	0	1	0	0	0	0	0	0	0	0
6	unclassified (0.1.2.1.4.1.1)	1	0	0	0	0	1	0	0	0	0	0	0	0	0
2	Bacteroidetes (0.1.3)	57560	2919	6087	2438	3438	3692	3717	5668	5292	5800	6277	6573	2276	3383
3	Bacteroidia (0.1.3.1)	56557	2397	6067	2434	3434	3350	3695	5645	5283	5794	6266	6551	2274	3367
4	Bacteroidales (0.1.3.1.1)	56557	2397	6067	2434	3434	3350	3695	5645	5283	5794	6266	6551	2274	3367
5	Porphyromonadaceae (0.1.3.1.1.1)	12212	800	1247	280	588	3275	1562	617	992	498	644	140	172	1397

6	Barnesiella (0.1.3.1.1.1.1)	60	1	0	2	0	1	25	0	0	0	0	1	0	30
6	Parabacteroides (0.1.3.1.1.1.2)	5397	3	1243	120	510	0	373	614	987	495	641	96	172	143
6	unclassified (0.1.3.1.1.1.3)	6755	796	4	158	78	3274	1164	3	5	3	3	43	0	1224
5	Prevotellaceae (0.1.3.1.1.2)	1450	0	0	185	0	1	740	0	0	0	1	0	0	523
6	Prevotella (0.1.3.1.1.2.1)	1386	0	0	178	0	0	706	0	0	0	1	0	0	501
6	unclassified (0.1.3.1.1.2.2)	64	0	0	7	0	1	34	0	0	0	0	0	0	22
5	Rikenellaceae (0.1.3.1.1.3)	3505	1554	52	1	87	0	763	27	0	0	0	4	0	1017
6	Alistipes (0.1.3.1.1.3.1)	3500	1553	52	1	86	0	762	27	0	0	0	4	0	1015
6	unclassified (0.1.3.1.1.3.2)	5	1	0	0	1	0	1	0	0	0	0	0	0	2
5	Bacteroidaceae (0.1.3.1.1.4)	39137	6	4753	1963	2755	3	607	4982	4278	5290	5604	6387	2096	413
6	Bacteroides (0.1.3.1.1.4.1)	39136	6	4753	1963	2755	3	607	4982	4278	5290	5603	6387	2096	413
6	unclassified (0.1.3.1.1.4.2)	1	0	0	0	0	0	0	0	0	0	1	0	0	0
5	unclassified (0.1.3.1.1.5)	253	37	15	5	4	71	23	19	13	6	17	20	6	17
6	unclassified (0.1.3.1.1.5.1)	253	37	15	5	4	71	23	19	13	6	17	20	6	17
3	Sphingobacteria (0.1.3.2)	5	0	0	0	0	0	0	3	0	0	0	2	0	0
4	Sphingobacteriales (0.1.3.2.1)	5	0	0	0	0	0	0	3	0	0	0	2	0	0
5	Cytophagaceae (0.1.3.2.1.1)	2	0	0	0	0	0	0	2	0	0	0	0	0	0
6	Flectobacillus (0.1.3.2.1.1.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6	Hymenobacter (0.1.3.2.1.1.2)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5	Sphingobacteriaceae (0.1.3.2.1.2)	3	0	0	0	0	0	0	1	0	0	0	2	0	0
6	Sphingobacterium (0.1.3.2.1.2.1)	2	0	0	0	0	0	0	0	0	0	0	2	0	0
6	unclassified (0.1.3.2.1.2.2)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
3	Flavobacteria (0.1.3.3)	4	0	1	0	0	0	0	1	0	0	0	2	0	0
4	Flavobacteriales (0.1.3.3.1)	4	0	1	0	0	0	0	1	0	0	0	2	0	0
5	Flavobacteriaceae (0.1.3.3.1.1)	4	0	1	0	0	0	0	1	0	0	0	2	0	0
6	Chryseobacterium (0.1.3.3.1.1.1)	2	0	0	0	0	0	0	0	0	0	0	2	0	0
6	Cloacibacterium (0.1.3.3.1.1.2)	1	0	1	0	0	0	0	0	0	0	0	0	0	0
6	Epilithonimonas (0.1.3.3.1.1.3)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
3	unclassified (0.1.3.4)	994	522	19	4	4	342	22	19	9	6	11	18	2	16
4	unclassified (0.1.3.4.1)	994	522	19	4	4	342	22	19	9	6	11	18	2	16
5	unclassified (0.1.3.4.1.1)	994	522	19	4	4	342	22	19	9	6	11	18	2	16
6	unclassified (0.1.3.4.1.1.1)	994	522	19	4	4	342	22	19	9	6	11	18	2	16
2	Proteobacteria (0.1.4)	18400	28	734	3817	2852	19	207	1434	890	811	638	1056	5765	149
3	Alphaproteobacteria (0.1.4.1)	8614	0	2	1615	1533	0	67	10	0	1	3	238	5098	47
4	Rhizobiales (0.1.4.1.1)	22	0	0	0	0	0	0	9	0	0	0	12	1	0
5	Bradyrhizobiaceae (0.1.4.1.1.1)	13	0	0	0	0	0	0	5	0	0	0	7	1	0
6	Bradyrhizobium (0.1.4.1.1.1.1)	12	0	0	0	0	0	0	5	0	0	0	7	0	0
6	unclassified (0.1.4.1.1.1.2)	1	0	0	0	0	0	0	0	0	0	0	0	1	0
5	Brucellaceae (0.1.4.1.1.2)	2	0	0	0	0	0	0	2	0	0	0	0	0	0
6	Ochrobactrum (0.1.4.1.1.2.1)	2	0	0	0	0	0	0	2	0	0	0	0	0	0
5	Rhizobiaceae (0.1.4.1.1.3)	3	0	0	0	0	0	0	2	0	0	0	1	0	0
6	Rhizobium (0.1.4.1.1.3.1)	3	0	0	0	0	0	0	2	0	0	0	1	0	0
5	unclassified (0.1.4.1.1.4)	4	0	0	0	0	0	0	0	0	0	0	4	0	0
6	unclassified (0.1.4.1.1.4.1)	4	0	0	0	0	0	0	0	0	0	0	4	0	0
4	Rhodospirillales (0.1.4.1.2)	5	0	0	1	0	0	0	0	0	0	0	0	4	0
5	Rhodospirillaceae (0.1.4.1.2.1)	4	0	0	0	0	0	0	0	0	0	0	0	4	0
6	unclassified (0.1.4.1.2.1.1)	4	0	0	0	0	0	0	0	0	0	0	0	4	0
5	unclassified (0.1.4.1.2.2)	1	0	0	1	0	0	0	0	0	0	0	0	0	0
6	unclassified (0.1.4.1.2.2.1)	1	0	0	1	0	0	0	0	0	0	0	0	0	0
4	Sphingomonadales (0.1.4.1.3)	2	0	0	0	0	0	0	1	0	0	0	1	0	0
5	Sphingomonadaceae (0.1.4.1.3.1)	2	0	0	0	0	0	0	1	0	0	0	1	0	0
6	Sphingomonas (0.1.4.1.3.1.1)	2	0	0	0	0	0	0	1	0	0	0	1	0	0
4	unclassified (0.1.4.1.4)	8585	0	2	1614	1533	0	67	0	0	1	3	225	5093	47
5	unclassified (0.1.4.1.4.1)	8585	0	2	1614	1533	0	67	0	0	1	3	225	5093	47
6	unclassified (0.1.4.1.4.1.1)	8585	0	2	1614	1533	0	67	0	0	1	3	225	5093	47
3	Betaproteobacteria (0.1.4.2)	3362	1	452	343	557	0	81	199	521	381	265	337	149	76

4	Burkholderiales (0.1.4.2.1)	10	1	3	0	0	0	0	4	1	0	0	1	0	0
5	Alcaligenaceae (0.1.4.2.1.1)	2	0	0	0	0	0	0	2	0	0	0	0	0	0
6	Advenella (0.1.4.2.1.1.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6	unclassified (0.1.4.2.1.1.2)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5	Comamonadaceae (0.1.4.2.1.2)	2	0	0	0	0	0	0	2	0	0	0	0	0	0
6	Variovorax (0.1.4.2.1.2.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6	unclassified (0.1.4.2.1.2.2)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5	unclassified (0.1.4.2.1.3)	6	1	3	0	0	0	0	0	1	0	0	1	0	0
6	unclassified (0.1.4.2.1.3.1)	6	1	3	0	0	0	0	0	1	0	0	1	0	0
4	Neisseriales (0.1.4.2.2)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5	Neisseriaceae (0.1.4.2.2.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6	Neisseria (0.1.4.2.2.1.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
4	Rhodocyclales (0.1.4.2.3)	1	0	0	0	0	0	0	0	0	0	0	1	0	0
5	Rhodocyclaceae (0.1.4.2.3.1)	1	0	0	0	0	0	0	0	0	0	0	1	0	0
6	Shinella (0.1.4.2.3.1.1)	1	0	0	0	0	0	0	0	0	0	0	1	0	0
4	unclassified (0.1.4.2.4)	3350	0	449	343	557	0	81	194	520	381	265	335	149	76
5	unclassified (0.1.4.2.4.1)	3350	0	449	343	557	0	81	194	520	381	265	335	149	76
6	unclassified (0.1.4.2.4.1.1)	3350	0	449	343	557	0	81	194	520	381	265	335	149	76
3	Gammaproteobacteria (0.1.4.3)	5855	24	273	1763	663	16	53	1216	362	426	362	455	219	23
4	Enterobacteriales (0.1.4.3.1)	5760	19	269	1755	655	13	49	1191	357	421	355	444	210	22
5	Enterobacteriaceae (0.1.4.3.1.1)	5760	19	269	1755	655	13	49	1191	357	421	355	444	210	22
6	Cronobacter (0.1.4.3.1.1.1)	5	0	0	3	1	0	0	1	0	0	0	0	0	0
6	Escherichia Shigella (0.1.4.3.1.1.2)	3747	3	125	1372	491	1	31	826	183	256	86	257	110	6
6	Pantoea (0.1.4.3.1.1.3)	7	0	1	0	0	0	0	5	0	0	0	1	0	0
6	Proteus (0.1.4.3.1.1.4)	1036	3	73	175	116	3	7	92	97	139	116	140	69	6
6	Salmonella (0.1.4.3.1.1.5)	3	0	0	0	0	0	0	3	0	0	0	0	0	0
6	unclassified (0.1.4.3.1.1.6)	962	13	70	205	47	9	11	264	77	26	153	46	31	10
4	Gammaproteobacteria_order_incertae_sedis (0.1.4.3.2)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5	Gammaproteobacteria_family_incertae_sedis (0.1.4.3.2.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6	Gilvimirinus (0.1.4.3.2.1.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
4	Pasteurellales (0.1.4.3.3)	12	1	2	1	0	1	1	1	1	0	0	2	1	1
5	Pasteurellaceae (0.1.4.3.3.1)	12	1	2	1	0	1	1	1	1	0	0	2	1	1
6	unclassified (0.1.4.3.3.1.1)	12	1	2	1	0	1	1	1	1	0	0	2	1	1
4	Pseudomonadales (0.1.4.3.4)	13	0	0	0	1	0	0	9	0	1	1	1	0	0
5	Moraxellaceae (0.1.4.3.4.1)	4	0	0	0	1	0	0	0	0	1	1	1	0	0
6	Acinetobacter (0.1.4.3.4.1.1)	4	0	0	0	1	0	0	0	0	1	1	1	0	0
5	Pseudomonadaceae (0.1.4.3.4.2)	9	0	0	0	0	0	0	9	0	0	0	0	0	0
6	Pseudomonas (0.1.4.3.4.2.1)	9	0	0	0	0	0	0	9	0	0	0	0	0	0
4	Xanthomonadales (0.1.4.3.5)	8	0	0	0	0	0	0	5	0	0	0	3	0	0
5	Xanthomonadaceae (0.1.4.3.5.1)	8	0	0	0	0	0	0	5	0	0	0	3	0	0
6	Luteimonas (0.1.4.3.5.1.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6	Pseudoxanthomonas (0.1.4.3.5.1.2)	1	0	0	0	0	0	0	0	0	0	0	1	0	0
6	Stenotrophomonas (0.1.4.3.5.1.3)	4	0	0	0	0	0	0	3	0	0	0	1	0	0
6	unclassified (0.1.4.3.5.1.4)	2	0	0	0	0	0	0	1	0	0	0	1	0	0
4	unclassified (0.1.4.3.6)	61	4	2	7	7	2	3	9	4	4	6	5	8	0
5	unclassified (0.1.4.3.6.1)	61	4	2	7	7	2	3	9	4	4	6	5	8	0
6	unclassified (0.1.4.3.6.1.1)	61	4	2	7	7	2	3	9	4	4	6	5	8	0
3	unclassified (0.1.4.4)	569	3	7	96	99	3	6	9	7	3	8	26	299	3
4	unclassified (0.1.4.4.1)	569	3	7	96	99	3	6	9	7	3	8	26	299	3
5	unclassified (0.1.4.4.1.1)	569	3	7	96	99	3	6	9	7	3	8	26	299	3
6	unclassified (0.1.4.4.1.1.1)	569	3	7	96	99	3	6	9	7	3	8	26	299	3
2	Tenericutes (0.1.5)	899	665	0	0	0	233	0	0	0	0	0	1	0	0
3	Mollicutes (0.1.5.1)	899	665	0	0	0	233	0	0	0	0	0	1	0	0
4	Anaeroplasmatales (0.1.5.1.1)	897	663	0	0	0	233	0	0	0	0	0	1	0	0
5	Anaeroplasmataceae (0.1.5.1.1.1)	897	663	0	0	0	233	0	0	0	0	0	1	0	0
6	Anaeroplasma (0.1.5.1.1.1.1)	897	663	0	0	0	233	0	0	0	0	0	1	0	0

4 unclassified (0.1.5.1.2)	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
5 unclassified (0.1.5.1.2.1)	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
6 unclassified (0.1.5.1.2.1.1)	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Verrucomicrobia (0.1.6)	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Verrucomicrobiae (0.1.6.1)	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Verrucomicrobiales (0.1.6.1.1)	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Verrucomicrobiaceae (0.1.6.1.1.1)	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0
6 Akkermansia (0.1.6.1.1.1.1)	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Firmicutes (0.1.7)	36420	4362	2155	2631	2697	4345	4733	1697	2550	2563	1696	1347	796	4848	
3 Bacilli (0.1.7.1)	8745	58	700	518	538	706	1217	642	1326	801	568	351	272	1048	
4 Bacillales (0.1.7.1.1)	49	7	5	2	1	5	4	6	4	1	4	4	3	3	
5 Alicyclobacillaceae (0.1.7.1.1.1)	9	2	0	0	0	0	1	0	3	0	1	1	1	0	
6 Tumblebacillus (0.1.7.1.1.1.1)	9	2	0	0	0	0	1	0	3	0	1	1	1	0	
5 Bacillaceae_1 (0.1.7.1.1.2)	1	0	0	0	0	0	0	1	0	0	0	0	0	0	
6 Geobacillus (0.1.7.1.1.2.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0	
5 Paenibacillaceae_1 (0.1.7.1.1.3)	2	0	0	0	0	0	0	1	0	0	0	1	0	0	
6 Paenibacillus (0.1.7.1.1.3.1)	1	0	0	0	0	0	0	1	0	0	0	0	0	0	
6 Thermobacillus (0.1.7.1.1.3.2)	1	0	0	0	0	0	0	0	0	0	0	1	0	0	
5 Staphylococcaceae (0.1.7.1.1.4)	34	5	5	2	1	5	2	4	1	1	2	2	2	2	
6 Jeotgalicoccus (0.1.7.1.1.4.1)	2	2	0	0	0	0	0	0	0	0	0	0	0	0	
6 Staphylococcus (0.1.7.1.1.4.2)	31	2	5	2	1	5	2	4	1	1	2	2	2	2	
6 unclassified (0.1.7.1.1.4.3)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
5 unclassified (0.1.7.1.1.5)	3	0	0	0	0	0	1	0	0	0	1	0	0	1	
6 unclassified (0.1.7.1.1.5.1)	3	0	0	0	0	0	1	0	0	0	1	0	0	1	
4 Lactobacillales (0.1.7.1.2)	8646	50	690	512	535	697	1210	629	1319	797	561	345	263	1038	
5 Enterococcaceae (0.1.7.1.2.1)	1718	4	71	407	499	2	2	25	64	101	229	216	94	4	
6 Enterococcus (0.1.7.1.2.1.1)	1682	4	67	401	486	2	2	25	63	100	226	209	93	4	
6 unclassified (0.1.7.1.2.1.2)	36	0	4	6	13	0	0	0	1	1	3	7	1	0	
5 Lactobacillaceae (0.1.7.1.2.2)	6745	41	602	91	26	691	1189	587	1225	689	322	113	151	1018	
6 Lactobacillus (0.1.7.1.2.2.1)	6507	41	577	89	25	689	1140	555	1185	675	304	112	142	973	
6 unclassified (0.1.7.1.2.2.2)	238	0	25	2	1	2	49	32	40	14	18	1	9	45	
5 Leuconostocaceae (0.1.7.1.2.3)	6	0	0	0	0	0	0	2	0	0	0	4	0	0	
6 Leuconostoc (0.1.7.1.2.3.1)	1	0	0	0	0	0	0	0	0	0	0	1	0	0	
6 Weissella (0.1.7.1.2.3.2)	5	0	0	0	0	0	0	2	0	0	0	3	0	0	
5 Streptococcaceae (0.1.7.1.2.4)	27	3	3	5	1	0	1	3	1	3	0	3	2	2	
6 Lactococcus (0.1.7.1.2.4.1)	3	2	0	1	0	0	0	0	0	0	0	0	0	0	
6 Streptococcus (0.1.7.1.2.4.2)	23	1	3	4	0	0	1	3	1	3	0	3	2	2	
6 unclassified (0.1.7.1.2.4.3)	1	0	0	0	1	0	0	0	0	0	0	0	0	0	
5 unclassified (0.1.7.1.2.5)	150	2	14	9	9	4	18	12	29	4	10	9	16	14	
6 unclassified (0.1.7.1.2.5.1)	150	2	14	9	9	4	18	12	29	4	10	9	16	14	
4 unclassified (0.1.7.1.3)	50	1	5	4	2	4	3	7	3	3	3	2	6	7	
5 unclassified (0.1.7.1.3.1)	50	1	5	4	2	4	3	7	3	3	3	2	6	7	
6 unclassified (0.1.7.1.3.1.1)	50	1	5	4	2	4	3	7	3	3	3	2	6	7	
3 Clostridia (0.1.7.2)	21849	4060	1440	780	862	2865	3161	721	1199	1757	1119	153	228	3504	
4 Clostridiales (0.1.7.2.1)	21806	4049	1440	780	862	2850	3152	720	1199	1757	1119	153	228	3497	
5 Clostridiaceae_1 (0.1.7.2.1.1)	451	5	7	45	5	189	18	8	5	86	54	8	5	16	
6 Clostridium_sensu_stricto (0.1.7.2.1.1.1)	269	3	4	41	1	177	13	6	2	0	3	3	4	12	
6 unclassified (0.1.7.2.1.1.2)	182	2	3	4	4	12	5	2	3	86	51	5	1	4	
5 Clostridiales_Incertae_Sedis_XI (0.1.7.2.1.2)	4	1	0	0	0	1	0	2	0	0	0	0	0	0	
6 Anaerococcus (0.1.7.2.1.2.1)	2	0	0	0	0	0	0	2	0	0	0	0	0	0	
6 Finegoldia (0.1.7.2.1.2.2)	1	0	0	0	0	1	0	0	0	0	0	0	0	0	
6 Peptoniphilus (0.1.7.2.1.2.3)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
5 Eubacteriaceae (0.1.7.2.1.3)	278	0	1	161	79	5	0	0	0	0	0	15	12	5	
6 Anaerofustis (0.1.7.2.1.3.1)	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
6 Eubacterium (0.1.7.2.1.3.2)	276	0	1	161	79	5	0	0	0	0	0	15	12	3	
5 Lachnospiraceae (0.1.7.2.1.4)	14064	2885	1125	129	451	1469	1908	608	1027	1238	888	48	71	2217	

6	Anaerostipes (0.1.7.2.1.4.1)	2591	0	580	0	2	0	0	332	503	756	413	5	0	0
6	Blautia (0.1.7.2.1.4.2)	2265	1	465	35	22	4	2	257	520	481	466	9	0	3
6	Clostridium XIVa (0.1.7.2.1.4.3)	592	40	1	41	222	212	31	2	0	1	0	2	1	39
6	Clostridium XIVb (0.1.7.2.1.4.4)	67	38	0	0	0	5	6	0	0	0	0	0	0	18
6	Dorea (0.1.7.2.1.4.5)	52	12	0	0	2	6	14	0	0	0	0	0	0	18
6	Johnsonella (0.1.7.2.1.4.6)	58	55	0	0	0	1	0	0	0	0	0	2	0	0
6	Lachnospiracea incertae sedis (0.1.7.2.1.4.7)	56	2	0	0	0	19	3	0	0	0	0	0	0	32
6	Marvinbryantia (0.1.7.2.1.4.8)	3	0	0	0	0	2	0	0	0	0	0	0	0	1
6	Roseburia (0.1.7.2.1.4.9)	87	0	0	0	0	1	21	0	0	0	0	0	0	65
6	unclassified (0.1.7.2.1.4.10)	8293	2737	79	53	203	1219	1831	17	4	0	9	30	70	2041
5	Peptostreptococcaceae (0.1.7.2.1.5)	1738	3	261	339	67	68	56	68	147	431	168	56	14	60
6	Clostridium XI (0.1.7.2.1.5.1)	1715	3	261	338	67	65	48	67	146	429	168	56	14	53
6	unclassified (0.1.7.2.1.5.2)	23	0	0	1	0	3	8	1	1	2	0	0	0	7
5	Ruminococcaceae (0.1.7.2.1.6)	3494	893	11	73	233	605	772	16	11	0	3	10	119	748
6	Anaerotruncus (0.1.7.2.1.6.1)	7	0	0	1	1	0	1	0	0	0	0	0	4	0
6	Butyricoccus (0.1.7.2.1.6.2)	395	47	0	9	151	0	49	0	0	0	0	1	102	36
6	Clostridium III (0.1.7.2.1.6.3)	1	0	0	0	0	0	0	0	0	0	0	1	0	0
6	Clostridium IV (0.1.7.2.1.6.4)	116	38	1	11	21	22	6	6	2	0	0	0	0	9
6	Flavonifractor (0.1.7.2.1.6.5)	5	1	0	0	0	0	3	0	0	0	0	0	0	1
6	Oscillibacter (0.1.7.2.1.6.6)	486	106	0	0	0	116	114	0	0	0	0	1	0	149
6	Pseudoflavonifractor (0.1.7.2.1.6.7)	164	38	0	13	1	15	52	4	0	0	0	2	0	39
6	Ruminococcus (0.1.7.2.1.6.8)	10	3	0	0	0	7	0	0	0	0	0	0	0	0
6	Sporobacter (0.1.7.2.1.6.9)	7	3	0	0	0	0	3	0	0	0	0	0	0	1
6	unclassified (0.1.7.2.1.6.10)	2303	657	10	39	59	445	544	6	9	0	3	5	13	513
5	unclassified (0.1.7.2.1.7)	1777	262	35	33	27	513	398	18	9	2	6	16	7	451
6	unclassified (0.1.7.2.1.7.1)	1777	262	35	33	27	513	398	18	9	2	6	16	7	451
4	unclassified (0.1.7.2.2)	43	11	0	0	0	15	9	1	0	0	0	0	0	7
5	unclassified (0.1.7.2.2.1)	43	11	0	0	0	15	9	1	0	0	0	0	0	7
6	unclassified (0.1.7.2.2.1.1)	43	11	0	0	0	15	9	1	0	0	0	0	0	7
3	Erysipelotrichia (0.1.7.3)	4795	34	10	1299	1253	554	280	38	17	0	2	817	286	205
4	Erysipelotrichales (0.1.7.3.1)	4795	34	10	1299	1253	554	280	38	17	0	2	817	286	205
5	Erysipelotrichaceae (0.1.7.3.1.1)	4795	34	10	1299	1253	554	280	38	17	0	2	817	286	205
6	Allobaculum (0.1.7.3.1.1.1)	28	0	0	3	6	0	11	0	1	0	0	1	0	6
6	Clostridium XVIII (0.1.7.3.1.1.2)	2855	3	5	982	960	17	42	4	5	0	0	663	151	23
6	Coprobacillus (0.1.7.3.1.1.3)	2	0	0	2	0	0	0	0	0	0	0	0	0	0
6	Turcibacter (0.1.7.3.1.1.4)	635	29	3	16	3	533	24	2	1	0	2	5	3	14
6	unclassified (0.1.7.3.1.1.5)	1275	2	2	296	284	4	203	32	10	0	0	148	132	162
3	Negativicutes (0.1.7.4)	23	3	1	2	0	2	4	0	3	1	2	4	1	0
4	Selenomonadales (0.1.7.4.1)	23	3	1	2	0	2	4	0	3	1	2	4	1	0
5	Veillonellaceae (0.1.7.4.1.1)	23	3	1	2	0	2	4	0	3	1	2	4	1	0
6	Veillonella (0.1.7.4.1.1.1)	20	2	1	2	0	2	4	0	2	1	2	3	1	0
6	unclassified (0.1.7.4.1.1.2)	3	1	0	0	0	0	0	0	1	0	0	1	0	0
3	unclassified (0.1.7.5)	1008	207	4	32	44	218	71	296	5	4	5	22	9	91
4	unclassified (0.1.7.5.1)	1008	207	4	32	44	218	71	296	5	4	5	22	9	91
5	unclassified (0.1.7.5.1.1)	1008	207	4	32	44	218	71	296	5	4	5	22	9	91
6	unclassified (0.1.7.5.1.1.1)	1008	207	4	32	44	218	71	296	5	4	5	22	9	91
2	unclassified (0.1.8)	2163	331	23	94	60	399	259	77	33	8	29	41	194	615
3	unclassified (0.1.8.1)	2163	331	23	94	60	399	259	77	33	8	29	41	194	615
4	unclassified (0.1.8.1.1)	2163	331	23	94	60	399	259	77	33	8	29	41	194	615
5	unclassified (0.1.8.1.1.1)	2163	331	23	94	60	399	259	77	33	8	29	41	194	615
6	unclassified (0.1.8.1.1.1.1)	2163	331	23	94	60	399	259	77	33	8	29	41	194	615