

**Table S2. Description of observed species from OUT annotation across two subspecies**

OUT no.	OUT Abundance	Taxonomy
Otu2	75294	Bacteria;Proteobacteria;Gammaproteobacteria;Pasteurellales
Otu6	63495	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu3	62422	Bacteria;Proteobacteria;Gammaproteobacteria;Pasteurellales
Otu1	54347	Bacteria;Proteobacteria;Betaproteobacteria;Neisseriales;Neisseriaceae;Snodgrassella;Snodgrassella_alvi
Otu8	49452	Bacteria;Actinobacteria;Actinobacteria;Bifidobacteriales;Bifidobacteriaceae;Bifidobacterium
Otu32	46674	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu4	45530	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu106	40865	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu10	25479	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu28	24137	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu12	12756	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu5	10889	Bacteria;Firmicutes;Bacilli;Lactobacillales;Enterococcaceae;Melissococcus;Melissococcus_plutonius
Otu136	9928	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu7	8661	Bacteria;Proteobacteria;Alphaproteobacteria;Rhodospirillales;Acetobacteraceae;Commensalibacter;Commensalibac
Otu110	8579	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu123	8382	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu102	7013	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu9	6157	Bacteria;Proteobacteria;Alphaproteobacteria;Rhizobiales
Otu23	4405	Bacteria;Proteobacteria;Alphaproteobacteria;Rhodospirillales;Acetobacteraceae
Otu117	2967	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu101	2773	Bacteria;Proteobacteria;Gammaproteobacteria;Pasteurellales
Otu11	2480	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Bacteroidaceae;Bacteroides
Otu122	2461	Bacteria;Proteobacteria;Gammaproteobacteria;Pasteurellales
Otu13	2387	Bacteria;Proteobacteria;Gammaproteobacteria;Enterobacteriales;Enterobacteriaceae;Enterobacter
Otu130	2198	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu104	2121	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu107	1881	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu14	1668	Bacteria;Proteobacteria;Alphaproteobacteria;Rhodospirillales;Acetobacteraceae;Saccharibacter;Saccharibacter_flor
Otu18	1553	Bacteria;Bacteroidetes;Flavobacteriia;Flavobacteriales;Weeksellaceae

Otu40	1129	Bacteria;Proteobacteria;Gammaproteobacteria;Enterobacteriales;Enterobacteriaceae
Otu17	984	Bacteria;Firmicutes;Clostridia;Clostridiales;Veillonellaceae;Megasphaera
Otu150	794	Bacteria;Proteobacteria;Betaproteobacteria;Neisseriales;Neisseriaceae;Snodgrassella;Snodgrassella_alvi
Otu19	708	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae
Otu148	620	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu16	585	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae;Ruminococcus;Ruminococcus_gnavus
Otu15	552	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Bacteroidaceae;Bacteroides;Bacteroides_fragilis
Otu139	479	Bacteria;Proteobacteria;Gammaproteobacteria
Otu133	427	Bacteria;Firmicutes;Bacilli;Lactobacillales;Enterococcaceae;Melissococcus;Melissococcus_plutonius
Otu25	417	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae;Blautia;Blautia_producta
Otu35	413	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Bacteroidaceae;Bacteroides;Bacteroides_ovatus
Otu128	408	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu31	407	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu127	382	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu20	367	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Porphyromonadaceae;Parabacteroides
Otu22	364	Bacteria;Proteobacteria;Betaproteobacteria;Burkholderiales;Alcaligenaceae;Sutterella
Otu111	342	Bacteria;Proteobacteria;Gammaproteobacteria;Pasteurellales
Otu27	328	Bacteria;Firmicutes;Bacilli;Lactobacillales
Otu21	326	Bacteria;Proteobacteria;Gammaproteobacteria;Enterobacteriales;Enterobacteriaceae;Escherichia;Escherichia_coli
Otu99	312	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu24	309	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Bacteroidaceae;Bacteroides;Bacteroides_ovatus
Otu125	260	Bacteria;Actinobacteria;Actinobacteria;Bifidobacteriales;Bifidobacteriaceae;Bifidobacterium
Otu29	236	Bacteria;Actinobacteria;Actinobacteria;Bifidobacteriales;Bifidobacteriaceae;Bifidobacterium
Otu105	226	Bacteria;Proteobacteria;Betaproteobacteria;Neisseriales;Neisseriaceae;Snodgrassella;Snodgrassella_alvi
Otu103	220	Bacteria;Proteobacteria;Betaproteobacteria;Neisseriales;Neisseriaceae;Snodgrassella;Snodgrassella_alvi
Otu26	207	Bacteria;Firmicutes;Clostridia;Clostridiales;Veillonellaceae;Phascolarctobacterium
Otu30	192	Bacteria;Firmicutes;Clostridia;Clostridiales;Veillonellaceae;Acidaminococcus
Otu135	166	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu121	138	Bacteria;Actinobacteria;Actinobacteria;Bifidobacteriales;Bifidobacteriaceae;Bifidobacterium;Bifidobacterium_adole.
Otu37	128	Bacteria;Cyanobacteria;Chloroplast;Streptophyta
Otu131	107	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae;Clostridium;Clostridium_citroniae

Otu155	106	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu33	87	Bacteria;Proteobacteria;Deltaproteobacteria;Desulfovibrionales;Desulfovibrionaceae;Bilophila
Otu149	86	Bacteria;Firmicutes;Bacilli;Lactobacillales;Enterococcaceae;Melissococcus;Melissococcus_plutonius
Otu164	85	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu41	83	Bacteria;Firmicutes;Bacilli;Bacillales;Staphylococcaceae;Staphylococcus;Staphylococcus_epidermidis
Otu170	78	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu34	71	Bacteria;Firmicutes;Clostridia;Clostridiales;Veillonellaceae;Dialister
Otu36	63	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus;Lactobacillus_ruminis
Otu39	62	Bacteria;Proteobacteria;Gammaproteobacteria;Enterobacteriales;Enterobacteriaceae;Providencia
Otu112	55	Bacteria;Proteobacteria;Gammaproteobacteria;Pasteurellales
Otu171	54	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu159	53	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae
Otu58	50	Bacteria;Proteobacteria;Gammaproteobacteria;Enterobacteriales;Enterobacteriaceae;Serratia;Serratia_marcescens
Otu143	43	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae
Otu42	40	Bacteria;Firmicutes;Bacilli;Lactobacillales;Streptococcaceae;Streptococcus;Streptococcus_infantis
Otu38	35	Bacteria;Actinobacteria;Actinobacteria;Bifidobacteriales;Bifidobacteriaceae;Bifidobacterium;Bifidobacterium_longu
Otu160	34	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu54	30	Bacteria;Firmicutes;Clostridia;Clostridiales;Ruminococcaceae;Faecalibacterium;Faecalibacterium_prausnitzii
Otu49	28	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Rikenellaceae
Otu152	27	Bacteria;Proteobacteria;Gammaproteobacteria;Pasteurellales
Otu56	26	Bacteria;Proteobacteria;Gammaproteobacteria;Pseudomonadales;Moraxellaceae;Acinetobacter;Acinetobacter_joh
Otu59	24	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae;Ruminococcus;Ruminococcus_torques
Otu53	24	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Bacteroidaceae;Bacteroides
Otu55	24	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Corynebacteriaceae;Corynebacterium
Otu44	23	Bacteria;Firmicutes;Bacilli;Lactobacillales;Streptococcaceae;Streptococcus
Otu43	22	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Micrococcaceae;Renibacterium
Otu48	21	Bacteria;Firmicutes;Clostridia;Clostridiales;Ruminococcaceae
Otu46	21	Bacteria;Firmicutes;Erysipelotrichi;Erysipelotrichales;Erysipelotrichaceae;Eubacterium;Eubacterium_dolichum
Otu61	19	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Corynebacteriaceae;Corynebacterium
Otu74	19	Bacteria;Firmicutes;Clostridia;Clostridiales;Peptostreptococcaceae
Otu84	18	Bacteria;Proteobacteria;Gammaproteobacteria;Aeromonadales;Aeromonadaceae;Aeromonas;Aeromonas_hydroph

Otu50	17	Bacteria;Firmicutes;Bacilli;Lactobacillales;Carnobacteriaceae;Granulicatella
Otu70	16	Bacteria;Proteobacteria;Betaproteobacteria;Neisseriales;Neisseriaceae;Neisseria;Neisseria_subflava
Otu47	16	Bacteria;Thermi;Deinococci;Thermales;Thermaceae;Thermus
Otu52	16	Bacteria;Proteobacteria;Alphaproteobacteria;Rhizobiales;Methylobacteriaceae
Otu51	15	Bacteria;Firmicutes;Clostridia;Clostridiales;Ruminococcaceae;Ruminococcus;Ruminococcus_bromii
Otu83	15	Bacteria;Proteobacteria;Gammaproteobacteria;Pseudomonadales;Moraxellaceae;Acinetobacter
Otu45	14	Bacteria;TM7;TM7-3
Otu97	14	Bacteria;Proteobacteria;Gammaproteobacteria;Pseudomonadales;Moraxellaceae;Enhydrobacter
Otu151	13	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu63	12	Bacteria;Proteobacteria;Betaproteobacteria;Burkholderiales;Burkholderiaceae;Lautropia
Otu67	12	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae;Roseburia;Roseburia_faecis
Otu66	12	Bacteria;Bacteroidetes;Cytophagia;Cytophagales;Cytophagaceae
Otu68	12	Bacteria;Firmicutes;Clostridia;Clostridiales;Ruminococcaceae;Oscillospira
Otu60	11	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Corynebacteriaceae;Corynebacterium
Otu64	11	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae;Clostridium;Clostridium_clostridioforme
Otu71	11	Bacteria;Firmicutes;Clostridia;Clostridiales;Veillonellaceae;Veillonella;Veillonella_dispar
Otu118	11	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae;Blautia
Otu96	11	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Corynebacteriaceae;Corynebacterium
Otu77	10	Bacteria;Proteobacteria;Gammaproteobacteria;Pasteurellales;Pasteurellaceae;Haemophilus;Haemophilus_parainflu
Otu78	10	Bacteria;Firmicutes;Clostridia;Clostridiales;Veillonellaceae;Dialister
Otu79	10	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Corynebacteriaceae;Corynebacterium
Otu57	10	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Micrococcaceae;Arthrobacter
Otu80	10	Bacteria;Firmicutes;Clostridia;Clostridiales;Mogibacteriaceae
Otu89	10	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Actinomycetaceae;Actinomyces
Otu98	10	Bacteria;Proteobacteria;Gammaproteobacteria;Pseudomonadales;Moraxellaceae;Acinetobacter
Otu91	10	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Dermabacteraceae;Brachybacterium;Brachybacterium_con
Otu65	9	Bacteria;Firmicutes;Clostridia;Clostridiales;Ruminococcaceae;Gemmiger;Gemmiger_formicilis
Otu73	9	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Corynebacteriaceae;Corynebacterium
Otu76	9	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae
Otu113	9	Bacteria;Proteobacteria;Betaproteobacteria;Rhodocyclales;Rhodocyclaceae;Hydrogenophilus
Otu62	8	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae

Otu69	8	Bacteria;Proteobacteria;Epsilonproteobacteria;Campylobacterales;Campylobacteraceae;Campylobacter
Otu72	8	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae
Otu86	8	Bacteria;Bacteroidetes;Rhodothermi;Rhodothermales;Rhodothermaceae;Rubricoccus
Otu75	7	Bacteria;Firmicutes;Clostridia;Clostridiales;Tissierellaceae;Anaerococcus
Otu163	7	Bacteria;Firmicutes;Bacilli;Lactobacillales;Lactobacillaceae;Lactobacillus
Otu100	7	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Porphyromonadaceae;Parabacteroides;Parabacteroides_distasoni
Otu81	7	Bacteria;TM7;TM7-1
Otu87	7	Bacteria;Bacteroidetes;Sphingobacteriia;Sphingobacteriales;Sphingobacteriaceae;Sphingobacterium;Sphingobacteri
Otu93	7	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Corynebacteriaceae;Corynebacterium;Corynebacterium_kr
Otu129	6	Bacteria;Proteobacteria;Gammaproteobacteria;Alteromonadales;Shewanellaceae;Shewanella
Otu116	6	Bacteria;Proteobacteria;Betaproteobacteria;Neisseriales;Neisseriaceae;Kingella
Otu114	6	Bacteria;Proteobacteria;Betaproteobacteria;Burkholderiales;Oxalobacteraceae;Massilia
Otu82	6	Bacteria;Firmicutes;Clostridia;Clostridiales;Ruminococcaceae;Oscillospira
Otu85	6	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Bacteroidaceae;Bacteroides;Bacteroides_eggerthii
Otu88	6	Bacteria;Firmicutes;Bacilli;Lactobacillales;Aerococcaceae;Abiotrophia
Otu137	6	Bacteria;Proteobacteria;Alphaproteobacteria;Rhizobiales;Beijerinckiaceae
Otu90	6	Bacteria;Thermi;Deinococci;Deinococcales;Deinococcaceae;Deinococcus
Otu92	6	Bacteria;Firmicutes;Clostridia;Clostridiales;Ruminococcaceae;Oscillospira
Otu124	5	Bacteria;Firmicutes;Bacilli;Lactobacillales;Aerococcaceae
Otu161	5	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus;Bacillus_humi
Otu109	5	Bacteria;Proteobacteria;Alphaproteobacteria;Rhodospirillales;Acetobacteraceae;Roseomonas;Roseomonas_mucosa
Otu94	5	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Microbacteriaceae;Yonghaparkia
Otu126	4	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Rikenellaceae
Otu158	4	Bacteria;Proteobacteria;Gammaproteobacteria;Pasteurellales
Otu145	4	Bacteria;Bacteroidetes;Flavobacteriia;Flavobacteriales;Flavobacteriaceae;Capnocytophaga
Otu147	4	Bacteria;Proteobacteria;Betaproteobacteria;Burkholderiales;Oxalobacteraceae;Herbaspirillum
Otu146	4	Bacteria;Proteobacteria;Alphaproteobacteria;Sphingomonadales;Sphingomonadaceae;Sphingomonas
Otu115	4	Bacteria;Proteobacteria;Gammaproteobacteria;Pasteurellales;Pasteurellaceae;Haemophilus
Otu119	4	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae;Ruminococcus;Ruminococcus_gnavus
Otu108	4	Bacteria;Firmicutes;Clostridia;Clostridiales;Mogibacteriaceae
Otu132	4	Bacteria;Firmicutes;Erysipelotrichi;Erysipelotrichales;Erysipelotrichaceae;Eubacterium;Eubacterium_dolichum

Otu134	4	Bacteria;Actinobacteria;Acidimicrobiia;Acidimicrobiales
Otu138	4	Bacteria;Firmicutes;Bacilli;Bacillales;Thermoactinomycetaceae
Otu95	4	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Micrococcaceae;Rothia;Rothia_mucilaginos
Otu120	3	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;Prevotellaceae;Prevotella
Otu154	3	Bacteria;Firmicutes;Clostridia;Clostridiales;Veillonellaceae;Dialister
Otu141	3	Bacteria;Firmicutes;Clostridia;Clostridiales;Veillonellaceae;Dialister
Otu162	3	Bacteria;Firmicutes;Erysipelotrichi;Erysipelotrichales;Erysipelotrichaceae;Clostridium;Clostridium_amosum
Otu165	3	Bacteria;Firmicutes;Clostridia;Clostridiales;Ruminococcaceae;Butyricoccus;Butyricoccus_pullicaecorum
Otu168	3	Bacteria;Firmicutes;Bacilli;Lactobacillales;Leuconostocaceae;Leuconostoc
Otu153	2	Bacteria;Tenericutes;Mollicutes;RF39
Otu156	2	Bacteria;Bacteroidetes;Bacteroidia;Bacteroidales;S24-7
Otu157	2	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Sporichthyaceae
Otu140	2	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae;Lachnospira
Otu142	2	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Actinomycetaceae;Actinomyces
Otu144	2	Bacteria;Firmicutes;Clostridia;Clostridiales;Lachnospiraceae;Clostridium;Clostridium_piliforme
Otu167	2	Bacteria;Firmicutes;Clostridia;Clostridiales;Ruminococcaceae;Oscillospira
Otu166	2	Bacteria;Actinobacteria;Actinobacteria;Actinomycetales;Corynebacteriaceae;Corynebacterium
Otu169	2	Bacteria;Firmicutes;Bacilli;Gemellales;Gemellaceae











