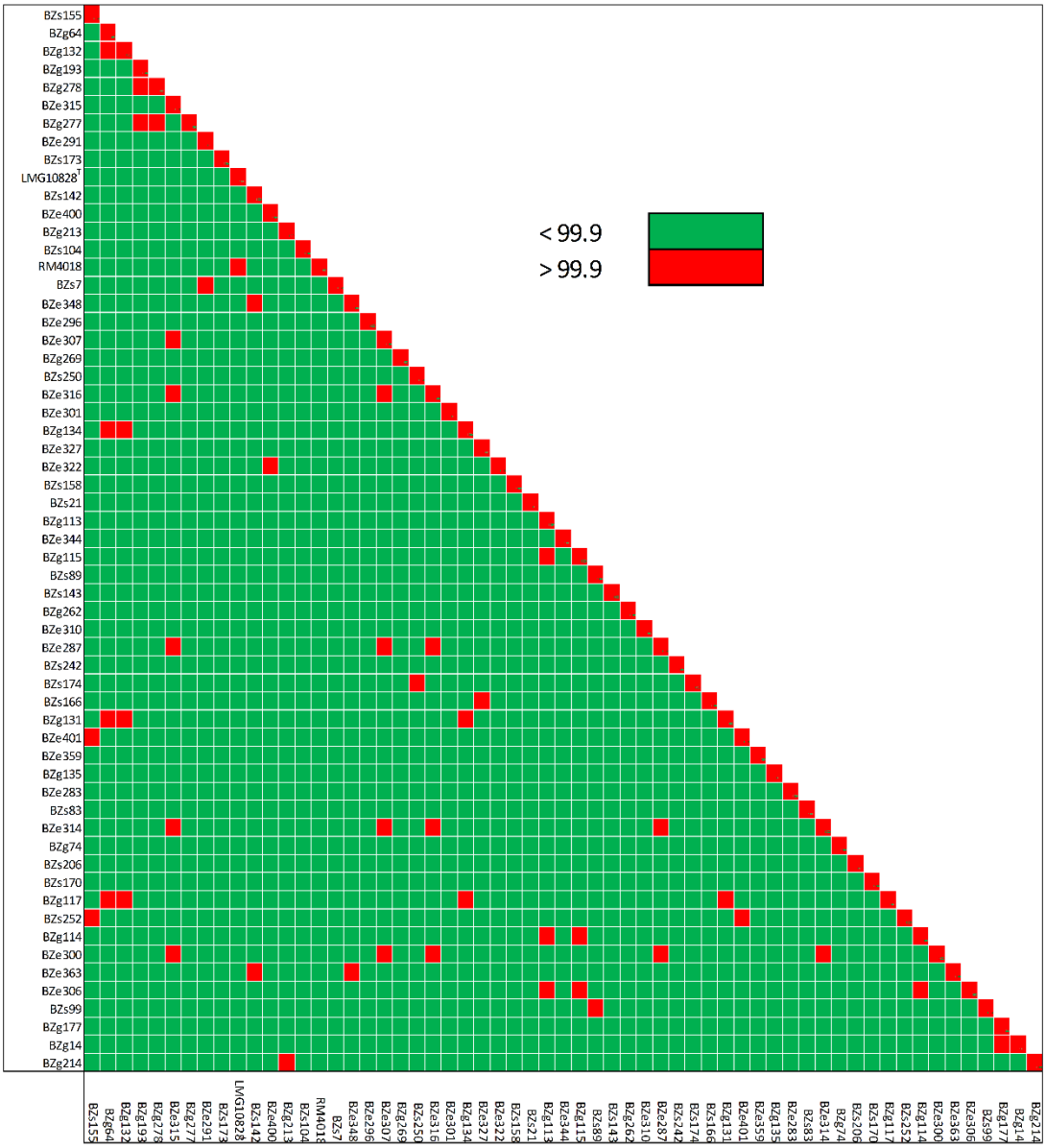
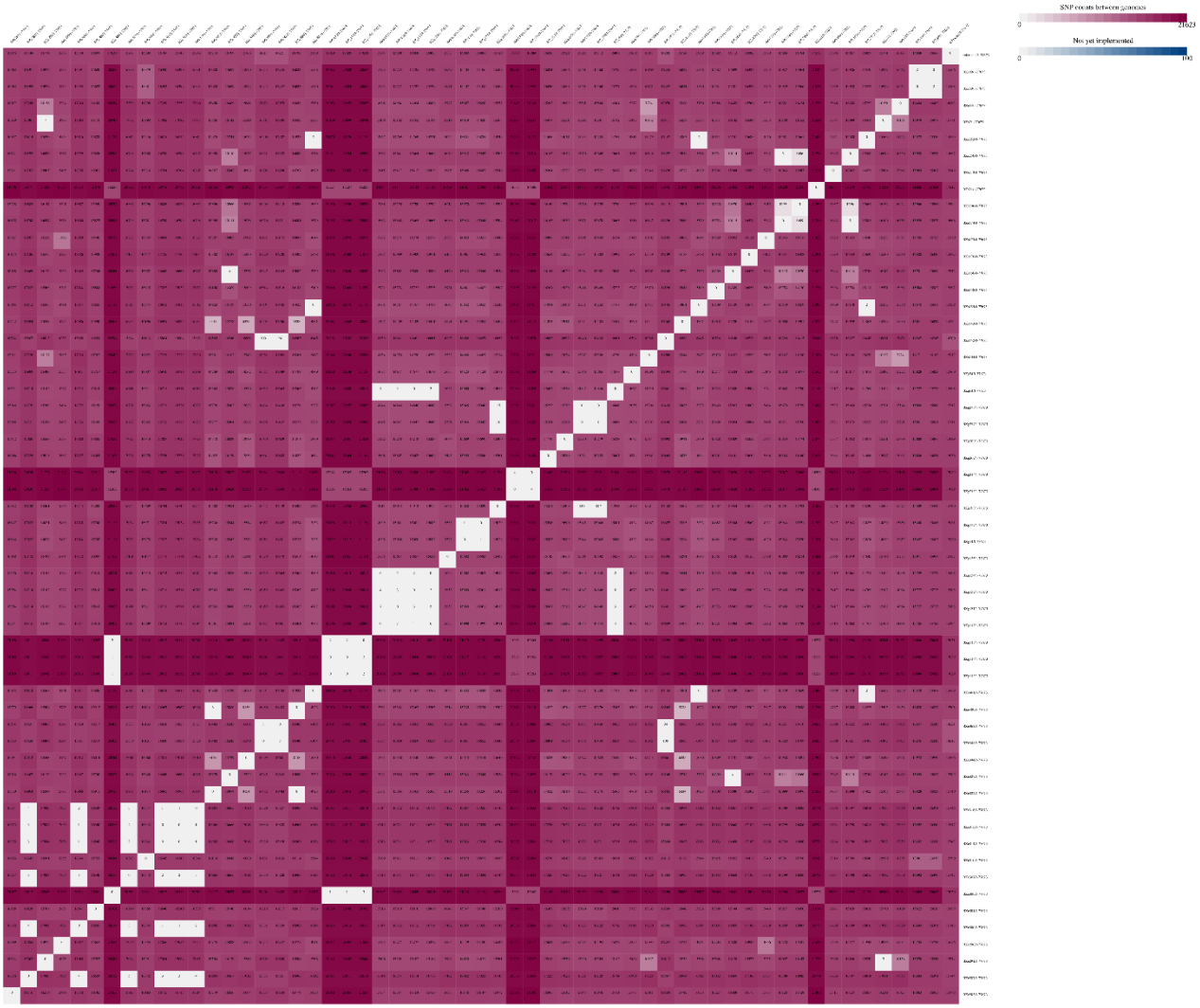
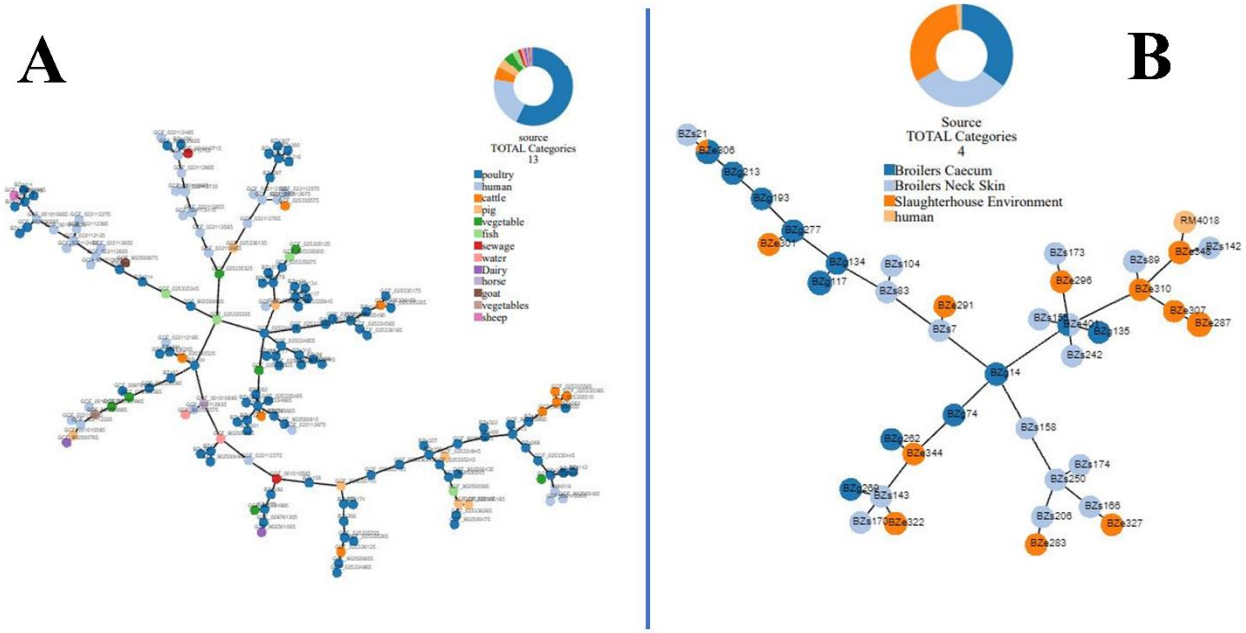
Supplementary figures



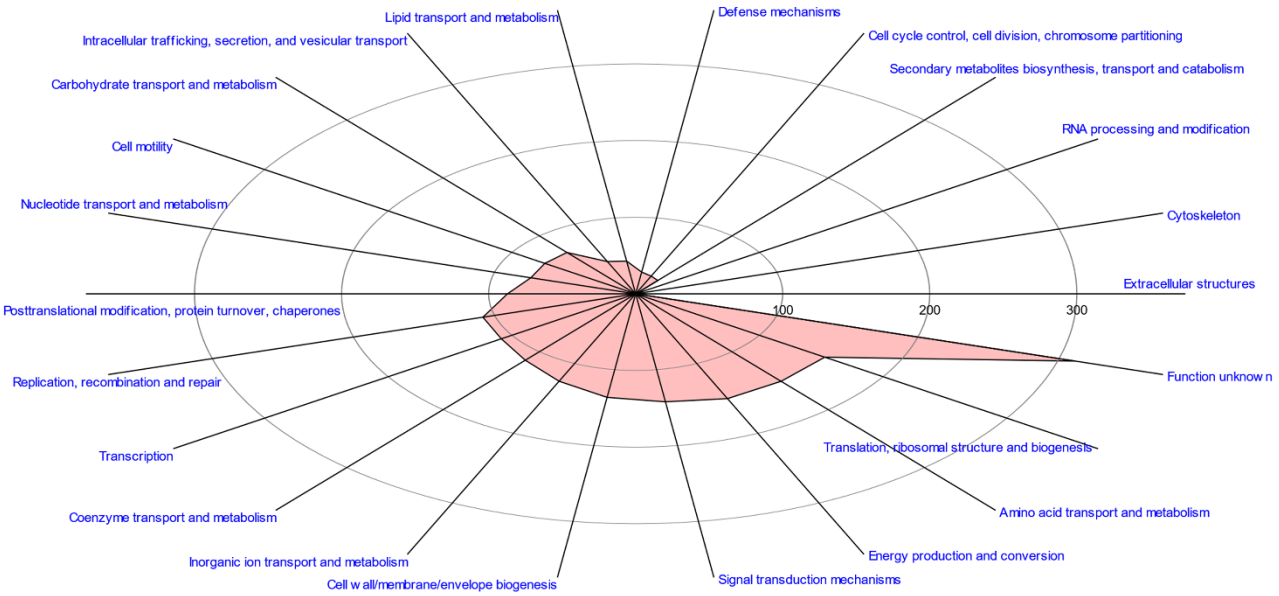
Supplementary figure 1. Average nucleotide identity (ANI) values about 56 *A. butzleri* isolates. The heatmap shows ANI value above (red) and below (green) 99.9%. Isolates that show ANI values below 99.9% are considered different strains. The genome of RM4018 and LMG 10828^{T} were included as control (same strain).



Supplementary figure 2. Single nucleotide polymorphisms (SNPs) about 56 *A. butzleri* isolates. The figure shows the number of SNPs between isolates. The genome of RM4018 was used for the alignment and included. Considering the ANI value (> 99.9%), BZs142 was considered equal to BZe348 and BZe363 even if the number of SNPs from the comparison with these isolates was respectively 100 and 94.



Supplementary figure 3. Trees about cgMLST on 56 *A. butzleri* genomes including assemblies present in NCBI (A) and 56 *A. butzleri* isolates from BNS, BC and SE (B). The figure B includes the genome RM4018. The legend in figure A (profile size 1607) indicates the sources of isolation while the legend in figure B (profile size 1009) shows the isolation sources broilers caecum (BC), slaughterhouse environment (SE) and broiler neck skin (BNS). The isolation source of RM4018 is included as "human".



Supplementary figure 4. Gene enrichment analysis (e-mapper) on *A. butzleri* genes. The polar plot was produced on COGs average from the 31 *A. butzleri* strains isolated from BNS, BC and SE.

Supplementary tables

Supplementary table 1. Information about isolation sources (broilers and environmental samples) of *A. butzleri* isolates. The table shows information about isolation source codes, antibiotic treatment (no_ATB = absence of treatment), average weight, and age of broilers. The information about material, machines and slaughtering phase of SE samples are indicated in the second part of the table. The "DAY" numbers and the a/b letters after SE samples indicate different sampling days.

Flock code	Antibiotic treatment	Age (days)	Average weight (kg)
1_DAY2	Penicillin/Tetracycline	55	3.57
1_DAY3	Tetracycline	48	3.23
1_DAY4	Penicillin/Tetracycline	50	3.3
1_DAY5	no_ATB	50	3.11
1_DAY6	no_ATB	50	2.6
1_DAY7	no_ATB	51	3.4
1_DAY9	Penicillin/Enrofloxacin	57	3.38
2_DAY2	Penicillin/Thiamphenicol	50	3.77
2_DAY4	no_ATB	50	3.14
2_DAY5	no_ATB	43	2.54
2_DAY8	no_ATB	47	2.86
2_DAY9	Doxipan	47	2.83
3_DAY2	no_ATB	47	2.5
3_DAY3	Amoxindox	48	3.22
3_DAY4	no_ATB	47	3.48
3_DAY6	no_ATB	47	3.07
3_DAY7	Amoxifarma	53	3.53
3_DAY8	Amoxifarma	50	3.27
3_DAY9	no_ATB	50	3.78
4_DAY4	no_ATB	47	2.9
4_DAY5	Amoxindox-Floxatril	50	3.8
4_DAY6	Amoxifarma	54	3.61
4_DAY7	no_ATB	47	3.5
4_DAY8	Amoxid	50	3.59
4_DAY9	Prazil	43	2.59
5_DAY2	no_ATB	50	3.76
5_DAY3	Amoxifarma	58	2.82
5_DAY4	Amoxifarma	54	3.74
5_DAY5	Floxatril	50	3.09
5_DAY6	Levoflok	50	3.48
5_DAY9	Doxipan	54	3.86
6_DAY4	no_ATB	50	3.16
6_DAY6	no_ATB	48	3.3
6_DAY7	Amoxid_Taf_25%	57	3.85
6_DAY9	Taf 25%	51	3.47
7_DAY2	no_ATB	43	2.7
7_DAY9	Doxipan Amoxifarma	50	3.75

8_DAY9	Amoxifarma	54	4.07

SE code	Material	Machine/function	Phase
1 a/b	steel	Scalding tank	Scalding
2 a/b	Teflon/rubber	Chicken plucker	Plucking
3 a/b	Teflon/rubber	Chicken plucker	Plucking
4 a/b	steel	Scalding tank	Scalding
5 a/b	Teflon/rubber	Chicken plucker	Plucking
6 a/b	steel	Chicken plucker	Plucking
7 a/b	steel	Cloaca opening machine	Preparation
11 a/b	Teflon/rubber	Skin transport conveyors	Skin removal
12 a/b	steel	Skin transport conveyors	Skin removal
17 a/b	Teflon/rubber	Guts/giblets transport conveyors	Waste line
19 a/b	steel	Extractor	Interior removal
20 a/b	steel	Neck-cutting	Neck removal

DAY2 (27th jan 2021); DAY3 (3rd feb 2021); DAY 4 (17th feb 2021); DAY5 (3rd mar 2021); DAY6 (16th mar 2021); DAY7 (16th apr 2021); DAY8 (5th may 2021)
SE: a (24th jun 2021); b (24th mar 2022)

Supplementary table 2. Metrics about *A. butzleri* genomes. The table shows the following information about *A. butzleri* genomes: genome size (in Mbp), reads number, number of contigs and coverage (reads nr. * reads length)/genome size). The information about functional annotation is included excluding multiple isolates (ANI > 99.9% and SNPs < 10).

Isolate	Genome size Mbp	Reads nr	Contigs	Coverage	Total Genes	% of unknown function genes
BZe283	2.31	14604540	46	950	2308	50.61
BZe296	2.18	16407104	82	1128	2198	49.23
BZe301	2.19	17882118	36	1223	2173	47.26
BZe306	2.37	18230684	40	1154	2307	49.54
BZe310	2.16	16016130	57	1112	2164	47.55
BZe314	2.32	19786068	42	1279	2292	49.65
BZe322	2.11	17531452	33	1245	2121	46.77
BZe327	2.13	20586038	24	1447	2135	48.01
BZe344	2.17	21827612	28	1509	2213	49.53
BZe363	2.31	27456922	32	1782	2267	49.36
BZg134	2.32	17542324	63	1135	2321	50.71
BZg135	2.10	17857734	33	1274	2133	48.52
BZg177	2.14	23264286	96	1630	2160	48.38
BZg214	2.26	15894316	34	1054	2209	48.57
BZg262	2.05	18279838	23	1335	2072	46.24
BZg269	2.03	16499444	51	1217	2041	45.37
BZg278	2.16	15803232	21	1097	2160	47.87
BZg74	2.17	15526676	82	1072	2195	49.25
BZs104	2.16	11508306	77	801	2144	47.53
BZs143	2.12	18935560	59	1341	2160	47.04
BZs158	2.08	13862546	80	997	2095	47.49
BZs170	2.16	15062142	41	1046	2164	46.95
BZs173	2.26	15626580	70	1037	2305	50.15
BZs206	2.09	15139302	45	1086	2089	46.77
BZs21	2.24	14023472	41	941	2192	48.22
BZs242	2.10	17457894	40	1249	2101	46.69
BZs250	2.12	10142814	36	718	2125	47.62
BZs252	2.14	10786642	64	758	2136	47.10
BZs7	2.08	11552840	57	832	2049	45.58
BZs83	2.16	17277374	77	1202	2125	47.53
BZs99	2.11	9841820	58	699	2114	47.63
BZe287	2.32	14347992	49	928	NA	NA
BZe291	2.11	14992940	58	1066	NA	NA
BZe300	2.32	22744926	47	1471	NA	NA
BZe307	2.32	14320402	41	926	NA	NA
BZe315	2.32	21144274	48	1368	NA	NA
BZe316	2.32	9771964	48	632	NA	NA
BZe348	2.42	14725160	47	911	NA	NA

BZe400	2.23	17520632	45	1181	NA	NA
BZe401	2.13	20468432	79	1443	NA	NA
BZg113	2.37	9962958	35	630	NA	NA
BZg114	2.37	18314482	43	1159	NA	NA
BZg115	2.37	14151178	50	896	NA	NA
BZg117	2.29	17659272	83	1154	NA	NA
BZg131	2.33	14414588	64	928	NA	NA
BZg132	2.32	12496318	66	806	NA	NA
BZg14	2.13	16931580	99	1191	NA	NA
BZg193	2.15	14661550	22	1023	NA	NA
BZg213	2.26	16522028	37	1096	NA	NA
BZg277	2.16	12290076	21	853	NA	NA
BZg64	2.32	20022516	64	1296	NA	NA
BZs142	2.27	19305212	133	1276	NA	NA
BZs155	2.14	16710130	75	1173	NA	NA
BZs166	2.13	13279908	24	933	NA	NA
BZs174	2.12	12290952	36	870	NA	NA
BZs89	2.11	21102050	58	1499	NA	NA

Supplementary table 3. Metadata about 166 genomes included in cgMLST analysis. The table shows information about the genome included in cgMLST study. The genebank codes, strain location, year of sequencing, source of isolation are shown in the table. The column "type" indicates several group linked to isolation sources: animals, clinical, environment (env) and food.

Genome	Genebank	Location	Year	Source	Type
BZe283	n/a	Italy	2021	poultry	env
BZe287	n/a	Italy	2021	poultry	env
BZe291	n/a	Italy	2021	poultry	env
BZe296	n/a	Italy	2021	poultry	env
BZe300	n/a	Italy	2022	poultry	env
BZe301	n/a	Italy	2022	poultry	env
BZe306	n/a	Italy	2022	poultry	env
BZe307	n/a	Italy	2022	poultry	env
BZe310	n/a	Italy	2022	poultry	env
BZe314	n/a	Italy	2022	poultry	env
BZe315	n/a	Italy	2022	poultry	env
BZe316	n/a	Italy	2022	poultry	env
BZe322	n/a	Italy	2022	poultry	env
BZe327	n/a	Italy	2022	poultry	env
BZe344	n/a	Italy	2022	poultry	env
BZe348	n/a	Italy	2022	poultry	env
BZe363	n/a	Italy	2022	poultry	env
BZe400	n/a	Italy	2022	poultry	env
BZe401	n/a	Italy	2022	poultry	animal
BZg113	n/a	Italy	2021	poultry	animal
BZg114	n/a	Italy	2021	poultry	animal
BZg115	n/a	Italy	2021	poultry	animal
BZg117	n/a	Italy	2021	poultry	animal
BZg131	n/a	Italy	2021	poultry	animal
BZg132	n/a	Italy	2021	poultry	animal
BZg134	n/a	Italy	2021	poultry	animal
BZg135	n/a	Italy	2021	poultry	animal
BZg14	n/a	Italy	2021	poultry	animal
BZg177	n/a	Italy	2021	poultry	animal
BZg193	n/a	Italy	2021	poultry	animal
BZg213	n/a	Italy	2021	poultry	animal
BZg214	n/a	Italy	2021	poultry	animal
BZg262	n/a	Italy	2021	poultry	animal
BZg269	n/a	Italy	2021	poultry	animal
BZg277	n/a	Italy	2021	poultry	animal
BZg278	n/a	Italy	2021	poultry	animal
BZg64	n/a	Italy	2021	poultry	animal
BZg74	n/a	Italy	2021	poultry	animal
BZs104	n/a	Italy	2021	poultry	animal
BZs142	n/a	Italy	2021	poultry	animal

BZs143	n/a	Italy	2021	poultry	animal
BZs155	n/a	Italy	2021	poultry	animal
BZs158	n/a	Italy	2021	poultry	animal
BZs166	n/a	Italy	2021	poultry	animal
BZs170	n/a	Italy	2021	poultry	animal
BZs173	n/a	Italy	2021	poultry	animal
BZs174	n/a	Italy	2021	poultry	animal
BZs206	n/a	Italy	2021	poultry	animal
BZs21	n/a	Italy	2021	poultry	animal
BZs242	n/a	Italy	2021	poultry	animal
BZs250	n/a	Italy	2021	poultry	animal
BZs252	n/a	Italy	2021	poultry	animal
BZs7	n/a	Italy	2021	poultry	animal
BZs83	n/a	Italy	2021	poultry	animal
BZs89	n/a	Italy	2021	poultry	animal
BZs99	n/a	Italy	2021	poultry	animal
GCF_001010585	GCF_001010585	Canada	2008	sewage	env
GCF_001010595	GCF_001010595	Canada	2009	pig	animal
GCF_001010605	GCF_001010605	Canada	2008	human	clinical
GCF_001010615	GCF_001010615	Canada	2009	human	clinical
GCF_001010665	GCF_001010665	Canada	2008	human	clinical
GCF_001010675	GCF_001010675	Canada	2009	human	clinical
GCF_001010695	GCF_001010695	Canada	2009	horse	animal
GCF_001010715	GCF_001010715	Canada	2009	sewage	env
GCF_009761295	GCF_009761295	Germany	2016	poultry	env
GCF_009761305	GCF_009761305	Germany	2016	poultry	env
GCF_022112115	GCF_022112115	France	2016	human	clinical
GCF_022112125	GCF_022112125	France	2016	human	clinical
GCF_022112195	GCF_022112195	France	2016	human	clinical
GCF_022112205	GCF_022112205	France	2016	human	clinical
GCF_022112225	GCF_022112225	France	2016	human	clinical
GCF_022112275	GCF_022112275	France	2016	human	clinical
GCF_022112335	GCF_022112335	France	2016	human	clinical
GCF_022112375	GCF_022112375	France	2016	human	clinical
GCF_022112395	GCF_022112395	France	2016	human	clinical
GCF_022112415	GCF_022112415	France	2016	human	clinical
GCF_022112455	GCF_022112455	France	2016	human	clinical
GCF_022112495	GCF_022112495	France	2016	human	clinical
GCF_022112515	GCF_022112515	France	2016	human	clinical
GCF_022112575	GCF_022112575	France	2016	human	clinical
GCF_022112585	GCF_022112585	France	2016	human	clinical
GCF_022112605	GCF_022112605	France	2015	human	clinical
GCF_022112655	GCF_022112655	France	2015	human	clinical
GCF_022112675	GCF_022112675	France	2015	human	clinical
GCF_022112735	GCF_022112735	France	2015	human	clinical

GCF_022112755	GCF_022112755	France	2015	human	clinical
GCF_022112765	GCF_022112765	France	2015	human	clinical
GCF_022112815	GCF_022112815	France	2015	human	clinical
GCF_022112855	GCF_022112855	France	2015	human	clinical
GCF_022112875	GCF_022112875	France	2015	human	clinical
GCF_022112895	GCF_022112895	France	2015	human	clinical
GCF_022112905	GCF_022112905	France	2015	human	clinical
GCF_022112935	GCF_022112935	France	2014	human	clinical
GCF_022112955	GCF_022112955	France	2014	human	clinical
GCF_025334585	GCF_025334585	China	2019	poultry	food
GCF_025334795	GCF_025334795	China	2019	pig	food
GCF_025334845	GCF_025334845	China	2019	poultry	food
GCF_025334855	GCF_025334855	China	2019	poultry	food
GCF_025334885	GCF_025334885	China	2019	poultry	food
GCF_025334895	GCF_025334895	China	2019	vegetable	food
GCF_025334925	GCF_025334925	China	2019	vegetable	food
GCF_025334945	GCF_025334945	China	2019	pig	food
GCF_025334965	GCF_025334965	China	2019	vegetable	food
GCF_025334985	GCF_025334985	China	2019	poultry	food
GCF_025335005	GCF_025335005	China	2019	fish	food
GCF_025335125	GCF_025335125	China	2019	vegetable	food
GCF_025335145	GCF_025335145	China	2019	pig	food
GCF_025335165	GCF_025335165	China	2019	poultry	food
GCF_025335175	GCF_025335175	China	2019	poultry	food
GCF_025335185	GCF_025335185	China	2019	pig	food
GCF_025335225	GCF_025335225	China	2019	fish	food
GCF_025335245	GCF_025335245	China	2019	poultry	food
GCF_025335265	GCF_025335265	China	2019	poultry	food
GCF_025335285	GCF_025335285	China	2019	poultry	food
GCF_025335305	GCF_025335305	China	2019	poultry	food
GCF_025335325	GCF_025335325	China	2019	vegetable	food
GCF_025335345	GCF_025335345	China	2019	fish	food
GCF_025335385	GCF_025335385	China	2019	vegetable	food
GCF_025335395	GCF_025335395	China	2019	cattle	food
GCF_025335445	GCF_025335445	China	2019	poultry	food
GCF_025335465	GCF_025335465	China	2019	poultry	food
GCF_025335485	GCF_025335485	China	2019	poultry	food
GCF_025335495	GCF_025335495	China	2019	poultry	food
GCF_025335515	GCF_025335515	China	2019	cattle	food
GCF_025335525	GCF_025335525	China	2019	cattle	food
GCF_025335565	GCF_025335565	China	2019	cattle	food
GCF_025335575	GCF_025335575	China	2019	cattle	food
GCF_025335605	GCF_025335605	China	2019	poultry	food
GCF_025335625	GCF_025335625	China	2019	poultry	food
GCF_025335645	GCF_025335645	China	2019	vegetable	food

GCF_025335665	GCF_025335665	China	2019	cattle	food
GCF_025335675	GCF_025335675	China	2019	poultry	food
GCF_025335705	GCF_025335705	China	2019	poultry	food
GCF_025335745	GCF_025335745	China	2019	pig	food
GCF_025335845	GCF_025335845	China	2019	poultry	food
GCF_025336125	GCF_025336125	China	2019	cattle	food
GCF_025336135	GCF_025336135	China	2019	pig	food
GCF_025336155	GCF_025336155	China	2019	cattle	food
GCF_025336185	GCF_025336185	China	2019	poultry	food
GCF_025336205	GCF_025336205	China	2019	poultry	food
GCF_025336225	GCF_025336225	China	2019	poultry	food
GCF_025336245	GCF_025336245	China	2019	poultry	food
GCF_025336265	GCF_025336265	China	2019	poultry	food
GCF_902500435	GCF_902500435	Portugal	2011	poultry	animal
GCF_902500445	GCF_902500445	Portugal	2011	poultry	animal
GCF_902500465	GCF_902500465	Portugal	2016	water	env
GCF_902500475	GCF_902500475	Portugal	2015	poultry	food
GCF_902500485	GCF_902500485	France	2003	human	clinical
GCF_902500495	GCF_902500495	Portugal	2015	poultry	food
GCF_902500545	GCF_902500545	Portugal	2011	poultry	animal
GCF_902500565	GCF_902500565	Portugal	2011	poultry	env
GCF_902500575	GCF_902500575	Portugal	2016	water	env
GCF_902500585	GCF_902500585	Portugal	2015	fish	food
GCF_902500595	GCF_902500595	Portugal	2011	poultry	env
GCF_902500605	GCF_902500605	Portugal	2015	poultry	food
GCF_902500635	GCF_902500635	Portugal	2015	cattle	food
GCF_902500645	GCF_902500645	Portugal	2016	poultry	food
GCF_902500655	GCF_902500655	Portugal	2016	poultry	food
GCF_902500665	GCF_902500665	Portugal	2016	poultry	food
GCF_902500675	GCF_902500675	Portugal	2015	goat	food
GCF_902500685	GCF_902500685	Portugal	2016	vegetables	food
GCF_902500765	GCF_902500765	Portugal	2015	Dairy	env
GCF_902500815	GCF_902500815	Portugal	2011	poultry	animal
GCF_902500965	GCF_902500965	Portugal	2015	sheep	food
GCF_902501005	GCF_902501005	Portugal	2015	Dairy	env
RM4018	CP000361.1	USA	2006	human	clinical

Supplementary table 4. Data about gene enrichment (e-mapper). The table shows the number of genes related to different COGs categories in the 31 strains from BNS, BC and SE. The letters g, e and s in the strains names indicates isolation from BC, SE and BNS respectively.

		BZe283	BZe363	BZe296	BZe301	BZe306	BZe310	BZe314	BZe322	BZe327	BZe344	BZg74	BZg134	BZg135	BZg177	BZg214	BZg262	BZg269	BZg278	BZs7	BZs21	BZs83	BZs99	BZs104	BZs143	BZs158	BZs170	BZs173	BZs206	BZs242	BZs250	BZs252
A	RNA processing and modification	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B	Chromatin structure and dynamics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C	Energy production and conversion	151	154	147	155	152	149	150	153	149	150	146	159	149	147	150	148	148	150	149	151	149	148	150	159	146	151	153	148	149	150	149
D	Cell cycle control, cell division, chromosome partitioning	30	29	27	24	27	24	32	28	22	24	27	27	24	26	21	25	24	28	23	26	24	23	23	25	25	29	25	23	25	22	25
E	Amino acid transport and metabolism	153	154	156	155	160	154	157	149	145	145	153	146	145	155	154	147	146	150	152	152	141	148	147	153	145	156	164	154	147	152	146
F	Nucleotide transport and metabolism	74	74	75	75	74	75	75	75	74	74	75	75	75	73	75	76	75	75	75	74	73	73	72	74	73	74	74	73	74	74	77
G	Carbohydrate transport and metabolism	75	79	71	72	73	73	76	69	70	75	70	69	71	68	75	71	68	70	69	74	72	70	71	69	71	69	69	69	67	75	73
H	Coenzyme transport and metabolism	114	118	115	115	114	117	119	113	115	114	116	115	115	111	115	114	113	114	112	113	116	115	116	114	114	114	114	114	115	115	115
I	Lipid transport and metabolism	42	46	42	45	57	44	47	42	43	43	41	40	40	42	44	43	41	44	42	44	44	43	44	43	40	45	40	40	43	41	43
J	Translation, ribosomal structure and biogenesis	154	155	157	151	151	153	154	153	154	154	152	154	153	153	150	151	151	153	152	151	151	153	152	154	152	156	154	154	152	154	152
K	Transcription	118	114	108	120	120	111	123	102	105	103	110	117	106	108	113	104	98	108	102	110	106	113	110	106	99	109	121	97	101	101	104
L	Replication, recombination and repair	111	92	113	97	108	103	94	107	92	114	136	156	100	124	98	100	98	108	98	91	113	108	103	108	95	108	124	104	108	110	136
M	Cell wall/membra	142	150	127	135	149	140	144	133	143	128	131	139	133	134	147	131	128	139	126	143	140	130	134	132	127	140	137	133	138	139	138

	ne/envelope biogenesis																														
N	Cell motility	74	77	69	73	75	75	75	78	77	74	73	74	71	73	77	74	73	73	69	76	71	73	72	70	73	71	72	72	74	72	77
O	Posttranslational modification, protein turnover, chaperones	91	85	89	89	87	86	85	87	86	92	90	89	87	89	86	88	86	89	87	83	85	82	85	89	85	89	93	84	87	84	89
P	Inorganic ion transport and metabolism	125	148	124	134	144	126	139	121	122	118	122	123	115	116	141	118	120	119	120	141	121	124	131	121	120	131	126	122	120	118	116
Q	Secondary metabolites biosynthesis, transport and catabolism	22	28	22	25	34	24	26	23	23	21	19	22	21	21	26	22	22	23	22	27	24	21	23	21	21	28	19	19	26	19	19
R	General function prediction only	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	Function unknown	323	328	323	308	325	311	335	308	302	307	315	323	322	305	303	304	286	312	303	306	312	311	313	307	296	314	326	307	303	312	307
T	Signal transduction mechanisms	144	158	140	152	162	150	156	137	141	132	144	142	135	144	156	139	137	137	136	157	138	144	145	129	139	137	143	131	138	133	137
U	Intracellular trafficking, secretion, and vesicular transport	47	50	43	47	54	44	52	44	46	52	52	45	42	45	50	44	43	44	45	59	44	44	46	43	43	46	47	44	42	44	43
V	Defense mechanisms	38	27	27	27	36	26	35	26	29	32	26	29	29	30	34	23	23	31	25	30	25	26	29	29	25	27	31	25	30	31	27
W	Extracellular structures	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y	Nuclear structure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Z	Cytoskeleton	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0	1

Supplementary table 5. *A. butzleri* pangenome partitions. The pangenome partitions of *A. butzleri* evaluated by different tool are shown in the table that reports the pangenome partition, the tool used, and gene number.

Genome partition	Tool	% of genomes	Gene Nr.
Core genes	Roary	99-100	1534
Soft core genes	Roary	95-100	98
Shell genes	Roary	15-95	724
Cloud genes	Roary	0-15	5108
Core genes	Panaroo	99-100	1693
Soft core genes	Panaroo	95-100	53
Shell genes	Panaroo	15-95	576
Cloud genes	Panaroo	0-15	3231
Persistent	PpanGGolin		1794
Cloud	PpanGGolin		4043
Shell	PpanGGolin		277

Supplementary table 6. Biofilm formation index of *A. butzleri*. The table shows the 31 strains analysed for biofilm formation, the sources of isolation are indicated in the left column: BC= broiler caecum, BNS=broiler neck skin, SE=superficial environment. Biofilm Formation Index values registered for each strain are indicated as BFI and standard deviations (Dev.st) are reported for each value.

Source of isolation	*A. butzleri* strains	BFI	Dev.st
BC	BZg278	2,93	0,42
SE	BZe306	2,75	1,20
BNS	BZs99	0,00	0,01
BNS	BZs83	0,00	0,20
BNS	BZs7	0,00	0,04
BC	BZg74	0,00	0,20
SE	BZe363	0,00	0,06
SE	BZe344	0,00	0,01
BNS	BZs252	-0,11	0,02
BNS	BZs104	-0,14	0,10
SE	BZe296	-0,15	0,05
BC	BZg134	-0,16	0,03
SE	BZe282	-0,18	0,03
BC	BZg177	-0,19	0,01
BNS	BZs206	-0,19	0,08
BC	BZg262	-0,22	0,01
SE	BZe327	-0,23	0,05
BNS	BZs173	-0,25	0,04
BNS	BZs158	-0,25	0,03
BC	BZg135	-0,25	0,05
BNS	BZs21	-0,25	0,04
SE	BZe314	-0,26	0,02
BNS	BZs250	-0,26	0,04
SE	BZe310	-0,26	0,04
BNS	BZs170	-0,27	0,05
BC	BZg269	-0,28	0,00
SE	BZe301	-0,29	0,03
BC	BZg214	-0,29	0,06
BNS	BZs143	-0,29	0,02
SE	BZe322	-0,30	0,02
BNS	BZs242	-0,31	0,04
	LMG 10828^{T}	-0,25	0,01

Supplementary table 7. Colonization of the 31 *A. butzleri* strains tested. The table shows the average bacterial load of the inoculum (T0), after washing steps (TC) and delta Log colonization of the *A. butzleri* strains and of the type strain LMG10828^T, with standard errors.

	Average			Standard errors		
Strain	**T0**	**TC**	**Δlog CFU/ml**	**T0**	**TC**	**Δlog CFU/ml**
BZe283	8.00	7.95	-0.05	0.23	0.92	0.83
BZe296	7.24	8.87	1.63	0.16	0.17	0.01
BZe301	7.96	7.27	-0.69	0.25	0.33	0.55
BZe306	8.29	6.89	-1.40	0.30	0.26	0.17
BZe310	8.30	7.26	-1.04	0.09	0.29	0.21
BZe314	7.90	7.13	-0.77	0.10	0.22	0.20
BZe322	7.81	7.48	-1.72	0.27	0.16	0.11
BZe327	7.48	8.13	0.65	0.25	0.37	0.49
BZe344	8.07	5.20	-2.87	0.22	0.69	0.80
BZe363	8.03	8.44	0.01	0.18	0.38	0.23
BZg134	8.48	6.31	-2.17	0.18	0.19	0.02
BZg135	8.20	8.20	-0.82	0.06	1.11	0.66
BZg177	8.21	5.91	-2.30	0.17	0.40	0.27
BZg214	6.57	8.63	2.06	0.39	0.30	0.10
BZg262	7.25	7.31	0.06	0.46	0.53	0.63
BZg269	7.96	7.03	-0.93	0.32	0.30	0.21
BZg278	8.34	7.80	-0.54	0.17	0.28	0.19
BZg74	7.84	6.15	-1.69	0.15	0.49	0.56
BZs104	7.22	7.58	0.36	0.29	0.53	0.33
BZs143	7.38	5.99	-1.38	0.31	0.42	0.28
BZs158	7.35	7.82	0.47	0.26	0.19	0.46
BZs170	7.61	7.89	0.28	0.18	0.35	0.40
BZs173	8.43	7.03	-1.40	0.08	0.18	0.12
BZs206	7.52	7.97	0.45	0.28	0.24	0.26
BZs21	7.34	8.56	1.22	0.47	0.65	0.71
BZs242	8.35	6.95	-1.40	0.17	1.30	1.47
BZs250	7.44	7.18	-0.27	0.48	0.27	0.32
BZs252	7.67	6.50	-1.17	0.14	0.08	0.22
BZs7	8.39	6.54	-1.85	0.19	0.34	0.37
BZs83	7.59	8.03	0.44	0.09	0.90	0.82
BZs99	8.48	7.88	-0.60	0.29	0.09	0.20
LMG10828^T	8.31	6.71	-1.60	0.23	0.13	0.33

Supplementary table 8. The table shows presence and absence of putative virulence genes in *A. butzleri* strains. The number 1 indicates the detection by direct alignment with sequences present in literature (figure 6B) while 2 indicates the detection using Dfast. Absence of genes is indicated by 0. The names of the proteins are indicated in the column GENE with the locus tag from Buzzanca and colleagues 2021 (10.1016/j.ygeno.2021.05.001).

GENE	BZs7	BZs21	BZg74	BZs83	BZs99	BZs104	BZg134	BZg135	BZs143	BZs158	BZs170	BZs173	BZg177	BZs206	BZg214	BZs242	BZs250	BZs252	BZg262	BZg269	BZg278	BZe283	BZe296	BZe301	BZe306	BZe310	BZe314	BZe322	BZe327	BZe344	BZe363
S_02099spore coat polysaccharide biosynthesis	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	0	2	2	2	2	2	2
Y_02513SwrC	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
R_01795TabA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
R_01709Arylesteraseprecursor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01173Cj1349	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
C_00304CadF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
C_01513similartoPorA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01320ciaB(hp)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
C_01765irgA(cirA)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00673TonBdomain	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01740transportproteinTonBdomain	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_00451TonBreceptordomain	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_00164TdhA	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_01366ExbB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01365ExbD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01417EpsE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01416EpsF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_02073XcpQ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00819PldA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_02071TlyA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00802MviN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00646HlyDdomain	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_00557HlyB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00258HecA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

F_00740HecB	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
F_00751CyaA	0	2	2	0	0	0	0	2	0	2	0	2	2	2	2	0	2	0	0	2	0	2	2	0	2	0	0	0	2	0	2	
F_00615InIJ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_02038PhoP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00642PhoQ	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_00593MprB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00790ResA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00882DSBA-likedomainprotein	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00243FixL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00184ZraS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01409TtrS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00355pld	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01571STM3117	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_02102EpsD	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_00892epsM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_02099EpsJ	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F_01902mltA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00703mltD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00427BdlA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01723O-Antigenligase	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_02088RfaC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_02010UreG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_02208UreF	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_02209UreE	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_02210ureC	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_02211UreA	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_02212UreD1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_01958FlagellarassemblyproteinH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01956Flagellarbasalbodyrodmodificationprotein	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00029Flagellarbasalbody-associatedproteinFliL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01940FlagellarbiosynthesisproteinFliR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

F_01936Flagellarhook-associatedproteinFlgL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01943Flagellarhook-basalbodyproteinFliE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00943Flagellarhook-lengthcontrolproteinFliK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01961FlgB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01942FlgC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01954FlgE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01962FlgG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00031FlgH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00032FlgK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00024FlgI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01935FlhA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00942FlhB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01946FlhF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00033FliD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01960FliF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01959FliG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01937FliI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00023FliM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01950FliN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00026FliQ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00034FliS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01945YlxH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00565Hag	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01840Flagellarfilament33kDacoreprotein	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00056FlaB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00972Flagellarmotorswitchprotein	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00828FlagellinN-methylase	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00683FliP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00058FliW1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00062FlagellarassemblyfactorFliW2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00222MotB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

F_00490CheB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00492CheR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00493CheA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00494CheY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00491CheD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00442CheV	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00249CheW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00331Mcp4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00187McpB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00223PomA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00353Tap	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00146Tar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00843Tsr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01657Bcr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_02202BepD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_02203BepE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00853Bla	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01087EptA	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
F_00488Fsr	1	1	1	1	1	1	1	1	2	2	2	2	0	2	0	2	2	2	2	0	2	2	0	2	0	0	2	2	2	2	2	2
F_00383HcpC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00342IleS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00264MacB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01660MexA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01661MexB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00682Pbp	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01162RlmN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01998UppP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_01701WbpD	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F_00322Cation/acetatesymporterActP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00324Cation/acetatesymporterActP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00328Cation/acetatesymporterActP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

F_00323InnermembraneproteinYjcH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F_00325InnermembraneproteinYjcH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1