

Table S1. Complete list and analytical data of the 185 bacterial chromosomes used in this study

1

No	Accession	Chromosome	Taxonomy	Group	Length	Putative ori	Putative ter	%G+C	%CDS	xCDS	χG	χG _{nc}	χG _{cd}	σG _d	σG _g	σG ^T	σG ^R	χA	χA _{nc}	χA _{cd}	σA _d	σA _g	σA ^T	σA ^R
1	NC_008009	Acidobacteria bacterium Ellin345	Acidobacteria	1	5650368	33	2825217	58.38	89.33	0.086	0.012	0.019	0.012	0.014	-0.010	0.002	0.012	-0.002	0.001	-0.002	0.037	0.048	0.042	-0.006
2	NC_002935	Corynebacterium diphtheriae	Actinobacteria	2	2488635	19	1244336	53.48	87.87	0.272	0.049	0.095	0.043	0.037	-0.054	-0.008	0.045	-0.012	-0.029	-0.009	-0.016	-0.048	-0.009	-0.007
3	NC_004369	Corynebacterium efficiens YS-314	Actinobacteria	2	3147090	1	1573546	63.14	90.52	0.177	0.012	0.052	0.009	-0.022	-0.052	-0.037	0.015	0.001	-0.015	0.003	-0.002	-0.010	-0.006	0.004
4	NC_006958	Corynebacterium glutamicum	Actinobacteria	2	3282708	1	1641355	53.84	87.34	0.174	0.038	0.083	0.032	0.016	-0.055	-0.020	0.035	-0.006	-0.017	-0.004	-0.010	-0.005	-0.007	-0.003
5	NC_002677	Mycobacterium leprae TN	Actinobacteria	2	3268203	1	1634102	57.80	76.64	0.225	0.056	0.056	0.056	0.070	-0.033	0.018	0.051	-0.064	-0.065	-0.063	-0.073	0.048	-0.013	-0.061
6	NC_008146	Mycobacterium sp. MCS	Actinobacteria	2	5705448	20	2852744	68.45	92.92	0.172	0.007	0.022	0.007	0.000	-0.016	-0.008	0.008	0.002	-0.000	0.002	0.012	0.012	0.012	0.000
7	NC_002944	Mycobacterium avium subsp. Paratuberculosis	Actinobacteria	2	4829781	1	2414891	69.30	91.36	0.055	0.005	0.007	0.004	0.003	-0.005	-0.001	0.004	0.001	0.001	0.001	0.011	0.010	0.010	0.001
8	NC_002945	Mycobacterium bovis AF2122/97	Actinobacteria	2	4345492	1	2172747	65.63	90.88	0.177	0.026	0.033	0.026	0.041	-0.005	0.018	0.023	-0.021	-0.018	-0.022	-0.031	0.008	-0.012	-0.019
9	NC_000962	Mycobacterium tuberculosis H37Rv	Actinobacteria	2	4411532	1	2205765	65.61	90.92	0.172	0.026	0.033	0.026	0.040	-0.005	0.017	0.023	-0.022	-0.018	-0.022	-0.031	0.009	-0.011	-0.020
10	NC_006361	Nocardia farcinica IFM 10152	Actinobacteria	2	6021225	1	3010613	70.83	90.30	0.182	0.007	0.030	0.005	-0.041	-0.029	-0.020	0.009	-0.005	-0.023	-0.003	0.001	0.008	0.005	-0.004
11	NC_008268	Rhodococcus sp. RHA1	Actinobacteria	2	7804765	3872441	1	67.52	91.05	0.164	0.019	0.037	0.017	-0.002	-0.043	-0.022	0.021	-0.007	-0.017	-0.006	0.004	0.018	0.011	-0.007
12	NC_007777	Frankia sp. CcI3	Actinobacteria	2	5433628	35	2716849	70.08	84.74	0.139	0.023	0.035	0.021	0.012	-0.033	-0.010	0.022	-0.036	-0.054	-0.032	-0.058	-0.002	-0.030	-0.028
13	NC_004551	Tropheryma whipplei TW08/27	Actinobacteria	2	925938	1	462970	46.31	84.47	0.476	0.019	-0.054	0.033	0.072	0.079	0.076	-0.003	-0.053	-0.009	-0.061	-0.064	0.053	-0.006	-0.059
14	NC_006087	Leifsonia xyli subsp. xyli str. CTCB07	Actinobacteria	2	2584158	225	1292304	67.68	70.10	0.278	0.009	0.012	0.008	-0.012	-0.042	-0.027	0.015	-0.022	-0.028	-0.019	-0.018	0.019	0.001	-0.019
15	NC_006085	Propionibacterium acnes KPA171202	Actinobacteria	2	2560265	245	1280377	60.01	89.18	0.196	0.051	0.085	0.047	0.033	-0.069	-0.018	0.051	-0.048	-0.062	-0.046	-0.075	0.003	-0.036	-0.039
16	NC_003155	Streptomyces avermitilis MA-4680	Actinobacteria	2	9025608	5287935	1	70.72	86.06	0.145	-0.001	0.027	-0.005	-0.026	-0.024	-0.025	-0.001	0.003	-0.012	0.006	0.025	0.020	0.023	0.003
17	NC_003888	Streptomyces coelicolor A3(2)	Actinobacteria	2	8667507	4270314	1	72.12	88.75	0.102	-0.014	0.016	-0.018	-0.046	-0.017	-0.032	-0.015	0.012	0.003	0.013	0.034	0.012	0.023	0.011
18	NC_007333	Thermobifida fusca YX	Actinobacteria	2	3642249	195	1821319	67.50	85.05	0.221	-0.003	0.036	-0.009	-0.038	-0.035	-0.036	-0.001	0.032	0.036	0.032	0.049	-0.004	0.023	0.027
19	NC_004307	Bifidobacterium longum NCC2705	Actinobacteria	2	2256640	1625765	1	497445	60.12	85.27	0.358	0.000	0.046	-0.007	-0.027	-0.036	-0.032	0.005	0.008	0.002	0.010	0.032	0.038	-0.003
20	NC_008148	Rubrobacter xylanophilus DSM 9941	Actinobacteria	2	3225748	2	1612876	70.48	91.71	0.226	0.022	0.038	0.021	0.058	0.037	0.047	0.010	-0.014	-0.024	-0.013	-0.012	0.015	0.002	-0.014
21	NC_006177	Symbiobacterium thermophilum IAM 14863	Actinobacteria	2	3566135	1	1783068	68.67	87.00	0.447	0.040	0.075	0.035	0.047	-0.004	0.021	0.025	0.004	0.024	0.001	-0.000	-0.004	-0.002	0.002
22	NC_000918	Aquifex aeolicus VF5	Aquificae	3	1551335	209841	985508	43.48	92.99	0.004	-0.000	-0.012	0.001	0.115	0.115	0.115	0.000	-0.008	-0.003	-0.008	0.147	0.066	0.157	-0.009
23	NC_002950	Porphyromonas gingivalis W83	Bacteroidetes	4	2343476	1	1171739	48.29	82.43	0.085	0.018	0.026	0.017	0.041	0.011	0.026	0.015	-0.010	-0.010	-0.010	0.028	0.055	0.041	-0.013
24	NC_004663	Bacteroides thetaiotaomicron VPI-5482	Bacteroidetes	4	6260361	4041000	910819	42.84	89.48	0.165	0.070	0.076	0.070	0.129	0.009	0.069	0.060	-0.031	-0.029	-0.031	0.023	0.108	0.066	-0.043
25	NC_002932	Chlorobium tepidum TLS	Chlorobi	5	2154946	2879	1080352	56.53	87.86	0.117	0.039	0.063	0.038	0.028	-0.047	-0.010	0.037	-0.043	-0.050	-0.043	-0.001	0.096	0.048	-0.048
26	NC_007514	Chlorobium chlorochromatii CaD3	Chlorobi	5	2572079	346	1286385	44.28	88.28	0.227	0.042	0.039	0.043	0.081	0.019	0.050	0.031	-0.019	-0.030	-0.017	-0.017	0.017	0.000	-0.017
27	NC_007512	Pelodictyon luteolum DSM 273	Chlorobi	5	2364842	2363373	1180952	57.33	89.01	0.160	0.038	0.058	0.036	0.009	-0.074	-0.033	0.041	-0.058	-0.075	-0.056	-0.012	0.017	0.053	-0.064
28	NC_007356	Dehalococcoides sp. CBDB1	Chloroflexi	6	1395502	261	698012	47.03	89.89	0.035	0.048	0.084	0.044	0.084	-0.003	0.041	0.043	-0.035	-0.018	-0.037	-0.001	0.077	0.038	-0.039
29	NC_007775	Synechococcus sp. JA-3-3Ab	Cyanobacteria	7	2932766	71	1466454	60.24	84.37	-0.024	0.000	-0.002	0.001	0.009	0.007	0.008	0.001	0.001	-0.003	0.002	-0.032	-0.034	-0.033	0.001
30	NC_000911	Synechocystis sp. PCC 6803	Cyanobacteria	7	3573470	349000	2135735	47.72	86.85	-0.017	0.001	0.003	0.001	0.027	0.024	0.026	0.001	-0.000	0.003	-0.001	-0.005	-0.003	-0.004	-0.001
31	NC_004113	Thermosynechococcus elongatus BP-1	Cyanobacteria	7	2593857	2266000	969071	53.92	89.51	-0.016	0.003	0.001	0.003	-0.003	-0.009	-0.006	0.003	0.001	-0.002	0.001	-0.036	-0.037	-0.037	0.001
32	NC_005125	Gloeobacter violaceus PCC 7421	Cyanobacteria	7	4659019	1585087	3914596	62.00	89.15	-0.003	0.001	0.002	0.001	-0.010	-0.012	-0.011	0.001	0.001	0.002	0.000	-0.012	-0.012	-0.012	0.000
33	NC_003272	Nostoc sp. PCC 7120	Cyanobacteria	7	6413771	2403018	5609903	41.35	82.15	0.014	0.001	0.000	0.001	0.036	0.036	0.036	0.000	-0.001	-0.001	-0.001	0.028	0.032	0.030	-0.002
34	NC_008025	Deinococcus geothermalis DSM 11300	Deinococcus-Thermus	8	2467205	222	1233824	66.64	90.26	0.003	0.008	0.028	0.006	0.015	0.003	0.009	0.006	-0.024	-0.017	-0.024	-0.018	0.030	0.006	-0.024
35	NC_001263	Deinococcus radiodurans R1 # 1	Deinococcus-Thermus	8	2648638	3268	1327587	67.01	89.75	0.029	0.001	0.019	-0.001	-0.013	-0.011	-0.012	-0.001	-0.010	-0.005	-0.011	0.027	0.052	0.040	-0.013
36	NC_006461	Thermus thermophilus HB8	Deinococcus-Thermus	8	1849742	1848185	923314	69.52	95.16	0.016	0.015	0.025	0.015	0.004	-0.026	-0.011	0.015	-0.017	-0.010	-0.017	-0.042	-0.008	-0.025	-0.017
37	NC_006582	Bacillus clausii KSM-K16	Firmicutes; Bacillales	9	4303871	183	2152118	44.75	85.77	0.529	0.080	0.109	0.077	0.105	0.016	0.061	0.044	0.030	0.036	0.029	0.051	0.041	0.046	0.005
38	NC_002570	Bacillus halodurans C-125	Firmicutes; Bacillales	9	4202352	584	2101760	43.69	85.03	0.535	0.095	0.118	0.092	0.130	0.037	0.083	0.046	0.030	0.033	0.030	0.053	0.044	0.048	0.004
39	NC_006270	Bacillus licheniformis ATCC 14580	Firmicutes; Bacillales	9	4222334	507	2111674	46.20	85.89	0.513	0.065	0.095	0.061	0.088	0.023	0.056	0.032	0.048	0.029	0.051	0.093	0.078	0.085	0.008
40	NC_000964	Bacillus subtilis subsp. subtilis str. 168	Firmicutes; Bacillales	9	4214630	410	2107725	43.52	87.07	0.496	0.075	0.097	0.072	0.107	0.030	0.068	0.038	0.041	0.030	0.043	0.081	0.067	0.074	0.007
41	NC_003997	Bacillus anthracis str. Ames	Firmicutes; Bacillales	9	5227293	407	2614053	35.38	80.61	0.507	0.157	0.182	0.152	0.208	0.022	0.115	0.093	0.047	0.035	0.050	0.086	0.057	0.071	0.014
42	NC_004722	Bacillus cereus ATCC 14579	Firmicutes; Bacillales	9	5411809	281	2706185	35.28	80.65	0.530	0.163	0.184	0.159	0.210	0.010	0.110	0.100	0.051	0.034	0.055	0.089	0.055	0.072	0.017
43	NC_005957	Bacillus thuringiensis serovar konkukian str. 97-27	Firmicutes; Bacillales	9	5237682	409	2619250	35.41	83.78	0.506	0.159	0.191	0.154	0.208	0.015	0.112	0.096	0.048	0.031	0.051	0.086	0.055	0.071	0.015
44	NC_006510	Geobacillus kaustophilus HTA426	Firmicutes; Bacillales	9	3544776	88	1772476	52.09	84.85	0.632	0.090	0.122	0.086	0.105	-0.000	0.052	0.053	0.021	0.033	0.019	0.036	0.053	0.044	-0.009
45	NC_004193	Oceanobacillus iheyensis HTE831	Firmicutes; Bacillales	9	3630528	300	1815564	35.68	84.23	0.536	0.119	0.125	0.118	0.174	0.070	0.122	0.052	0.044	0.030	0.047	0.081	0.065	0.073	0.008
46	NC_003212	Listeria innocua Clip11262	Firmicutes; Bacillales	9	3011208	319	1505923	37.44	89.05	0.603	0.096	0.150	0.091	0.122	0.036	0.079	0.043	0.063	0.045	0.066	0.094	0.048	0.071	0.023
47	NC_003210	Listeria monocytogenes EGD-e	Firmicutes; Bacillales	9	2944528	318	1472582	37.98	89.11	0.588	0.097	0												

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68	NC_003098	<i>Streptococcus pneumoniae</i> R6	Firmicutes; Lactobacillales	11	2038615	1	1019308	39.72	86.47	0.627	0.099	0.126	0.096	0.109	-0.042	0.033	0.075	0.010	0.028	0.008	0.019	0.041	0.030	-0.011
69	NC_002737	<i>Streptococcus pyogenes</i> M1 GAS	Firmicutes; Lactobacillales	11	1852441	232	926452	38.51	83.63	0.578	0.086	0.122	0.080	0.095	-0.021	0.037	0.058	0.018	0.035	0.014	0.026	0.030	0.028	-0.002
70	NC_006449	<i>Streptococcus thermophilus</i> CNRZ1066	Firmicutes; Lactobacillales	11	1796226	186	898299	39.08	83.67	0.619	0.092	0.125	0.086	0.100	-0.028	0.036	0.064	-0.007	0.013	-0.011	-0.006	0.030	0.012	-0.018
71	NC_007716	Aster yellows witches'-broom phytoplasma AYWB	Firmicutes; Mollicutes	12	706569	1	353285	26.89	73.66	0.411	0.004	-0.003	0.007	-0.031	-0.102	-0.067	0.035	0.007	-0.001	0.010	0.079	0.153	0.116	-0.037
72	NC_005303	Onion yellows phytoplasma OY-M	Firmicutes; Mollicutes	12	860631	1	430316	27.74	73.00	0.356	0.001	-0.010	0.005	-0.039	-0.098	-0.069	0.029	0.012	0.002	0.016	0.087	0.134	0.110	-0.023
73	NC_007633	<i>Mycoplasma capricolum</i> subsp. <i>Capricolum</i>	Firmicutes; Mollicutes	12	1010023	1	505012	23.77	88.24	0.401	0.071	0.059	0.072	0.159	0.130	0.145	0.015	0.030	0.013	0.032	0.092	0.108	0.100	-0.008
74	NC_004829	<i>Mycoplasma gallisepticum</i> R	Firmicutes; Mollicutes	12	996422	3163	501374	31.45	87.27	0.629	0.032	0.053	0.029	0.046	0.045	0.045	0.000	0.052	0.016	0.057	0.089	0.080	0.085	0.005
75	NC_000908	<i>Mycoplasma genitalium</i> G-37	Firmicutes; Mollicutes	12	580074	578581	288544	31.69	90.79	0.670	0.042	0.028	0.044	0.064	0.064	0.064	0.000	0.031	0.006	0.034	0.056	0.073	0.064	-0.009
76	NC_006360	<i>Mycoplasma hyopneumoniae</i> 232	Firmicutes; Mollicutes	12	892758	1	446380	28.56	89.76	0.108	0.002	0.024	-0.000	0.032	0.042	0.037	-0.005	0.013	-0.001	0.014	0.087	0.075	0.081	0.006
77	NC_006908	<i>Mycoplasma mobile</i> 163K	Firmicutes; Mollicutes	12	777079	215	388754	24.95	90.64	0.277	0.010	-0.002	0.012	0.111	0.170	0.140	-0.029	0.018	0.024	0.018	0.085	0.099	0.092	-0.007
78	NC_004432	<i>Mycoplasma penetrans</i> HF-2	Firmicutes; Mollicutes	12	1358633	1	679317	25.72	88.60	0.717	0.089	0.079	0.090	0.120	0.105	0.112	0.007	0.045	-0.019	0.054	0.084	0.120	0.102	-0.018
79	NC_000912	<i>Mycoplasma pneumoniae</i> M129	Firmicutes; Mollicutes	12	816394	814787	406590	40.01	87.82	0.626	0.015	0.010	0.016	0.022	0.012	0.017	0.005	0.030	0.002	0.035	0.062	0.082	0.072	-0.010
80	NC_002771	<i>Mycoplasma pulmonis</i> UAB CTIP	Firmicutes; Mollicutes	12	963879	222	482161	26.64	90.03	0.208	0.023	0.035	0.023	0.071	0.051	0.061	0.010	0.020	0.015	0.022	0.109	0.110	0.109	-0.001
81	NC_002162	<i>Ureaplasma parvum</i> serovar 3 str.	Firmicutes; Mollicutes	12	751719	1	375860	25.50	91.14	0.326	0.041	0.081	0.037	0.105	0.099	0.102	0.003	0.024	0.001	0.027	0.078	0.075	0.077	0.002
82	NC_003454	<i>Fusobacterium nucleatum</i> subsp. <i>nucleatum</i>	Fusobacteria	13	2174500	641868	1729118	27.15	88.86	0.271	0.102	0.134	0.098	0.284	0.230	0.257	0.027	0.053	0.051	0.053	0.137	0.094	0.115	0.022
83	NC_002696	<i>Caulobacter crescentus</i> CB15	Proteobacteria; α	14	4016947	5636	2014109	67.21	90.25	0.100	0.015	0.024	0.015	0.000	-0.032	-0.016	0.016	-0.014	-0.022	-0.012	-0.010	0.016	0.003	-0.013
84	NC_004463	<i>Bradyrhizobium japonicum</i> USDA 110	Proteobacteria; α	14	9105828	895124	5448038	64.06	86.67	0.119	0.010	0.016	0.010	-0.005	-0.028	-0.016	0.012	-0.011	-0.010	-0.011	-0.004	0.020	0.008	-0.012
85	NC_007964	<i>Nitrobacter hamburgensis</i> X14	Proteobacteria; α	14	4406967	107	2203590	61.71	80.39	0.132	0.018	0.019	0.018	0.020	-0.016	0.002	0.018	-0.014	-0.009	-0.016	-0.003	0.033	0.015	-0.018
86	NC_007406	<i>Nitrobacter winogradskyi</i> Nb-255	Proteobacteria; α	14	3402093	567	1701613	62.05	83.98	0.124	0.022	0.026	0.021	0.026	-0.015	0.005	0.021	-0.019	-0.017	-0.019	-0.011	0.030	0.010	-0.021
87	NC_006932	<i>Brucella abortus</i> biovar 1 str. 9-941 # I	Proteobacteria; α	14	2124241	784	1062904	57.16	81.00	0.180	0.032	0.038	0.031	0.038	-0.021	0.009	0.030	-0.022	-0.022	-0.022	-0.034	0.004	-0.015	-0.019
88	NC_003317	<i>Brucella melitensis</i> 16M # I	Proteobacteria; α	14	2117144	2000	1060572	57.16	85.41	0.230	0.034	0.046	0.032	0.038	-0.023	0.007	0.030	-0.024	-0.019	-0.025	-0.036	0.007	-0.014	-0.022
89	NC_003318	<i>Brucella melitensis</i> 16M # II	Proteobacteria; α	14	1177787	117000	705893	57.34	87.47	0.073	0.032	0.051	0.030	0.038	-0.020	0.009	0.029	-0.027	-0.025	-0.028	-0.058	-0.008	-0.033	-0.025
90	NC_004310	<i>Brucella suis</i> 1330 # I	Proteobacteria; α	14	2107794	2094000	1040104	57.21	84.27	0.171	0.033	0.045	0.031	0.038	-0.021	0.009	0.029	-0.023	-0.022	-0.023	-0.038	0.003	-0.018	-0.020
91	NC_004311	<i>Brucella suis</i> 1330 # II	Proteobacteria; α	14	1207381	1181000	577309	57.32	84.20	0.061	0.032	0.042	0.031	0.039	-0.022	0.009	0.030	-0.027	-0.020	-0.029	-0.059	-0.005	-0.032	-0.027
92	NC_008254	<i>Mesorhizobium</i> sp. BNC1	Proteobacteria; α	14	4412446	85	2206308	61.07	89.34	0.007	0.008	0.011	0.007	0.019	0.004	0.012	0.007	-0.006	-0.013	-0.005	-0.016	-0.007	-0.012	-0.005
93	NC_003062	<i>Agrobacterium tumefaciens</i> str. C58 circular	Proteobacteria; α	14	2841581	2800000	1379209	59.38	88.91	0.108	0.024	0.042	0.022	0.013	-0.034	-0.010	0.023	-0.023	-0.033	-0.021	-0.035	0.004	-0.015	-0.020
94	NC_007761	<i>Rhizobium etli</i> CFN 42	Proteobacteria; α	14	4381608	370494	2561298	61.27	86.03	0.079	0.010	0.019	0.008	-0.014	-0.034	-0.024	0.010	-0.006	-0.010	-0.005	-0.006	0.004	-0.001	-0.005
95	NC_003047	<i>Sinorhizobium meliloti</i> 1021	Proteobacteria; α	14	3654135	3289000	1461932	62.73	85.80	0.023	0.013	0.019	0.012	-0.001	-0.025	-0.013	0.012	-0.008	-0.008	-0.008	-0.001	0.016	0.008	-0.008
96	NC_007493	<i>Rhodobacter sphaeroides</i> 2.4.1 # 1	Proteobacteria; α	14	3188609	3110775	1516470	69.01	88.97	0.093	0.016	0.027	0.015	0.019	-0.010	0.005	0.014	-0.007	-0.005	-0.007	-0.029	-0.020	-0.025	-0.005
97	NC_008209	<i>Roseobacter denitrificans</i> OCh 114	Proteobacteria; α	14	4133097	204958	2271506	58.97	89.43	0.084	0.028	0.033	0.027	0.066	0.019	0.043	0.024	-0.014	-0.012	-0.014	-0.027	-0.001	-0.014	-0.013
98	NC_003911	<i>Silicibacter pomeroyi</i> DSS-3	Proteobacteria; α	14	4109442	164331	2219052	64.22	89.51	0.061	0.022	0.034	0.021	0.046	0.007	0.027	0.019	-0.007	-0.013	-0.006	-0.023	-0.013	-0.018	-0.005
99	NC_006677	<i>Gluconobacter oxydans</i> 621H	Proteobacteria; α	14	2702173	155	1351241	61.07	89.81	-0.060	-0.037	-0.044	-0.037	-0.040	0.034	-0.003	-0.037	0.018	0.013	0.018	-0.012	-0.045	-0.029	0.016
100	NC_007643	<i>Rhodospirillum rubrum</i> ATCC 11170	Proteobacteria; α	14	4352825	228	2176640	65.45	88.28	0.040	0.026	0.045	0.024	0.002	-0.047	-0.023	0.025	-0.019	-0.013	-0.019	-0.078	-0.044	-0.061	-0.017
101	NC_007940	<i>Rickettsia bellii</i> RML369-C	Proteobacteria; α	14	1522076	934199	173161	31.65	84.96	-0.048	-0.021	-0.017	-0.021	0.109	0.139	0.124	-0.015	-0.000	0.009	-0.002	0.082	0.078	0.080	0.002
102	NC_003103	<i>Rickettsia conorii</i> str. Malish 7	Proteobacteria; α	14	1268755	1	634378	32.44	80.32	0.216	0.064	0.043	0.068	0.148	0.058	0.103	0.045	0.007	0.003	0.008	0.065	0.079	0.072	-0.007
103	NC_000963	<i>Rickettsia prowazekii</i> str. Madrid E	Proteobacteria; α	14	1111523	1	555762	29.00	75.48	0.235	0.073	0.066	0.077	0.166	0.071	0.118	0.048	-0.009	-0.033	0.001	0.048	0.074	0.061	-0.013
104	NC_002978	<i>Wolbachia endosymbiont</i> of <i>D. melanogaster</i>	Proteobacteria; α	14	1267782	153	630440	35.23	80.05	-0.062	-0.003	-0.000	-0.004	0.162	0.151	0.157	0.006	-0.009	-0.001	-0.010	0.090	0.099	0.094	-0.005
105	NC_006833	<i>Wolbachia endosymbiont</i> of <i>Brugia malayi</i>	Proteobacteria; α	14	1080084	361157	901199	34.18	66.99	-0.152	-0.036	-0.026	-0.041	0.140	0.172	0.156	-0.016	0.002	0.005	0.001	0.099	0.072	0.085	0.014
106	NC_007205	<i>Candidatus Pelagibacter ubique</i> HTCC1062	Proteobacteria; α	14	1308759	398915	1053294	29.68	95.53	0.281	0.053	0.024	0.054	0.161	0.142	0.152	0.010	0.023	0.009	0.024	0.093	0.098	0.095	-0.003
107	NC_007794	<i>Novosphingobium aromaticivorans</i> DSM 12444	Proteobacteria; α	14	3561584	24	1780816	65.15	91.48	0.113	0.015	0.028	0.014	0.004	-0.027	-0.012	0.015	-0.014	-0.010	-0.014	-0.006	0.025	0.009	-0.015
108	NC_008048	<i>Sphingopyxis alaskensis</i> RB2256	Proteobacteria; α	14	3345170	173	1672758	65.50	90.39	0.018	0.012	0.014	0.012	0.017	-0.007	0.005	0.012	-0.007	-0.010	-0.007	-0.004	0.009	0.003	-0.007
109	NC_002927	<i>Bordetella bronchiseptica</i> RB50	Proteobacteria; β	15	5339179	5311567	2641977	68.08	91.81	0.117	0.029	0.047	0.028	0.016	-0.043	-0.013	0.030	-0.021	-0.027	-0.020	-0.008	0.036	0.014	-0.022
110	NC_002928	<i>Bordetella parapertussis</i> 12822	Proteobacteria; β	15	4773551	4745937	2359161	68.10	86.52	0.110	0.025	0.033	0.024	0.012	-0.039	-0.014	0.026	-0.015	-0.028	-0.012	-0.004	0.023	0.010	-0.013
111	NC_002929	<i>Bordetella pertussis</i> Tohama I	Proteobacteria; β	15	4086189	69000	2112094	67.72	82.59	0.119	0.016	0.017	0.015	-0.002	-0.038	-0.020	0.018	-0.009	-0.013	-0.008	0.006	0.025	0.016	-0.010
112	NC_007951	<i>Burkholderia xenovorans</i> LB400 # 1	Proteobacteria; β	15	4895836	192	2448110	62.76	85.91	0.174	0.026	0.033	0.024	0.035	-0.010	0.013	0.022	-0.006	-0.004	-0.006	0.005	0.022	0.013	-0.009
113	NC_007510	<i>Burkholderia</i> sp. 383 # 1	Proteobacteria; β	15	3694126	76	1847139	66.21	87.70	0.175	0.031	0.048	0.029	0.030										

Table S1. Complete list and analytical data of the 185 bacterial chromosomes used in this study

3

136 NC_000915	<i>Helicobacter pylori</i> 26695	Proteobacteria; ε-	17	1667867	1608997	775063	38.87	90.20	0.135	0.045	0.052	0.044	0.120	0.055	0.088	0.032	0.009	0.016	0.008	0.062	0.063	0.063	-0.001
137 NC_000921	<i>Helicobacter pylori</i> J99	Proteobacteria; ε-	17	1643831	1559162	737246	39.19	90.21	0.133	0.044	0.059	0.043	0.118	0.055	0.087	0.031	0.006	0.002	0.006	0.060	0.065	0.063	-0.002
138 NC_005090	<i>Wolinella succinogenes</i> DSM 1740	Proteobacteria; ε-	17	2110355	1	1055178	48.46	93.70	0.160	0.080	0.083	0.080	0.103	-0.048	0.027	0.076	-0.014	0.012	-0.016	0.006	0.048	0.027	-0.021
139 NC_007912	<i>Saccharophagus degradans</i> 2-40	Proteobacteria; γ-	18	5057531	5018983	2490217	45.83	86.67	0.267	0.079	0.093	0.077	0.094	-0.048	0.023	0.071	-0.033	-0.062	-0.028	0.016	0.103	0.059	-0.044
140 NC_003910	<i>Colwellia psychrerythraea</i> 34H	Proteobacteria; γ-	18	5373180	72	2686662	38.01	84.48	0.197	0.046	0.053	0.045	0.100	0.038	0.069	0.031	-0.007	-0.013	-0.006	0.014	0.036	0.025	-0.011
141 NC_006512	<i>Idiomarina loihiensis</i> L2TR	Proteobacteria; γ-	18	2839318	362	1420021	47.04	92.02	0.135	0.028	0.023	0.029	0.090	0.052	0.071	0.019	-0.002	0.001	-0.002	0.013	0.023	0.018	-0.005
142 NC_004347	<i>Shewanella oneidensis</i> MR-1	Proteobacteria; γ-	18	4969803	6873	2491774	45.96	83.26	0.116	0.057	0.071	0.054	0.082	-0.018	0.032	0.050	-0.032	-0.039	-0.031	-0.015	0.050	0.018	-0.033
143 NC_002528	<i>Buchnera aphidicola</i> str. APS	Proteobacteria; γ-	18	640681	13918	334258	26.31	86.93	0.101	0.036	0.062	0.034	0.127	0.084	0.105	0.022	-0.031	-0.042	-0.030	0.038	0.113	0.075	-0.037
144 NC_000913	<i>Escherichia coli</i> K12	Proteobacteria; γ-	18	4639675	3881357	1561746	50.79	86.87	0.097	0.032	0.050	0.029	0.076	0.028	0.052	0.024	-0.004	-0.002	-0.004	-0.003	0.005	0.001	-0.004
145 NC_002695	<i>Escherichia coli</i> O157:H7 str. Sakai	Proteobacteria; γ-	18	5498450	4723921	1974696	50.54	85.97	0.169	0.039	0.050	0.037	0.083	0.028	0.055	0.027	-0.002	-0.008	-0.001	0.010	0.016	0.013	-0.003
146 NC_004547	<i>Erwinia carotovora</i> subsp. atroseptica SCRI1043	Proteobacteria; γ-	18	5064019	4985096	2453086	50.97	85.88	0.123	0.055	0.065	0.053	0.094	-0.002	0.046	0.048	-0.022	-0.031	-0.020	-0.018	0.023	0.002	-0.021
147 NC_005126	<i>Photorhabdus luminescens</i> subsp. laumondii TTO1	Proteobacteria; γ-	18	5688987	223	2844716	42.83	83.57	0.184	0.077	0.093	0.075	0.128	0.004	0.066	0.062	-0.029	-0.037	-0.027	-0.012	0.049	0.019	-0.031
148 NC_003198	<i>Salmonella enterica</i> subsp. enterica serovar Typhi	Proteobacteria; γ-	18	4809037	3805127	1400608	52.09	87.47	0.159	0.041	0.053	0.039	0.082	0.020	0.051	0.031	-0.008	-0.012	-0.007	-0.007	0.008	0.001	-0.007
149 NC_003197	<i>Salmonella typhimurium</i> LT2	Proteobacteria; γ-	18	4857432	4045024	1616308	52.22	86.26	0.170	0.043	0.053	0.042	0.083	0.016	0.049	0.033	-0.007	-0.012	-0.007	-0.006	0.007	0.000	-0.007
150 NC_008263	<i>Shigella boydii</i> Sb227	Proteobacteria; γ-	18	4519823	3689193	1429281	51.21	80.33	0.073	0.015	0.020	0.014	0.066	0.047	0.057	0.010	-0.001	0.002	-0.001	0.006	0.010	0.008	-0.002
151 NC_007606	<i>Shigella dysenteriae</i> Sd197	Proteobacteria; γ-	18	4369232	3919608	1734992	51.25	77.02	0.039	0.014	0.020	0.012	0.062	0.042	0.052	0.010	-0.003	-0.003	-0.002	0.008	0.014	0.011	-0.003
152 NC_004337	<i>Shigella flexneri</i> 2a str. 301	Proteobacteria; γ-	18	4607203	3869099	1565497	50.89	86.54	0.100	0.027	0.039	0.025	0.072	0.032	0.052	0.020	-0.003	-0.003	-0.004	0.002	0.010	0.006	-0.004
153 NC_007384	<i>Shigella sonnei</i> Ss046	Proteobacteria; γ-	18	4825265	3824640	1412007	51.01	80.32	0.092	0.025	0.034	0.023	0.072	0.037	0.055	0.017	-0.003	-0.002	-0.003	0.006	0.014	0.010	-0.004
154 NC_007712	<i>Sodalis glossinidius</i> str. 'morsitans'	Proteobacteria; γ-	18	4171146	1	2085574	54.70	50.85	0.199	0.028	0.028	0.027	0.054	0.012	0.033	0.021	-0.008	-0.009	-0.007	-0.004	0.013	0.005	-0.008
155 NC_003143	<i>Yersinia pestis</i> CO92	Proteobacteria; γ-	18	4653728	4619729	2292865	47.64	80.17	0.097	0.030	0.036	0.029	0.083	0.038	0.061	0.023	-0.013	-0.016	-0.012	-0.018	0.004	-0.007	-0.011
156 NC_006155	<i>Yersinia pseudotuberculosis</i> IP 32953	Proteobacteria; γ-	18	4744671	4710647	2338311	47.61	82.47	0.178	0.044	0.052	0.043	0.089	0.024	0.056	0.033	-0.019	-0.024	-0.017	-0.022	0.011	-0.005	-0.016
157 NC_002971	<i>Coxiella burnetii</i> RSA 493	Proteobacteria; γ-	18	1995281	140	997777	42.66	84.61	0.195	0.049	0.028	0.053	0.082	-0.010	0.036	0.046	-0.002	-0.003	-0.002	0.009	0.018	0.014	-0.005
158 NC_006369	<i>Legionella pneumophila</i> str. Lens	Proteobacteria; γ-	18	3345687	192	1673035	38.41	86.99	0.150	0.070	0.074	0.069	0.118	-0.002	0.058	0.060	-0.019	-0.023	-0.019	0.010	0.057	0.034	-0.024
159 NC_002977	<i>Methylococcus capsulatus</i> str. Bath	Proteobacteria; γ-	18	3304561	3221107	1568826	63.58	89.27	0.078	0.038	0.055	0.036	0.031	-0.040	-0.005	0.036	-0.029	-0.042	-0.027	-0.015	0.041	0.013	-0.028
160 NC_008260	<i>Alcanivorax borkumensis</i> SK2	Proteobacteria; γ-	18	3120143	1	1560072	54.73	87.46	0.189	0.092	0.104	0.091	0.113	-0.058	0.028	0.086	-0.058	-0.060	-0.057	-0.052	0.064	0.006	-0.058
161 NC_007645	<i>Hahella chejuensis</i> KCTC 2396	Proteobacteria; γ-	18	7215267	378	3608011	53.87	87.85	0.124	0.059	0.074	0.058	0.087	-0.020	0.034	0.054	-0.022	-0.025	-0.021	0.004	0.055	0.030	-0.025
162 NC_002940	<i>Haemophilus ducreyi</i> 35000HP	Proteobacteria; γ-	18	1698955	1	849478	38.22	84.81	0.105	0.047	0.070	0.043	0.112	0.043	0.078	0.035	-0.005	0.010	-0.008	0.023	0.046	0.034	-0.011
163 NC_002663	<i>Pasteurella multocida</i> subsp. multocida str. Pm70	Proteobacteria; γ-	18	2257487	1000	1129743	40.40	88.95	0.019	0.007	0.008	0.007	0.083	0.072	0.077	0.006	-0.000	-0.002	0.000	0.019	0.019	0.019	-0.000
164 NC_005966	<i>Acinetobacter</i> sp. ADP1	Proteobacteria; γ-	18	3598621	201	1799511	40.43	87.82	0.238	0.057	0.091	0.054	0.099	0.019	0.059	0.040	-0.001	0.018	-0.004	-0.005	0.003	-0.001	-0.004
165 NC_007204	<i>Psychrobacter arcticus</i> 273-4	Proteobacteria; γ-	18	2650701	520	1325870	42.80	80.62	0.169	0.039	0.051	0.037	0.087	0.034	0.060	0.026	-0.000	0.004	-0.001	0.011	0.018	0.014	-0.004
166 NC_002516	<i>Pseudomonas aeruginosa</i> PA01	Proteobacteria; γ-	18	6264403	483	3132684	66.56	89.23	0.110	0.022	0.044	0.020	-0.010	-0.057	-0.034	0.023	-0.016	-0.036	-0.013	0.012	0.045	0.028	-0.017
167 NC_008027	<i>Pseudomonas entomophila</i> L48	Proteobacteria; γ-	18	5888780	552	2944942	64.16	88.72	0.145	0.032	0.049	0.030	0.010	-0.056	-0.023	0.033	-0.020	-0.034	-0.018	0.009	0.056	0.032	-0.023
168 NC_002947	<i>Pseudomonas putida</i> KT2440	Proteobacteria; γ-	18	6181863	9542	3100473	61.52	86.58	0.076	0.026	0.040	0.024	0.019	-0.031	-0.006	0.025	-0.020	-0.024	-0.019	0.001	0.042	0.022	-0.021
169 NC_004578	<i>Pseudomonas syringae</i> pv. tomato str.	Proteobacteria; γ-	18	6397126	339	3198902	58.40	85.07	0.065	0.024	0.039	0.022	0.030	-0.014	0.008	0.022	-0.024	-0.033	-0.022	-0.008	0.038	0.015	-0.023
170 NC_008245	<i>Francisella tularensis</i> subsp. tularensis FSC 198	Proteobacteria; γ-	18	1892616	1	946309	32.26	79.09	0.256	0.095	0.090	0.096	0.180	0.049	0.115	0.065	-0.003	-0.001	-0.003	0.034	0.066	0.050	-0.016
171 NC_006370	<i>Photobacterium profundum</i> SS9 # 1	Proteobacteria; γ-	18	4085304	7364	2050016	41.97	82.13	0.144	0.067	0.091	0.063	0.117	0.010	0.064	0.054	-0.023	-0.027	-0.022	-0.009	0.041	0.016	-0.025
172 NC_002505	<i>Vibrio cholerae</i> O1 biovar eltor str. N16961 # I	Proteobacteria; γ-	18	2961149	7397	1487971	47.69	87.52	0.206	0.053	0.068	0.051	0.084	-0.001	0.041	0.042	-0.012	-0.015	-0.011	-0.002	0.024	0.011	-0.013
173 NC_006840	<i>Vibrio fischeri</i> ES114 # I	Proteobacteria; γ-	18	2906179	7401	1460490	38.96	86.17	0.215	0.078	0.110	0.073	0.128	0.012	0.070	0.058	-0.009	-0.008	-0.009	0.008	0.037	0.022	-0.014
174 NC_004603	<i>Vibrio parahaemolyticus</i> RIMD 2210633 # I	Proteobacteria; γ-	18	3288558	7680	1651959	45.39	86.64	0.207	0.056	0.084	0.053	0.084	-0.006	0.039	0.045	-0.011	-0.020	-0.010	0.021	0.057	0.039	-0.018
175 NC_004459	<i>Vibrio vulnificus</i> CMCP6 # I	Proteobacteria; γ-	18	3281945	1005210	2646182	46.45	84.08	0.213	0.062	0.095	0.057	0.089	-0.008	0.040	0.048	-0.015	-0.038	-0.010	0.011	0.043	0.027	-0.016
176 NC_003919	<i>Xanthomonas axonopodis</i> pv. citri str. 306	Proteobacteria; γ-	18	5175554	42	2587819	64.77	85.85	0.128	0.022	0.029	0.020	0.027	-0.012	0.008	0.019	-0.015	-0.021	-0.014	-0.008	0.022	0.007	-0.015
177 NC_003902	<i>Xanthomonas campestris</i> pv. campestris str.	Proteobacteria; γ-	18	5076188	42	2538136	65.07	84.55	0.128	0.022	0.026	0.021	0.027	-0.013	0.007	0.020	-0.014	-0.015	-0.013	-0.006	0.023	0.008	-0.015
178 NC_006834	<i>Xanthomonas oryzae</i> pv. oryzae KACC10331	Proteobacteria; γ-	18	4941439	42	2470761	63.69	79.67	0.110	0.020	0.023	0.019	0.031	-0.004	0.013	0.018	-0.014	-0.015	-0.014	-0.004	0.026	0.011	-0.015
179 NC_002488	<i>Xylella fastidiosa</i> 9a5c	Proteobacteria; γ-	18	2679306	143	1339796	52.67	83.17	0.199	0.067	0.092	0.062	0.078	-0.039	0.019	0.058	-0.075	-0.091	-0.071	-0.079	0.059	-0.010	-0.069
180 NC_004342	<i>Leptospira interrogans</i> serovar Lai # I	Spirochaetes	19	4332241	234	2166354	35.01	77.89	0.172	0.068	0.068	0.068	0.116	0.000	0.058	0.058	-0.016	-0.022	-0.014	0.020	0.061	0.040	-0.020
181 NC_008277	<i>Borrelia afzelii</i> PKo	Spirochaetes	19	905394	460469	1	28.31	93.35	0.319	0.189	0.250	0.185	0.268	-0.013	0.128	0.141	-0.090	-0.114	-0.089	-0.025	0.208	0.092	-0.117
182 NC_001318	<i>Borrelia burgdorferi</i> B31	Spirochaetes	19	910724	45657																		