scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	CP018694	543	91347
Enterobacteriaceae	CP045282	543	91347
Klebsiella	CP034325	570	543
Klebsiella	AB715422	570	543
Enterobacterales	HG934082	91347	1236
Enterobacterales	CP011656	91347	1236
Enterobacterales	CP011640	91347	1236
Enterobacterales	KP025948	91347	1236
Enterobacterales	AY422214	91347	1236
Enterobacterales	KJ541681	91347	1236
Enterobacterales	CP042490	91347	1236
Enterobacterales	KM877517	91347	1236
Enterobacterales	CP017282	91347	1236
Enterobacterales	AP018454	91347	1236
Enterobacterales	JQ418542	91347	1236
Enterobacterales	HQ451074	91347	1236
Enterobacterales	CP018974	91347	1236
Enterobacterales	CP015075	91347	1236
Enterobacterales	CP026188	91347	1236
Staphylococcus	EU930825	1279	90964
Staphylococcus	FJ207465	1279	90964
Prevotella dentalis	CP003370	52227	838
Staphylococcus epidermidis	GQ900460	1282	1279
Staphylococcus epidermidis	AE015931	1282	1279
Prevotella dentalis	CP003371	908937	52227
Staphylococcus aureus	CP013622	1280	1279
Staphylococcus sciuri	AF093750	1296	1279
Staphylococcaceae	CP014375	90964	1385
Staphylococcus aureus	KC895984	1280	1385
Staphylococcus	KM276080	1279	1385
Staphylococcus hyicus	KM276082	1284	1279
Staphylococcus aureus	NC 002096	1280	1279
Staphylococcus aureus	NC 002129	1280	1279
Lysinibacillus sphaericus	AY325804	1421	400634
Gluconacetobacter diazotrophicus	AM889286	33996	89583
Frankia symbiont of Datisca glomerata	CP002802	2716812	1854
Enterobacteriaceae	CP011981	543	1854
Enterobacteriaceae	CP023916	543	1854
Enterobacteriaceae	HG969999	543	1854
Enterobacteriaceae	CP024040	543	1854
Klebsiella pneumoniae	CP029723	5 43 573	570
Klebsiella pneumoniae	JX442977	573 573	570
Klebsiella pneumoniae Klebsiella pneumoniae	AP018834	573 573	570
Klebsiella pneumoniae Klebsiella pneumoniae	CP023841	573 573	570 570
Preparetta hitefiliolitae	Or 023041	919	910

scientificName	nuccoreAcc	taxid	parent
Enterobacter cloacae	CP035637	550	354276
Klebsiella pneumoniae	CP023948	573	354276
Klebsiella pneumoniae	MK649823	573	354276
Klebsiella pneumoniae	CP033947	573	354276
Klebsiella pneumoniae	KF295829	573	354276
Klebsiella pneumoniae	CP012566	573	354276
Enterobacteriaceae	CP026280	543	354276
Enterobacteriaceae	CP026212	543	354276
Enterobacteriaceae	MF156708	543	354276
Enterobacteriaceae	KP125893	543	354276
Klebsiella pneumoniae	CP026173	573	354276
Enterobacteriaceae	CP026185	543	354276
Enterobacteriaceae	CP038279	543	354276
Klebsiella pneumoniae	CP011999	573	354276
Enterobacteriaceae	CP008932	543	354276
Enterobacteriaceae	CP041250	543	354276
Klebsiella oxytoca	CP011630	571	570
Escherichia coli	CP019904	562	561
Klebsiella quasipneumoniae	CP026370	1463165	570
Klebsiella pneumoniae	CP026180	573	570
Klebsiella pneumoniae	CP017935	573	570
Klebsiella pneumoniae	CP040994	573	570
Klebsiella pneumoniae	CP033395	573	570
Klebsiella pneumoniae	CP028582	573	570
Klebsiella pneumoniae	KP893385	573	570
Klebsiella pneumoniae	CP029230	573	570
Klebsiella pneumoniae	MK433206	573	570
Klebsiella pneumoniae	CP028796	573	570
Klebsiella pneumoniae	CP024484	573	570
Klebsiella pneumoniae	CP024543	573	570
Klebsiella pneumoniae	CP018670	573	570
Serratia marcescens	CP020508	615	613
Enterobacterales	AP019405	91347	613
Enterobacterales	CP042513	91347	613
Enterobacterales	CP013323	91347	613
Enterobacterales	CP007734	91347	613
Enterobacterales	CP023893	91347	613
Enterobacterales	CP041514	91347	613
Enterobacterales	CP032169	91347	613
Enterobacterales	AP014952	91347	613
Enterobacteriaceae	JN935899	543	613
Enterobacteriaceae	CP014069	543	613
Enterobacteriaceae	CP032305	543	613

scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	KR822247	543	570
Enterobacteriaceae	CP028781	543	570
Enterobacteriaceae	KX960110	543	570
Enterobacterales	CP020839	91347	570
Enterobacterales	KX214669	91347	570
Enterobacterales	CP036195	91347	570
Enterobacterales	JX104759	91347	570
Enterobacterales	MF344560	91347	570
Enterobacterales	CP031884	91347	570
Enterobacterales	KU647721	91347	570
Salmonella enterica	CP045055	28901	590
Enterobacteriaceae	MF150120	543	590
Enterobacteriaceae	MK264769	543	590
Pantoea stewartii	CP017584	66269	53335
Enterobacter cloacae	CP039312	550	53335
Klebsiella oxytoca	CP011633	571	53335
Escherichia coli	CP010166	562	53335
Enterobacteriaceae	CP042480	543	53335
Enterobacteriaceae	CP026241	543	53335
Enterobacteriaceae	CP011654	543	53335
Enterobacteriaceae	AP018569	543	53335
Enterobacterales	KC887916	91347	53335
Enterobacterales	CP023554	91347	53335
Enterobacterales	CP014297	91347	53335
Citrobacter sp. CF971	CP041050	2566012	2644389
Klebsiella pneumoniae	CP044037	573	2644389
Klebsiella	CP022443	570	2644389
Klebsiella	MH909332	570	2644389
Enterobacteriaceae	CP031940	543	2644389
Enterobacteriaceae	CP045065	543	2644389
Enterobacteriaceae	CP026182	543	2644389
Enterobacteriaceae	CP007735	543	2644389
Enterobacteriaceae	CP025213	543	2644389
Enterobacteriaceae	MF510424	543	2644389
Enterobacteriaceae	CP026720	543	2644389
Enterobacter cloacae	CP032292	550	2644389
Escherichia coli	CP025740	562	2644389
Escherichia coli	CP040383	562	2644389
Citrobacter portucalensis	CP039329	1639133	1344959
Klebsiella quasipneumoniae	CP034140	1463165	1344959
Enterobacter cloacae	CP039313	550	1344959
Enterobacteriaceae	CP026237	543	1344959
Enterobacteriaceae	CP022155	543	1344959
Escherichia coli	CP026404	562	1344959

scientificName	nuccoreAcc	taxid	parent
Escherichia coli	CP026206	562	1344959
Escherichia coli	CP030920	562	1344959
Desulfovibrio vulgaris	CP002298	881	872
Chlamydia pecorum	KT223768	85991	810
Chlamydia gallinacea	CP015841	1457153	810
Chlamydia avium	CP006572	1457141	810
Chlamydia	CP003818	810	1113537
Chlamydia	CP031647	810	1113537
Chlamydia felis	AP006862	83556	810
Chlamydia caviae	AE015926	83557	810
Chlamydia sp. S15-834C	LS992155	1967783	2641215
Staphylococcus simulans	GU228572	1286	1279
Staphylococcus epidermidis	AE015934	1282	1279
Staphylococcus	AY917098	1279	1279
Staphylococcus	CP024410	1279	1279
Staphylococcus cohnii	CP019598	29382	1279
Bacteria	CP041007	2	1279
Bacteria	CP042088	2	1279
Staphylococcus epidermidis	CP024438	1282	1279
Staphylococcus warneri	CP003673	1292	1279
Thermus	KC491194	270	188786
Thermus	LR027518	270	188786
Thermus brockianus	CP016314	56956	270
Thermus thermophilus	DQ058601	274	270
Thermus thermophilus	AB119193	274	270
Thermus thermophilus	KM659912	274	270
Thermus aquaticus	CP010823	271	270
Gammaproteobacteria	JQ001791	1236	1224
Gammaproteobacteria	CP015617	1236	1224
Gammaproteobacteria	KX832928	1236	1224
Gammaproteobacteria	CP031709	1236	1224
Acinetobacter wuhouensis	CP033119	1879050	469
Acinetobacter pittii	CP033533	48296	909768
Bacillus methanolicus	AY386314	1471	1386
Staphylococcus	AF051917	1279	1386
Staphylococcus	CP030435	1279	1386
Staphylococcus	KT780704	1279	1386
Staphylococcus	CP042085	1279	1386
Staphylococcus epidermidis	GQ900381	1282	1386
Staphylococcus aureus	AP003367	1280	1386
Staphylococcus aureus	CP042086	1280	1386
Staphylococcus aureus	CP012121	1280	1386
Staphylococcus aureus	CP042047	1280	1386

Klebsiella pneumoniae CP041096 573 2608935 Klebsiella sp. PO552 CP037447 1972757 2608929 Enterobacteriaceae CP026215 543 2608929 Enterobacteriaceae CP010165 543 2608929	scientificName	nuccoreAcc	taxid	parent
Staphylococcus CP042087 1279 1386 Staphylococcus aureus CP042091 1280 1386 Staphylococcus seiuri JF968541 1284 1386 Staphylococcus sciuri CP041885 1296 1386 Staphylococcus warneri CP003675 1292 1386 Staphylococcus epidermidis HG813245 1282 1386 Staphylococcus sureus AY373761 1280 1386 Staphylococcus saprophyticus CP027421 29382 1386 Staphylococcus saprophyticus CP022055 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus saprophyticus CP035292 1282 1279 Staphylococcus saprophyticus CP033202 1282 1279 Staphylococcus saprophyticus	Staphylococcus aureus	CP027491	1280	1386
Staphylococcus hyicus CP042091 1280 1386 Staphylococcus hyicus JF968541 1284 1386 Staphylococcus warneri CP041885 1296 1386 Staphylococcus warneri CP003675 1292 1386 Staphylococcus epidermidis HG813245 1282 1386 Staphylococcus sepidermidis AY373761 1280 1386 Staphylococcus saprophyticus CP027421 29382 1386 Staphylococcus saprophyticus CP022055 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus saprophyticus CP035292 1283 1279 Staphylococcus saprophyticus CP035292 1283 1279 Staphylococcus spide	Staphylococcus	NC_005566	1279	1386
Staphylococcus sciuri CP041885 1296 1386 Staphylococcus warneri CP041885 1296 1386 Staphylococcus warneri CP003675 1292 1386 Staphylococcus epidermidis HG813245 1282 1386 Staphylococcus aureus AY373761 1280 1386 Staphylococcus saprophyticus CP027212 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus saprophyticus CP023094 29385 1279 Staphylococcus saprophyticus CP023094 29385 1279 Staphylococcus saprophyticus CP035292 1282 1279 Staphylococcus saprophyticus CP035292 1283 1279 Staphylococcus spider	Staphylococcus	CP042087	1279	1386
Staphylococcus warneri CP041885 1296 1386 Staphylococcus warneri CP003671 1292 1386 Staphylococcus warneri CP003675 1292 1386 Staphylococcus epidermidis HG813245 1282 1386 Staphylococcus colnii CP027421 29382 1386 Staphylococcus saprophyticus CP022055 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus spendermidis GQ900452 1282 1279 Staphylococcus spendermidis GQ900452 1283 1279 Staphylococcus despendermidi	Staphylococcus aureus	CP042091	1280	1386
Staphylococcus warneri CP003671 1292 1386 Staphylococcus warneri CP003675 1292 1386 Staphylococcus epidermidis HG813245 1282 1386 Staphylococcus sureus AY373761 1280 1386 Staphylococcus saprophyticus CP027421 29382 1386 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus sepidermidis GQ900452 1282 1279 Staphylococcus speidermidis GQ900452 1282 1279 Staphylococcus speidermidis GQ900452 1283 1279 Staphylococcus sp. AntiMn-1 CP013300 1715860 91994 Streptomyces albulus AB058947 68570 1883 Klebsiella pneumoniae CP03304 573 1883 Enterobacteriaceae CP028785 543 1883 Enterobacteriaceae CP010162 562 1883 Klebsiella pneumoniae CP018358 571 1883 Klebsiella pneumoniae CP012489 <t< td=""><td>Staphylococcus hyicus</td><td>JF968541</td><td>1284</td><td>1386</td></t<>	Staphylococcus hyicus	JF968541	1284	1386
Staphylococcus epidermidis CP003675 1292 1386 Staphylococcus epidermidis HG813245 1282 1386 Staphylococcus aureus AY373761 1280 1386 Staphylococcus saprophyticus CP022055 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus epidermidis GQ900452 1282 1279 Staphylococcus sprophyticus CP035292 1283 1289 Staphylococcus sprophyticus CP034763 573 1883 Rlebsiella pneumoni	Staphylococcus sciuri	CP041885	1296	1386
Staphylococcus epidermidis HG813245 1282 1386 Staphylococcus aureus AY373761 1280 1386 Staphylococcus cohnii CP027421 29382 1386 Staphylococcus soprophyticus CP022095 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus saprophyticus CP035292 1283 1279 Staphylococcus haemolyticus CP034969 573 1883 Klebsiella pneumoniae CP028785 543 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella pneumoniae	Staphylococcus warneri	CP003671	1292	1386
Staphylococcus aureus AY373761 1280 1386 Staphylococcus cohnii CP027421 29382 1386 Staphylococcus saprophyticus CP022055 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus saprophyticus CP035292 1282 1279 Staphylococcus haemolyticus CP035292 1283 1279 Staphylococcus sp. AntiMn-1 CP013300 1715860 91994 Streptomyces albulus AB058947 68570 1883 Streptomyces albulus AB058947 68570 1883 Enterobacteriaceae CP034763 573 1883 Enterobacteriaceae CP028785 543 1883 Escherichia coli CP010162 562 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella pneumoniae CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 <td>Staphylococcus warneri</td> <td>CP003675</td> <td>1292</td> <td>1386</td>	Staphylococcus warneri	CP003675	1292	1386
Staphylococcus saprophyticus CP027421 29382 1386 Staphylococcus saprophyticus CP022055 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus epidermidis GQ900452 1282 1279 Staphylococcus haemolyticus CP035292 1283 1279 Staphylococcus sp. AntiMn-1 CP013300 1715860 91994 Staphylococcus sp. AntiMn-1 CP013300 1715860 91994 Staphylococcus sp. AntiMn-1 CP013300 1715860 91994 Streptomyces albulus AB058947 68570 1883 Klebsiella pneumoniae CP034763 573 1883 Stepterobacteriaceae CP028785 543 1883 Stenterobacteriaceae CP010162 562 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella pneumoniae CP018358 571 1883 Klebsiella pneumoniae CP041096 573 2608925 Klebsiella pneumoniae CP03	Staphylococcus epidermidis	HG813245	1282	1386
Staphylococcus saprophyticus CP022055 29385 1279 Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus epidermidis GQ900452 1282 1279 Staphylococcus haemolyticus CP035292 1283 1279 Staphylococcus sp. AntiMn-1 CP013300 1715860 91994 Streptomyces albulus AB058947 68570 1883 Klebsiella pneumoniae CP034763 573 1883 Enterobacteriaceae CP028785 543 1883 Enterobacteriaceae CP010162 562 1883 Klebsiella pneumoniae EU932690 570 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella pneumoniae CP018358 571 1883 Klebsiella pneumoniae CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608925 Enterobacteriaceae CP037447 1972757 2608925 Enterobacteriaceae CP01165 543 <td>Staphylococcus aureus</td> <td>AY373761</td> <td>1280</td> <td>1386</td>	Staphylococcus aureus	AY373761	1280	1386
Staphylococcus saprophyticus CP022094 29385 1279 Staphylococcus epidermidis GQ900452 1282 1279 Staphylococcus haemolyticus CP035292 1283 1279 Staphylococcus sp. AntiMn-1 CP013300 1715860 91994 Streptomyces albulus AB058947 68570 1883 Klebsiella pneumoniae CP034763 573 1883 Enterobacteriaceae CP028785 543 1883 Escherichia coli CP010162 562 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella pneumoniae CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608928 Klebsiella pneumoniae CP041096 573 2608928 Enterobacteriaceae CP012615 543 2608929 Enterobacteriaceae CP028803 573 2608929 Enterobacteriaceae CP041057 547	Staphylococcus cohnii	CP027421	29382	1386
Staphylococcus epidermidis GQ900452 1282 1279 Staphylococcus haemolyticus CP035292 1283 1279 Staphylococcus sp. AntiMn-1 CP013300 1715860 91994 Streptomyces albulus AB058947 68570 1883 Klebsiella pneumoniae CP034763 573 1883 Enterobacteriaceae CP028785 543 1883 Escherichia coli CP010162 562 1883 Klebsiella CP024569 570 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella pneumoniae CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608925 Enterobacteriaceae CP041096 573 2608925 Enterobacteriaceae CP026215 543 2608925 Enterobacteriaceae CP041057 547 543 Klebsiella pneumoniae CP041057 547 543	Staphylococcus saprophyticus	CP022055	29385	1279
Staphylococcus haemolyticus CP035292 1283 1279 Staphylococcus sp. AntiMn-1 CP013300 1715860 91994 Streptomyces albulus AB058947 68570 1883 Klebsiella pneumoniae CP034763 573 1883 Enterobacteriaceae CP028785 543 1883 Escherichia coli CP010162 562 1883 Klebsiella CP024569 570 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella pneumoniae CP018358 571 1883 Klebsiella pneumoniae CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP037447 1972757 2608925 Enterobacteriaceae CP037447 1972757 2608925 Enterobacteriaceae CP010165 543 2608925 Klebsiella pneumoniae CP028803 573 2608925 Klebsiella pneumoniae CP028803 573 2608925 <td>Staphylococcus saprophyticus</td> <td>CP022094</td> <td>29385</td> <td>1279</td>	Staphylococcus saprophyticus	CP022094	29385	1279
Staphylococcus sp. AntiMn-1 CP013300 1715860 91994 Streptomyces albulus AB058947 68570 1883 Klebsiella pneumoniae CP034763 573 1883 Enterobacteriaceae CP028785 543 1883 Escherichia coli CP010162 562 1883 Klebsiella CP024569 570 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella pneumoniae CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608925 Klebsiella pneumoniae CP037447 1972757 2608925 Enterobacteriaceae CP010165 543 2608925 Klebsiella pneumoniae CP028803 573 2608925 Klebsiella pneumoniae CP041057 547 543 Klebsiella pneumoniae CP023915 573 160674 Klebsiella pneumoniae CP036325 573 160674 <	Staphylococcus epidermidis	GQ900452	1282	1279
Streptomyces albulus AB058947 68570 1883 Klebsiella pneumoniae CP034763 573 1883 Enterobacteriaceae CP028785 543 1883 Escherichia coli CP010162 562 1883 Klebsiella CP024569 570 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella oxytoca CP018388 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608935 Klebsiella pneumoniae CP037447 1972757 2608925 Enterobacteriaceae CP010165 543 2608925 Enterobacteriaceae CP010165 543 2608925 Klebsiella pneumoniae CP028803 573 2608925 Klebsiella pneumoniae CP028903 573 2608925 Klebsiella pneumoniae CP023915 573 543 Raoultella ornithinolytica CP023915 573 160674	Staphylococcus haemolyticus	CP035292	1283	1279
Klebsiella pneumoniae CP034763 573 1883 Enterobacteriaceae CP028785 543 1883 Escherichia coli CP010162 562 1883 Klebsiella CP024569 570 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella oxytoca CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608935 Klebsiella sp. PO552 CP037447 1972757 2608922 Enterobacteriaceae CP026215 543 2608922 Enterobacteriaceae CP010165 543 2608922 Klebsiella pneumoniae CP028803 573 2608922 Klebsiella pneumoniae CP028803 573 2608922 Enterobacter CP041057 547 543 Klebsiella pneumoniae CP023915 573 160674 Klebsiella pneumoniae CP036325 573 160674	Staphylococcus sp. AntiMn-1	CP013300	1715860	91994
Enterobacteriaceae CP028785 543 1883 Escherichia coli CP010162 562 1883 Klebsiella CP024569 570 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella oxytoca CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608935 Klebsiella sp. PO552 CP037447 1972757 2608925 Enterobacteriaceae CP026215 543 2608925 Enterobacteriaceae CP010165 543 2608925 Klebsiella pneumoniae CP028803 573 2608925 Klebsiella pneumoniae CP028803 573 2608925 Enterobacteriaceae CP041057 547 543 Klebsiella pneumoniae CP023915 573 160674 Klebsiella pneumoniae CP012558 54291 160674 Klebsiella pneumoniae CP031819 573 160674 <tr< td=""><td>Streptomyces albulus</td><td>AB058947</td><td>68570</td><td>1883</td></tr<>	Streptomyces albulus	AB058947	68570	1883
Escherichia coli CP010162 562 1883 Klebsiella CP024569 570 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella oxytoca CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608925 Klebsiella sp. PO552 CP037447 1972757 2608925 Enterobacteriaceae CP026215 543 2608925 Enterobacteriaceae CP010165 543 2608925 Klebsiella pneumoniae CP028803 573 2608925 Klebsiella pneumoniae CP028803 573 2608925 Klebsiella pneumoniae CP0240157 547 543 Klebsiella pneumoniae CP023915 573 543 Klebsiella pneumoniae CP012558 54291 160674 Klebsiella pneumoniae CP03815 573 160674 Klebsiella quasipneumoniae CP031819 573 160674 <td>Klebsiella pneumoniae</td> <td>CP034763</td> <td>573</td> <td>1883</td>	Klebsiella pneumoniae	CP034763	573	1883
Klebsiella CP024569 570 1883 Klebsiella pneumoniae EU932690 573 1883 Klebsiella oxytoca CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608925 Klebsiella sp. PO552 CP037447 1972757 2608925 Enterobacteriaceae CP010165 543 2608925 Enterobacteriaceae CP010165 543 2608925 Klebsiella pneumoniae CP028803 573 2608925 Klebsiella pneumoniae CP041057 547 543 Klebsiella pneumoniae CP023915 573 543 Klebsiella pneumoniae CP012558 54291 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674	Enterobacteriaceae	CP028785	543	1883
Klebsiella pneumoniae EU932690 573 1883 Klebsiella oxytoca CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608928 Klebsiella sp. PO552 CP037447 1972757 2608928 Enterobacteriaceae CP026215 543 2608928 Enterobacteriaceae CP010165 543 2608928 Klebsiella pneumoniae CP028803 573 2608928 Enterobacter CP041057 547 543 Klebsiella pneumoniae CP023915 573 543 Klebsiella pneumoniae CP023915 573 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Klebsiella pneumoniae CP024513 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP01643 573 16067	Escherichia coli	CP010162	562	1883
Klebsiella oxytoca CP018358 571 1883 Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608935 Klebsiella sp. PO552 CP037447 1972757 2608929 Enterobacteriaceae CP026215 543 2608929 Enterobacteriaceae CP010165 543 2608929 Klebsiella pneumoniae CP028803 573 2608929 Enterobacter CP041057 547 543 Klebsiella pneumoniae CP023915 573 543 Klebsiella pneumoniae CP012558 54291 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP024133 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP01643 573 160674<	Klebsiella	CP024569	570	1883
Enterobacter sp. FY-07 CP012489 1692238 2608935 Klebsiella pneumoniae CP041096 573 2608935 Klebsiella sp. PO552 CP037447 1972757 2608929 Enterobacteriaceae CP026215 543 2608929 Enterobacteriaceae CP010165 543 2608929 Klebsiella pneumoniae CP028803 573 2608929 Enterobacter CP028803 573 2608929 Enterobacter CP028803 573 2608929 Enterobacter CP028803 573 2608929 Enterobacter CP041057 547 543 Klebsiella pneumoniae CP023915 573 543 Klebsiella pneumoniae CP012558 54291 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP024513 543 160674 Klebsiella pneumoniae CP03227 573 160674	Klebsiella pneumoniae	EU932690	573	1883
Klebsiella pneumoniae CP041096 573 2608935 Klebsiella sp. PO552 CP037447 1972757 2608929 Enterobacteriaceae CP026215 543 2608929 Enterobacteriaceae CP010165 543 2608929 Klebsiella pneumoniae CP028803 573 2608929 Enterobacter CP041057 547 543 Klebsiella pneumoniae CP023915 573 543 Raoultella ornithinolytica CP012558 54291 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Klebsiella pneumoniae CP03227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573	Klebsiella oxytoca	CP018358	571	1883
Klebsiella sp. PO552 CP037447 1972757 2608929 Enterobacteriaceae CP026215 543 2608929 Enterobacteriaceae CP010165 543 2608929 Klebsiella pneumoniae CP028803 573 2608929 Enterobacter CP041057 547 543 Klebsiella pneumoniae CP023915 573 543 Raoultella ornithinolytica CP012558 54291 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae AF156893 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160	Enterobacter sp. FY-07	CP012489	1692238	2608935
Enterobacteriaceae CP026215 543 2608929 Enterobacteriaceae CP010165 543 2608929 Klebsiella pneumoniae CP028803 573 2608929 Enterobacter CP041057 547 543 Klebsiella pneumoniae CP023915 573 543 Raoultella ornithinolytica CP012558 54291 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae AF156893 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Enterobacteriaceae CP026183 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 <td>Klebsiella pneumoniae</td> <td>CP041096</td> <td>573</td> <td>2608935</td>	Klebsiella pneumoniae	CP041096	573	2608935
Enterobacteriaceae CP010165 543 2608929 Klebsiella pneumoniae CP028803 573 2608929 Enterobacter CP041057 547 543 Klebsiella pneumoniae CP023915 573 543 Raoultella ornithinolytica CP012558 54291 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Enterobacteriaceae CP024513 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Klebsiella sp. PO552	CP037447	1972757	2608929
Klebsiella pneumoniae CP028803 573 2608929 Enterobacter CP041057 547 543 Klebsiella pneumoniae CP023915 573 543 Raoultella ornithinolytica CP012558 54291 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae AF156893 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Enterobacteriaceae	CP026215	543	2608929
Enterobacter CP041057 547 543 Klebsiella pneumoniae CP023915 573 543 Raoultella ornithinolytica CP012558 54291 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae AF156893 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Enterobacteriaceae	CP010165	543	2608929
Klebsiella pneumoniae CP023915 573 543 Raoultella ornithinolytica CP012558 54291 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae AF156893 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Klebsiella pneumoniae	CP028803	573	2608929
Raoultella ornithinolytica CP012558 54291 160674 Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae AF156893 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Enterobacteriaceae CP024513 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Enterobacter	CP041057	547	543
Klebsiella pneumoniae CP036325 573 160674 Klebsiella pneumoniae AF156893 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Enterobacteriaceae CP024513 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Klebsiella pneumoniae	CP023915	573	543
Klebsiella pneumoniae AF156893 573 160674 Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Enterobacteriaceae CP024513 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Raoultella ornithinolytica	CP012558	54291	160674
Klebsiella pneumoniae CP031819 573 160674 Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Enterobacteriaceae CP024513 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Klebsiella pneumoniae	CP036325	573	160674
Klebsiella quasipneumoniae CP034135 1463165 160674 Enterobacteriaceae CP026183 543 160674 Enterobacteriaceae CP024513 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Klebsiella pneumoniae	AF156893	573	160674
Enterobacteriaceae CP026183 543 160674 Enterobacteriaceae CP024513 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Klebsiella pneumoniae	CP031819	573	160674
Enterobacteriaceae CP024513 543 160674 Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Klebsiella quasipneumoniae	CP034135	1463165	160674
Klebsiella pneumoniae CP003227 573 160674 Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674		CP026183	543	160674
Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Enterobacteriaceae	CP024513	543	
Klebsiella pneumoniae CP011643 573 160674 Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674	Klebsiella pneumoniae	CP003227	573	160674
Klebsiella pneumoniae CP042487 573 160674 Klebsiella pneumoniae CP000652 573 160674 Klebsiella pneumoniae CP015397 573 160674		CP011643	573	160674
Klebsiella pneumoniae CP015397 573 160674		CP042487	573	160674
Klebsiella pneumoniae CP015397 573 160674	Klebsiella pneumoniae	CP000652	573	160674
	-	CP015397	573	160674
		CP024196	573	160674

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scientificName	nuccoreAcc	taxid	parent
Klebsiella pneumoniae	CP044041	573	160674
Klebsiella pneumoniae	CP018446	573	160674
Enterobacteriaceae	CP036332	543	160674
Enterobacteriaceae	CP023869	543	160674
Klebsiella pneumoniae	CP024044	573	160674
Klebsiella pneumoniae	CP021700	573	160674
Enterobacteriaceae	CP035127	543	160674
Klebsiella	CP031797	570	160674
Klebsiella pneumoniae	CP011619	573	160674
Klebsiella pneumoniae	CP023940	573	160674
Klebsiella aerogenes	CP044216	548	160674
Klebsiella pneumoniae	CP023908	573	160674
Klebsiella pneumoniae	CP031375	573	160674
Klebsiella pneumoniae	CP024485	573	160674
Klebsiella pneumoniae	CP023945	573	160674
Klebsiella pneumoniae	CP000651	573	160674
Klebsiella pneumoniae	CP024580	573	160674
Klebsiella	AP014955	570	160674
Klebsiella pneumoniae	CP018665	573	160674
Klebsiella pneumoniae	CP031816	573	160674
Klebsiella pneumoniae	CP011315	573	160674
Providencia stuartii	CP008919	588	586
Providencia rettgeri	CP017672	587	586
Borrelia miyamotoi	CP044645	47466	138
Borrelia miyamotoi	CP036583	47466	138
Borrelia miyamotoi	CP044651	47466	138
Borrelia miyamotoi	CP037244	47466	138
Borrelia miyamotoi	CP037234	47466	138
Borrelia miyamotoi	CP044827	47466	138
Borrelia miyamotoi	CP037260	47466	138
Borrelia miyamotoi	CP037242	47466	138
Borrelia miyamotoi	CP044811	47466	138
Borrelia miyamotoi	CP037485	47466	138
Escherichia coli	CP023830	562	138
Escherichia coli	CP003112	562	138
Escherichia coli	CP016039	562	138
Escherichia coli	CP003114	562	138
Escherichia coli	CP000801	562	138
Escherichia coli	EU580135	562	138
Escherichia coli	FN649415	562	138
Escherichia coli	CP042634	562	138
Escherichia coli	CP010224	562	138
Enterobacteriaceae	CP018108	543	138
Enterobacteriaceae	CP006787	543	138

scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	CP032499	543	138
Escherichia coli	CP002187	562	138
Enterobacteriaceae	AP009244	543	138
Salmonella enterica	GU949535	28901	138
Enterobacteriaceae	JX566769	543	138
Enterobacteriaceae	CP017722	543	138
Shigella boydii	HQ404303	621	620
Shigella flexneri	CP001387	623	620
Shigella flexneri	CP034063	623	620
Shigella boydii	CP001061	621	620
Escherichia coli	CP031924	562	620
Escherichia coli	CP041342	562	620
Enterobacteriaceae	CP001148	543	620
Escherichia coli	AF251289	562	620
Escherichia coli	KC853436	562	620
Escherichia coli	CP027259	562	620
Escherichia coli	CP025843	562	620
Escherichia coli	KC853438	562	620
Escherichia coli	LT985282	562	620
Escherichia coli	AY929248	562	620
Enterobacteriaceae	KM085452	543	620
Enterobacteriaceae	CP045786	543	620
Enterobacteriaceae	CP011433	543	620
Enterobacteriaceae	CP012934	543	620
Arthrobacter sp. FB24	CP000457	290399	235627
Arthrobacter sp. FB24	CP000455	290399	235627
Arthrobacter sp. Rue61a	CP003204	1118963	235627
Paenarthrobacter aurescens	CP000476	43663	174299
Escherichia coli	CP010120	562	174299
Escherichia coli	CP043735	562	174299
Enterobacteriaceae	CP019076	543	174299
Enterobacteriaceae	MH454107	543	174299
Enterobacteriaceae	CP033847	543	174299
Enterobacteriaceae	CP028576	543	174299
Enterobacteriaceae	LS992186	543	174299
Enterobacteriaceae	KP453775	543	174299
Enterobacteriaceae	CP035478	543	174299
Enterobacteriaceae	CP023827	543	174299
Enterobacteriaceae	CP015070	543	174299
Enterobacteriaceae	KX928752	543	174299
Enterobacteriaceae	MK797990	543	174299
Enterobacteriaceae	AP018574	543	174299
Enterobacteriaceae	CP015086	543	174299
Enterobacteriaceae	CP034956	543	174299

scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	CP024863	543	1742992
Enterobacteriaceae	CP023259	543	1742992
Escherichia coli	CP041531	562	1742992
Escherichia coli	CP029978	562	1742992
Escherichia coli	CP031233	562	1742992
Escherichia coli	CP018964	562	1742992
Salmonella enterica	AY333434	28901	1742992
Enterobacteriaceae	CP033761	543	1742992
Enterobacteriaceae	CP036329	543	1742992
Enterobacteriaceae	CP009860	543	1742992
Enterobacteriaceae	CP025737	543	1742992
Escherichia coli	CP000971	562	1742992
Escherichia coli	MH580302	562	1742992
Escherichia coli	MF679147	562	1742992
Escherichia coli	CP043741	562	1742992
Escherichia coli	MG838205	562	1742992
Escherichia coli	LC484363	562	1742992
Escherichia coli	CP034739	562	1742992
Escherichia coli	MF474175	562	1742992
Escherichia coli	CP019007	562	1742992
Escherichia coli	JX077110	562	1742992
Escherichia coli	KJ484636	562	1742992
Escherichia coli	MF174860	562	1742992
Escherichia coli	EU330199	562	1742992
Enterobacteriaceae	KY007017	543	1742992
Enterobacteriaceae	CP026643	543	1742992
Enterobacteriaceae	MK878890	543	1742992
Enterobacteriaceae	CP010149	543	1742992
Enterobacteriaceae	NC_011964	543	1742992
Escherichia coli	CP010126	562	1742992
Escherichia coli	CP031323	562	1742992
Escherichia coli	CP043952	562	1742992
Escherichia coli	CP023384	562	1742992
Escherichia coli	CP019909	562	1742992
Escherichia coli	CP041997	562	1742992
Escherichia coli	CP019018	562	1742992
Escherichia coli	CP043737	562	1742992
Escherichia coli	CP032891	562	1742992
Escherichia coli	AP009242	562	1742992
Escherichia coli	CP024864	562	1742992
Escherichia	CP032813	561	543
Escherichia	CP030785	561	543
Escherichia coli	CP010124	562	543
Escherichia coli	CP025871	562	543

scientificName	nuccoreAcc	taxid	parent
Escherichia coli	FN822746	562	543
Escherichia coli	CP022913	562	543
Escherichia coli	CP025857	562	543
Escherichia coli	CP024258	562	543
Escherichia coli	CP025861	562	543
Escherichia coli	CP025905	562	543
Escherichia coli	CP024994	562	543
Escherichia coli	CP009053	562	543
Escherichia coli	CP023734	562	543
Escherichia coli	CP010136	562	543
Escherichia coli	CP035753	562	543
Escherichia coli	CP014200	562	543
Escherichia coli	CP014199	562	543
Enterobacteriaceae	EU935738	543	543
Enterobacteriaceae	CP023918	543	543
Enterobacteriaceae	CP017852	543	543
Enterobacteriaceae	AP014806	543	543
Enterobacteriaceae	CP027120	543	543
Bifidobacterium asteroides	EU030683	1684	1678
Empedobacter brevis	CP043636	247	59734
Empedobacter brevis	CP043635	247	59734
Bacillus thuringiensis	CP004137	1428	86661
Bacillus thuringiensis	CP004129	1428	86661
Bacillus thuringiensis	CP003892	1428	86661
Bacillus thuringiensis	CP003755	1428	86661
Bacillus thuringiensis	AP014869	1428	86661
Lactococcus lactis	CP016718	1358	1357
Lactococcus lactis	MF150537	1358	1357
Lactococcus lactis	AF207855	1358	1357
Lactococcus lactis	AB079380	1358	1357
Lactococcus lactis	AJ550509	1358	1357
Lactococcus lactis	HM021326	1358	1357
Lactococcus lactis	CP016751	1358	1357
Lactococcus lactis	CP016710	1358	1357
Lactococcus lactis	CP002369	1358	1357
Lactococcus lactis	AF306799	1358	1357
Lactococcus lactis	CP034585	1358	1357
Lactococcus lactis	NC_004960	1358	1357
Lactococcus lactis	AB079381	1358	1357
Lactococcus lactis	CP020609	1358	1357
Lactococcus lactis	CP031543	1358	1357
Lactococcus lactis	CP003164	1358	1357
Lactococcus lactis	CP034572	1358	1357
Lactococcus lactis	CP034579	1358	1357

scientificName	nuccoreAcc	taxid	parent
Lactococcus lactis	EU289287	1358	1357
Lactobacillus brevis	CP031180	1580	1578
Lactococcus lactis	AB198069	1358	1578
Lactococcus lactis	CP016704	1358	1578
Lactococcus lactis	CP043525	1358	1578
Lactococcus lactis	JQ821356	1358	1578
Lactococcus lactis	CP020606	1358	1578
Lactococcus lactis	CP029291	1358	1578
Lactococcus garvieae	KM007159	1363	1357
Lactococcus garvieae	HE651325	1363	1357
Lactococcus lactis	AF001314	1358	1357
Lactococcus lactis	FR872378	1358	1357
Lactococcus lactis	CP000430	1358	1357
Lactococcus lactis	CP034576	1358	1357
Lactococcus lactis	NC_002798	1358	1357
Lactococcus lactis	CP016750	1358	1357
Pseudomonas cerasi	LT222314	1583341	286
Pseudomonas cerasi	LT963401	1583341	286
Pseudomonas	LT963405	286	135621
Pseudomonas	CP026564	286	135621
Pseudomonas	LT985191	286	135621
Pseudomonas syringae	LT985194	317	251695
Pseudomonas syringae	LT963413	317	251695
Pseudomonas syringae	LT963407	317	251695
Pseudomonas syringae group genomosp. 3	AF359557	251701	136849
Pseudomonas syringae	LT963406	317	136849
Pseudomonas avellanae	CP026566	46257	136849
Pseudomonas cerasi	LT963400	1583341	136849
Pseudomonas cerasi	LT222317	1583341	136849
Pseudomonas savastanoi	FR820587	29438	251698
Pseudomonas syringae group genomosp. 3	AY603980	251701	251698
Pseudomonas savastanoi	FR820585	29438	251698
Pseudomonas syringae	LT963403	317	251698
Pseudomonas cerasi	LT222313	1583341	251698
Pseudomonas	CP034561	286	251698
Pseudomonas syringae	LT963394	317	251698
Pseudomonas syringae	CP024714	317	251698
Pseudomonas	LT963411	286	251698
Pseudomonas	CP026557	286	251698
Pseudomonas	CP026563	286	251698
Pseudomonas	LT963404	286	251698
Pseudomonas	CP034560	286	251698
Pseudomonas	AE016854	286	251698
Pseudomonas	AE016855	286	251698

scientificName	nuccoreAcc	taxid	parent
Pseudomonas	KY362366	286	251698
Pseudomonas syringae	CP011973	317	251698
Pseudomonas syringae	CP018204	317	251698
Pseudomonas syringae	CP018203	317	251698
Pseudomonas	CP034559	286	251698
Pseudomonas	CP026559	286	251698
Pseudomonas	CP019872	286	251698
Pseudomonas amygdali	CP031228	47877	251698
Borreliella burgdorferi	CP001261	139	64895
Borreliella burgdorferi	AF169008	139	64895
Borreliella burgdorferi	CP001376	139	64895
Borreliella burgdorferi	CP001496	139	64895
Borreliella burgdorferi	CP001546	139	64895
Borreliella burgdorferi	CP001453	139	64895
Borreliella burgdorferi	CP002235	139	64895
Borreliella burgdorferi	CP001444	139	64895
Borreliella burgdorferi	CP031410	139	64895
Borreliella burgdorferi	CP001268	139	64895
Borreliella burgdorferi	CP002229	139	64895
Borreliella burgdorferi	CP031405	139	64895
Borreliella burgdorferi	CP031407	139	64895
Borrelia mayonii	CP015782	1674146	64895
Borrelia mayonii	CP015786	1674146	64895
Borreliella bissettii	CP002754	64897	64895
Borreliella bissettii	CP002748	64897	64895
Borreliella bissettii	CP002752	64897	64895
Borreliella bissettii	CP002749	64897	64895
Borreliella bissettii	CP002753	64897	64895
Borreliella bissettii	CP002750	64897	64895
Borreliella burgdorferi	CP001549	139	64895
Borreliella burgdorferi	CP001371	139	64895
Borreliella burgdorferi	CP001266	139	64895
Borreliella burgdorferi	CP001270	139	64895
Borreliella burgdorferi	CP017204	139	64895
Borreliella burgdorferi	CP002323	139	64895
Borreliella burgdorferi	CP001263	139	64895
Borreliella	CP015783	64895	1643685
Borreliella	AE001581	64895	1643685
Borreliella	CP002310	64895	1643685
Borreliella	AE001577	64895	1643685
Borreliella	CP015784	64895	1643685
Borreliella	CP019757	64895	1643685
Borreliella	AE001578	64895	1643685
Borreliella	CP001450	64895	1643685

scientificName	nuccoreAcc	taxid	parent
Borreliella	CP001445	64895	1643685
Borreliella	CP001556	64895	1643685
Borreliella	CP001526	64895	1643685
Borreliella	CP001499	64895	1643685
Borreliella	CP001492	64895	1643685
Borreliella	CP001457	64895	1643685
Borreliella	CP001381	64895	1643685
Borreliella	CP001534	64895	1643685
Borreliella	CP001426	64895	1643685
Borreliella	CP001264	64895	1643685
Borreliella burgdorferi	CP001415	139	1643685
Borreliella	CP001269	64895	1643685
Borreliella	CP001259	64895	1643685
Borreliella	CP015785	64895	1643685
Borreliella	CP002261	64895	1643685
Borreliella	CP002240	64895	1643685
Borreliella	CP001491	64895	1643685
Borreliella	CP001208	64895	1643685
Borreliella	AE001579	64895	1643685
Borreliella burgdorferi	CP001475	139	1643685
Borreliella burgdorferi	CP002263	139	1643685
Borreliella burgdorferi	CP002321	139	1643685
Borreliella burgdorferi	CP001479	139	1643685
Borreliella burgdorferi	CP031408	139	1643685
Borreliella burgdorferi	CP001478	139	1643685
Borreliella burgdorferi	CP002227	139	1643685
Borreliella burgdorferi	CP001558	139	1643685
Borreliella burgdorferi	CP001565	139	1643685
Borreliella burgdorferi	CP001414	139	1643685
Borreliella burgdorferi	AE001576	139	1643685
Borreliella burgdorferi	CP019756	139	1643685
Borreliella burgdorferi	CP001372	139	1643685
Borreliella	CP001202	64895	1643685
Borreliella finlandensis	CP001516	498741	64895
Borreliella finlandensis	CP001517	498741	64895
Borreliella afzelii	CP002940	29518	64895
Borreliella afzelii	CP000400	29518	64895
Borreliella afzelii	CP009068	29518	64895
Borreliella afzelii	CP001240	29518	64895
Borreliella afzelii	CP001237	29518	64895
Borreliella afzelii	CP001248	29518	64895
Borreliella afzelii	CP002935	29518	64895
Borreliella afzelii	CP002938	29518	64895
Borreliella afzelii	CP002937	29518	64895

scientificName	nuccoreAcc	taxid	parent
Borreliella	CP028868	64895	64895
Borreliella	CP001303	64895	64895
Borreliella	CP028880	64895	64895
Borreliella valaisiana	CP001441	62088	64895
Borreliella garinii	CP028864	29519	64895
Borrelia sp. CA690	CP044542	1476873	64895
Edwardsiella ictaluri	KR869778	67780	635
Edwardsiella ictaluri	AF244084	67780	635
Edwardsiella ictaluri	KT937280	67780	635
Edwardsiella piscicida	CP016445	1263550	635
Edwardsiella ictaluri	KC237288	67780	635
Edwardsiella piscicida	MG212496	1263550	635
Edwardsiella tarda	MF925335	636	635
Edwardsiella piscicida	MG212498	1263550	635
Edwardsiella piscicida	MG212497	1263550	635
Klebsiella pneumoniae	CP032209	573	635
Klebsiella pneumoniae	CP039975	573	635
Klebsiella pneumoniae	CP018460	573	635
Klebsiella pneumoniae	CP023488	573	635
Klebsiella pneumoniae	AP012055	573	635
Klebsiella pneumoniae	CP006663	573	635
Klebsiella pneumoniae	CP014649	573	635
Klebsiella pneumoniae	CP021713	573	635
Klebsiella pneumoniae	CP031735	573	635
Klebsiella	CP025142	570	635
Klebsiella	LR025093	570	635
Klebsiella	CP022125	570	635
Klebsiella	MK396843	570	635
Klebsiella	CP035216	570	635
Klebsiella pneumoniae	MG764551	573	635
Klebsiella pneumoniae	MK036889	573	635
Klebsiella pneumoniae	CP010390	573	635
Klebsiella pneumoniae	CP021166	573	635
Klebsiella pneumoniae	CP025212	573	635
Klebsiella pneumoniae	CP041936	573	635
Klebsiella	CP028954	570	635
Klebsiella	CP026716	570	635
Klebsiella	CP024483	570	635
Klebsiella	LR134219	570	635
Klebsiella	CP022926	570	635
Klebsiella	MH745929	570	635
Enterobacter cloacae	MH056209	550	635
Pantoea dispersa	CP045217	59814	53335
Enterobacteriaceae	AY258503	543	53335

scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	CP027463	543	53335
Enterobacteriaceae	CP027600	543	53335
Enterobacteriaceae	KJ484640	543	53335
Enterobacteriaceae	CP027522	543	53335
Enterobacteriaceae	CP028120	543	53335
Escherichia coli	CP031895	562	53335
Escherichia coli	KR905384	562	53335
Escherichia coli	CP018772	562	53335
Escherichia coli	KY565558	562	53335
Escherichia coli	MG825371	562	53335
Escherichia coli	CP023144	562	53335
Escherichia coli	CP029742	562	53335
Escherichia coli	MG196294	562	53335
Escherichia coli	CP043035	562	53335
Enterobacteriaceae	KT754166	543	53335
Enterobacteriaceae	CP040455	543	53335
Enterobacteriaceae	FJ386569	543	53335
Enterobacteriaceae	KU932021	543	53335
Enterobacteriaceae	MG299133	543	53335
Enterobacteriaceae	CP009052	543	53335
Escherichia coli	CU928147	562	53335
Escherichia coli	CP027379	562	53335
Escherichia coli	CP027324	562	53335
Borrelia miyamotoi	CP036777	47466	53335
Borrelia miyamotoi	CP044821	47466	53335
Borrelia miyamotoi	CP036773	47466	53335
Borrelia miyamotoi	CP036937	47466	53335
Rhodobacteraceae	CP015092	31989	204455
Rhodobacteraceae	CP015233	31989	204455
Epibacterium mobile	LR027556	379347	1649279
Roseovarius	CP020475	74030	31989
Rhodobacteraceae	CP010699	31989	31989
Rhodobacteraceae	CP004395	31989	31989
Sulfitobacter sp. THAF37	CP045375	2587855	196795
Marinovum algicola	CP010861	42444	367771
Roseivivax sp. THAF197b	CP045320	2588299	2639302
Roseovarius	CP045394	74030	2639302
Roseovarius indicus	CP031600	540747	74030
Escherichia coli	CP001847	562	74030
Escherichia coli	CP024137	562	74030
Escherichia coli	CP024129	562	74030
Escherichia coli	CP014753	562	74030
Escherichia coli	CP006263	562	74030
Escherichia coli	CP025880	562	74030

scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	CP041537	543	74030
Enterobacteriaceae	CP040454	543	74030
Escherichia coli	CP011418	562	74030
Salmonella enterica	CP019190	28901	74030
Salmonella enterica	CP017721	28901	74030
Escherichia coli	CP027641	562	74030
Escherichia coli	CP027674	562	74030
Escherichia coli	CP028383	562	74030
Escherichia coli	CP027375	562	74030
Escherichia coli	CP027343	562	74030
Escherichia coli	CP042297	562	74030
Escherichia coli	CP001162	562	74030
Escherichia coli	CP027521	562	74030
Enterobacteriaceae	JN983046	543	74030
Enterobacteriaceae	CP038792	543	74030
Escherichia coli	LT985252	562	74030
Escherichia coli	CP011496	562	74030
Escherichia coli	CP027256	562	74030
Escherichia coli	CP031893	562	74030
Escherichia coli	CP015239	562	74030
Escherichia coli	CP011019	562	74030
Escherichia coli	CP010192	562	74030
Escherichia coli	CP027455	562	74030
Escherichia coli	CP027765	562	74030
Escherichia coli	JQ418522	562	74030
Escherichia coli	CP010123	562	74030
Escherichia albertii	CP030782	208962	561
Escherichia albertii	CP024286	208962	561
Escherichia coli	CP001065	562	561
Escherichia coli	CP026754	562	561
Escherichia coli	CP023358	562	561
Escherichia	CP024287	561	561
Escherichia coli	CP027448	562	561
Escherichia coli	CP025844	562	561
Enterobacteriaceae	CP012928	543	561
Enterobacteriaceae	KF582523	543	561
Enterobacteriaceae	GU371926	543	561
Enterobacteriaceae	KU932028	543	561
Enterobacteriaceae	CP023355	543	561
Enterobacteriaceae	KY416992	543	561
Enterobacteriaceae	KU254579	543	561
Enterobacteriaceae	CP017726	543	561
Escherichia coli	CP021847	562	561
Escherichia coli	CP010215	562	561

Escherichia coli	scientificName	nuccoreAcc	taxid	parent
Escherichia coli Enterobacteriaceae Escherichia coli Enterobacteriaceae	Escherichia coli	MK092064	562	561
Enterobacteriaceae MH626558 543 561 Escherichia coli CP043219 562 561 Enterobacteriaceae CP041534 543 561 Escherichia coli CP043748 562 561 Enterobacteriaceae LT838198 543 561 Enterobacteriaceae CP04102 543 561 Enterobacteriaceae CP041102 543 561 Enterobacteriaceae CP035752 543 561 Enterobacteriaceae CP0357904 543 561 Enterobacteriaceae CP0437994 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP024151 543 561 Escherichia coli CP023471 28901 561 Escherichia coli CP023771 <t< td=""><td>Escherichia coli</td><td>CP033634</td><td>562</td><td>561</td></t<>	Escherichia coli	CP033634	562	561
Escherichia coli CP043219 562 561 Enterobacteriaceae CP041534 543 561 Escherichia coli CP043748 562 561 Enterobacteriaceae LT838198 543 561 Escherichia coli CP042642 562 561 Enterobacteriaceae CP041102 543 561 Enterobacteriaceae CP041102 543 561 Enterobacteriaceae CP035752 543 561 Enterobacteriaceae CP037904 543 561 Enterobacteriaceae CP037904 543 561 Enterobacteriaceae CP041514 543 561 Enterobacteriaceae CP041515 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP044151 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Escherichia coli CP027551 562 561 Escherichia coli CP027551 562 561 Escherichia coli CP027551 562 561 Escherichia coli AP1761 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP023369 562 561 Escherichia coli CP023369 562 561 Escherichia coli CP041564 562 561 Escherichia co	Escherichia coli	CP027439	562	561
Enterobacteriaceae CP041534 543 561 Escherichia coli CP043748 562 561 Enterobacteriaceae LT838198 543 561 Escherichia coli CP042642 562 561 Enterobacteriaceae CP041102 543 561 Enterobacteriaceae CP035752 543 561 Enterobacteriaceae CP037904 543 561 Enterobacteriaceae CP015914 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP023471 28901 561 Escherichia coli CP023471 28901 561 Escherichia coli CP027551 562 561 Escherichia coli AF550679 <td< td=""><td>Enterobacteriaceae</td><td>MH626558</td><td>543</td><td>561</td></td<>	Enterobacteriaceae	MH626558	543	561
Escherichia coli Enterobacteriaceae Excherichia coli Escherichia coli Escherichia coli Enterobacteriaceae CP041642 562 561 Enterobacteriaceae CP041102 543 561 Enterobacteriaceae CP035752 543 561 Enterobacteriaceae CP037904 543 561 Enterobacteriaceae CP037904 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024403 Salmonella enterica CP023471 Escherichia coli CP027551 Escherichia coli CP027551 Escherichia coli CP012626 Escherichia coli CP012626 Escherichia coli CP012665 Escherichia coli CP012377 Escherichia coli CP013959 Escherichia coli CP03959 Escherichia coli CP03959 Escherichia coli CP03959 Escherichia coli CP03959 Escherichia coli CP041564 Escherichia coli Escherichia coli CP041564 Escherichia	Escherichia coli	CP043219	562	561
Enterobacteriaceae LT838198 543 561 Escherichia coli CP042642 562 561 Enterobacteriaceae CP041102 543 561 Enterobacteriaceae CP035752 543 561 Enterobacteriaceae CP037904 543 561 Enterobacteriaceae CP015914 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024171 28901 561 Salmonella enterica CP023471 28901 561 Scherichia coli CP027551 562 561 Escherichia coli CP0277551 562 561 Escherichia coli LS992167 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377	Enterobacteriaceae	CP041534	543	561
Escherichia coli CP042642 562 561 Enterobacteriaceae CP041102 543 561 Enterobacteriaceae CP035752 543 561 Enterobacteriaceae CP037904 543 561 Enterobacteriaceae CP015914 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Salmonella enterica CP023471 28901 561 Escherichia coli CP027551 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP019376 562 561 Escherichia coli KJ484634 562 <td>Escherichia coli</td> <td>CP043748</td> <td>562</td> <td>561</td>	Escherichia coli	CP043748	562	561
Enterobacteriaceae CP041102 543 561 Enterobacteriaceae CP035752 543 561 Enterobacteriaceae CP037904 543 561 Enterobacteriaceae CP015914 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP026403 543 561 Salmonella enterica CP024371 28901 561 Scherichia coli CP027551 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP019456 562 561 Escherichia coli KJ484634 562 <td>Enterobacteriaceae</td> <td>LT838198</td> <td>543</td> <td>561</td>	Enterobacteriaceae	LT838198	543	561
Enterobacteriaceae CP037502 543 561 Enterobacteriaceae CP037904 543 561 Enterobacteriaceae CP015914 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024403 543 561 Enterobacteriaceae CP024471 28901 561 Salmonella enterica CP023471 28901 561 Escherichia coli CP027551 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP013476 562 561 Escherichia coli CP019456 562 561 Escherichia coli KJ484634 562 561 Escherichia coli HG03695 562 <td>Escherichia coli</td> <td>CP042642</td> <td>562</td> <td>561</td>	Escherichia coli	CP042642	562	561
Enterobacteriaceae CP037904 543 561 Enterobacteriaceae CP015914 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP024471 28901 561 Salmonella enterica CP023471 28901 561 Escherichia coli CP027551 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli KJ484634 562 561 Escherichia coli HG003695 562 561 Escherichia coli HG003695 562 561 Escherichia coli CP041564 562	Enterobacteriaceae	CP041102	543	561
Enterobacteriaceae CP015914 543 561 Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP026403 543 561 Enterobacteriaceae CP023471 28901 561 Salmonella enterica CP023471 28901 561 Escherichia coli CP027551 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP019456 562 561 Escherichia coli KJ484634 562 561 Escherichia coli HG003695 562 561 Escherichia coli CP041564 562	Enterobacteriaceae	CP035752	543	561
Enterobacteriaceae CP043759 543 561 Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP026403 543 561 Salmonella enterica CP023471 28901 561 Escherichia coli CP027551 562 561 Escherichia coli AP017611 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP013477 562 561 Escherichia coli CP019456 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP041564 562	Enterobacteriaceae	CP037904	543	561
Enterobacteriaceae CP024151 543 561 Enterobacteriaceae CP026403 543 561 Salmonella enterica CP023471 28901 561 Escherichia coli CP027551 562 561 Escherichia coli AP017611 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP023359 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP041564 562 <	Enterobacteriaceae	CP015914	543	561
Enterobacteriaceae CP026403 543 561 Salmonella enterica CP023471 28901 561 Escherichia coli CP027551 562 561 Escherichia coli AP017611 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP03367 562 561 Escherichia coli CP019456 562 561 Escherichia coli CP023959 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP027130 562	Enterobacteriaceae	CP043759	543	561
Salmonella enterica CP023471 28901 561 Escherichia coli CP027551 562 561 Escherichia coli AP017611 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023376 562 561 Escherichia coli CP019456 562 561 Escherichia coli CP023959 562 561 Escherichia coli KJ484634 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP027130 562 5	Enterobacteriaceae	CP024151	543	561
Escherichia coli CP027551 562 561 Escherichia coli AP017611 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP023959 562 561 Escherichia coli CP023959 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP035355 562 561 <td>Enterobacteriaceae</td> <td>CP026403</td> <td>543</td> <td>561</td>	Enterobacteriaceae	CP026403	543	561
Escherichia coli AP017611 562 561 Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli AF550679 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP019456 562 561 Escherichia coli CP023959 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035555 562 561 <td>Salmonella enterica</td> <td>CP023471</td> <td>28901</td> <td>561</td>	Salmonella enterica	CP023471	28901	561
Escherichia coli CP012626 562 561 Escherichia coli LS992167 562 561 Escherichia coli AF550679 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP019456 562 561 Escherichia coli CP023959 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP035355 562 561 Escherichia coli CP031295 562 561 <td>Escherichia coli</td> <td>CP027551</td> <td>562</td> <td>561</td>	Escherichia coli	CP027551	562	561
Escherichia coli LS992167 562 561 Escherichia coli AF550679 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP019456 562 561 Escherichia coli CP023959 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP035355 562 561 Escherichia coli CP035355 562 561 Escherichia coli CP031295 562 561 <td>Escherichia coli</td> <td>AP017611</td> <td>562</td> <td>561</td>	Escherichia coli	AP017611	562	561
Escherichia coli AF550679 562 561 Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP019456 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP035355 562 561 Escherichia coli CP035355 562 561 Escherichia coli CP031295 562 561	Escherichia coli	CP012626	562	561
Escherichia coli CP012377 562 561 Escherichia coli CP023367 562 561 Escherichia coli CP019456 562 561 Escherichia coli CP023959 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Escherichia coli CP024133 562 561 <td>Escherichia coli</td> <td>LS992167</td> <td>562</td> <td>561</td>	Escherichia coli	LS992167	562	561
Escherichia coli CP023367 562 561 Escherichia coli CP019456 562 561 Escherichia coli CP023959 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli MK492688 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP034959 543 561 Enterobacteriaceae MG197491 543 561<	Escherichia coli	AF550679	562	561
Escherichia coli CP019456 562 561 Escherichia coli CP023959 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli MK492688 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Escherichia coli CP034592 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561 </td <td>Escherichia coli</td> <td>CP012377</td> <td>562</td> <td>561</td>	Escherichia coli	CP012377	562	561
Escherichia coli CP023959 562 561 Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli MK492688 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP034133 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	CP023367	562	561
Escherichia coli KJ484634 562 561 Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP034133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	CP019456	562	561
Escherichia coli MG878866 562 561 Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli MK492688 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	CP023959	562	561
Escherichia coli HG003695 562 561 Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli MK492688 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae CP034592 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	KJ484634	562	561
Escherichia coli AP018147 562 561 Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli MK492688 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae CP034592 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	MG878866	562	561
Escherichia coli FQ482074 562 561 Escherichia coli CP041564 562 561 Escherichia coli MK492688 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae CP034592 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	HG003695	562	561
Escherichia coli CP041564 562 561 Escherichia coli MK492688 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	AP018147	562	561
Escherichia coli MK492688 562 561 Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	FQ482074	562	561
Escherichia coli CP027130 562 561 Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	CP041564	562	561
Escherichia coli CP019561 562 561 Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae CP034592 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	MK492688	562	561
Escherichia coli CP035355 562 561 Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae CP034592 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	CP027130	562	561
Escherichia coli AY214164 562 561 Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae CP034592 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	CP019561	562	561
Escherichia coli CP031295 562 561 Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae CP034592 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	CP035355	562	561
Escherichia coli CP024133 562 561 Enterobacteriaceae MG197491 543 561 Enterobacteriaceae CP034592 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	AY214164	562	561
Enterobacteriaceae MG197491 543 561 Enterobacteriaceae CP034592 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	CP031295	562	561
Enterobacteriaceae CP034592 543 561 Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Escherichia coli	CP024133	562	561
Enterobacteriaceae MG197500 543 561 Enterobacteriaceae MK419152 543 561	Enterobacteriaceae	MG197491	543	561
Enterobacteriaceae MK419152 543 561	Enterobacteriaceae	CP034592	543	561
	Enterobacteriaceae	MG197500	543	561
Escherichia coli CP031766 562 561	Enterobacteriaceae	MK419152	543	561
	Escherichia coli	CP031766	562	561

Enterobacteriaceae	scientificName	$\operatorname{nuccoreAcc}$	taxid	parent
Escherichia coli	Enterobacteriaceae	CP024975	543	561
Escherichia coli CP019244 562 561 Escherichia coli AP018354 562 561 Escherichia coli KT845955 562 561 Escherichia CP018107 561 561 Escherichia CP024284 561 561 Escherichia coli CP040265 562 561 Escherichia coli CP029104 562 561 Escherichia coli CP024296 562 561 Escherichia coli CP02462 562 561 Escherichia coli CP024662 562 561 Escherichia coli CP025850 562 561 Escherichia coli CP025850 562 561 Escherichia coli CP0284249 562 561 Escherichia coli CP028893 562 561 Escherichia coli CP081895 562 561 Escherichia coli CP028193 562 561 Enterobacteriaceae MP360948 513 561 <	Escherichia coli	CP042629	562	561
Escherichia coli AP018354 562 561 Escherichia coli KT845955 562 561 Escherichia CP018107 561 561 Escherichia CP024284 561 561 Escherichia coli CP040265 562 561 Escherichia coli CP029104 562 561 Escherichia coli CP02496 562 561 Escherichia coli CP024662 562 561 Escherichia coli CP024662 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP0400001 562 561 Escherichia coli CP081895 562 561 Escherichia coli CP081895 562 561 Escherichia coli CP028193 362 561 Escherichia coli CP032836 573 561 Enterobacteriaceae CP032825 543 561 <	Escherichia coli	MG677985	562	561
Escherichia KT845955 562 561 Escherichia CP018107 561 561 Escherichia CP024284 561 561 Escherichia coli CP040265 562 561 Escherichia coli CP029104 562 561 Escherichia coli CP024296 562 561 Escherichia coli CP024296 562 561 Escherichia coli CP024896 562 561 Escherichia coli CP024895 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP028193 562 561 Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Enterobacteriaceae LS999561 543 561 <	Escherichia coli	CP019244	562	561
Escherichia CP018107 561 561 Escherichia CP024284 561 561 Escherichia coli CP040265 562 561 Escherichia coli AP010910 562 561 Escherichia coli CP029104 562 561 Escherichia coli CP024296 562 561 Escherichia coli CP024662 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP085850 562 561 Escherichia coli CP080001 562 561 Escherichia coli CP08958 562 561 Escherichia coli CP08958 562 561 Klebsiella pneumoniae CP088958 562 561 Klebsiella pneumoniae CP040995 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae LS999561 543 561 Enterobacteriaceae LS999561 543 56	Escherichia coli	AP018354	562	561
Escherichia CP024284 561 561 Escherichia coli CP040265 562 561 Escherichia coli AP010910 562 561 Escherichia coli CP029104 562 561 Escherichia coli CP024296 562 561 Escherichia coli CP025850 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP006001 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP028193 562 561 Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP04995 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae LS99561 543 561 Enterobacteriaceae LS99561 543 561 Escherichia coli AB255435 562 561	Escherichia coli	KT845955	562	561
Escherichia coli CP040265 562 561 Escherichia coli AP010910 562 561 Escherichia coli CP029104 562 561 Escherichia coli CP024296 562 561 Escherichia coli CP024662 562 561 Escherichia coli CP025850 562 561 Escherichia coli CP006001 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP028193 562 561 Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AP04804 562	Escherichia	CP018107	561	561
Escherichia coli AP010910 562 561 Escherichia coli CP029104 562 561 Escherichia coli CP024296 562 561 Escherichia coli CP024662 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP006001 562 561 Escherichia coli CP08898 562 561 Escherichia coli CP028193 562 561 Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae LS999561 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB25435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562	Escherichia	CP024284	561	561
Escherichia coli CP029104 562 561 Escherichia coli CP024296 562 561 Escherichia coli CP024662 562 561 Escherichia coli CP025850 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP06001 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP028193 562 561 Scherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae LS999561 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543	Escherichia coli	CP040265	562	561
Escherichia coli CP024296 562 561 Escherichia coli CP024662 562 561 Escherichia coli CP0245850 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP006001 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035470 543<	Escherichia coli	AP010910	562	561
Escherichia coli CP024662 562 561 Escherichia coli CP025850 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP006001 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP03821 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli AP014804 562 561 Escherichia coli AP014804 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035470 543	Escherichia coli	CP029104	562	561
Escherichia coli CP025850 562 561 Escherichia coli CP024249 562 561 Escherichia coli CP006001 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP035470 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP041530 543 </td <td>Escherichia coli</td> <td>CP024296</td> <td>562</td> <td>561</td>	Escherichia coli	CP024296	562	561
Escherichia coli CP024249 562 561 Escherichia coli CP006001 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN54767 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP041545 54	Escherichia coli	CP024662	562	561
Escherichia coli CP006001 562 561 Escherichia coli CP018958 562 561 Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP041545 <td< td=""><td>Escherichia coli</td><td>CP025850</td><td>562</td><td>561</td></td<>	Escherichia coli	CP025850	562	561
Escherichia coli CP018958 562 561 Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP047530 543 561 Enterobacteriaceae CP0471530 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP041545	Escherichia coli	CP024249	562	561
Escherichia coli CP028193 562 561 Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae LT174531 <	Escherichia coli	CP006001	562	561
Klebsiella pneumoniae CP040995 573 561 Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035470 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP041156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT1985217	Escherichia coli	CP018958	562	561
Klebsiella pneumoniae CP032836 573 561 Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035470 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT174531	Escherichia coli	CP028193	562	561
Enterobacteriaceae MF363048 543 561 Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT1985217 543 561 Enterobacteriaceae LT985217 <t< td=""><td>Klebsiella pneumoniae</td><td>CP040995</td><td>573</td><td>561</td></t<>	Klebsiella pneumoniae	CP040995	573	561
Enterobacteriaceae CP023821 543 561 Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035470 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae LS992194 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 <td< td=""><td>Klebsiella pneumoniae</td><td>CP032836</td><td>573</td><td>561</td></td<>	Klebsiella pneumoniae	CP032836	573	561
Enterobacteriaceae LS999561 543 561 Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035470 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae LS992194 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP009913 <td< td=""><td>Enterobacteriaceae</td><td>MF363048</td><td>543</td><td>561</td></td<>	Enterobacteriaceae	MF363048	543	561
Escherichia coli AB255435 562 561 Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035470 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae LS992194 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP009913 543 561 Enterobacteriaceae CP019910 543 561 Enterobacteriaceae CP024242 562	Enterobacteriaceae	CP023821	543	561
Escherichia coli FN554767 562 561 Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035470 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae LS992194 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 <	Enterobacteriaceae	LS999561	543	561
Escherichia coli AP014804 562 561 Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035470 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae LS992194 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP009913 543 561 Enterobacteriaceae CP019910 543 561 Enterobacteriaceae CP019910 543 561 Enterobacteriaceae CP024242 562<	Escherichia coli	AB255435	562	561
Enterobacteriaceae CP028322 543 561 Enterobacteriaceae CP035470 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae LS992194 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP019910 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242	Escherichia coli	FN554767	562	561
Enterobacteriaceae CP035470 543 561 Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae LS992194 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Escherichia coli	AP014804	562	561
Enterobacteriaceae CP035518 543 561 Enterobacteriaceae CP041530 543 561 Enterobacteriaceae LS992194 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	CP028322	543	561
Enterobacteriaceae CP041530 543 561 Enterobacteriaceae LS992194 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	CP035470	543	561
Enterobacteriaceae LS992194 543 561 Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	CP035518	543	561
Enterobacteriaceae CP027377 543 561 Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	CP041530	543	561
Enterobacteriaceae CP044156 543 561 Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	LS992194	543	561
Enterobacteriaceae CP041545 543 561 Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	CP027377	543	561
Enterobacteriaceae CP012632 543 561 Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	CP044156	543	561
Enterobacteriaceae LT174531 543 561 Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	CP041545	543	561
Enterobacteriaceae LT985217 543 561 Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	CP012632	543	561
Enterobacteriaceae MH909349 543 561 Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	LT174531	543	561
Enterobacteriaceae CP032205 543 561 Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	LT985217	543	561
Enterobacteriaceae CP023828 543 561 Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	MH909349	543	561
Enterobacteriaceae CP000913 543 561 Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	CP032205	543	561
Enterobacteriaceae CP019910 543 561 Escherichia coli CP024242 562 561	Enterobacteriaceae	CP023828	543	561
Escherichia coli CP024242 562 561	Enterobacteriaceae	CP000913	543	561
	Enterobacteriaceae	CP019910	543	561
Escherichia coli FR851303 562 561	Escherichia coli	CP024242	562	561
	Escherichia coli	FR851303	562	561

scientificName	nuccoreAcc	taxid	parent
Escherichia coli	CP037947	562	561
Escherichia coli	CP023369	562	561
Escherichia coli	AP018811	562	561
Enterobacteriaceae	CP041523	543	561
Enterobacteriaceae	CP000244	543	561
Enterobacteriaceae	MH316135	543	561
Enterobacteriaceae	CP041579	543	561
Enterobacteriaceae	CP015072	543	561
Enterobacteriaceae	KY751926	543	561
Enterobacteriaceae	LS992188	543	561
Enterobacteriaceae	KX839209	543	561
Enterobacteriaceae	CP010239	543	561
Agrobacterium tumefaciens	CP000631	358	1183400
Blastomonas sp. RAC04	CP016458	1842535	2626550
Escherichia coli	CP012493	562	2626550
Escherichia coli	CP042949	562	2626550
Escherichia coli	CP028121	562	2626550
Escherichia coli	AP019763	562	2626550
Escherichia coli	CP014077	562	2626550
Escherichia coli	CP024055	562	2626550
Escherichia coli	CP045828	562	2626550
Escherichia coli	AF401292	562	2626550
Escherichia coli	CP015856	562	2626550
Escherichia coli	CP013028	562	2626550
Escherichia coli	CP028115	562	2626550
Escherichia coli	CP037942	562	2626550
Escherichia coli	AP009243	562	2626550
Escherichia coli	CP010201	562	2626550
Escherichia coli	CP002730	562	2626550
Escherichia coli	CP042633	562	2626550
Escherichia coli	CP010187	562	2626550
Escherichia coli	CP011136	562	2626550
Enterobacteriaceae	CP041619	543	2626550
Enterobacteriaceae	CP003035	543	2626550
Enterobacteriaceae	CP024887	543	2626550
Enterobacterales	CP011639	91347	2626550
Enterobacteriaceae	MF497780	543	2626550
Enterobacteriaceae	CP027606	543	2626550
Pseudomonas aeruginosa	CP027168	287	136841
Gammaproteobacteria	KC609323	1236	136841
Gammaproteobacteria	MF497782	1236	136841
Gammaproteobacteria	NC_019151	1236	136841
Gammaproteobacteria	$\overline{\text{CP018949}}$	1236	136841
Gammaproteobacteria	HQ589350	1236	136841

scientificName	nuccoreAcc	taxid	parent
Gammaproteobacteria	CP036441	1236	136841
Gammaproteobacteria	CP026123	1236	136841
Acinetobacter sp. ACNIH2	CP026418	1758189	196816
Enterobacteriaceae	CP018815	543	196816
Enterobacteriaceae	CP021900	543	196816
Escherichia coli	KU295131	562	196816
Klebsiella pneumoniae	JX397875	573	196816
Klebsiella pneumoniae	CP018887	573	196816
Gammaproteobacteria	KC609322	1236	196816
Gammaproteobacteria	KP125892	1236	196816
Gammaproteobacteria	MN401418	1236	196816
Klebsiella pneumoniae	MH595534	573	196816
Enterobacteriaceae	KU176944	543	196816
Enterobacterales	MF156710	91347	196816
Enterobacteriaceae	MF072963	543	196816
Enterobacteriaceae	MH328007	543	196816
Gammaproteobacteria	CP026224	1236	196816
Raoultella ornithinolytica	MF788069	54291	196816
Pseudomonas aeruginosa	CP029714	287	196816
Enterococcus faecalis	AE016832	1351	1350
Staphylococcus	AY355285	1279	1350
Borrelia miyamotoi	CP044803	47466	1350
Borrelia miyamotoi	CP036745	47466	1350
Borrelia miyamotoi	CP036596	47466	1350
Borrelia miyamotoi	CP037071	47466	1350
Borrelia miyamotoi	CP036573	47466	1350
Borrelia miyamotoi	CP037081	47466	1350
Enterobacteriaceae	CP043017	543	1350
Enterobacteriaceae	CP028153	543	1350
Enterobacteriaceae	CP006264	543	1350
Enterobacteriaceae	JN797501	543	1350
Enterobacteriaceae	CP043196	543	1350
Enterobacteriaceae	MG515249	543	1350
Enterobacteriaceae	KY075650	543	1350
Escherichia coli	CP016551	562	1350
Escherichia coli	CP021846	562	1350
Escherichia coli	CP030285	562	1350
Escherichia coli	CP033379	562	1350
Escherichia coli	CP034590	562	1350
Escherichia coli	CP029181	562	1350
Escherichia coli	CP010234	562	1350
Escherichia coli	CP034746	562	1350
Escherichia coli	CP042894	562	1350
Escherichia coli	CP010243	562	1350

Escherichia coli CP029493 562 1350 Escherichia coli MG825383 562 1350 Escherichia coli CP032239 562 1350 Escherichia coli CP034786 562 1350 Escherichia coli CP032890 562 1350 Escherichia coli CP032890 562 1350 Escherichia coli CP03784 208962 1350 Escherichia albertii CP034163 208962 1350 Escherichia albertii CP034163 208962 1350 Escherichia albertii CP03784 208962 1350 Escherichia albertii CP03784 208962 1350 Enterobacteriaceae MX32192 543 1350 Enterobacteriaceae KX518745 543 1350 Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae MG196293 343 1350 Enterobacteriaceae <t< th=""><th>scientificName</th><th>nuccoreAcc</th><th>taxid</th><th>parent</th></t<>	scientificName	nuccoreAcc	taxid	parent
Escherichia coli MG825383 562 1350 Escherichia coli CP032239 562 1350 Escherichia coli CP034786 562 1350 Escherichia coli CP032890 562 1350 Escherichia coli CP033632 562 1350 Escherichia coli CP03784 208962 1350 Escherichia albertii CP03163 208962 1350 Escherichia albertii CP03163 208962 1350 Enterobacteriaceae MN32192 543 1350 Enterobacteriaceae KX518745 543 1350 Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae CP04641 543 1350 Enterobacteriaceae CP04006	Escherichia coli	CP029493	562	1350
Escherichia coli CP034786 562 1350 Escherichia coli CP032890 562 1350 Escherichia coli CP032890 562 1350 Escherichia coli CP032830 262 1350 Escherichia albertii CP021203 562 1350 Escherichia albertii CP030784 208962 1350 Escherichia albertii CP03163 208962 1350 Escherichia albertii CP03163 208962 1350 Escherichia albertii CP03163 208962 1350 Escherichia albertii CP031643 208962 1350 Escherichia albertii CP031643 208962 1350 Escherichia albertii CP041641 543 1350 Enterobacteriaceae KX518745 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriace	Escherichia coli	MG825383		
Escherichia coli CP036289 562 1350 Escherichia coli CP033890 562 1350 Escherichia coli CP033632 562 1350 Escherichia coli CP021203 562 1350 Escherichia albertii CP030784 208962 1350 Escherichia albertii CP034163 208962 1350 Enterobacteriaceae MN232192 543 1350 Enterobacteriaceae KX518745 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae CP041925 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP04069 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP	Escherichia coli	CP032239	562	1350
Escherichia coli CP032890 562 1350 Escherichia coli CP0313632 562 1350 Escherichia coli CP021203 562 1350 Escherichia albertii CP03784 208962 1350 Escherichia albertii CP034163 208962 1350 Enterobacteriaceae MN232192 543 1350 Enterobacteriaceae KX518745 543 1350 Enterobacteriaceae KX880944 543 1350 Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP0419697 543 1350 Enterobacteriaceae CP0419697 543 1350 Enterobacteriaceae CP021597 543 1350 Enterobacteriaceae <	Escherichia coli	CP034786	562	1350
Escherichia coli CP033632 562 1350 Escherichia coli CP021203 562 1350 Escherichia albertii CP030784 208962 1350 Escherichia albertii CP034163 208962 1350 Enterobacteriaceae MN232192 543 1350 Enterobacteriaceae KX518745 543 1350 Enterobacteriaceae KX880944 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae LT985263 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae CP0419629 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae	Escherichia coli	CP036204	562	1350
Escherichia albertii CP021203 562 1350 Escherichia albertii CP030784 208962 1350 Escherichia albertii CP034163 208962 1350 Enterobacteriaceae MN232192 543 1350 Enterobacteriaceae KX518745 543 1350 Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae LT985263 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP042647 543 1350 Enterobacteriaceae	Escherichia coli	CP032890	562	1350
Escherichia albertii CP030784 208962 1350 Escherichia albertii CP084163 208962 1350 Enterobacteriaceae MN232192 543 1350 Enterobacteriaceae KX518745 543 1350 Enterobacteriaceae KX880944 543 1350 Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae LT985263 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP0416549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP0416641 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae CP021365 543 1350 Enterobacteriaceae	Escherichia coli	CP033632	562	1350
Escherichia albertii CP034163 208962 1350 Enterobacteriaceae MN232192 543 1350 Enterobacteriaceae KX 518745 543 1350 Enterobacteriaceae KX 880944 543 1350 Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae LT985263 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae MH8410117 543 1350 Enterobacteriaceae	Escherichia coli	CP021203	562	1350
Enterobacteriaceae MN232192 543 1350 Enterobacteriaceae KX518745 543 1350 Enterobacteriaceae KX880944 543 1350 Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae LT985263 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae CP0	Escherichia albertii	CP030784	208962	1350
Enterobacteriaceae KX518745 543 1350 Enterobacteriaceae KX880944 543 1350 Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae LT985263 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP0	Escherichia albertii	CP034163	208962	1350
Enterobacteriaceae KX880944 543 1350 Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae LT985263 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP0	Enterobacteriaceae	MN232192	543	1350
Enterobacteriaceae CP042617 543 1350 Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae ET985263 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MK40117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP04	Enterobacteriaceae	KX518745	543	1350
Enterobacteriaceae CP041922 543 1350 Enterobacteriaceae LT985263 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP0241576 543 1350 Enterobacteriaceae CP	Enterobacteriaceae	KX880944	543	1350
Enterobacteriaceae LT985263 543 1350 Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP022443 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP0	Enterobacteriaceae	CP042617	543	1350
Enterobacteriaceae MG196293 543 1350 Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP0	Enterobacteriaceae	CP041922	543	1350
Enterobacteriaceae CP016549 543 1350 Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP04675 543 1350 Enterobacteriaceae CP03	Enterobacteriaceae	LT985263	543	1350
Enterobacteriaceae CP042641 543 1350 Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP043	Enterobacteriaceae	MG196293	543	1350
Enterobacteriaceae CP040069 543 1350 Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP090951 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP034821 543 1350 Escherichia coli CP04321	Enterobacteriaceae	CP016549	543	1350
Enterobacteriaceae CP015997 543 1350 Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP090951 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP031654 562 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP04321	Enterobacteriaceae	CP042641	543	1350
Enterobacteriaceae MF679145 543 1350 Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP009051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 <td>Enterobacteriaceae</td> <td>CP040069</td> <td>543</td> <td>1350</td>	Enterobacteriaceae	CP040069	543	1350
Enterobacteriaceae CP020522 543 1350 Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP009051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 <td>Enterobacteriaceae</td> <td>CP015997</td> <td>543</td> <td>1350</td>	Enterobacteriaceae	CP015997	543	1350
Enterobacteriaceae CP021336 543 1350 Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP03110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP099051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP010183 562 1350 Escherichia coli CP01573	Enterobacteriaceae	MF679145	543	1350
Enterobacteriaceae MH844525 543 1350 Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP090951 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Escherichia coli CP01573 139 1350 Borreliella burgdorferi CP001547<	Enterobacteriaceae	CP020522	543	1350
Enterobacteriaceae MK410117 543 1350 Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP009051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Escherichia coli CP01573 139 1350 Borreliella burgdorferi CP001547 <td>Enterobacteriaceae</td> <td>CP021336</td> <td>543</td> <td>1350</td>	Enterobacteriaceae	CP021336	543	1350
Enterobacteriaceae KU980950 543 1350 Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP009051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001577 139 1350 Borreliella burgdorferi AE000784 139 1350	Enterobacteriaceae	MH844525	543	1350
Enterobacteriaceae CP012491 543 1350 Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP009051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350	Enterobacteriaceae	MK410117	543	1350
Enterobacteriaceae CP003110 543 1350 Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP009051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP0104083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Enterobacteriaceae	KU980950	543	1350
Enterobacteriaceae CP023732 543 1350 Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP009051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP0104083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Enterobacteriaceae	CP012491	543	1350
Enterobacteriaceae CP027443 543 1350 Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP009051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Enterobacteriaceae	CP003110	543	1350
Enterobacteriaceae CP041576 543 1350 Enterobacteriaceae CP009051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Enterobacteriaceae	CP023732	543	1350
Enterobacteriaceae CP009051 543 1350 Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Enterobacteriaceae	CP027443	543	1350
Enterobacteriaceae CP026475 543 1350 Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Enterobacteriaceae	CP041576	543	1350
Enterobacteriaceae CP034821 543 1350 Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Enterobacteriaceae	CP009051	543	1350
Escherichia coli CP031654 562 1350 Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Enterobacteriaceae	CP026475	543	1350
Escherichia coli CP043218 562 1350 Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Enterobacteriaceae	CP034821	543	1350
Escherichia coli CP020936 562 1350 Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Escherichia coli	CP031654	562	1350
Escherichia coli CP010146 562 1350 Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Escherichia coli	CP043218	562	1350
Escherichia coli CP014083 562 1350 Borreliella burgdorferi CP001573 139 1350 Borreliella burgdorferi CP001547 139 1350 Borreliella burgdorferi AE000784 139 1350	Escherichia coli	CP020936	562	
Borreliella burgdorferiCP0015731391350Borreliella burgdorferiCP0015471391350Borreliella burgdorferiAE0007841391350	Escherichia coli	CP010146	562	1350
Borreliella burgdorferiCP0015731391350Borreliella burgdorferiCP0015471391350Borreliella burgdorferiAE0007841391350	Escherichia coli	CP014083	562	
Borreliella burgdorferi AE000784 139 1350	Borreliella burgdorferi	CP001573	139	1350
Borreliella burgdorferi AE000784 139 1350	~	CP001547	139	
	Borreliella burgdorferi	AE000784	139	1350
	Borrelia miyamotoi	CP036924	47466	1350

scientificName	nuccoreAcc	taxid	parent
Borreliella garinii	CP001314	29519	1350
Borreliella garinii	CP028865	29519	1350
Borreliella spielmanii	CP001471	88916	64895
Borreliella afzelii	CP002944	29518	64895
Borrelia mayonii	CP015791	1674146	64895
Borreliella garinii	CP001307	29519	64895
Borreliella bissettii	CP002758	64897	64895
Borreliella bavariensis	CP028882	664662	64895
Photobacterium damselae	CP021153	38293	657
Photobacterium damselae	CP021155	38293	657
Photobacterium damselae	CP035460	38293	657
Photobacterium damselae	CP021154	38293	657
Photobacterium damselae	CP021156	38293	657
Klebsiella	CP019161	570	657
Klebsiella pneumoniae	CP045692	573	657
Klebsiella pneumoniae	FO834905	573	657
Klebsiella pneumoniae	CP032834	573	657
Klebsiella oxytoca	CP017930	571	657
Klebsiella pneumoniae	CP021961	573	657
Klebsiella	CP035203	570	657
Klebsiella	AP019689	570	657
Klebsiella	CP013713	570	657
Klebsiella pneumoniae	CP026154	573	657
Klebsiella pneumoniae	CP024875	573	657
Klebsiella variicola	CP023978	244366	570
Klebsiella aerogenes	LR134207	548	570
Klebsiella	CP024497	570	570
Klebsiella	CP032356	570	570
Klebsiella pneumoniae	CP034046	573	570
Klebsiella pneumoniae	MK413722	573	570
Klebsiella pneumoniae	MK413721	573	570
Klebsiella pneumoniae	CP034040	573	570
Enterobacteriaceae	CP028791	543	570
Enterobacteriaceae	CP034406	543	570
Enterobacteriaceae	MK262712	543	570
Enterobacteriaceae	CP031736	543	570
Enterobacteriaceae	CP026186	543	570
Enterobacteriaceae	LN824134	543	570
Enterobacteriaceae	CP032208	543	570
Enterobacteriaceae	CP018696	543	570
Enterobacteriaceae	CP034681	543	570
Enterobacteriaceae	CP011314	543	570
Enterobacteriaceae	MH733011	543	570
Enterobacteriaceae	CP004000	543	570

scientificName	$\operatorname{nuccoreAcc}$	taxid	parent
Enterobacteriaceae	CP021699	543	570
Klebsiella	CP040595	570	570
Klebsiella	CP029218	570	570
Klebsiella	CP029221	570	570
Klebsiella	LR134257	570	570
Klebsiella	CP028916	570	570
Klebsiella variicola	CP000965	244366	570
Klebsiella pneumoniae	CP031796	573	570
Staphylococcus aureus	CP029199	1280	570
Staphylococcus aureus	CP030478	1280	570
Staphylococcus aureus	CP035102	1280	570
Staphylococcus aureus	GQ900405	1280	570
Staphylococcus	CP029083	1279	570
Staphylococcus aureus	CP026967	1280	570
Enterobacter asburiae	AP019631	61645	354276
Enterobacter asburiae	AP019633	61645	354276
Enterobacter asburiae	AP019534	61645	354276
Enterobacter	KX912253	547	354276
Enterobacter	CP034768	547	354276
Enterobacter cloacae	MK471334	550	354276
Enterobacter cloacae	KX858825	550	354276
Enterobacter cancerogenus	CP045770	69218	354276
Enterobacter	LS999207	547	354276
Enterobacter	CP019890	547	354276
Enterobacter	CP017187	547	354276
Enterobacter cloacae	CP021777	550	354276
Enterobacter	CP033799	547	354276
Enterobacter	CP022534	547	354276
Enterobacter hormaechei	CP027145	158836	354276
Enterobacter kobei	CP043512	208224	354276
Enterobacter cloacae	CP020054	550	354276
Enterobacter ludwigii	CP002887	299767	354276
Enterobacter roggenkampii	CP022149	1812935	354276
Enterobacter roggenkampii	CP033798	1812935	354276
Enterobacter	CP012169	547	354276
Enterobacter	CP031569	547	354276
Enterobacter	CP008907	547	354276
Enterobacter	CP026851	547	354276
Enterobacter	CP035636	547	354276
Enterobacter	CP017182	547	354276
Leisingera sp. NJS201	CP038235	2508306	2614906
Leisingera sp. NJS204	CP035420	2508307	2614906
Phaeobacter gallaeciensis	CP006972	60890	302485
Phaeobacter	CP010648	302485	31989

scientificName	nuccoreAcc	taxid	parent
Phaeobacter	CP010773	302485	31989
Phaeobacter inhibens	CP002979	221822	302485
Phaeobacter inhibens	CP010614	221822	302485
Phaeobacter inhibens	CP010633	221822	302485
Phaeobacter porticola	CP016368	1844006	302485
Klebsiella variicola	CP000966	244366	302485
Klebsiella	CP027614	570	302485
Klebsiella	CP025040	570	302485
Klebsiella	CP008791	570	302485
Klebsiella	CP026181	570	302485
Klebsiella	CP011621	570	302485
Enterobacteriaceae	CP033628	543	302485
Enterobacteriaceae	KJ146688	543	302485
Enterobacteriaceae	CP032181	543	302485
Enterobacteriaceae	CP035181	543	302485
Klebsiella	CP026371	570	302485
Klebsiella	CP023489	570	302485
Klebsiella pneumoniae	CP041937	573	302485
Klebsiella pneumoniae	MK262711	573	302485
Klebsiella pneumoniae	MG736312	573	302485
Klebsiella pneumoniae	LT576116	573	302485
Klebsiella variicola	CP032357	244366	302485
Klebsiella variicola	CP013986	244366	302485
Klebsiella variicola	CP008701	244366	302485
Klebsiella variicola	CP009275	244366	302485
Klebsiella	CP017286	570	302485
Klebsiella	CP033755	570	302485
Klebsiella variicola	CP044049	244366	302485
Klebsiella	CP020851	570	302485
Enterobacteriaceae	CP041648	543	302485
Enterobacteriaceae	CP014777	543	302485
Klebsiella pneumoniae	CP045691	573	302485
Klebsiella pneumoniae	CP031801	573	302485
Klebsiella pneumoniae	CP032832	573	302485
Enterobacteriaceae	CP025468	543	302485
Enterobacteriaceae	KY270849	543	302485
Enterobacteriaceae	MK191023	543	302485
Klebsiella	MK167987	570	302485
Klebsiella	MG288683	570	302485
Enterobacteriaceae	CP035124	543	302485
Enterobacteriaceae	CP022442	543	302485
Klebsiella pneumoniae	CP017386	573	302485
Klebsiella pneumoniae	KP008371	573	302485
Klebsiella pneumoniae	HQ202266	573	302485

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scientificName	nuccoreAcc	taxid	parent
Klebsiella pneumoniae	CP035204	573	302485
Klebsiella pneumoniae	CP041642	573	302485
Klebsiella pneumoniae	CP029740	573	302485
Klebsiella pneumoniae	CP026396	573	302485
Enterobacteriaceae	KY093014	543	302485
Enterobacteriaceae	CP044529	543	302485
Enterobacteriaceae	CP044038	543	302485
Enterobacteriaceae	CP034777	543	302485
Enterobacteriaceae	CP030067	543	302485
Enterobacteriaceae	CP018955	543	302485
Enterobacteriaceae	CP024510	543	302485
Klebsiella pneumoniae	KC757417	573	302485
Enterobacteriaceae	CP012988	543	302485
Enterobacteriaceae	CP034131	543	302485
Enterobacteriaceae	LK391770	543	302485
Enterobacteriaceae	CP021946	543	302485
Klebsiella pneumoniae	CP028479	573	302485
Klebsiella pneumoniae	FO203500	573	302485
Klebsiella pneumoniae	CP035776	573	302485
Klebsiella pneumoniae	MK649827	573	302485
Klebsiella pneumoniae	CP031793	573	302485
Klebsiella pneumoniae	FO834904	573	302485
Klebsiella pneumoniae	CP026139	573	302485
Klebsiella pneumoniae	CP006800	573	302485
Klebsiella pneumoniae	CP027044	573	302485
Klebsiella pneumoniae	JX424424	573	302485
Klebsiella pneumoniae	CP027613	573	302485
Klebsiella pneumoniae	CP030876	573	302485
Klebsiella pneumoniae	CP026163	573	302485
Klebsiella pneumoniae	CP031851	573	302485
Klebsiella pneumoniae	KX839208	573	302485
Carnobacterium sp. 17-4	CP002564	208596	257487
Carnobacterium inhibens	CP006816	147709	2747
Carnobacterium inhibens	CP006815	147709	2747
Phaeobacter	CP010640	302485	2747
Phaeobacter gallaeciensis	CP010679	60890	2747
Roseovarius sp. THAF9	CP045408	2587847	2614913
Mycolicibacterium gilvum	CP000658	350054	1804
Mycolicibacterium gilvum	CP000659	350054	1804
Mycobacterium grossiae	CP043475	1552759	1763
Proteobacteria	CP019671	1224	2
Proteobacteria	CP026703	1224	2
Proteobacteria	LC155907	1224	$\overline{2}$
Proteobacteria	MF344578	1224	$\overline{2}$
		_	

scientificName	nuccoreAcc	taxid	parent
Gammaproteobacteria	CP026220	1236	2
Gammaproteobacteria	KP873172	1236	2
Aeromonas sp. ASNIH3	CP026223	1636608	257493
Escherichia coli	FN822748	562	257493
Enterobacteriaceae	KF705207	543	257493
Enterobacteriaceae	AP005147	543	257493
Enterobacteriaceae	CP018110	543	257493
Enterobacteriaceae	CP032495	543	257493
Enterobacteriaceae	CP030003	543	257493
Enterobacteriaceae	CP021845	543	257493
Enterobacteriaceae	CP034252	543	257493
Escherichia coli	CP029058	562	257493
Escherichia coli	CP024976	562	257493
Enterobacteriaceae	KC853439	543	257493
Enterobacteriaceae	CP016585	543	257493
Enterobacteriaceae	LT985273	543	257493
Enterobacteriaceae	CP012923	543	257493
Enterobacteriaceae	CP014972	543	257493
Enterobacteriaceae	CP029771	543	257493
Enterobacteriaceae	KY748189	543	257493
Enterobacteriaceae	CP023356	543	257493
Enterobacteriaceae	CP024093	543	257493
Enterobacteriaceae	MH884651	543	257493
Enterobacteriaceae	KU932032	543	257493
Enterobacteriaceae	AP014805	543	257493
Enterobacteriaceae	LN735560	543	257493
Enterobacteriaceae	CP039299	543	257493
Enterobacteriaceae	LM651376	543	257493
Enterobacteriaceae	CP036203	543	257493
Enterobacteriaceae	CP037994	543	257493
Enterobacteriaceae	CP041533	543	257493
Enterobacteriaceae	LT985288	543	257493
Enterobacteriaceae	LT985238	543	257493
Enterobacteriaceae	LT985321	543	257493
Enterobacteriaceae	CP002186	543	257493
Enterobacteriaceae	CP042248	543	257493
Enterobacteriaceae	CP024468	543	257493
Enterobacteriaceae	CP027395	543	257493
Enterobacteriaceae	KC788405	543	257493
Enterobacteriaceae	KX246268	543	257493
Enterobacteriaceae	MG948331	543	257493
Escherichia coli	MF078004	562	257493
Escherichia coli	CP036181	562	257493
Enterobacteriaceae	CP031897	543	257493
Emicropacienaceae	OL 091991	040	Z01490

Enterobacteriaceae	scientificName	nuccoreAcc	taxid	parent
Acinetobacter radioresistens AP019741 40216 469 Lactobacillus brevis CP021480 1580 469 Lactobacillus brevis CP032933 1580 469 Lactobacillus brevis CP021457 1580 469 Lactobacillus plantarum CP020457 1580 469 Lactobacillus plantarum CP032747 60520 1578 Lactobacillus plantarum CP018325 1590 1578 Lactobacillus plantarum CP018325 1590 1578 Lactobacillus plantarum CP018325 1590 1578 Lactobacillus plantarum CP035567 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035149 1590	Enterobacteriaceae	CP019692	543	257493
Lactobacillus brevis CP021480 1580 469 Lactobacillus brevis CP029333 1580 469 Lactobacillus brevis CP021457 1580 469 Lactobacillus plantarum CP021457 1580 469 Lactobacillus plantarum CP002747 60520 1578 Lactobacillus plantarum CP032747 60520 1578 Lactobacillus plantarum CP018330 1590 1578 Lactobacillus plantarum CP018330 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035153 1590 1578 Lactobacillus plantarum CP035558 1590	Acinetobacter sp. TGL-Y2	CP015111	1407071	196816
Lactobacillus brevis CP032933 1580 469 Lactobacillus brevis CP021459 1580 469 Lactobacillus previs CP021457 1580 469 Lactobacillus plantarum CP006037 1590 1578 Lactobacillus plantarum CP018325 1590 1578 Lactobacillus plantarum CP018330 1590 1578 Lactobacillus plantarum CP035567 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP025416 1590 1578 Lactobacillus plantarum CP025172 1590 1578 Lactobacillus plantarum CP021930 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP03516 1590 1578 Lactobacillus plantarum CP03516 1590 <t< td=""><td>Acinetobacter radioresistens</td><td>AP019741</td><td>40216</td><td>469</td></t<>	Acinetobacter radioresistens	AP019741	40216	469
Lactobacillus brevis CP021457 1580 469 Lactobacillus plantarum CP0214457 1580 469 Lactobacillus plantarum CP006037 1590 1578 Lactobacillus paraplantarum CP018325 1590 1578 Lactobacillus plantarum CP018325 1590 1578 Lactobacillus plantarum CP035567 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP021930 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP03575 1590 <td>Lactobacillus brevis</td> <td>CP021480</td> <td>1580</td> <td>469</td>	Lactobacillus brevis	CP021480	1580	469
Lactobacillus brevis CP021457 1580 469 Lactobacillus plantarum CP006037 1590 1578 Lactobacillus paraplantarum CP032747 60520 1578 Lactobacillus plantarum CP018335 1590 1578 Lactobacillus plantarum CP018330 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035146 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035168 1590 1578 Lactobacillus plantarum CP035168 1590 1578 Lactobacillus plantarum CP037432 1590<	Lactobacillus brevis	CP032933	1580	469
Lactobacillus paraplantarum CP006037 1590 1578 Lactobacillus paraplantarum CP032747 60520 1578 Lactobacillus plantarum CP018325 1590 1578 Lactobacillus plantarum CP018330 1590 1578 Lactobacillus plantarum CP035567 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP025416 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP021930 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP013153 1590 1578 Lactobacillus plantarum CP035549 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP03516 1590 1578 Lactobacillus plantarum CP03575 <td< td=""><td>Lactobacillus brevis</td><td>CP021459</td><td>1580</td><td>469</td></td<>	Lactobacillus brevis	CP021459	1580	469
Lactobacillus paraplantarum CP032747 60520 1578 Lactobacillus plantarum CP018325 1590 1578 Lactobacillus plantarum CP018335 1590 1578 Lactobacillus plantarum CP035167 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP013153 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP03516 1590 1578 Lactobacillus plantarum CP03558 1590 1578 Lactobacillus plantarum CP037432 159	Lactobacillus brevis	CP021457	1580	469
Lactobacillus plantarum CP018325 1590 1578 Lactobacillus plantarum CP018330 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP025416 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP021930 1590 1578 Lactobacillus plantarum CP035144 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP040738 938155	Lactobacillus plantarum	CP006037	1590	1578
Lactobacillus plantarum CP018330 1590 1578 Lactobacillus plantarum CP035567 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP025416 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP021930 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum AP018407 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035168 1590 1578 Lactobacillus plantarum CP035166 1590 1578 Lactobacillus plantarum CP035755 1590 1578 Lactobacillus plantarum CP035755 1590 1578 Lactobacillus plantarum CP035757 1590 </td <td>Lactobacillus paraplantarum</td> <td>CP032747</td> <td>60520</td> <td>1578</td>	Lactobacillus paraplantarum	CP032747	60520	1578
Lactobacillus plantarum CP035567 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP025416 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP021930 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum AP018407 1590 1578 Lactobacillus plantarum CP035133 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035158 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP037522 1590 1578 Lactobacillus plantarum CP037525 1590 1578 Lactobacillus plantarum CP025587 1590 </td <td>Lactobacillus plantarum</td> <td>CP018325</td> <td>1590</td> <td>1578</td>	Lactobacillus plantarum	CP018325	1590	1578
Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP025416 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP021930 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum AP018407 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum CP035169 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP037432 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP040738 938155 1578 Lactobacillus plantarum CP025587 1590	Lactobacillus plantarum	CP018330	1590	1578
Lactobacillus plantarum CP025416 1590 1578 Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP021930 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum AP018407 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035166 1590 1578 Lactobacillus plantarum CP035116 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP037432 1590 1578 Lactobacillus plantarum CP037575 1590 1578 Lactobacillus paraplantarum CP040738 938155 1578 Lactobacillus pantarum CP032749 60520 1578 Lactobacillus plantarum CP035761	Lactobacillus plantarum	CP035567	1590	1578
Lactobacillus plantarum CP035172 1590 1578 Lactobacillus plantarum CP021930 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum AP018407 1590 1578 Lactobacillus plantarum CP031153 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035116 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP0357432 1590 1578 Lactobacillus plantarum CP035757 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus plantarum CP040738 938155 1578 Lactobacillus plantarum CP032749 60520 1578 Lactobacillus plantarum CP02587 1590 1578 Lactobacillus plantarum CP035024 159	Lactobacillus plantarum	CP035169	1590	1578
Lactobacillus plantarum CP021930 1590 1578 Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum AP018407 1590 1578 Lactobacillus plantarum CP013153 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035116 1590 1578 Lactobacillus plantarum CP035168 1590 1578 Lactobacillus plantarum CP037432 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus plantarum CP040738 938155 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus paracollinoides CP014929 <t< td=""><td>Lactobacillus plantarum</td><td>CP025416</td><td>1590</td><td>1578</td></t<>	Lactobacillus plantarum	CP025416	1590	1578
Lactobacillus plantarum CP035134 1590 1578 Lactobacillus plantarum AP018407 1590 1578 Lactobacillus plantarum CP013153 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP03516 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP035755 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus plantarum CP040738 938155 1578 Lactobacillus plantarum CP032749 60520 1578 Lactobacillus plantarum CP03587 1590 1578 Lactobacillus plantarum CP035924 1590 1578 Lactobacillus plantarum CP044073 1590 1578 Lactobacillus paracollinoides CP014929 <td< td=""><td>Lactobacillus plantarum</td><td>CP035172</td><td>1590</td><td>1578</td></td<>	Lactobacillus plantarum	CP035172	1590	1578
Lactobacillus plantarum AP018407 1590 1578 Lactobacillus plantarum CP013153 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP037432 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP040738 938155 1578 Lactobacillus plantarum CP040738 938155 1578 Lactobacillus plantarum CP032749 60520 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP005945 1590 1578 Lactobacillus plantarum CP014929 2	Lactobacillus plantarum	CP021930	1590	1578
Lactobacillus plantarum CP013153 1590 1578 Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035116 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP037432 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus plantarum CP040738 938155 1578 Lactobacillus paraplantarum CP032749 60520 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP091461 1580 1578 Lactobacillus paracollinoides CP014929 240427 1578 Lactobacillus plantarum CP013155	Lactobacillus plantarum	CP035134	1590	1578
Lactobacillus plantarum CP035149 1590 1578 Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035116 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP037432 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus plantarum CP040738 938155 1578 Lactobacillus paraplantarum CP032749 60520 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP091461 1580 1578 Lactobacillus paracollinoides CP01461 1580 1578 Lactobacillus plantarum CP01272 51663 1253 Lactobacillus plantarum CP013155	Lactobacillus plantarum	AP018407	1590	1578
Lactobacillus plantarum CP035558 1590 1578 Lactobacillus plantarum CP035116 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP037432 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus plantarum CP040738 938155 1578 Lactobacillus paraplantarum CP032749 60520 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus brevis CP021461 1580 1578 Lactobacillus plantarum CP005945 1590 1578 Lactobacillus paracollinoides CP014929 240427 1578 Lactobacillus plantarum CP01272 51663 1253 Lactobacillus plantarum CP03155 1590 1253 Lactobacillus plantarum CP031561	Lactobacillus plantarum	CP013153	1590	1578
Lactobacillus plantarum CP035516 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP037432 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus futsaii CP040738 938155 1578 Lactobacillus paraplantarum CP032749 60520 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP021461 1580 1578 Lactobacillus paracollinoides CP014929 240427 1578 Lactobacillus paracollinoides CP01272 51663 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP035561	Lactobacillus plantarum	CP035149	1590	1578
Lactobacillus plantarum CP035516 1590 1578 Lactobacillus plantarum CP035568 1590 1578 Lactobacillus plantarum CP037432 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus futsaii CP040738 938155 1578 Lactobacillus paraplantarum CP032749 60520 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP021461 1580 1578 Lactobacillus paracollinoides CP014929 240427 1578 Lactobacillus paracollinoides CP01272 51663 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP035561		CP035558	1590	1578
Lactobacillus plantarum CP037432 1590 1578 Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus futsaii CP040738 938155 1578 Lactobacillus paraplantarum CP032749 60520 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP021461 1580 1578 Lactobacillus plantarum CP005945 1590 1578 Lactobacillus paracollinoides CP014929 240427 1578 Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP035661 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP015339 1		CP035116	1590	1578
Lactobacillus plantarum CP035575 1590 1578 Lactobacillus plantarum CP013752 1590 1578 Lactobacillus futsaii CP040738 938155 1578 Lactobacillus paraplantarum CP032749 60520 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus plantarum CP021461 1580 1578 Lactobacillus plantarum CP005945 1590 1578 Lactobacillus paracollinoides CP014929 240427 1578 Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580	Lactobacillus plantarum	CP035568	1590	1578
Lactobacillus plantarum CP013752 1590 1578 Lactobacillus futsaii CP040738 938155 1578 Lactobacillus paraplantarum CP032749 60520 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus brevis CP021461 1580 1578 Lactobacillus plantarum CP005945 1590 1578 Lactobacillus paracollinoides CP014929 240427 1578 Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus plantarum	CP037432	1590	1578
Lactobacillus futsaii CP040738 938155 1578 Lactobacillus paraplantarum CP032749 60520 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus brevis CP021461 1580 1578 Lactobacillus plantarum CP005945 1590 1578 Lactobacillus paracollinoides CP014929 240427 1578 Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP031155 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum AP018408 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus plantarum	CP035575	1590	1578
Lactobacillus paraplantarum CP032749 60520 1578 Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus brevis CP021461 1580 1578 Lactobacillus plantarum CP005945 1590 1578 Lactobacillus paracollinoides CP014929 240427 1578 Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum AP018408 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus plantarum	CP013752	1590	1578
Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus brevis CP021461 1580 1578 Lactobacillus plantarum CP005945 1590 1578 Lactobacillus paracollinoides CP014929 240427 1578 Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus futsaii	CP040738	938155	1578
Lactobacillus plantarum CP025587 1590 1578 Lactobacillus plantarum CP035024 1590 1578 Lactobacillus brevis CP021461 1580 1578 Lactobacillus plantarum CP005945 1590 1578 Lactobacillus paracollinoides CP014929 240427 1578 Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus paraplantarum	CP032749	60520	1578
Lactobacillus brevis CP021461 1580 1578 Lactobacillus plantarum CP005945 1590 1578 Lactobacillus paracollinoides CP014929 240427 1578 Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP0313155 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826		CP025587	1590	1578
Lactobacillus plantarum CP005945 1590 1578 Lactobacillus paracollinoides CP014929 240427 1578 Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP013155 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum AP018408 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus plantarum	CP035024	1590	1578
Lactobacillus paracollinoides CP014929 240427 1578 Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP013155 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum AP018408 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus brevis	CP021461	1580	1578
Pediococcus damnosus CP012272 51663 1253 Lactobacillus plantarum CP013155 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum AP018408 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus plantarum	CP005945	1590	1578
Lactobacillus plantarum CP013155 1590 1253 Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum AP018408 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus paracollinoides	CP014929	240427	1578
Lactobacillus plantarum CP032645 1590 1253 Lactobacillus plantarum AP018408 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Pediococcus damnosus	CP012272	51663	1253
Lactobacillus plantarum AP018408 1590 1253 Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus plantarum	CP013155	1590	1253
Lactobacillus plantarum CP035561 1590 1253 Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus plantarum	CP032645	1590	1253
Lactobacillus brevis CP031186 1580 1253 Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus plantarum	AP018408	1590	
Lactobacillus brevis CP031211 1580 1253 Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus plantarum	CP035561	1590	1253
Lactobacillus brevis CP015339 1580 1253 Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826		CP031186		
Pediococcus damnosus CP012273 51663 1253 Lactobacillaceae CP014903 33958 186826	Lactobacillus brevis	CP031211	1580	1253
Lactobacillaceae CP014903 33958 186826	Lactobacillus brevis	CP015339	1580	1253
	Pediococcus damnosus	CP012273	51663	1253
Lactobacillaceae CP012291 33958 186826	Lactobacillaceae	CP014903	33958	186826
	Lactobacillaceae	CP012291	33958	186826

scientificName	$\operatorname{nuccoreAcc}$	taxid	parent
Lactobacillus backii	CP014893	375175	1578
Lactobacillus backii	CP014884	375175	1578
Lactobacillus backii	CP014626	375175	1578
Lactobacillus bifermentans	CP045873	1607	1578
Lactobacillus brevis	CP005981	1580	1578
Salmonella enterica	JX017306	28901	1578
Enterobacteriaceae	CP042497	543	1578
Enterobacteriaceae	CP012164	543	1578
Enterobacteriaceae	CP010367	543	1578
Gammaproteobacteria	DQ402049	1236	1578
Gammaproteobacteria	AB117929	1236	1578
Citrobacter sp. 36-4CPA	KM373703	1036018	2644389
Enterobacter sp. E76	CP042503	2596949	2608935
Escherichia coli	CP010227	562	2608935
Cronobacter sakazakii	CP004094	28141	413496
Enterobacter	AB583678	547	413496
Enterobacter	CP041059	547	413496
Enterobacter roggenkampii	CP019842	1812935	413496
Enterobacteriaceae	CP039315	543	413496
Enterobacteriaceae	CP042543	543	413496
Enterobacteriaceae	JF795024	543	413496
Enterobacteriaceae	CP023889	543	413496
Enterobacteriaceae	CP035912	543	413496
Enterobacteriaceae	CP042648	543	413496
Enterobacter cloacae	AB583677	550	413496
Klebsiella pneumoniae	CP018738	573	413496
Klebsiella pneumoniae	CP029592	573	413496
Enterobacteriaceae	CP018453	543	413496
Enterobacteriaceae	CP039606	543	413496
Erwinia amylovora	FR719210	552	551
Enterobacteriaceae	CP032843	543	551
Enterobacteriaceae	MG649064	543	551
Enterobacteriaceae	CP039571	543	551
Enterobacteriaceae	AF025795	543	551
Enterobacteriaceae	CP038655	543	551
Salmonella enterica	AY079200	28901	551
Escherichia coli	KM107843	562	551
Enterobacteriaceae	CP040323	543	551
Escherichia coli	CP006638	562	551
Enterobacter	CP041056	547	551
Enterobacter	CP043517	547	551
Pectobacterium carotovorum	CP021895	554	122277
Tatumella morbirosei	AF022806	642227	82986
Erwinia amylovora	FR719211	552	82986

scientificName	$\operatorname{nuccoreAcc}$	taxid	parent
Enterobacterales	CP011604	91347	82986
Klebsiella pneumoniae	CP023909	573	82986
Klebsiella quasipneumoniae	CP029433	1463165	82986
Pantoea stewartii	CP017582	66269	82986
Pantoea stewartii	CP017583	66269	82986
Serratia marcescens	EU697813	615	82986
Citrobacter freundii	CP011605	546	1344959
Salmonella enterica	CP019997	28901	1344959
Enterobacteriaceae	CP030001	543	1344959
Enterobacteriaceae	CP041028	543	1344959
Enterobacteriaceae	CP006051	543	1344959
Enterobacteriaceae	CP010375	543	1344959
Yersinia kristensenii	CP032484	28152	629
Enterobacteriaceae	CP034127	543	629
Enterobacter sp. 18A13	AP019636	2565914	2608935
Enterobacterales	CP010380	91347	2608935
Enterobacterales	CP009869	91347	2608935
Klebsiella michiganensis	CP044110	1134687	570
Legionella pneumophila	CP016869	446	445
Legionella pneumophila	CP015940	446	445
Legionella pneumophila	CP021273	446	445
Legionella oakridgensis	CP004007	29423	445
Fluoribacter dumoffii	AB297474	463	461
Legionella	CP015957	445	444
Legionella pneumophila	CP015942	446	444
Enterobacterales	CP018649	91347	444
Enterobacterales	DQ390455	91347	444
Enterobacterales	CP019284	91347	444
Enterobacterales	MK356561	91347	444
Enterobacterales	LT985251	91347	444
Enterobacterales	CP042533	91347	444
Enterobacterales	KX062091	91347	444
Enterobacterales	LT221038	91347	444
Gammaproteobacteria	LS998787	1236	444
Gammaproteobacteria	CP041525	1236	444
Gammaproteobacteria	HF545433	1236	444
Gammaproteobacteria	CP040895	1236	444
Enterobacterales	CP031259	91347	444
Gammaproteobacteria	AP018557	1236	444
Enterobacteriaceae	KY128484	543	444
Gammaproteobacteria	GU585907	1236	444
Gammaproteobacteria	CP019026	1236	444
Gammaproteobacteria	KM977631	1236	444
Klebsiella pneumoniae	CP018819	573	444

CP024573	scientificName	nuccoreAcc	taxid	parent
Klebsiella pneumoniae CP09116 573 444 Klebsiella pneumoniae CP028179 573 444 Klebsiella pneumoniae CP023250 573 444 Klebsiella pneumoniae MH745930 573 444 Klebsiella pneumoniae CP021698 573 444 Enterobacteriaceae CP022226 543 444 Enterobacteriaceae CP033776 543 444 Enterobacteriaceae CP021168 543 444 Enterobacteriaceae CP0218782 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae CP020991 543 444 Enterobacteriaceae CP020991 543 444 Enterobacteriaceae CP020991 543 444 Enterobacteriaceae CP020991 543 444 Enterobacteriaceae CP035182 543 444 Enterobacteriaceae CP035182 543 444 Enterobacteriacea CP027	Klebsiella pneumoniae	CP024573	573	444
Klebsiella pneumoniae CP023250 573 444 Klebsiella pneumoniae MH745930 573 444 Klebsiella pneumoniae CP021698 573 444 Enterobacteriaceae CP022226 543 444 Enterobacteriaceae CP033776 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae CP020991 543 444 Enterobacteriaceae CP035182 543 444 Mycobacteriaceae CP00895 1762 85007 Mycobacterium CP016642 1763 1762 Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus simulans HQ170520 1286 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus	-	CP009116	573	444
Klebsiella pneumoniae CP023250 573 444 Klebsiella pneumoniae MH745930 573 444 Klebsiella pneumoniae CP021698 573 444 Enterobacteriaceae CP022226 543 444 Enterobacteriaceae CP033776 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae CP020991 543 444 Enterobacteriaceae CP035182 543 444 Mycobacteriaceae CP00895 1762 85007 Mycobacterium CP016642 1763 1762 Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus simulans HQ170520 1286 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus		CP028179	573	444
Klebsiella pneumoniae CP021698 573 444 Enterobacteriaceae CP022226 543 444 Enterobacteriaceae CP033776 543 444 Enterobacteriaceae CP021168 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae CP020091 543 444 Enterobacteriaceae CP035182 543 444 Enterobacteriaceae CP000895 1762 85007 Mycobacterium CP016642 1763 1762 Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus simulans CP027495 1280 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP017401 1286 1762 Staphylococcus simulans CP017401 1286 1762 Staphylococcus simulans CP013204 867076 185978 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 <		CP023250	573	444
Klebsiella pneumoniae CP021698 573 444 Enterobacteriaceae CP022226 543 444 Enterobacteriaceae CP033776 543 444 Enterobacteriaceae CP021168 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae CP020091 543 444 Enterobacteriaceae CP035182 543 444 Enterobacteriaceae CP000895 1762 85007 Mycobacterium CP016642 1763 1762 Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus simulans CP027495 1280 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP017401 1286 1762 Staphylococcus simulans CP017401 1286 1762 Staphylococcus simulans CP013204 867076 185978 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 <		MH745930	573	444
Enterobacteriaceae CP02226 543 444 Enterobacteriaceae CP033776 543 444 Enterobacteriaceae CP021168 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae CP020091 543 444 Enterobacteriaceae CP020091 543 444 Enterobacteriaceae CP000895 1762 85007 Mycobacteriaceae CP000895 1762 85007 Mycobacterium CP016642 1763 1762 Staphylococcus sarpophyticus FR687301 29385 1762 Staphylococcus simulans CP016642 1286 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762		CP021698	573	444
Enterobacteriaceae CP021168 543 444 Enterobacteriaceae CP028782 543 444 Enterobacteriaceae DQ449578 543 444 Enterobacteriaceae CP020091 543 444 Enterobacteriaceae CP035182 543 444 Mycobacterium CP016642 1762 85007 Mycobacterium CP016642 1762 85007 Mycobacterium CP01642 1763 1762 Staphylococcus sureus CP027495 1280 1762 Staphylococcus simulans CP017431 1286 1762 Staphyloc		CP022226	543	444
Enterobacteriaceae CP028782 543 444 Enterobacteriaceae DQ449578 543 444 Enterobacteriaceae CP020091 543 444 Enterobacteriaceae CP035182 543 444 Mycobacteriaceae CP000895 1762 85007 Mycobacterium CP016642 1763 1762 Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus simulans CP027495 1280 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762 Staphylococcus simulans CP015644 1286 1762 Staphylococcus simulans CP015644 1286 1762 Paenibacillus polymyxa CP013204 867076 185978 Paenibacillus polymyxa CP0110107 1428 44249 Bacillus thuringiensis CP010107 1428 44249 Bacillus mycoides CP031077 1405 8661	Enterobacteriaceae	CP033776	543	444
Enterobacteriaceae DQ449578 543 444 Enterobacteriaceae CP020091 543 444 Enterobacteriaceae CP035182 543 444 Mycobacteriaceae CP000895 1762 85007 Mycobacterium CP016642 1763 1762 Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus simulans CP027495 1280 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762 Staphylococcus simulans CP015644 1286 1762 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 Paenibacillus polymyxa CP042273 1406 4249 Bacillus thuringiensis CP010107 1428 44249 Bacillus mycoides CP031077 1405 8661 Bacillus mycoides CP012107 1428 8661 Bacillus sp. ABP14 CP017017 1892404 86661	Enterobacteriaceae	CP021168	543	444
Enterobacteriaceae CP020091 543 444 Enterobacteriaceae CP035182 543 444 Mycobacteriaceae CP000895 1762 85007 Mycobacterium CP016642 1763 1762 Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus simulans CP027495 1280 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762 Staphylococcus simulans CP015644 1286 1762 Staphylococcus simulans CP013204 867076 185978 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 Paenibacillus polymyxa CP042273 1406 44249 Bacillus polymyxa CP011017 1428 44249 Bacillus polymyxa CP031077 1405 86661 Bacillus mycoides CP031077 1405 86661 Bacillus mycoides CP030647 64104 86661	Enterobacteriaceae	CP028782	543	444
Enterobacteriaceae CP035182 543 444 Mycobacteriaceae CP000895 1762 85007 Mycobacterium CP016642 1763 1762 Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus simulans CP027495 1280 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP013204 867076 185978 Paenibacillus sp. IBB B 3084 CP013204 867076 185978 Paenibacillus sp. IBBB B 3084 CP013204 867076 185978 Bacillus thuringiensis CP010107 1428 4249 Bacillus mycoides CP031077 1405 <td>Enterobacteriaceae</td> <td>DQ449578</td> <td>543</td> <td>444</td>	Enterobacteriaceae	DQ449578	543	444
Mycobacteriaceae CP000895 1762 85007 Mycobacterium CP016642 1763 1762 Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus sureus CP027495 1280 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762 Staphylococcus simulans CP013204 867076 185978 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 Paenibacillus polymyxa CP042273 1406 42449 Bacillus thuringiensis CP010107 1428 44249 Bacillus cereus AB083655 1396 86661 Bacillus mycoides CP031077 1405 86661 Bacillus mycoides CP012107 1428 86661 Bacillus pseudomycoides CP009689 1405 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356	Enterobacteriaceae	CP020091	543	444
Mycobacterium CP016642 1763 1762 Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus sureus CP027495 1280 1762 Staphylococcus simulans HQ170520 1286 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762 Staphylococcus simulans CP015644 1286 1762 Staphylococcus simulans CP015644 1286 1762 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 Paenibacillus polymyxa CP013204 867076 185978 Paenibacillus polymyxa CP010107 1428 44249 Bacillus thuringiensis CP010107 1428 44249 Bacillus mycoides CP031077 1405 86661 Bacillus mycoides CP012107 1428 86661 Bacillus pseudomycoides CP009689 1405 86661 Bacillus pseudomycoides CP09689 1405	Enterobacteriaceae	CP035182	543	444
Staphylococcus saprophyticus FR687301 29385 1762 Staphylococcus aureus CP027495 1280 1762 Staphylococcus simulans HQ170520 1286 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 Paenibacillus polymyxa CP042273 1406 44249 Bacillus thuringiensis CP010107 1428 44249 Bacillus recreus AB083655 1396 86661 Bacillus mycoides CP031077 1405 86661 Bacillus mycoides CP012107 1428 86661 Bacillus pseudomycoides CP009689 1405 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543	Mycobacteriaceae	CP000895	1762	85007
Staphylococcus surreus CP027495 1280 1762 Staphylococcus simulans HQ170520 1286 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 Paenibacillus polymyxa CP042273 1406 4249 Pacillus thuringiensis CP010107 1428 44249 Bacillus recreus AB083655 1396 86661 Bacillus mycoides CP031077 1405 86661 Bacillus mycoides CP012107 1428 86661 Bacillus pseudomycoides CP009689 1405 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543 185979 Enterobacteriaceae KP979588 543	Mycobacterium	CP016642	1763	1762
Staphylococcus simulans HQ170520 1286 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 Paenibacillus polymyxa CP042273 1406 44249 Bacillus thuringiensis CP010107 1428 44249 Bacillus cereus AB083655 1396 86661 Bacillus mycoides CP031077 1405 86661 Bacillus thuringiensis CP012107 1495 86661 Bacillus mycoides CP009689 1405 86661 Bacillus pseudomycoides CP009647 64104 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli CP043037 562	Staphylococcus saprophyticus	FR687301	29385	1762
Staphylococcus simulans HQ170520 1286 1762 Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 Paenibacillus polymyxa CP042273 1406 44249 Bacillus thuringiensis CP010107 1428 44249 Bacillus mycoides CP031077 1405 86661 Bacillus mycoides CP031077 1405 86661 Bacillus pseudomycoides CP012107 1428 86661 Bacillus pseudomycoides CP009647 64104 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae MG800340 543	Staphylococcus aureus	CP027495	1280	1762
Staphylococcus simulans CP017431 1286 1762 Staphylococcus simulans CP015644 1286 1762 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 Paenibacillus polymyxa CP042273 1406 44249 Bacillus thuringiensis CP010107 1428 44249 Bacillus cereus AB083655 1396 86661 Bacillus mycoides CP031077 1405 86661 Bacillus thuringiensis CP012107 1428 86661 Bacillus mycoides CP009689 1405 86661 Bacillus pseudomycoides CP009647 64104 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae MG800340 543 1859		HQ170520	1286	1762
Staphylococcus simulans CP015644 1286 1762 Paenibacillus sp. IHB B 3084 CP013204 867076 185978 Paenibacillus polymyxa CP042273 1406 4249 Bacillus thuringiensis CP010107 1428 44249 Bacillus cereus AB083655 1396 86661 Bacillus mycoides CP031077 1405 86661 Bacillus thuringiensis CP012107 1428 86661 Bacillus mycoides CP009689 1405 86661 Bacillus spseudomycoides CP009647 64104 86661 Bacillus sps. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543 185979 Enterobacteriaceae KP979588 543 185979 Enterobacteriaceae DQ995352 562 185979 Enterobacteriaceae KT693145 543 18597		CP017431	1286	1762
Paenibacillus polymyxa CP042273 1406 44249 Bacillus thuringiensis CP010107 1428 44249 Bacillus cereus AB083655 1396 86661 Bacillus mycoides CP031077 1405 86661 Bacillus thuringiensis CP012107 1428 86661 Bacillus mycoides CP099689 1405 86661 Bacillus pseudomycoides CP009647 64104 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae AP010964 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979		CP015644	1286	1762
Bacillus thuringiensis CP010107 1428 44249 Bacillus cereus AB083655 1396 86661 Bacillus mycoides CP031077 1405 86661 Bacillus thuringiensis CP012107 1428 86661 Bacillus mycoides CP099689 1405 86661 Bacillus pseudomycoides CP099647 64104 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Escherichia coli CP032885 562 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Enterobacteriaceae DQ995352 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979	Paenibacillus sp. IHB B 3084	CP013204	867076	185978
Bacillus cereus AB083655 1396 86661 Bacillus mycoides CP031077 1405 86661 Bacillus thuringiensis CP012107 1428 86661 Bacillus mycoides CP009689 1405 86661 Bacillus pseudomycoides CP009647 64104 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Escherichia coli CP032885 562 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979	Paenibacillus polymyxa	CP042273	1406	44249
Bacillus mycoides CP031077 1405 86661 Bacillus thuringiensis CP012107 1428 86661 Bacillus mycoides CP009689 1405 86661 Bacillus pseudomycoides CP009647 64104 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Escherichia coli CP032885 562 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979	Bacillus thuringiensis	CP010107	1428	44249
Bacillus thuringiensis CP012107 1428 86661 Bacillus mycoides CP009689 1405 86661 Bacillus pseudomycoides CP009647 64104 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Escherichia coli CP032885 562 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae DQ995352 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae LT985285 543 185979 Enterobacteriaceae LT985285 543 185979	Bacillus cereus	AB083655	1396	86661
Bacillus mycoides CP009689 1405 86661 Bacillus pseudomycoides CP009647 64104 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Escherichia coli CP032885 562 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Enterobacteriaceae CP041450 562 185979	Bacillus mycoides	CP031077	1405	86661
Bacillus pseudomycoides CP009647 64104 86661 Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Escherichia coli CP032885 562 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae AP010964 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Enterobacteriaceae DQ995352 543 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Enterobacteriaceae LT985285 543 185979 Enterobacteriaceae CP041450 562 185979	Bacillus thuringiensis	CP012107	1428	86661
Bacillus sp. ABP14 CP017017 1892404 86661 Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Escherichia coli CP032885 562 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae AP010964 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Enterobacteriaceae DQ995352 543 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979	Bacillus mycoides	CP009689	1405	86661
Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Escherichia coli CP032885 562 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae AP010964 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979	Bacillus pseudomycoides	CP009647	64104	86661
Bacillus sp. FDAARGOS_527 CP033796 2576356 185979 Escherichia coli CP032885 562 185979 Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae AP010964 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979	Bacillus sp. ABP14	CP017017	1892404	86661
Enterobacteriaceae HF565446 543 185979 Enterobacteriaceae AP010964 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae DQ995352 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979		CP033796	2576356	185979
Enterobacteriaceae AP010964 543 185979 Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae DQ995352 543 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979	Escherichia coli	CP032885	562	185979
Enterobacteriaceae KP979588 543 185979 Escherichia coli FJ985252 562 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae DQ995352 543 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979	Enterobacteriaceae	HF565446	543	185979
Escherichia coli FJ985252 562 185979 Escherichia coli CP043037 562 185979 Enterobacteriaceae DQ995352 543 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979	Enterobacteriaceae	AP010964	543	185979
Escherichia coli CP043037 562 185979 Enterobacteriaceae DQ995352 543 185979 Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979	Enterobacteriaceae	KP979588	543	185979
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Enterobacteriaceae MG800340 543 185979 Enterobacteriaceae KT693145 543 185979 Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979	Escherichia coli	CP043037	562	185979
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Enterobacteriaceae LT985240 543 185979 Enterobacteriaceae CP035473 543 185979 Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979	Enterobacteriaceae		543	185979
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Enterobacteriaceae LT985285 543 185979 Escherichia coli CP041450 562 185979	Enterobacteriaceae	LT985240	543	185979
Escherichia coli CP041450 562 185979	Enterobacteriaceae	CP035473	543	185979
	Enterobacteriaceae	LT985285	543	185979
Enterobacteriaceae CP036207 543 185979	Escherichia coli	CP041450	562	185979
	Enterobacteriaceae	CP036207	543	185979

Salmonella enterica CP011432 28901 185979 Salmonella enterica CP030189 28901 185979 Klebsiella MK079571 570 185979 Escherichia coli CP018944 562 185979 Pseudomonas fragi CP021135 296 136842 Klebsiella pneumoniae KY978631 573 136842 Klebsiella pneumoniae CP0219583 573 136842 Klebsiella pneumoniae CP023950 573 136842 Klebsiella pneumoniae CP025944 562 136842 Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX44308 573 136842 Klebsiella pneumoniae KX44308 573 136842 Klebsiella pneumoniae KX44308 573 136842 Klebsiella pneumoniae KX44408 573 136842 Klebsiella pneumoniae KX44408 573 136842 Klebsiella pneumoniae KX46409 645 642	scientificName	nuccoreAcc	taxid	parent
Klebsiella MK079571 570 185979 Escherichia coli CP018944 562 185979 Pseudomonas fragi CP021135 296 136842 Klebsiella pneumoniae KY978631 573 136842 Seudomonas fragi CP021134 296 136842 Klebsiella pneumoniae CP023950 573 136842 Klebsiella pneumoniae CP023964 562 136842 Klebsiella pneumoniae CP037964 573 136842 Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX444308 573 136842 Klebsiella pneumoniae KX444308 573 136842 Klebsiella pneumoniae KX364409 645 642 Klebsiella pneumoniae KX364409 645 642 Enterobacteriaceae AP018835 543 642 Enterobacteriaceae AP018835 543 642 Escherichia coli CP0192600 562 45349 Escheri	Salmonella enterica	CP011432	28901	185979
Escherichia coli CP018944 562 185979 Pseudomonas fragi CP021135 296 136842 Pseudomonas fragi CP021134 296 136842 Pseudomonas fragi CP021134 296 136842 Klebsiella pneumoniae CP029583 573 136842 Klebsiella pneumoniae CP025944 562 136842 Klebsiella pneumoniae CP037964 573 136842 Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae KX364499 645 642 Elbersichia coli CP00665 132466 452 Edwardsiella CP00665 132406 45349	Salmonella enterica	CP030189	28901	185979
Pseudomonas fragi CP021135 296 136842 Klebsiella pneumoniae KY978631 573 136842 Pseudomonas fragi CP021134 296 136842 Klebsiella pneumoniae CP029583 573 136842 Klebsiella pneumoniae CP023950 573 136842 Secherichia coli CP025944 562 136842 Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae MG05313 573 136842 Klebsiella pneumoniae MG05313 573 136842 Klebsiella pneumoniae MK364409 645 642 Reromonas salmonicida KX364409 645 642 Enterobacteriaceae AP018835 543 642 Edwardsiella CP006665 132406 45349 Escherichia coli CP019261 562 45349 <td< td=""><td>Klebsiella</td><td>MK079571</td><td>570</td><td>185979</td></td<>	Klebsiella	MK079571	570	185979
Klebsiella pneumoniae KY978631 573 136842 Pseudomonas fragi CP021134 296 136842 Klebsiella pneumoniae CP029583 573 136842 Klebsiella pneumoniae CP023950 573 136842 Escherichia coli CP025944 562 136842 Klebsiella pneumoniae CP037964 573 136842 Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae KX46409 645 642 Klebsiella pneumoniae MG053313 573 136842 Klebsiella pneumoniae KX364409 645 642 Enterobacteriace AP18835 543 642 <	Escherichia coli	CP018944	562	185979
Pseudomonas fragi CP021134 296 136842 Klebsiella pneumoniae CP029583 573 136842 Klebsiella pneumoniae CP023950 573 136842 Escherichia coli CP025944 562 136842 Klebsiella pneumoniae CP037964 573 136842 Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae CP028792 573 136842 Klebsiella pneumoniae MG053313 573 136842 Klebsiella pneumoniae KX346409 645 642	Pseudomonas fragi	CP021135	296	136842
Klebsiella pneumoniae CP029583 573 136842 Klebsiella pneumoniae CP023950 573 136842 Escherichia coli CP025944 562 136842 Klebsiella pneumoniae CP037964 573 136842 Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae MG053313 573 136842 Klebsiella pneumoniae MG053113 436 642 Enterobacteria CP0192660 562 45349 <	Klebsiella pneumoniae	KY978631	573	136842
Klebsiella pneumoniae CP023950 573 136842 Escherichia coli CP025944 562 136842 Klebsiella pneumoniae CP037964 573 136842 Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae MG053313 573 136842 Klebsiella pneumoniae MG053133 573 136842 Klebsiella pneumoniae MG053131 56 642 Entre profession CP019260 56 45349 </td <td>Pseudomonas fragi</td> <td>CP021134</td> <td>296</td> <td>136842</td>	Pseudomonas fragi	CP021134	296	136842
Escherichia coli CP025944 562 136842 Klebsiella pneumoniae CP037964 573 136842 Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae CP028792 573 136842 Klebsiella pneumoniae MG053313 573 136842 Keromonas salmonicida KX364409 645 642 Enterobacteriaceae AP018835 543 642 Edwardsiella CP006665 132406 45349 Escherichia coli CP019261 562 45349 Escherichia coli CP042600 562 45349 Escherichia coli CP033095 562 45349 Salmonella enterica EV19534 28901 45349 Salmonella enterica AY509004 28901 45349 Salmonella enterica AY509004 28901 45349 Salmonella enterica AY509004 28901 45349 Sal	Klebsiella pneumoniae	CP029583	573	136842
Klebsiella pneumoniae CP037964 573 136842 Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae CP028792 573 136842 Klebsiella pneumoniae MG053313 573 136842 Aeromonas salmonicida KX364409 645 642 Enterobacteriaceae AP018835 543 642 Enterobacteriaceae AP018835 543 642 Edwardsiella CP006665 132406 45349 Escherichia coli CP042600 562 45349 Escherichia coli CP042600 562 45349 Salmonella enterica EU219534 28901 45349 Salmonella enterica AY509004 28901 45349 <t< td=""><td>Klebsiella pneumoniae</td><td>CP023950</td><td>573</td><td>136842</td></t<>	Klebsiella pneumoniae	CP023950	573	136842
Klebsiella pneumoniae CP043936 573 136842 Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae CP028792 573 136842 Klebsiella pneumoniae MG053313 573 136842 Keromonas salmonicida KX364409 645 642 Enterobacteriaceae AP018835 543 642 Edwardsiella CP006665 132406 45349 Escherichia coli CP019261 562 45349 Escherichia coli CP033095 562 45349 Salmonella enterica EU219534 28901 45349 Salmonella enterica CP001125 28901 45349 Salmonella enterica AY509004 28901 45349 Escherichia coli CP031894 562 45349 Escherichia coli CP041782 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomon	Escherichia coli	CP025944	562	136842
Klebsiella pneumoniae KX443408 573 136842 Klebsiella pneumoniae CP028792 573 136842 Klebsiella pneumoniae MG053313 573 136842 Aeromonas salmonicida KX364409 645 642 Enterobacteriaceae AP018835 543 642 Edwardsiella CP006665 132406 45349 Escherichia coli CP019261 562 45349 Escherichia coli CP042600 562 45349 Escherichia coli CP033095 562 45349 Salmonella enterica EU219534 28901 45349 Salmonella enterica AY509004 28901 45349 Escherichia coli CP031894 562 45349 Escherichia coli CP031894 562 45349 Kanthomonas citri AY780631 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP041964 346 643453 Xanthomonas	Klebsiella pneumoniae	CP037964	573	136842
Klebsiella pneumoniae CP028792 573 136842 Klebsiella pneumoniae MG053313 573 136842 Aeromonas salmonicida KX364409 645 642 Enterobacteriaceae AP018835 543 642 Edwardsiella CP006665 132406 45349 Escherichia coli CP019261 562 45349 Escherichia coli CP042600 562 45349 Escherichia coli CP033095 562 45349 Salmonella enterica EU219534 28901 45349 Salmonella enterica CP031125 28901 45349 Salmonella enterica AY509004 28901 45349 Escherichia coli CP031894 562 45349 Salmonella enterica AY509004 28901 45349 Salmonella enterica AY509004 28901 45349 Salmonella enterica AY780631 346 643453 Xanthomonas citri AY780631 346 643453 Xanthomona	Klebsiella pneumoniae	CP043936	573	136842
Klebsiella pneumoniae CP028792 573 136842 Klebsiella pneumoniae MG053313 573 136842 Aeromonas salmonicida KX364409 645 642 Enterobacteriaceae AP018835 543 642 Edwardsiella CP006665 132406 45349 Escherichia coli CP019261 562 45349 Escherichia coli CP033095 562 45349 Escherichia coli CP033095 562 45349 Salmonella enterica CP031954 28901 45349 Salmonella enterica CP001125 28901 45349 Salmonella enterica AY509004 28901 45349 S	Klebsiella pneumoniae	KX443408	573	136842
Klebsiella pneumoniae MG053313 573 136842 Aeromonas salmonicida KX364409 645 642 Enterobacteriaceae AP018835 543 642 Edwardsiella CP006665 132406 45349 Escherichia coli CP019261 562 45349 Escherichia coli CP033095 562 45349 Escherichia coli CP033095 562 45349 Salmonella enterica EU219534 28901 45349 Salmonella enterica CP001125 28901 45349 Salmonella enterica AY509004 28901 45349 Sa		CP028792	573	136842
Enterobacteriaceae AP018835 543 642 Edwardsiella CP006665 132406 45349 Escherichia coli CP019261 562 45349 Escherichia coli CP042600 562 45349 Escherichia coli CP033095 562 45349 Salmonella enterica EU219534 28901 45349 Salmonella enterica CP001125 28901 45349 Salmonella enterica AY509004 28901 45349 Salmonella enterica CP031894 562 45349 Salmonella enterica AY509004 28901 45349 Salmonella enterica CP031894 562 45349 Salmonella enterica AY509004 28901 45349 Salmonella enterica CP031894 562 45349 Salmonella enterica CP031894 562 45349 Salmonella enterica CP031894 362 45349 Salmonella enterica CP031894 362 45349 Salmonella en		MG053313	573	136842
Edwardsiella CP006665 132406 45349 Escherichia coli CP019261 562 45349 Escherichia coli CP042600 562 45349 Escherichia coli CP033095 562 45349 Salmonella enterica EU219534 28901 45349 Salmonella enterica CP001125 28901 45349 Salmonella enterica AY509004 28901 45349 Salmonella enterica AY50904 28901 45349 <	Aeromonas salmonicida	KX364409	645	642
Escherichia coli CP019261 562 45349 Escherichia coli CP042600 562 45349 Escherichia coli CP033095 562 45349 Salmonella enterica EU219534 28901 45349 Salmonella enterica CP001125 28901 45349 Salmonella enterica AY509004 28901 45349 Escherichia coli CP031894 562 45349 Escherichia coli CP031894 562 45349 Xanthomonas citri AY780631 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP003780 346 643453 Xanthomonas AE008924 338 32033 Xanthomonas CP020888 338 32033 Xanthomonas citri CP020884 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017	Enterobacteriaceae	AP018835	543	642
Escherichia coli CP042600 562 45349 Escherichia coli CP033095 562 45349 Salmonella enterica EU219534 28901 45349 Salmonella enterica CP001125 28901 45349 Salmonella enterica AY509004 28901 45349 Escherichia coli CP031894 562 45349 Xanthomonas citri AY780631 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP041964 346 643453 Xanthomonas citri CP003780 346 643453 Xanthomonas AE008924 338 32033 Xanthomonas CP020888 338 32033 Xanthomonas citri CP020884 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017021 346 32033 Xanthomonas citri CP017021 346 32033 Xanthomonas citri CP0	Edwardsiella	CP006665	132406	45349
Escherichia coli CP033095 562 45349 Salmonella enterica EU219534 28901 45349 Salmonella enterica CP001125 28901 45349 Salmonella enterica AY509004 28901 45349 Escherichia coli CP031894 562 45349 Xanthomonas citri AY780631 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP03780 346 643453 Xanthomonas AE008924 338 32033 Xanthomonas AE008925 338 32033 Xanthomonas citri CP020888 338 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017021 346 338 Xanthomonas citri CP017021 346 338 Xanthomonas citri CP034654 339 38 Thiomonas arsenitoxydans FP47	Escherichia coli	CP019261	562	45349
Salmonella enterica EU219534 28901 45349 Salmonella enterica CP001125 28901 45349 Salmonella enterica AY509004 28901 45349 Escherichia coli CP031894 562 45349 Xanthomonas citri AY780631 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP003780 346 643453 Xanthomonas AE008924 338 32033 Xanthomonas AE008925 338 32033 Xanthomonas citri CP020888 338 32033 Xanthomonas citri CP020884 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017021 346 32033 Xanthomonas citri CP017021 346 338 Xanthomonas citri CP017021 346 338 Xanthomonas citri CP017021 346 338 Xanthomonas citri CP034654	Escherichia coli	CP042600	562	45349
Salmonella enterica CP 001125 28901 45349 Salmonella enterica AY 509004 28901 45349 Escherichia coli CP 031894 562 45349 Xanthomonas citri AY 780631 346 643453 Xanthomonas citri CP 041782 346 643453 Xanthomonas citri CP 003780 346 643453 Xanthomonas AE 008924 338 32033 Xanthomonas AE 008925 338 32033 Xanthomonas citri CP 020888 338 32033 Xanthomonas citri CP 020884 346 32033 Xanthomonas citri CP 017023 346 32033 Xanthomonas citri CP 017021 346 32033 Xanthomonas citri CP 017021 346 338 Xanthomonas citri CP 017021 346 338 Xanthomonas citri CP 037654 339 338 Xanthomonas citri CP 037654 339 338 Xanthomonas citri <t< td=""><td>Escherichia coli</td><td>CP033095</td><td>562</td><td>45349</td></t<>	Escherichia coli	CP033095	562	45349
Salmonella enterica AY509004 28901 45349 Escherichia coli CP031894 562 45349 Xanthomonas citri AY780631 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP03780 346 643453 Xanthomonas citri CP003780 346 643453 Xanthomonas AE008924 338 32033 Xanthomonas CP020888 338 32033 Xanthomonas citri CP020884 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017021 346 338 Xanthomonas citri CP017021 346 338 Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides JX294729 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycop	Salmonella enterica	EU219534	28901	45349
Escherichia coli CP031894 562 45349 Xanthomonas citri AY780631 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP041964 346 643453 Xanthomonas citri CP003780 346 643453 Xanthomonas AE008924 338 32033 Xanthomonas AE008925 338 32033 Xanthomonas citri CP020888 338 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017021 346 32033 Xanthomonas citri CP017021 346 338 Xanthomonas citri CP034654 339 338 Xanthomonas citri CP034654 <	Salmonella enterica	CP001125	28901	45349
Xanthomonas citri AY780631 346 643453 Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP041964 346 643453 Xanthomonas citri CP003780 346 643453 Xanthomonas AE008924 338 32033 Xanthomonas CP020888 338 32033 Xanthomonas citri CP020884 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas campestris CP017021 346 338 Xanthomonas campestris CP017021 346 338 Xanthomonas resenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Salmonella enterica	AY509004	28901	45349
Xanthomonas citri CP041782 346 643453 Xanthomonas citri CP041964 346 643453 Xanthomonas citri CP003780 346 643453 Xanthomonas AE008924 338 32033 Xanthomonas AE008925 338 32033 Xanthomonas CP020888 338 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017021 346 32033 Xanthomonas citri CP017021 346 338 Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Escherichia coli	CP031894	562	45349
Xanthomonas citri CP041964 346 643453 Xanthomonas citri CP003780 346 643453 Xanthomonas AE008924 338 32033 Xanthomonas AE008925 338 32033 Xanthomonas citri CP020888 338 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas euvesicatoria AM039949 456327 338 Xanthomonas citri CP017021 346 338 Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma capricolum JX294729 2102 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas citri	AY780631	346	643453
Xanthomonas citri CP003780 346 643453 Xanthomonas AE008924 338 32033 Xanthomonas AE008925 338 32033 Xanthomonas citri CP020888 338 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas citri CP017021 346 338 Xanthomonas citri CP017021 346 338 Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas citri	CP041782	346	643453
Xanthomonas AE008924 338 32033 Xanthomonas AE008925 338 32033 Xanthomonas CP020888 338 32033 Xanthomonas citri CP020884 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas euvesicatoria AM039949 456327 338 Xanthomonas campestris CP017021 346 338 Xanthomonas rasenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas citri	CP041964	346	643453
Xanthomonas AE008925 338 32033 Xanthomonas CP020888 338 32033 Xanthomonas citri CP020884 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas euvesicatoria AM039949 456327 338 Xanthomonas citri CP017021 346 338 Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides JX294729 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas citri	CP003780	346	643453
Xanthomonas CP020888 338 32033 Xanthomonas citri CP020884 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas euvesicatoria AM039949 456327 338 Xanthomonas citri CP017021 346 338 Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides JX294729 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas	AE008924	338	32033
Xanthomonas citri CP020884 346 32033 Xanthomonas citri CP017023 346 32033 Xanthomonas euvesicatoria AM039949 456327 338 Xanthomonas citri CP017021 346 338 Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas	AE008925	338	32033
Xanthomonas citri CP017023 346 32033 Xanthomonas euvesicatoria AM039949 456327 338 Xanthomonas citri CP017021 346 338 Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas	CP020888	338	32033
Xanthomonas euvesicatoria AM039949 456327 338 Xanthomonas citri CP017021 346 338 Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma capricolum JX294729 2102 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas citri	CP020884	346	32033
Xanthomonas citri CP017021 346 338 Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma mycoides JX294729 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas citri	CP017023	346	32033
Xanthomonas campestris CP034654 339 338 Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma mycoides JX294729 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas euvesicatoria	AM039949	456327	338
Thiomonas arsenitoxydans FP475957 426114 32012 Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma mycoides JX294729 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas citri	CP017021	346	338
Mycoplasma mycoides JX294730 2102 656088 Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma mycoides JX294729 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Xanthomonas campestris	CP034654	339	338
Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma mycoides JX294729 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Thiomonas arsenitoxydans	FP475957	426114	32012
Mycoplasma mycoides FQ790215 2102 656088 Mycoplasma mycoides JX294729 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088	Mycoplasma mycoides	JX294730	2102	656088
Mycoplasma mycoides JX294729 2102 656088 Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088		FQ790215	2102	656088
Mycoplasma capricolum JX294737 2095 656088 Mycoplasma mycoides M25059 2102 656088		_	2102	656088
Mycoplasma mycoides M25059 2102 656088		JX294737	2095	656088
	Mycoplasma mycoides	M25059	2102	656088
	Sinorhizobium meliloti	DQ145546	382	28105

scientificName	nuccoreAcc	taxid	parent
Sinorhizobium meliloti	CP021796	382	28105
Sinorhizobium meliloti	CP003934	382	28105
Sinorhizobium meliloti	CP026529	382	28105
Sinorhizobium meliloti	CP021807	382	28105
Sinorhizobium meliloti	CP002784	382	28105
Sinorhizobium meliloti	JQ665880	382	28105
Sinorhizobium meliloti	CP003935	382	28105
Sinorhizobium meliloti	CP021803	382	28105
Sinorhizobium meliloti	CP011000	382	28105
Sinorhizobium meliloti	CP021815	382	28105
Sinorhizobium meliloti	CP021832	382	28105
Enterobacteriaceae	CP028715	543	28105
Enterobacteriaceae	KY463454	543	28105
Enterobacteriaceae	JX258655	543	28105
Enterobacteriaceae	CP024670	543	28105
Enterobacteriaceae	CP023373	543	28105
Enterobacteriaceae	CP035754	543	28105
Enterobacteriaceae	KM212169	543	28105
Enterobacteriaceae	CP035775	543	28105
Enterobacteriaceae	LT985276	543	28105
Escherichia coli	LT985310	562	28105
Gammaproteobacteria	MG228427	1236	28105
Gammaproteobacteria	CP041048	1236	28105
Gammaproteobacteria	CP034714	1236	28105
Gammaproteobacteria	MH325469	1236	28105
Enterobacteriaceae	CP042479	543	28105
Enterobacteriaceae	CP012168	543	28105
Escherichia coli	FJ705806	562	28105
Citrobacter freundii	CP022274	546	28105
Klebsiella pneumoniae	AP018577	573	28105
Enterobacteriaceae	KU302801	543	28105
Enterobacteriaceae	CP041052	543	28105
Gammaproteobacteria	CP024581	1236	28105
Gammaproteobacteria	CP029730	1236	28105
Enterobacteriaceae	CP029123	543	28105
Enterobacteriaceae	LT985244	543	28105
Enterobacteriaceae	CP040384	543	28105
Enterobacteriaceae	CP011429	543	28105
Enterobacteriaceae	CP025236	543	28105
Enterobacteriaceae	MK033499	543	28105
Enterobacteriaceae	CP024824	543	28105
Enterobacteriaceae	CP003998	543	28105
Gammaproteobacteria	MF150118	1236	28105
Gammaproteobacteria	MN101850	1236	28105
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scientificName	nuccoreAcc	taxid	parent
Gammaproteobacteria	CP017387	1236	28105
Klebsiella pneumoniae	KT935446	573	28105
Providencia rettgeri	LC507075	587	28105
Enterobacteriaceae	CP032388	543	28105
Enterobacteriaceae	CP032397	543	28105
Enterobacteriaceae	CP041027	543	28105
Escherichia coli	CP045742	562	28105
Salmonella enterica	CP018220	28901	28105
Xanthomonas	CP016879	338	28105
Xanthomonas	CP020994	338	28105
Xanthomonas	CP012050	338	28105
Xanthomonas albilineans	FP340278	29447	338
Microchaete diplosiphon	AP018245	1197	188910
Microchaete diplosiphon	AP018242	1197	188910
Nostoc punctiforme	CP001042	272131	1177
Nostoc sp. 'Peltigera membranacea cyanobiont' N6	CP026688	1261031	2593658
Nostoc commune	AP018330	1178	1177
Nostoc commune	AP018334	1178	1177
Nostoc sphaeroides	CP031945	446679	1177
Nostoc sphaeroides	CP031942	446679	1177
Moraxella osloensis	CP024178	34062	475
Moraxella osloensis	CP024449	34062	475
Moraxella osloensis	CP024181	34062	475
Moraxella osloensis	AP017384	34062	475
Moraxella osloensis	CP014236	34062	475
Moraxella osloensis	CP024448	34062	475
Rhodococcus hoagii	KP851975	43767	1827
Rhodococcus hoagii	KX443401	43767	1827
Rhodococcus hoagii	NC_011150	43767	1827
Rhodococcus hoagii	AF116907	43767	1827
Rhodococcus hoagii	CP027795	43767	1827
Rhodococcus sp. SGAir0479	CP039433	2567884	192944
Geobacillus sp. WCH70	CP001640	471223	2642459
Burkholderia sp. OLGA172	CP014580	1804984	2613784
Paraburkholderia caffeinilytica	CP031468	1761016	1822464
Bacillus thuringiensis	CP015153	1428	1822464
Bacillus thuringiensis	AP014872	1428	1822464
Bacillus	CP024779	1386	262150
Bacillus	CP004866	1386	262150
Bacillus	CP045775	1386	262150
Bacillus thuringiensis	CP010098	1428	262150
Bacillus thuringiensis	CP004879	1428	262150
Bacillus thuringiensis	AY138809	1428	262150
Escherichia coli	CP041528	562	262150

scientificName	$\operatorname{nuccoreAcc}$	taxid	parent
Escherichia coli	CP010161	562	262150
Bacteria	CP011006	2	262150
Bacteria	MN057686	2	262150
Mucilaginibacter sp. PAMC 26640	CP014772	1300914	2617802
Streptococcus mutans	CP044494	1309	1301
Enterobacteriaceae	AB011548	543	1301
Enterobacteriaceae	DQ916413	543	1301
Enterobacteriaceae	CP006052	543	1301
Escherichia coli	CP023958	562	1301
Salmonella enterica	CP001149	28901	1301
Enterobacteriaceae	CP039575	543	1301
Shigella	CP019695	620	543
Escherichia coli	HQ622575	562	543
Enterobacteriaceae	AF311902	543	543
Enterobacteriaceae	CP031925	543	543
Enterobacteriaceae	CP011435	543	543
Escherichia coli	LT985294	562	543
Enterobacteriaceae	CP019897	543	543
Salmonella enterica	CP039578	28901	543
Escherichia coli	CP045830	562	543
Escherichia coli	CP023904	562	543
Methylobacterium radiotolerans	CP001009	31998	407
Methylobacterium nodulans	CP001354	114616	407
Bacillus cereus	CP009593	1396	407
Bacillus thuringiensis	CP009717	1428	407
Bacillus cereus	CP023183	1396	407
Lactobacillus	CP032362	1578	33958
Lactobacillus	CP040739	1578	33958
Lactobacillus sakei	CP022711	1599	1578
Lactobacillus backii	CP014629	375175	1578
Lactobacillus paracollinoides	CP014920	240427	1578
Lactobacillus sakei	AF438419	1599	1578
Lactobacillus sakei	KF559313	1599	1578
Lactobacillus curvatus	CP029968	28038	1578
Lactobacillus curvatus	AP018701	28038	1578
Lactobacillaceae	KY886451	33958	1578
Lactobacillaceae	CP019716	33958	1578
Lactobacillus plantarum	CP017378	1590	1578
Lactobacillus sakei	AP017933	1599	1578
Leptospira interrogans	CP044511	173	171
Leptospira interrogans	CP011933	173	171
Leptospira interrogans	KJ586855	173	171
Leptospira interrogans	CP006726	173	171
Leptospira interrogans	CP039260	173	171

scientificName	nuccoreAcc	taxid	parent
Leptospira interrogans	CP039285	173	171
Leptospira interrogans	CP044512	173	171
Leptospira interrogans	CP006725	173	171
Leptospira interrogans	CP043040	173	171
Leptospira interrogans	CP039286	173	171
Lactobacillus	JX174169	1578	171
Lactobacillus	CP027193	1578	171
Lactobacillaceae	CP003140	33958	171
Lactobacillaceae	CP017411	33958	171
Lactobacillaceae	CP024417	33958	171
Lactobacillaceae	CP016493	33958	171
Lactobacillus backii	CP014879	375175	171
Lactobacillus brevis	CP031203	1580	171
Lactobacillales	MF951102	186826	91061
Lactobacillales	AP018406	186826	91061
Lactobacillus brevis	AP012175	1580	91061
Komagataeibacter medellinensis	AP012165	1177712	1434011
Komagataeibacter xylinus	CP004361	28448	1434011
Gluconobacter oxydans	CP000008	442	441
Acetobacteraceae	KC871566	433	204441
Acetobacteraceae	AP012166	433	204441
Staphylococcus equorum	CP013716	246432	1279
Staphylococcus xylosus	CP007209	1288	1279
Staphylococcus equorum	CP013982	246432	1279
Staphylococcus equorum	CP013717	246432	1279
Enterobacteriaceae	CP009466	543	1279
Enterobacteriaceae	JQ418533	543	1279
Enterobacter hormaechei	CP042572	158836	1279
Sphingomonadaceae	CP023451	41297	204457
Sphingomonas wittichii	CP021185	160791	13687
Sphingomonas sp. Cra20	CP024924	1327635	196159
Borrelia hermsii	CP014813	140	138
Borrelia hermsii	CP014830	140	138
Borrelia hermsii	CP000274	140	138
Borrelia turicatae	CP015631	142	138
Borrelia turicatae	CP019367	142	138
Borrelia turicatae	CP015633	142	138
Legionella pneumophila	CP015943	446	138
Legionella longbeachae	CP020895	450	445
Legionella pneumophila	CP021280	446	445
Legionella fallonii	LN614828	96230	445
Listeria monocytogenes	CP028184	1639	1637
Listeria monocytogenes	MK134858	1639	1637
Listeria monocytogenes	CP025562	1639	1637

scientificName	nuccoreAcc	taxid	parent
Carnobacterium maltaromaticum	CP016847	2751	2747
Carnobacterium maltaromaticum	CP016846	2751	2747
Piscirickettsia salmonis	CP013771	1238	1237
Piscirickettsia salmonis	CP033945	1238	1237
Piscirickettsia salmonis	CP013794	1238	1237
Piscirickettsia salmonis	CP013760	1238	1237
Piscirickettsia salmonis	CP033944	1238	1237
Piscirickettsia salmonis	CP012510	1238	1237
Piscirickettsia salmonis	CP013780	1238	1237
Piscirickettsia salmonis	CP013765	1238	1237
Escherichia coli	KY706108	562	1237
Escherichia coli	CP036244	562	1237
Escherichia coli	EU935739	562	1237
Escherichia coli	CP024718	562	1237
Escherichia coli	LT985271	562	1237
Enterobacteriaceae	CP018954	543	1237
Enterobacteriaceae	AP018939	543	1237
Enterobacteriaceae	KT754160	543	1237
Escherichia coli	CP018771	562	1237
Escherichia coli	CP011335	562	1237
Escherichia coli	CP010139	562	1237
Enterobacterales	CP017632	91347	1237
Enterobacterales	CP016838	91347	1237
Enterobacterales	MN232195	91347	1237
Enterobacterales	CP028537	91347	1237
Enterobacterales	MF135534	91347	1237
Enterobacterales	MH884653	91347	1237
Enterobacterales	CP033253	91347	1237
Enterobacterales	CP043855	91347	1237
Enterobacterales	MF083142	91347	1237
Enterobacterales	MF344582	91347	1237
Enterobacterales	CP039271	91347	1237
Salmonella enterica	CP006056	28901	1237
Enterobacterales	AP018352	91347	1237
Enterobacterales	CP008906	91347	1237
Enterobacterales	CP042552	91347	1237
Sinorhizobium meliloti	AF327371	382	1237
Chlamydia muridarum	AE002162	83560	810
Chlamydia trachomatis	J03321	813	810
Streptomyces sp. WAC00288	CP027024	2094021	2593676
Streptomyces sp. WAC00288	CP027026	2094021	2593676
Streptomyces sp. WAC00288	CP027023	2094021	2593676
Streptomyces sp. WAC00288	CP027025	2094021	2593676
Escherichia coli	CP025868	562	2593676

scientificName	nuccoreAcc	taxid	parent
Escherichia coli	CP031294	562	2593676
Escherichia coli	CP010153	562	2593676
Escherichia coli	CP033097	562	2593676
Enterobacteriaceae	CP003298	543	2593676
Enterobacteriaceae	CP027369	543	2593676
Enterobacteriaceae	CP019283	543	2593676
Enterobacteriaceae	CP028433	543	2593676
Enterobacteriaceae	CP039754	543	2593676
Enterobacteriaceae	CU638872	543	2593676
Enterobacteriaceae	AP017612	543	2593676
Enterobacteriaceae	CP015915	543	2593676
Enterobacteriaceae	KY515225	543	2593676
Escherichia albertii	CP034165	208962	2593676
Escherichia coli	CP010244	562	2593676
Escherichia coli	MG516909	562	2593676
Yersinia pestis	CP001595	632	1649845
Yersinia pestis	CP009843	632	1649845
Enterobacteriaceae	CP014995	543	1649845
Enterobacteriaceae	AP018351	543	1649845
Enterobacteriaceae	CP029901	543	1649845
Enterobacteriaceae	CP010386	543	1649845
Enterobacteriaceae	CP030078	543	1649845
Klebsiella oxytoca	AP014953	571	1649845
Salmonella enterica	KP763470	28901	1649845
Salmonella enterica	CP014707	28901	1649845
Salmonella enterica	CP030187	28901	1649845
Cronobacter sakazakii	CP012254	28141	1649845
Borreliella garinii	CP001316	29519	1649845
Borreliella garinii	CP001310	29519	1649845
Borreliella	CP001518	64895	1649845
Borreliella	CP000405	64895	1649845
Borrelia sp. CA690	CP044538	1476873	1649845
Staphylococcus hominis	CP014104	1290	1279
Staphylococcus epidermidis	CP035289	1282	1279
Staphylococcus epidermidis	AE015933	1282	1279
Staphylococcus	GQ900383	1279	1279
Staphylococcus	CP013912	1279	1279
Staphylococcus	GQ900456	1279	1279
Staphylococcus	CP023967	1279	1279
Staphylococcus caprae	CP031272	29380	1279
Staphylococcus	HG380319	1279	1279
Staphylococcus	MH423314	1279	1279
Staphylococcus epidermidis	GQ900457	1282	1279
Staphylococcus Staphylococcus	CP000028	1279	1279
Diaphy lococcus	OF 000028	1419	1419

scientificName	nuccoreAcc	taxid	parent
Staphylococcus aureus	GQ900395	1280	1279
Staphylococcus aureus	LN831037	1280	1279
Staphylococcus epidermidis	GQ900453	1282	1279
Staphylococcus	CP022907	1279	1279
Staphylococcus	CP035293	1279	1279
Staphylococcus	CP027490	1279	1279
Corynebacterium glutamicum	AP009045	1718	1716
Corynebacterium doosanense	CP006765	1121358	1716
Curtobacterium flaccumfaciens	CP045288	2035	2034
Synechocystis sp. PCC 6714	CP007544	1147	2640012
Synechocystis sp. PCC 6714	CP007545	1147	2640012
Borreliella	CP001474	64895	2640012
Borreliella burgdorferi	CP001443	139	2640012
Borreliella burgdorferi	CP001420	139	2640012
Borreliella burgdorferi	CP002319	139	2640012
Borreliella burgdorferi	CP002259	139	2640012
Borreliella	CP002946	64895	2640012
Borreliella	CP001242	64895	2640012
Borreliella	CP001238	64895	2640012
Borreliella	CP001311	64895	2640012
Borreliella	CP028878	64895	2640012
Bacillus thuringiensis	CP010579	1428	2640012
Bacillus thuringiensis	CP010578	1428	2640012
Bacillus thuringiensis	CP015152	1428	2640012
Bacillus thuringiensis	CP014853	1428	2640012
Bacillus thuringiensis	CP015177	1428	2640012
Bacillus thuringiensis	CP032609	1428	2640012
Bacillus thuringiensis	KX258624	1428	2640012
Bacillus thuringiensis	CP010111	1428	2640012
Bacillus thuringiensis	CP044980	1428	2640012
Bacillus thuringiensis	AP014867	1428	2640012
Bacillus cereus	CP003748	1396	2640012
Bacillus cereus	CP016317	1396	2640012
Bacillus cereus	CP000228	1396	2640012
Bacillus	AP007210	1386	2640012
Bacillus	KY940428	1386	2640012
Bacillus thuringiensis	CP003753	1428	2640012
Bacillus cereus	CP001285	1396	2640012
Bacillus cereus	AE017195	1396	2640012
Bacillus cereus	CP042928	1396	2640012
Bacillaceae	CP033789	186817	1385
Bacillaceae	CP009299	186817	1385
Bacillaceae	CP045534	186817	1385
Bacillus thuringiensis	CP022346	1428	1385
Dacing manighting	01 022040	1120	1000

scientificName	nuccoreAcc	taxid	parent
Bacillus sp. SYJ	CP036355	2529386	185979
Bacillus cereus	CP009636	1396	185979
Bacillus thuringiensis	CP003754	1428	185979
Bacillus	CP001406	1386	185979
Bacillus	AE011190	1386	185979
Bacillus wiedmannii	CP024688	1890302	86661
Moraxella osloensis	CP024445	34062	86661
Moraxella osloensis	CP024184	34062	86661
Moraxella osloensis	CP024177	34062	86661
Moraxella osloensis	AP017383	34062	86661
Moraxella osloensis	CP024447	34062	86661
Moraxella osloensis	CP024446	34062	86661
Moraxella osloensis	CP024179	34062	86661
Moraxella osloensis	AP017382	34062	86661
Moraxella osloensis	CP014235	34062	86661
Moraxella osloensis	CP014238	34062	86661
Escherichia coli	CP035364	562	86661
Enterobacteriaceae	KY486279	543	86661
Escherichia coli	KX023259	562	86661
Escherichia coli	CP041453	562	86661
Escherichia coli	MG860488	562	86661
Escherichia coli	CP010154	562	86661
Escherichia coli	CP024153	562	86661
Escherichia coli	CP024136	562	86661
Escherichia coli	CP021103	562	86661
Klebsiella	CP034130	570	86661
Klebsiella	CP028549	570	86661
Klebsiella	CP037442	570	86661
Klebsiella pneumoniae	CP023417	573	86661
Klebsiella pneumoniae	CP014763	573	86661
Klebsiella pneumoniae	CP031799	573	86661
Klebsiella pneumoniae	CP033758	573	86661
Klebsiella pneumoniae	CP045662	573	86661
Klebsiella pneumoniae	CP031809	573	86661
Enterobacteriaceae	CP014778	543	86661
Enterobacteriaceae	CP009865	543	86661
Enterobacteriaceae	MG462728	543	86661
Enterobacteriaceae	CP031811	543	86661
Klebsiella quasipneumoniae	CP034679	1463165	86661
Klebsiella	CP014697	570	86661
Klebsiella	CP029430	570	86661
Klebsiella	CP025516	570	86661
Klebsiella sp. FDAARGOS_511	CP033823	2488567	2608929
Klebsiella aerogenes	LR134252	548	2608929

scientificName	nuccoreAcc	taxid	parent
Leclercia sp. W17	CP031103	2282309	2627398
Leclercia adecarboxylata	MK036891	83655	83654
Enterobacter hormaechei	CP031723	158836	83654
Enterobacter cloacae complex sp. ECNIH7	CP017991	1915310	354276
Citrobacter	CP037863	544	543
Citrobacter	CP032180	544	543
Klebsiella	CP008789	570	543
Klebsiella	CP044528	570	543
Klebsiella michiganensis	CP029143	1134687	543
Enterobacteriaceae	CP008842	543	543
Enterobacteriaceae	CP023875	543	543
Klebsiella oxytoca	CP026283	571	543
Pantoea sp. PSNIH2	CP009871	1484157	2630326
Enterobacterales	AP018757	91347	2630326
Enterobacteriaceae	CP026198	543	2630326
Enterobacteriaceae	CP026189	543	2630326
Cronobacter	CP006733	413496	543
Leclercia adecarboxylata	CP040894	83655	543
Cronobacter sakazakii	CP004093	28141	543
Klebsiella pneumoniae	CP035197	573	543
Leclercia adecarboxylata	MH909329	83655	543
Enterobacter sp. E76	CP042500	2596949	543
Klebsiella huaxiensis	CP036176	2153354	570
Staphylococcus aureus	KY436024	1280	570
Staphylococcus aureus	CP029650	1280	570
Staphylococcus aureus	CP000704	1280	570
Staphylococcus aureus	CP016854	1280	570
Staphylococcus aureus	CP030560	1280	570
Staphylococcus aureus	CP043303	1280	570
Staphylococcus aureus	AB255366	1280	570
Staphylococcus aureus	CP030535	1280	570
Staphylococcus	MK933269	1279	570
Staphylococcus	FR821778	1279	570
Staphylococcus	CP022608	1279	570
Staphylococcus aureus	GQ900418	1280	570
Staphylococcus aureus	GQ900401	1280	570
Staphylococcus aureus	CP007679	1280	570
Staphylococcus aureus	CP026965	1280	570
Staphylococcus aureus	CP026972	1280	570
Staphylococcus aureus	CP035004	1280	570
Staphylococcus aureus	MH465666	1280	570
Staphylococcus aureus	MH785233	1280	570
Staphylococcus chromogenes	MH431899	46126	1279
Staphylococcus aureus	CP007677	1280	1279
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scientificName	nuccoreAcc	taxid	parent
Staphylococcus aureus	GQ900406	1280	1279
Staphylococcus aureus	CP002389	1280	1279
Staphylococcus aureus	HE579060	1280	1279
Staphylococcus aureus	CP006839	1280	1279
Staphylococcus aureus	GQ900382	1280	1279
Staphylococcus aureus	CP030394	1280	1279
Staphylococcus aureus	CP023562	1280	1279
Staphylococcus haemolyticus	CP024810	1283	1279
Staphylococcus	CP016971	1279	1279
Staphylococcus lugdunensis	CP020766	28035	1279
Morganellaceae	MG516912	1903414	91347
Morganellaceae	KF295828	1903414	91347
Morganellaceae	KX774387	1903414	91347
Morganellaceae	MH491967	1903414	91347
Candidatus Hamiltonella defensa	CP017608	138072	568987
Xenorhabdus nematophila	FN667743	628	626
Gammaproteobacteria	AP014939	1236	626
Gammaproteobacteria	KX064437	1236	626
Providencia rettgeri	KX832927	587	626
Salmonella enterica	CP006050	28901	626
Salmonella enterica	CP016864	28901	626
Gammaproteobacteria	CP027043	1236	626
Gammaproteobacteria	CP031106	1236	626
Gammaproteobacteria	CP000602	1236	626
Gammaproteobacteria	CP042646	1236	626
Gammaproteobacteria	LT985249	1236	626
Gammaproteobacteria	CP017055	1236	626
Gammaproteobacteria	MH995506	1236	626
Gammaproteobacteria	KY887591	1236	626
Gammaproteobacteria	CP044075	1236	626
Gammaproteobacteria	CP025231	1236	626
Gammaproteobacteria	MG252895	1236	626
Gammaproteobacteria	MK638972	1236	626
Gammaproteobacteria	JQ010984	1236	626
Gammaproteobacteria	LT882698	1236	626
Gammaproteobacteria	AP019688	1236	626
Klebsiella pneumoniae	KX636095	573	626
Enterobacteriaceae	CP019001	543	626
Enterobacteriaceae	CP039562	543	626
Enterobacteriaceae	CP021536	543	626
Buchnera aphidicola	FJ705299	9	32199
Buchnera aphidicola	CP034884	9	32199
Buchnera aphidicola	CP034883	9	32199
Buchnera aphidicola	CP034871	9	32199

scientificName	nuccoreAcc	taxid	parent
Buchnera aphidicola	CP002698	9	32199
Buchnera aphidicola	CP034880	9	32199
Buchnera aphidicola	CP034877	9	32199
Buchnera aphidicola	CP034901	9	32199
Buchnera aphidicola	CP034874	9	32199
Buchnera aphidicola	CP034862	9	32199
Streptomyces sp. $x4(2010)$	GU271942	706422	2593676
Streptomyces sp. x3	GQ984145	682314	2593676
Streptomyces globisporus	CP013740	1908	1482558
Bacillus cereus	CP022448	1396	1482558
Bacillus cereus	CP022447	1396	1482558
Bacillus cereus	CP045610	1396	1482558
Bacillus sp. SYJ	CP036354	2529386	1482558
Bacillus thuringiensis	CP014290	1428	1482558
Buchnera aphidicola	CP002650	9	1482558
Buchnera aphidicola	CP034863	9	1482558
Buchnera aphidicola	CP034866	9	1482558
Enterobacteriaceae	CP038605	543	1482558
Enterobacteriaceae	NC_011422	543	1482558
Enterobacteriaceae	CP038592	543	1482558
Enterobacteriaceae	CP039272	543	1482558
Enterobacteriaceae	CP023444	543	1482558
Enterobacteriaceae	CP038602	543	1482558
Salmonella enterica	CP039278	28901	1482558
Salmonella enterica	CP038597	28901	1482558
Enterobacteriaceae	CP029434	543	1482558
Enterobacteriaceae	CP009851	543	1482558
Citrobacter portucalensis	CP039328	1639133	1482558
Salmonella	MH430881	590	543
Escherichia coli	CP041112	562	543
Escherichia coli	LT985234	562	543
Escherichia coli	CP040928	562	543
Enterobacterales	KY051550	91347	543
Enterobacterales	CP045558	91347	543
Enterobacterales	CP040809	91347	543
Enterobacterales	CP029874	91347	543
Enterobacterales	CP026578	91347	543
Escherichia coli	CP006642	562	543
Plautia stali symbiont	AP012552	891974	36866
Photorhabdus asymbiotica	FN691998	291112	29487
Enterococcus faecium	CP044271	1352	1350
Enterococcus faecium	CP012434	1352	1350
Enterococcus faecium	CP032309	1352	1350
Enterococcus faecium	CP035657	1352	1350

scientificName	nuccoreAcc	taxid	parent
Enterococcus faecium	CP041266	1352	1350
Enterococcus faecium	CP023427	1352	1350
Enterococcus faecium	CP016168	1352	1350
Enterococcus durans	HQ696461	53345	1350
Enterococcus faecium	AB570326	1352	1350
Enterococcus faecium	DQ832184	1352	1350
Synechococcus sp. PCC 73109	CP014000	374982	2626047
Synechococcus sp. PCC 7117	CP016479	195498	2626047
Synechococcus sp. PCC 73109	CP013999	374982	2626047
Synechococcus	CP000953	1129	1890426
Synechococcus	CP016486	1129	1890426
Synechococcus sp. NIES-970	AP017963	1827144	2626047
Yersinia pestis	CP001588	632	2626047
Brevirhabdus pacifica	CP019138	1267768	1855413
Lactobacillus plantarum	AB450918	1590	1855413
Lactobacillus plantarum	CP006038	1590	1855413
Lactobacillus plantarum	CP025284	1590	1855413
Lactobacillus plantarum	CP025413	1590	1855413
Lactobacillus plantarum	CP032753	1590	1855413
Lactobacillus plantarum	CP020098	1590	1855413
Lactobacillus brevis	CP016802	1580	1855413
Lactobacillus brevis	CP031178	1580	1855413
Lactobacillus plantarum	CP032461	1590	1855413
Lactobacillus plantarum	CP023773	1590	1855413
Lactobacillus plantarum	CP015860	1590	1855413
Lactobacillus plantarum	CP020095	1590	1855413
Lactobacillus plantarum	CP035145	1590	1855413
Lactobacillus plantarum	CP018212	1590	1855413
Lactobacillus brevis	CP031177	1580	1855413
Lactobacillus sakei	LT907984	1599	1855413
Lactobacillus sakei	LT907987	1599	1855413
Lactobacillus sakei	CP025208	1599	1855413
Lactobacillus curvatus	CP029967	28038	1855413
Lactobacillus sakei	KF559312	1599	1855413
Lactobacillus sakei	LT960785	1599	1855413
Lactobacillus	LT960789	1578	1855413
Lactobacillus	CP031004	1578	1855413
Lactobacillus sakei	CP032636	1599	1855413
Lactobacillus sakei	CP022710	1599	1855413
Lactobacillus sakei	LT960782	1599	1855413
Lactobacillus sakei	AP017932	1599	1855413
Lactobacillus sakei	CP025207	1599	1855413
Bacteria	KC771559	2	1855413
Bacteria	CP003376	2	1855413

scientificName	nuccoreAcc	taxid	parent
Bacteria	CP038640	2	1855413
Bacteria	CP019238	2	1855413
Bacteria	CP009797	2	1855413
Bacteria	KP289281	2	1855413
Bacteria	CP002451	2	1855413
Bacteria	FJ948173	2	1855413
Bordetella pertussis	AB237782	520	517
Xanthomonas vesicatoria	CP018471	56460	338
Comamonadaceae	JF274989	80864	80840
Comamonadaceae	JF274990	80864	80840
Proteobacteria	CP002288	1224	80840
Proteobacteria	EF079106	1224	80840
Proteobacteria	CP026268	1224	80840
Acidovorax sp. JS42	CP000541	232721	2684926
Proteobacteria	AB231906	1224	2684926
Proteobacteria	JX469832	1224	2684926
Xanthomonas oryzae	CP018090	347	338
Paracoccus haeundaensis	JQ684024	225362	265
Rhodobacteraceae	CP045398	31989	265
Nostoc sp. PCC 7120	AP003603	103690	2593658
Nostoc sp. NIES-3756	AP017297	1751286	2593658
Nostoc sp. NIES-2111	AP018188	1973475	2593658
Nostoc linckia	AP018225	92942	1177
Borreliella	CP001522	64895	1177
Borreliella	AE000792	64895	1177
Borrelia mayonii	CP015781	1674146	1177
Borreliella bissettii	CP002747	64897	1177
Borreliella spielmanii	CP001467	88916	1177
Borreliella afzelii	CP000402	29518	1177
Borreliella valaisiana	CP001432	62088	1177
Borreliella	CP001305	64895	1177
Borreliella	CP000014	64895	1177
Borrelia sp. CA690	CP044539	1476873	1177
Borreliella chilensis	CP009911	1245910	64895
Enterobacteriaceae	CP022918	543	64895
Enterobacteriaceae	CP009778	543	64895
Enterobacteriaceae	CP014648	543	64895
Enterobacteriaceae	LT216440	543	64895
Enterobacteriaceae	CP011982	543	64895
Enterobacteriaceae	CP006658	543	64895
Enterobacteriaceae	CP017388	543	64895
Enterobacteriaceae	CP036308	543	64895
Klebsiella pneumoniae	CP040992	573	64895
Escherichia coli	NC 002119	562	64895
	1,0_002110	JU2	0 1000

scientificName	nuccoreAcc	taxid	parent
Klebsiella pneumoniae	CP040596	573	64895
Klebsiella pneumoniae	CP023954	573	64895
Bacillus velezensis	CP026611	492670	1938374
Bacillus	CP032862	1386	1938374
Burkholderia sp. OLGA172	CP014582	1804984	1938374
Paraburkholderia aromaticivorans	CP022996	2026199	1822464
Bacillus thuringiensis	CP004072	1428	1822464
Bacillus thuringiensis	CP013059	1428	1822464
Bacillus mycoides	CP020746	1405	1822464
Bacillus thuringiensis	CP003691	1428	1822464
Bacillus wiedmannii	CP024687	1890302	1822464
Bacillus	CP010854	1386	1822464
Bacillus	CP020941	1386	1822464
Bacillus	CP031063	1386	1822464
Bacillus	CP018742	1386	1822464
Borrelia miyamotoi	CP017127	47466	1822464
Borrelia miyamotoi	CP017131	47466	1822464
Borrelia miyamotoi	CP017128	47466	1822464
Borrelia miyamotoi	CP017130	47466	1822464
Borrelia miyamotoi	CP036780	47466	1822464
Borrelia miyamotoi	CP037277	47466	1822464
Borrelia miyamotoi	CP024381	47466	1822464
Borrelia miyamotoi	CP024325	47466	1822464
Borrelia miyamotoi	CP024395	47466	1822464
Borrelia miyamotoi	CP024209	47466	1822464
Crocosphaera subtropica	CP000809	43989	2546360
Enterobacteriaceae	CP032188	543	2546360
Enterobacteriaceae	KR822246	543	2546360
Enterobacteriaceae	CP021720	543	2546360
Enterobacteriaceae	CP023910	543	2546360
Enterobacteriaceae	CP013340	543	2546360
Enterobacteriaceae	CP017452	543	2546360
Klebsiella	CP035205	570	2546360
Klebsiella oxytoca	CP026284	571	2546360
Lactobacillus plantarum	CP023494	1590	2546360
Lactobacillus plantarum	DQ099911	1590	2546360
Lactobacillus brevis	AB370336	1580	2546360
Lactobacillus	FR714836	1578	2546360
Lactobacillus plantarum	CP012658	1590	2546360
Glaesserella parasuis	FJ947048	738	2094023
Escherichia coli	CP043021	562	2094023
Enterobacteriaceae	CP022067	543	2094023
Enterobacteriaceae	CP001126	543	2094023
Shigella	CP019693	620	2094023

scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	FN543505	543	2094023
Enterobacteriaceae	CP012638	543	2094023
Enterobacteriaceae	CP010204	543	2094023
Escherichia coli	DQ995354	562	2094023
Enterobacteriaceae	EU090225	543	2094023
Enterobacteriaceae	CP028586	543	2094023
Escherichia coli	CP010225	562	2094023
Escherichia coli	KJ470776	562	2094023
Escherichia coli	CP019955	562	2094023
Enterobacteriaceae	CP003226	543	2094023
Enterobacteriaceae	CP037999	543	2094023
Enterobacteriaceae	CP041115	543	2094023
Salmonella sp. SSDFZ54	CP034822	2500542	2614656
Borrelia miyamotoi	CP024376	47466	2614656
Borrelia miyamotoi	CP024377	47466	2614656
Borrelia miyamotoi	CP044792	47466	2614656
Borrelia miyamotoi	CP036763	47466	2614656
Borrelia miyamotoi	CP044653	47466	2614656
Borrelia miyamotoi	CP044664	47466	2614656
Borrelia miyamotoi	CP044840	47466	2614656
Nostocaceae	AP003602	1162	1161
Scytonema sp. NIES-4073	AP018264	2005464	2618749
Nostocales	AP018250	1161	1117
Nostocales	AP018175	1161	1117
Nostoc carneum	AP018182	374162	1177
Microchaete diplosiphon	AP018234	1197	1177
Nostoc linckia	AP018224	92942	1177
Trichormus variabilis	CP000121	264691	264688
Borrelia miyamotoi	CP036933	47466	264688
Borrelia miyamotoi	CP024221	47466	264688
Borrelia miyamotoi	CP044818	47466	264688
Borrelia miyamotoi	CP036931	47466	264688
Borrelia hermsii	CP014819	140	264688
Borrelia hermsii	CP014821	140	264688
Borrelia turicatae	CP019362	142	264688
Yersinia	CP033689	444888	267071
Yersinia	CP009366	444888	267071
Yersinia	CP009837	444888	267071
Lactobacillus reuteri	CP006014	1598	1578
Enterobacteriaceae	CP044958	543	1578
Enterobacteriaceae	CP029926	543	1578
Enterobacteriaceae	CP041449	543	1578
Enterobacteriaceae	KP899805	543	1578
Escherichia coli	CP014086	562	1578
Escherichia con	C1 014000	JU2	1910

scientificName	nuccoreAcc	taxid	parent
Streptococcus suis	AB019522	1307	1301
Streptococcus thermophilus	AF295100	1308	1301
Streptococcus suis	CP012913	1307	1301
Enterobacteriaceae	CP011430	543	1301
Enterobacteriaceae	CP031767	543	1301
Enterobacteriaceae	AP018804	543	1301
Enterobacteriaceae	CP022228	543	1301
Enterobacteriaceae	CP020051	543	1301
Escherichia coli	CP043746	562	1301
Escherichia coli	CP034790	562	1301
Escherichia coli	CP042620	562	1301
Salmonella sp.	MK356558	599	2614656
Salmonella sp.	MK356557	599	2614656
Escherichia coli	CP041570	562	2614656
Escherichia coli	CP014078	562	2614656
Actinobacillus pleuropneumoniae	DQ517426	715	713
Psychrobacter maritimus	HF953351	256325	497
Acinetobacter sp. M131	JX101638	1280052	196816
Acinetobacter sp. M131	JX101640	1280052	196816
Agarilytica rhodophyticola	CP021747	1737490	2036021
Estrella lausannensis	LN867111	483423	483422
Hymenobacter	CP006588	89966	1853232
Hymenobacter	CP040937	89966	1853232
Hymenobacter oligotrophus	CP032318	2319843	89966
Hymenobacter sp. 17J36-26	CP037921	2496028	2615202
Lactococcus lactis	CP016703	1358	2615202
Lactobacillus curvatus	AP018703	28038	2615202
Bacteria	CP002370	2	2615202
Bacteria	CP043521	$\overline{2}$	2615202
Bacteria	MF157411	$\overline{2}$	2615202
Clostridium sp. MT351	JQ807734	$\frac{-}{1195166}$	2614128
Borrelia miyamotoi	CP024335	47466	2614128
Borrelia miyamotoi	CP036917	47466	2614128
Borrelia miyamotoi	CP024375	47466	2614128
Borrelia miyamotoi	CP024330	47466	2614128
Borrelia miyamotoi	CP024327	47466	2614128
Borrelia miyamotoi	CP036766	47466	2614128
Borrelia miyamotoi	CP044826	47466	2614128
Borrelia miyamotoi	CP044660	47466	2614128
Borrelia miyamotoi	CP036783	47466	2614128
Borrelia miyamotoi	CP036942	47466	2614128
Borrelia miyamotoi	CP044656	47466	2614128
Borrelia miyamotoi	CP037269	47466	2614128
Borrelia miyamotoi	CP037080	47466	2614128
Dorrona miyamotor	01 001000	T1 T00	2017120

scientificName nuccoreacc taxid parent Staphylococcus hominis CP014106 1290 2614128 Staphylococcus hominis CP014108 1290 2614128 Staphylococcus sureus CP03674 1280 2614128 Staphylococcus epidermidis CP018843 1282 2614128 Staphylococcus warneri CP033101 1292 2614128 Klebsiella pneumoniae JQ319767 573 2614128 Enterobacteriaceae CP02336 543 2614128 Enterobacteriaceae CP023368 543 2614128 Enterobacteriaceae CP023368 543 2614128 Salmonella enterica CP03193 28901 2614128 Salmonella enterica CP034825 2500542 2614128 Salmonella enterica CP034825 2500542 2614128 Enterobacteriaceae CP013859 28901 2614128 Enterobacteriaceae CP011366 543 2614128 Enterobacteriaceae CP011367 543	· · · · · · · · · · · · · · · · · · ·	,	, . 1	
Staphylococcus hominis CP014108 1290 2614128 Staphylococcus aureus CP030674 1280 2614128 Staphylococcus warneri CP018843 1282 2614128 Staphylococcus warneri CP033101 1292 2614128 Klebsiella pneumoniae JQ319767 573 2614128 Enterobacteriaceae CP025336 543 2614128 Enterobacteriaceae CP023868 543 2614128 Enterobacteriaceae CP03724 1224 2614128 Salmonella enterica CP031931 28901 2614128 Salmonella enterica CP031825 2500542 2614128 Salmonella enterica CP038598 28901 2614128 Enterobacteriaceae CP038598 28901 2614128 Enterobacteriaceae CP012166 158836 2614128 Enterobacteriaceae CP011363 543 2614128 Enterobacteriaceae CP0103817 543 2614128 Enterobacteriaceae CP043749 543	scientificName	nuccoreAcc	taxid	parent
Staphylococcus aureus CP030674 1280 2614128 Staphylococcus epidermidis CP018843 1282 2614128 Staphylococcus warneri CP033101 1292 2614128 Klebsiella pneumoniae JQ319767 573 2614128 Enterobacteriaceae CP025336 543 2614128 Enterobacteriaceae CP023868 543 2614128 Enterobacteriaceae CP023868 543 2614128 Salmonella enterica CP031825 2500542 2614128 Salmonella enterica CP034825 2500542 2614128 Salmonella enterica CP034825 2500542 2614128 Salmonella enterica CP034825 2500542 2614128 Salmonella enterica CP034829 2500542 2614128 Salmonella enterica CP034829 2500542 2614128 Enterobacteriaceae CP034829 253 2614128 Enterobacteriaceae CP011736 543 2614128 Enterobacteriaceae CP034749 543 </td <td></td> <td></td> <td></td> <td></td>				
Staphylococcus epidermidis CP018843 1282 2614128 Staphylococcus warneri CP033101 1292 2614128 Klebsiella pneumoniae JQ319767 573 2614128 Enterobacteriaceae KM107847 543 2614128 Enterobacteriaceae CP023868 543 2614128 Proteobacteria CP017224 1224 2614128 Salmonella enterica CP030193 28901 2614128 Salmonella enterica CP038598 28901 2614128 Salmonella enterica CP038598 28901 2614128 Salmonella enterica CP038598 28901 2614128 Enterobacteriaceae CP038598 28901 2614128 Enterobacteriaceae CP038598 28901 2614128 Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP011389 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP034494 543 26141				
Staphylococcus warneri CP033101 1292 2614128 Klebsiella pneumoniae JQ319767 573 2614128 Enterobacteriaceae KM107847 543 2614128 Enterobacteriaceae CP025366 543 2614128 Enterobacteriaceae CP038868 543 2614128 Enterobacteriaceae CP031922 1224 2614128 Salmonella enterica CP034825 2500542 2614128 Salmonella enterica CP034825 2500542 2614128 Salmonella enterica CP038598 28901 2614128 Salmonella enterica CP038598 28901 2614128 Enterobacteriaceae CP012166 158836 2614128 Enterobacteriaceae CP011366 543 2614128 Enterobacteriaceae CP0110389 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP037449 543 261412	- *	CP030674		
Klebsiella pneumoniae JQ319767 573 2614128 Enterobacteriaceae KMI07847 543 2614128 Enterobacteriaceae CP025366 543 2614128 Enterobacteriaceae CP023868 543 2614128 Enterobacteriaceae CP030193 28901 2614128 Salmonella enterica CP034825 2500542 2614128 Salmonella enterica CP038598 28901 2614128 Salmonella enterica CP038598 28901 2614128 Enterobacteriaceae CP039274 543 2614128 Enterobacteriaceae CP0112166 158836 2614128 Enterobacteriaceae CP011369 543 2614128 Enterobacteriaceae CP011389 543 2614128 Enterobacteriaceae CP010389 543 2614128 Enterobacteriaceae CP0134749 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP034829 562 2614128	Staphylococcus epidermidis			2614128
Enterobacteriaceae KM107847 543 2614128 Enterobacteriaceae CP025336 543 2614128 Enterobacteriaceae CP023868 543 2614128 Proteobacteria CP017224 1224 2614128 Salmonella enterica CP030193 28901 2614128 Salmonella enterica CP038598 2500542 2614128 Enterobacteriaceae CP038598 28901 2614128 Enterobacteriaceae CP038598 28901 2614128 Enterobacteriaceae CP039274 543 2614128 Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP011376 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP034829 543 2614128 Escherichia coli KY612498 562 2614128 <	Staphylococcus warneri			
Enterobacteriaceae CP023536 543 2614128 Proteobacteriaceae CP023868 543 2614128 Proteobacteria CP017224 122 2614128 Salmonella enterica CP034825 2500542 2614128 Salmonella enterica CP038598 28901 2614128 Salmonella enterica CP038598 28901 2614128 Enterobacteriaceae CP039274 543 2614128 Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP034829 543 2614128 Enterobacteriaceae CP011607 562 2614128 Enterobacteriaceae CP011607 573 2614128 <	Klebsiella pneumoniae	JQ319767		2614128
Enterobacteriaceae CP023868 543 2614128 Proteobacteria CP017224 1224 2614128 Salmonella enterica CP030193 28901 2614128 Salmonella sp. SSDFZ54 CP038598 28901 2614128 Salmonella enterica CP038598 28901 2614128 Enterobacteriaceae CP039274 543 2614128 Enterobacteriaceae CP012166 158836 2614128 Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP034848 543 2614128 Enterobacteriaceae CP034848 543 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli KY612498 562 2614128 Enterobacteriaceae CP010156 562 2614128	Enterobacteriaceae			2614128
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Salmonella enterica CP030193 28901 2614128 Salmonella sp. SSDFZ54 CP034825 2500542 2614128 Salmonella enterica CP038598 28901 2614128 Enterobacteriaceae CP039274 543 2614128 Enterobacteri hormaechei CP012166 158836 2614128 Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP010389 543 2614128 Enterobacteriaceae CP013317 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP034829 543 2614128 Enterobacteriaceae CP034829 562 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Enterobacteriaceae CP0277040 573 2614128 Enterobacteriaceae CP01607 543 2614128	Enterobacteriaceae	CP023868	543	2614128
Salmonella sp. SSDFZ54 CP034825 2500542 2614128 Salmonella enterica CP038598 28901 2614128 Enterobacteriaceae CP039274 543 2614128 Enterobacter hormaechei CP012166 158836 2614128 Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP010389 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP034829 543 2614128 Enterobacteriaceae CP034829 543 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Enterobacteriaceae CP010156 562 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP019902 543 2614128 <td>Proteobacteria</td> <td>CP017224</td> <td>1224</td> <td>2614128</td>	Proteobacteria	CP017224	1224	2614128
Salmonella enterica CP038598 28901 2614128 Enterobacteriaceae CP039274 543 2614128 Enterobacter hormaechei CP012166 158836 2614128 Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP010389 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP037488 543 2614128 Enterobacteriaceae CP034829 543 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Klebsiella pneumoniae CP0277040 573 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP011607 543 2614128	Salmonella enterica	CP030193	28901	2614128
Enterobacteriaceae CP039274 543 2614128 Enterobacter hormaechei CP012166 158836 2614128 Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP010389 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP034829 543 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Escherichia coli CP010156 562 2614128 Escherichia coli CP011607 573 2614128 Enterobacteriaceae CP014300 573 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP034050 543 2614128	Salmonella sp. SSDFZ54	CP034825	2500542	2614128
Enterobacter hormaechei CP012166 158836 2614128 Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP010389 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP034829 543 2614128 Enterobacteriaceae CP034829 543 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Escherichia coli CP014300 573 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP01400 543 2614128 Enterobacteriaceae CP01400 543 2614128 Enterobacteriaceae CP0160845 543 2614128	Salmonella enterica	CP038598	28901	2614128
Enterobacteriaceae CP041736 543 2614128 Enterobacteriaceae CP010389 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP034829 543 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Escherichia coli CP027040 573 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP008845 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP0393333 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034676 543 2614128	Enterobacteriaceae	CP039274	543	2614128
Enterobacteriaceae CP010389 543 2614128 Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP03748 543 2614128 Enterobacteriaceae CP034829 543 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Klebsiella pneumoniae CP027040 573 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034670 543 2614128 Enterobacteriaceae CP034676 543 2614128	Enterobacter hormaechei	CP012166	158836	2614128
Enterobacteriaceae CP018317 543 2614128 Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP034829 543 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Klebsiella pneumoniae CP027040 573 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP018845 543 2614128 Enterobacteriaceae CP018845 543 2614128 Enterobacteriaceae CP018902 543 2614128 Enterobacteriaceae CP033323 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034676 543 2614128 Enterobacteriaceae CP034676 543 2614128	Enterobacteriaceae	CP041736	543	2614128
Enterobacteriaceae CP043749 543 2614128 Enterobacteriaceae CP037448 543 2614128 Enterobacteriaceae CP034829 543 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Klebsiella pneumoniae CP027040 573 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034676 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP036189 573 2614128	Enterobacteriaceae	CP010389	543	2614128
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Enterobacteriaceae CP034829 543 2614128 Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Klebsiella pneumoniae CP027040 573 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP008845 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP039323 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034691 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP034676 543 2614128 Enterobacteriaceae CP038459 543 2614128	Enterobacteriaceae	CP043749	543	2614128
Escherichia coli KY612498 562 2614128 Escherichia coli CP010156 562 2614128 Klebsiella pneumoniae CP027040 573 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP008845 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP039323 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP024491 543 2614128 Enterobacteriaceae CP036322 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP03779 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP0378459 543 2614128 Enterobacteriaceae CP034682 543 2614128	Enterobacteriaceae	CP037448	543	2614128
Escherichia coli CP010156 562 2614128 Klebsiella pneumoniae CP027040 573 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP008845 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP039323 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034650 543 2614128 Enterobacteriaceae CP034676 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacterium jeikeium CP033786 38289 1716	Enterobacteriaceae	CP034829	543	2614128
Klebsiella pneumoniae CP027040 573 2614128 Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP008845 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP039323 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034676 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP029779 573 2614128 Enterobacteriaceae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae CP033786 38289 1716 <tr< td=""><td>Escherichia coli</td><td>KY612498</td><td>562</td><td>2614128</td></tr<>	Escherichia coli	KY612498	562	2614128
Enterobacteriaceae CP014300 543 2614128 Enterobacteriaceae CP008845 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP039323 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP034091 543 2614128 Enterobacteriaceae CP036322 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP034676 543 2614128 Klebsiella pneumoniae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716	Escherichia coli	CP010156	562	2614128
Enterobacteriaceae CP008845 543 2614128 Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP039323 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP024491 543 2614128 Enterobacteriaceae CP036322 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP039779 573 2614128 Klebsiella pneumoniae CP036189 573 2614128 Enterobacteriaceae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacteria CP033785 2 2608935 <tr< td=""><td>Klebsiella pneumoniae</td><td>CP027040</td><td>573</td><td>2614128</td></tr<>	Klebsiella pneumoniae	CP027040	573	2614128
Enterobacteriaceae CP011607 543 2614128 Enterobacteriaceae CP039323 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP024491 543 2614128 Enterobacteriaceae CP036322 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP029779 573 2614128 Klebsiella pneumoniae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Enterobacteriaceae	CP014300	543	2614128
Enterobacteriaceae CP039323 543 2614128 Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP024491 543 2614128 Enterobacteriaceae CP036322 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP029779 573 2614128 Klebsiella pneumoniae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Enterobacteriaceae	CP008845	543	2614128
Enterobacteriaceae CP019902 543 2614128 Enterobacteriaceae CP034050 543 2614128 Enterobacteriaceae CP024491 543 2614128 Enterobacteriaceae CP036322 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP029779 573 2614128 Klebsiella pneumoniae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Enterobacteriaceae	CP011607	543	2614128
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Enterobacteriaceae CP024491 543 2614128 Enterobacteriaceae CP036322 543 2614128 Enterobacteriaceae CP034676 543 2614128 Klebsiella pneumoniae CP029779 573 2614128 Klebsiella pneumoniae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Enterobacteriaceae	CP019902	543	2614128
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Klebsiella pneumoniae CP029779 573 2614128 Klebsiella pneumoniae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Enterobacteriaceae	CP036322	543	2614128
Klebsiella pneumoniae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Enterobacteriaceae	CP034676	543	2614128
Klebsiella pneumoniae CP036189 573 2614128 Enterobacteriaceae CP038459 543 2614128 Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Klebsiella pneumoniae	CP029779	573	2614128
Enterobacteriaceae CP035218 543 2614128 Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935		CP036189	573	2614128
Enterobacteriaceae CP034682 543 2614128 Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Enterobacteriaceae	CP038459	543	2614128
Enterobacteriaceae JX566768 543 2614128 Corynebacterium jeikeium CP033786 38289 1716 Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Enterobacteriaceae	CP035218	543	2614128
Corynebacterium jeikeium CP033786 38289 1716 Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Enterobacteriaceae	CP034682	543	2614128
Corynebacterium jeikeium CP033786 38289 1716 Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Enterobacteriaceae	JX566768	543	2614128
Enterobacter sp. RFL1396 AF527822 211595 2608935 Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935	Corynebacterium jeikeium		38289	1716
Bacteria CP033785 2 2608935 Bacteria CP033804 2 2608935				
Bacteria CP033804 2 2608935	_		2	
	Leclercia adecarboxylata			

scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	CP016527	543	2608935
Enterobacteriaceae	CP011316	543	2608935
Klebsiella pneumoniae	CP031813	573	2608935
Salmonella enterica	CP001112	28901	2608935
Enterobacteriaceae	LT985313	543	2608935
Enterobacteriaceae	CP031822	543	2608935
Rahnella sp. WMR42	FN429021	657334	2635087
Salmonella enterica	CP034969	28901	2635087
Salmonella enterica	CP039275	28901	2635087
Escherichia coli	CP028466	562	2635087
Klebsiella pneumoniae	CP025579	573	2635087
Escherichia coli	AP019680	562	2635087
Escherichia coli	CP034742	562	2635087
Salmonella	CP034823	590	2635087
Escherichia coli	CP026574	562	2635087
Escherichia coli	CP011067	562	2635087
Escherichia coli	CP024802	562	2635087
Escherichia coli	CP036184	562	2635087
Proteus mirabilis	JQ319766	584	583
Yersinia enterocolitica	NC_005570	630	629
Escherichia coli	CP042612	562	629
Escherichia coli	AY589570	562	629
Enterobacteriaceae	CP011603	543	629
Enterobacteriaceae	CP023891	543	629
Enterobacteriaceae	CP006637	543	629
Escherichia coli	CP040073	562	629
Cronobacter sakazakii	CP045781	28141	629
Corynebacterium renale	EF488047	1724	1716
Escherichia coli	CP019255	562	1716
Escherichia coli	CP033764	562	1716
Enterobacteriaceae	CP044052	543	1716
Enterobacteriaceae	LT985292	543	1716
Pantoea agglomerans	CP016891	549	1654067
Pantoea agglomerans	CP034151	549	1654067
Pantoea agglomerans	CP031652	549	1654067
Coxiella burnetii	CP014560	777	776
Acinetobacter baumannii	CP018144	470	909768
Acinetobacter	CP032137	469	468
Acinetobacter	CP002524	469	468
Acinetobacter	CP020593	469	468
Acinetobacter	CP031382	469	468
Acinetobacter	MG954377	469	468
Acinetobacter	CP032741	469	468
Acinetobacter baumannii	CP032742	470	468

Phenylobacterium zucineum	scientificName	nuccoreAcc	taxid	parent
Sphingopyxis sp. 113P3 CP009453 292913 2614943 Sphingobium hydrophobicum CP022750 1673076 165695 Sphingomonas sp. FARSPH CP02986 2219696 196159 Sphingomonas sp. NK1 AB270530 164608 2644732 Sphingomonas sp. IC081 CP029763 304378 196159 Sphingomonas sp. IC081 CP029763 70947 165695 Borrelia miyamotoi CP044628 47466 165695 Borrelia miyamotoi CP044333 47466 165695 Borrelia duttonii CP000978 40834 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP003454 29520 138 Borrelia duttonii CP00996 138 1643685 Borrelia duttonii CP000995 40834 16	Phenylobacterium zucineum	CP000748	284016	20
Sphingobium hydrophobicum CP022750 1673076 165695 Sphingomonas sp. FARSPH CP029986 2219696 196159 Sphingomonas sp. NIC1 CP015523 1961362 196159 Novosphingobium sp. KA1 AB270530 164608 2644732 Sphingomonas sp. IC081 CP020763 304378 196159 Sphingobium herbicidovorans CP020540 76947 165695 Borrelia miyamotoi CP044628 47466 165695 Borrelia miyamotoi CP04383 47466 165695 Borrelia duttonii CP000978 40834 138 Borrelia crocidurae CP003427 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003449 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia duttonii CP000992 138 1643685 Borrelia duttonii CP000999 40834	· ·	CP009453	292913	2614943
Sphingomonas sp. FARSPH CP029986 2219696 196159 Sphingomonas sp. NIC1 CP015523 1961362 196159 Novosphingobium sp. KA1 ABB270530 164608 2644732 Sphingomonas sp. IC081 CP029763 304378 196159 Sphingobium herbicidovorans CP020540 76947 165695 Borrelia miyamotoi CP024883 47466 165695 Borrelia miyamotoi CP0044828 47466 165695 Borrelia miyamotoi CP0043427 29520 138 Borrelia crocidurae CP003427 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003442 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP003454 29520 138 Borrelia crocidurae CP0003454 29520 138 Borrelia duttonii CP000995 138 1643685 Borrelia duttonii CP000985 40834 <td< td=""><td></td><td></td><td></td><td></td></td<>				
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Sphingomonas sp. IC081 CP029763 304378 196159 Sphingobium herbicidovorans CP020540 76947 165695 Borrelia miyamotoi CP044628 47466 165695 Borrelia miyamotoi CP024383 47466 165695 Borrelia miyamotoi CP00078 40834 138 Borrelia crocidurae CP003427 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003449 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP0003452 29520 138 Borrelia duttonii CP000999 40834 1643685 Borrelia duttonii CP000999 40834 1643685 Borrelia duttonii CP000985 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 <td></td> <td>AB270530</td> <td>164608</td> <td>2644732</td>		AB270530	164608	2644732
Sphingobium herbicidovorans CP020540 76947 165695 Borrelia miyamotoi CP044628 47466 165695 Borrelia miyamotoi CP024383 47466 165695 Borrelia miyamotoi CP017133 47466 165695 Borrelia miyamotoi CP000978 40834 138 Borrelia crocidurae CP003427 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003449 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP0003454 29520 138 Borrelia crocidurae CP000992 138 1643685 Borrelia duttonii CP0009990 40834 1643685 Borrelia duttonii CP000995 40834 1643685 Borrelia duttonii CP000985 40834 1643685 Borrelia crocidurae CP000987 40834 1643685 Borrelia crocidurae CP003458 29520 1643685		CP029763	304378	196159
Borrelia miyamotoi CP044628 47466 165695 Borrelia miyamotoi CP024383 47466 165695 Borrelia miyamotoi CP017133 47466 165695 Borrelia miyamotoi CP007133 47466 165695 Borrelia duttonii CP003427 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP003454 29520 138 Borrelia crocidurae CP000992 138 1643685 Borrelia CP000992 138 1643685 Borrelia duttonii CP000990 40834 1643685 Borrelia duttonii CP000990 40834 1643685 Borrelia duttonii CP000997 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP003450 29520 1643685	Sphingobium herbicidovorans	CP020540	76947	165695
Borrelia miyamotoi CP017133 47466 165695 Borrelia duttonii CP000978 40834 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP0009454 29520 138 Borrelia crocidurae CP000996 138 1643685 Borrelia duttonii CP0009996 138 1643685 Borrelia duttonii CP0009996 138 1643685 Borrelia duttonii CP0009985 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia crocidurae CP00989 40834 1643685 Borrelia crocidurae CP003458 29520 1643685 Borrelia crocidurae CP003458 29520 1643685 Staphylococcus CP03458 29520 1643685		CP044628	47466	165695
Borrelia duttonii CP000978 40834 138 Borrelia crocidurae CP003427 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003449 29520 138 Borrelia crocidurae CP003454 29520 138 Borrelia crocidurae CP000992 138 1643685 Borrelia CP0009992 138 1643685 Borrelia duttonii CP000990 40834 1643685 Borrelia duttonii CP000990 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia crocidurae CP0003450 29520 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP003450 29520 1643685 Staphylococcus CP030458 29520 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus AP017923 1279 1643685 E	Borrelia miyamotoi	CP024383	47466	165695
Borrelia duttonii CP000978 40834 138 Borrelia crocidurae CP003427 29520 138 Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003449 29520 138 Borrelia crocidurae CP003454 29520 138 Borrelia crocidurae CP000992 138 1643685 Borrelia CP0009992 138 1643685 Borrelia duttonii CP000990 40834 1643685 Borrelia duttonii CP000990 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia crocidurae CP0003450 29520 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP003450 29520 1643685 Staphylococcus CP030458 29520 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus AP017923 1279 1643685 E	*	CP017133	47466	165695
Borrelia crocidurae CP003447 29520 138 Borrelia crocidurae CP003449 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP0003454 29520 138 Borrelia CP000992 138 1643685 Borrelia CP0009992 138 1643685 Borrelia duttonii CP0009990 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP003458 29520 1643685 Staphylococcus CP03458 29520 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Staphylococcus MH587574 1279 1643685 Staphylococcus CP042549 1134687 1643685 Acinetobacter h	· ·	CP000978	40834	138
Borrelia crocidurae CP003449 29520 138 Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP003454 29520 138 Borrelia CP0009992 138 1643685 Borrelia CP0009996 138 1643685 Borrelia duttonii CP0009990 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia duttonii CP000989 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP03450 29520 1643685 Staphylococcus CP030458 1279 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Enterobacter hormaechei CP042549 1134687 1643685	Borrelia crocidurae	CP003427	29520	138
Borrelia crocidurae CP003452 29520 138 Borrelia crocidurae CP003454 29520 138 Borrelia CP000992 138 1643685 Borrelia duttonii CP000996 138 1643685 Borrelia duttonii CP000995 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia duttonii CP000989 40834 1643685 Borrelia crocidurae CP000989 40834 1643685 Borrelia crocidurae CP000989 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP003458 29520 1643685 Staphylococcus CP030458 1279 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685	Borrelia crocidurae	CP003447	29520	138
Borrelia crocidurae CP003454 29520 138 Borrelia CP000992 138 1643685 Borrelia CP000996 138 1643685 Borrelia duttonii CP000990 40834 1643685 Borrelia duttonii CP000985 40834 1643685 Borrelia duttonii CP000989 40834 1643685 Borrelia crocidurae CP003458 29520 1643685 Borrelia crocidurae CP03458 29520 1643685 Borrelia crocidurae CP03458 29520 1643685 Staphylococcus CP03458 1279 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP025182 470 1643685 Acinetobacter baumannii CP026945 469 1643685 <	Borrelia crocidurae	CP003449	29520	138
Borrelia CP000992 138 1643685 Borrelia CP000996 138 1643685 Borrelia duttonii CP000990 40834 1643685 Borrelia duttonii CP000985 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia crocidurae CP000989 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP003458 29520 1643685 Staphylococcus CP030458 1279 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685	Borrelia crocidurae	CP003452	29520	138
Borrelia CP000996 138 1643685 Borrelia duttonii CP000990 40834 1643685 Borrelia duttonii CP000985 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia crocidurae CP000989 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP03458 29520 1643685 Staphylococcus CP03458 29520 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Staphylococcus MF587574 1279 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026128 469 1643685 <	Borrelia crocidurae	CP003454	29520	138
Borrelia duttonii CP000990 40834 1643685 Borrelia duttonii CP000985 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia duttonii CP000989 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP03458 29520 1643685 Borrelia crocidurae CP03458 29520 1643685 Borrelia crocidurae CP03458 29520 1643685 Staphylococcus CP030458 1279 1643685 Staphylococcus MH587574 1279 1643685 Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685	Borrelia	CP000992	138	1643685
Borrelia duttonii CP000985 40834 1643685 Borrelia duttonii CP000987 40834 1643685 Borrelia duttonii CP000989 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP030458 29520 1643685 Staphylococcus CP030458 1279 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP023191 65959 434	Borrelia	CP000996	138	1643685
Borrelia duttonii CP000987 40834 1643685 Borrelia duttonii CP000989 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP003458 29520 1643685 Staphylococcus CP030458 1279 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434	Borrelia duttonii	CP000990	40834	1643685
Borrelia duttonii CP000989 40834 1643685 Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP003458 29520 1643685 Staphylococcus CP030458 1279 1643685 Staphylococcus MH587574 1279 1643685 Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP0281391 65959 434 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434	Borrelia duttonii	CP000985	40834	1643685
Borrelia crocidurae CP003450 29520 1643685 Borrelia crocidurae CP003458 29520 1643685 Staphylococcus CP030458 1279 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP028191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP025128 2058136 2662419<	Borrelia duttonii	CP000987	40834	1643685
Borrelia crocidurae CP003458 29520 1643685 Staphylococcus CP030458 1279 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419	Borrelia duttonii	CP000989	40834	1643685
Staphylococcus CP030458 1279 1643685 Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP0281333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 </td <td>Borrelia crocidurae</td> <td>CP003450</td> <td>29520</td> <td>1643685</td>	Borrelia crocidurae	CP003450	29520	1643685
Staphylococcus AP017923 1279 1643685 Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Borrelia crocidurae	CP003458	29520	1643685
Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Staphylococcus	CP030458	1279	1643685
Staphylococcus MH587574 1279 1643685 Enterobacteriaceae CP033952 543 1643685 Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Staphylococcus	AP017923	1279	1643685
Klebsiella michiganensis CP042549 1134687 1643685 Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419		MH587574	1279	1643685
Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Enterobacteriaceae	CP033952	543	1643685
Enterobacter hormaechei CP030008 158836 1643685 Acinetobacter baumannii CP035046 470 1643685 Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus spi. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Klebsiella michiganensis	CP042549	1134687	1643685
Acinetobacter baumannii CP027182 470 1643685 Acinetobacter CP026945 469 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419		CP030008	158836	1643685
Acinetobacter CP026945 469 1643685 Acinetobacter CP006769 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Acinetobacter baumannii	CP035046	470	1643685
Acinetobacter CP006769 469 1643685 Acinetobacter CP026128 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Acinetobacter baumannii	CP027182	470	1643685
Acinetobacter CP026128 469 1643685 Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Acinetobacter	CP026945	469	1643685
Acinetobacter CP018333 469 1643685 Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Acinetobacter	CP006769	469	1643685
Acetobacter pomorum CP023191 65959 434 Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Acinetobacter	CP026128	469	1643685
Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Acinetobacter		469	
Acetobacter ghanensis LN609304 431306 434 Staphylococcus epidermidis CP024441 1282 434 Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Acetobacter pomorum	CP023191	65959	434
Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419		LN609304	431306	434
Staphylococcus epidermidis CP024439 1282 434 Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419	Staphylococcus epidermidis	CP024441	1282	434
Planococcus sp. MB-3u-03 CP025128 2058136 2662419 Planococcus sp. MB-3u-03 CP025124 2058136 2662419			1282	
Planococcus sp. MB-3u-03 CP025124 2058136 2662419	1 0 1			
	*			
	-		1578	

scientificName	nuccoreAcc	taxid	parent
Lactobacillus	LT960786	1578	2662419
Lactobacillus	CP022476	1578	2662419
Lactobacillus	CP027192	1578	2662419
Lactobacillus	CP025475	1578	2662419
Lactobacillus sakei	CP020461	1599	2662419
Lactobacillus plantarum	CP006247	1590	2662419
Lactobacillus plantarum	CP017068	1590	2662419
Lactobacillus plantarum	CP013154	1590	2662419
Lactobacillus	CP027197	1578	2662419
Lactobacillus	CP035017	1578	2662419
Lactobacillus	CP014931	1578	2662419
Lactobacillus	CP020862	1578	2662419
Lactobacillus plantarum	CP033891	1590	2662419
Staphylococcus	CP040870	1279	2662419
Staphylococcus	CP003674	1279	2662419
Staphylococcus	CP031278	1279	2662419
Staphylococcus	CP014130	1279	2662419
Staphylococcus	CP014103	1279	2662419
Staphylococcus aureus	MH785236	1280	2662419
Staphylococcus aureus	CP042004	1280	2662419
Staphylococcus aureus	CP042154	1280	2662419
Staphylococcus aureus	JQ619831	1280	2662419
Staphylococcus aureus	MH785229	1280	2662419
Staphylococcus aureus	CP042005	1280	2662419
Staphylococcus agnetis	CP009624	985762	1279
Enterobacteriaceae	CP041248	543	1279
Enterobacteriaceae	CP045556	543	1279
Enterobacteriaceae	CP026213	543	1279
Enterobacteriaceae	CP039319	543	1279
Enterobacteriaceae	CP035215	543	1279
Enterobacteriaceae	CP041047	543	1279
Citrobacter amalonaticus	CP011133	35703	544
Proteus vulgaris	AP004237	585	583
Enterobacterales	JQ996150	91347	583
Providencia heimbachae	CP028385	333962	586
Leuconostoc citreum	CP042414	33964	1243
Leuconostoc citreum	CP042394	33964	1243
Leuconostoc mesenteroides	CP042406	1245	1243
Leuconostoc	CP014602	1243	81850
Leuconostoc	CP001756	1243	81850
Leuconostoc	LT996083	1243	81850
Leuconostoc mesenteroides	CP014612	1245	81850
Leuconostoc	LN890332	1243	81850
Leuconostoc	CP042398	1243	81850

scientificName	$\operatorname{nuccoreAcc}$	taxid	parent
Leuconostoc gelidum	CP017198	1244	1243
Leuconostoc pseudomesenteroides	CP042384	33968	1243
Leuconostoc citreum	CP024927	33964	1243
Leuconostoc citreum	CP042416	33964	1243
Leuconostoc citreum	DQ489740	33964	1243
Leuconostoc carnosum	CP003854	1252	1243
Leuconostoc gelidum	CP017199	1244	1243
Leuconostoc	CP021968	1243	1243
Leuconostoc	CP013017	1243	1243
Leuconostoc	CP042421	1243	1243
Leuconostoc	CP042375	1243	1243
Leuconostoc carnosum	CP003852	1252	1243
Vibrio anguillarum	CP016256	55601	662
Vibrio cholerae	CP043555	666	662
Polymorphum gilvum	CP002569	991904	991903
Shinella sp. HZN7	CP015748	879274	2643062
Agrobacterium tumefaciens	CP026928	358	2643062
Agrobacterium tumefaciens	CP026927	358	2643062
Borrelia miyamotoi	CP036564	47466	2643062
Borrelia miyamotoi	CP024379	47466	2643062
Borrelia miyamotoi	CP037061	47466	2643062
Vibrionaceae	KP791968	641	135623
Vibrionaceae	CP025539	641	135623
Vibrionaceae	KX957972	641	135623
Vibrionaceae	CP014052	641	135623
Photobacterium damselae	KP100338	38293	135623
Proteus mirabilis	CP017086	584	135623
Enterobacteriaceae	LS998788	543	135623
Enterobacteriaceae	CP026211	543	135623
Enterobacteriaceae	AP018758	543	135623
Enterobacteriaceae	CP026236	543	135623
Enterobacteriaceae	CP041548	543	135623
Enterobacteriaceae	CP011646	543	135623
Enterobacteriaceae	CP026274	543	135623
Escherichia coli	CP035471	562	135623
Enterobacteriaceae	CP015078	543	135623
Enterobacteriaceae	CP040826	543	135623
Escherichia coli	CP041567	562	135623
Enterobacteriaceae	CP027137	543	135623
Escherichia coli	CP019907	562	135623
Lactobacillus	LT960780	1578	135623
Leuconostoc mesenteroides	CP035275	1245	135623
Lactobacillus	CP019713	1578	135623
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scientificName	nuccoreAcc	taxid	parent
Lactobacillus	CP017701	1578	135623
Lactobacillus	CP005982	1578	135623
Lactobacillus plantarum	CP017369	1590	135623
Weissella cibaria	CP041196	137591	46255
Enterobacteriaceae	CP030079	543	46255
Enterobacteriaceae	CP024681	543	46255
Citrobacter	MK167988	544	46255
Citrobacter freundii	CP033743	546	46255
Enterobacter	CP010383	547	46255
Enterobacter	CP043768	547	46255
Enterobacter cloacae	KY126370	550	46255
Enterococcus	CP043327	1350	81852
Enterococcus	NC_011140	1350	81852
Enterococcus	CP020486	1350	81852
Enterococcus	KX810026	1350	81852
Enterococcus faecium	AM931300	1352	81852
Enterococcus faecium	NC_008821	1352	81852
Enterococcus faecalis	GQ484954	1351	81852
Enterococcus faecalis	CP022486	1351	81852
Enterococcus faecium	GQ900435	1352	81852
Enterococcus faecium	CP012464	1352	81852
Enterococcus faecium	KX574671	1352	81852
Enterococcus faecium	CP018825	1352	81852
Enterococcus faecalis	CP036247	1351	81852
Ilyobacter polytropus	CP002283	167642	167639
Bacillus muralis	CP017081	264697	1386
Bacillus kochii	CP022984	859143	1386
Klebsiella pneumoniae	CP032835	573	1386
Klebsiella pneumoniae	CP032837	573	1386
Escherichia coli	CP018105	562	1386
Escherichia coli	MG836696	562	1386
Klebsiella	AP019691	570	1386
Klebsiella	CP031581	570	1386
Enterobacteriaceae	CP026852	543	1386
Enterobacteriaceae	MK036885	543	1386
Klebsiella pneumoniae	CP000650	573	1386
Klebsiella pneumoniae	CP045019	573	1386
Klebsiella sp. PO552	CP037444	1972757	1386
Raoultella planticola	CP019900	575	160674
Enterobacter	CP008898	547	160674
Klebsiella pneumoniae	CP018737	573	160674
Klebsiella pneumoniae	CP011576	573	160674
Enterobacteriaceae	CP035538	543	160674
Enterobacteriaceae	AP018752	543	160674

scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	CP006801	543	160674
Enterobacteriaceae	CP016812	543	160674
Enterobacteriaceae	KJ958927	543	160674
Enterobacter cloacae	MG764554	550	160674
Enterobacteriaceae	AP018567	543	160674
Enterobacteriaceae	CP039972	543	160674
Enterobacteriaceae	CP043758	543	160674
Enterobacteriaceae	MK079573	543	160674
Escherichia	HG963476	561	160674
Escherichia coli	MG780294	562	160674
Escherichia coli	LT985322	562	160674
Escherichia coli	CP043753	562	160674
Enterobacteriaceae	KF954150	543	160674
Enterobacteriaceae	CP035209	543	160674
Klebsiella pneumoniae	CP018316	573	160674
Klebsiella pneumoniae	CP032227	573	160674
Enterobacteriaceae	CP041444	543	160674
Enterobacteriaceae	CP035198	543	160674
Enterobacteriaceae	CP014758	543	160674
Enterobacteriaceae	MK248692	543	160674
Enterobacteriaceae	CP042971	543	160674
Klebsiella pneumoniae	CP036447	573	160674
Klebsiella pneumoniae	CP020073	573	160674
Enterobacteriaceae	CP014299	543	160674
Enterobacteriaceae	KY296104	543	160674
Enterobacteriaceae	CP015991	543	160674
Enterobacteriaceae	MH919378	543	160674
Enterobacteriaceae	CP020110	543	160674
Enterobacteriaceae	CP044204	543	160674
Klebsiella pneumoniae	CP032171	573	160674
Enterobacter kobei	CP043514	208224	160674
Escherichia coli	CP038458	562	160674
Escherichia coli	CP045280	562	160674
Klebsiella pneumoniae	MK773538	573	160674
Chromobacterium sp. IIBBL 274-1	CP029555	2202142	2641838
Herbaspirillum seropedicae	CP034394	964	963
Leuconostoc carnosum	LT996084	1252	963
Leuconostoc gelidum	CP017200	1244	963
Leuconostoc mesenteroides	CP035273	1245	963
Leuconostoc mesenteroides	CP020734	1245	963
Leuconostoc citreum	AJ493278	33964	963
Leuconostoc	CP042397	1243	963
Leuconostoc	CP021969	1243	963
Leuconostocaceae	CP037937	81850	186826

Leuconostocaceae			parent
	CP035142	81850	186826
Leuconostocaceae	CP042403	81850	186826
Weissella cibaria	CP012875	137591	186826
Leuconostoc lactis	CP042423	1246	1243
Leuconostoc	CP016331	1243	1243
Leuconostoc	CP016599	1243	1243
Leuconostoc lactis	CP042388	1246	1243
Leuconostoc citreum	DQ489739	33964	1243
Leuconostocaceae	CP002900	81850	1243
Weissella soli	CP042381	155866	46255
Weissella cibaria	CP027428	137591	46255
Leuconostoc mesenteroides	AP017938	1245	46255
Leuconostoc lactis	CP016601	1246	46255
Weissella cibaria	CP012876	137591	46255
Weissella confusa	CP027566	1583	46255
Leuconostoc mesenteroides	CP042407	1245	46255
Sphingopyxis macrogoltabida	CP009431	33050	165697
Blastomonas fulva	CP020084	1550728	150203
Blastomonas sp. RAC04	CP016462	1842535	150203
Sphingopyxis macrogoltabida	CP012701	33050	150203
Sphingopyxis sp. FD7	AP017899	1914525	2614943
Nostoc commune	AP018333	1178	2614943
Nostoc sphaeroides	CP031944	446679	2614943
Nostoc sp. 'Lobaria pulmonaria (5183) cyanobiont'	CP026696	1618022	2593658
Calothrix brevissima	AP018213	938406	1186
Microchaete diplosiphon	AP018244	1197	1186
Calothrix brevissima	AP018214	938406	1186
Escherichia coli	CU928149	562	1186
Escherichia coli	LR025104	562	1186
Enterobacterales	FJ666132	91347	1186
Enterobacteriaceae	HE578058	543	1186
Enterobacteriaceae	HG963477	543	1186
Escherichia coli	JN935898	562	1186
Enterobacteriaceae	CP022964	543	1186
Escherichia coli	CP022281	562	1186
Salmonella enterica	CP030208	28901	1186
Enterobacteriaceae	CP014974	543	1186
Enterobacteriaceae	CP044153	543	1186
Enterobacteriaceae	JN935897	543	1186
Enterobacteriaceae	CP024290	543	1186
Escherichia coli	CP010127	562	1186
Enterobacteriaceae	CP012734	543	1186
Enterobacteriaceae	JQ269336	543	1186
Enterobacteriaceae	CP024467	543	1186

Salmonella enterica MK 360096 28901 1186 Salmonella enterica CP022061 28901 1186 Enterobacteriaceae EU219533 543 1186 Enterobacteriaceae AP019764 543 1186 Enterobacteriaceae MF428416 543 1186 Salmonella enterica CP016575 28901 1186 Salmonella enterica CP034075 28901 1186 Salmonella enterica CP034075 28901 1186 Enterobacteriaceae KX833212 543 1186 Enterobacteriaceae CP030195 28901 1186 Enterobacteriaceae CP030195 28901 1186 Enterobacteriaceae CP030195 28901 1186 Enterobacteriaceae CP030195 28901 1186 Enterobacteriaceae CP029139 543 1186 Enterobacteriaceae CP041121 543 1186 Enterobacteriaceae CP041436 543 1186 Enterobacteriac	scientificName	nuccoreAcc	taxid	parent
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Salmonella enterica CP029854 28901 1186 Salmonella enterica CP034075 28901 1186 Enterobacteriaceae KX833212 543 1186 Salmonella enterica CP030195 28901 1186 Enterobacteriaceae CP041058 543 1186 Enterobacteriaceae CP029139 543 1186 Enterobacteriaceae CP023253 543 1186 Enterobacteriaceae CP041121 543 1186 Enterobacteriaceae CP044436 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP030113 543 1186 Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP016511 543 1186 Escherichia coli GP01424 543 1186 Escherichia coli <td< td=""><td></td><td></td><td></td><td></td></td<>				
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Salmonella enterica CP030195 28901 1186 Enterobacteriaceae CP041058 543 1186 Enterobacteriaceae CP029139 543 1186 Enterobacteriaceae CP023253 543 1186 Enterobacteriaceae CP041121 543 1186 Enterobacteriaceae CP024436 543 1186 Enterobacteriaceae CP03416 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP032422 543 1186 Enterobacteriaceae CP032422 543 1186 Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP011921 543 1186 Enterobacteriaceae CP011842 543 1186 Enterobacteriaceae CP011842 543 1186 Escherichia coli GU214746 562 1186 Escherichia coli GP032				
Enterobacteriaceae CP041058 543 1186 Enterobacteriaceae CP029139 543 1186 Enterobacteriaceae CP023253 543 1186 Enterobacteriaceae CP041121 543 1186 Enterobacteriaceae CP024436 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP032422 543 1186 Enterobacteriaceae CP032212 543 1186 Enterobacteriaceae CP032212 543 1186 Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP011142 562 1186 Escherichia coli CP011842 562 1186 Enterobacteriaceae CP011842 543 1186 Escherichia coli GU214746 562 1186 Salmonella enterica CP032886 562 1186 Scherichia coli CP032886<				
Enterobacteriaceae CP029139 543 1186 Enterobacteriaceae CP023253 543 1186 Enterobacteriaceae CP041121 543 1186 Enterobacteriaceae CP024436 543 1186 Enterobacteriaceae AY178821 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP030213 543 1186 Enterobacteriaceae CP030213 543 1186 Enterobacteriaceae CP031921 543 1186 Enterobacteriaceae CP031921 543 1186 Escherichia coli CP011142 562 1186 Salmonella enterica CP011842 543 1186 Escherichia coli GU214746 562 1186 Salmonella enterica CP032886 562 1186 Salmonella enterica CP033933 1493872 59732 Chryseobacterium shandongense				
Enterobacteriaceae CP023253 543 1186 Enterobacteriaceae CP041121 543 1186 Enterobacteriaceae CP024436 543 1186 Enterobacteriaceae AY178821 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP032422 543 1186 Enterobacteriaceae CP030213 543 1186 Enterobacteriaceae CP030213 543 1186 Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP031921 543 1186 Escherichia coli CP011142 562 1186 Enterobacteriaceae CP011842 562 1186 Escherichia coli GU214746 562 1186 Escherichia coli CP03886 562 1186 Salmonella enterica CP039598 28901 1186 Chryseobacterium shandongense CP039598 28901 1186 Chryseobacterium balustinum <td></td> <td></td> <td></td> <td></td>				
Enterobacteriaceae CP041121 543 1186 Enterobacteriaceae CP024436 543 1186 Enterobacteriaceae AY178821 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP032422 543 1186 Enterobacteriaceae CP030213 543 1186 Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP011142 562 1186 Escherichia coli CP011142 562 1186 Salmonella enterica CP016566 28901 1186 Escherichia coli GU214746 562 1186 Escherichia coli GU214746 562 1186 Escherichia coli CP032886 562 1186 Salmonella enterica CP033958 28901 1186 Chryseobacterium shandongense CP033913 1493872 59732 Chryseobacterium balustinum CP033935 246 59732 Chryseobacteriu				
Enterobacteriaceae CP024436 543 1186 Enterobacteriaceae AY178821 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP032422 543 1186 Enterobacteriaceae CP030213 543 1186 Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP031921 543 1186 Escherichia coli CP011142 562 1186 Salmonella enterica CP016566 28901 1186 Escherichia coli GU214746 562 1186 Escherichia coli GP032886 562 1186 Escherichia coli CP032886 562 1186 Escherichia coli CP032886 562 1186 Escherichia coli CP032886 562 1186 Chryseobacterium shandongense CP033913 1493872 59732 Chryseobacterium balustinum CP033931 1493872 59732 Chryseobacterium b				
Enterobacteriaceae AY178821 543 1186 Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP032422 543 1186 Enterobacteriaceae CP030213 543 1186 Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP031921 543 1186 Escherichia coli CP011142 562 1186 Salmonella enterica CP011842 543 1186 Escherichia coli GU214746 562 1186 Escherichia coli GU214746 562 1186 Escherichia coli CP032886 562 1186 Salmonella enterica CP039598 28901 1186 Chryseobacterium shandongense CP033913 1493872 59732 Chryseobacterium balustinum CP033935 246 59732 Chryseobacterium balustinum CP033935 246 59732 Bordetella parapertussis HE965804 519 517 Xa				
Enterobacteriaceae CP030116 543 1186 Enterobacteriaceae CP032422 543 1186 Enterobacteriaceae CP030213 543 1186 Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP031921 543 1186 Escherichia coli CP011142 562 1186 Escherichia coli CP016566 28901 1186 Escherichia coli GU214746 562 1186 Escherichia coli CP032886 562 1186 Escherichia coli CP032886 562 1186 Salmonella enterica CP039598 28901 1186 Chryseobacterium shandongense CP033913 1493872 59732 Chryseobacterium balustinum CP033935 246 59732 Chryseobacterium balustinum CP033935 246 59732 Sarlottella parapertussis HE965804 519 517 Xanthomonas fragariae LT853884 48664 338 <t< td=""><td></td><td></td><td></td><td></td></t<>				
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Enterobacteriaceae CP030213 543 1186 Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP031921 543 1186 Escherichia coli CP011142 562 1186 Salmonella enterica CP016566 28901 1186 Enterobacteriaceae CP011842 543 1186 Escherichia coli GU214746 562 1186 Escherichia coli CP03886 562 1186 Escherichia coli CP039598 28901 1186 Escherichia coli CP039598 28901 1186 Escherichia coli CP039598 28901 1186 Escherichia coli CP033918 28901 1186 Escherichia coli CP033918 28901 1186 Escherichia coli CP033913 1493872 59732 Chryscobacterium shandongense CP033913 1493872 59732 Chryscobacterium shandongense CP018391 1466 338 Xanthomonas f				
Enterobacteriaceae CP016511 543 1186 Enterobacteriaceae CP031921 543 1186 Escherichia coli CP011142 562 1186 Salmonella enterica CP016566 28901 1186 Enterobacteriaceae CP011842 543 1186 Escherichia coli GU214746 562 1186 Escherichia coli CP032886 562 1186 Salmonella enterica CP039598 28901 1186 Chryscobacterium shandongense CP033913 1493872 59732 Chryseobacterium balustinum CP033935 246 59732 Bordetella parapertussis HE965804 519 517 Xanthomonas fragariae CP016832 48664 338 Xanthomonas fragariae LT853884 48664 338 Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter crystallopoietes CP01865 37928 1663 Bacillus sp. FDAARGOS_527 CP03788 2576356 <t< td=""><td></td><td></td><td></td><td></td></t<>				
Enterobacteriaceae CP031921 543 1186 Escherichia coli CP011142 562 1186 Salmonella enterica CP016566 28901 1186 Enterobacteriaceae CP011842 543 1186 Escherichia coli GU214746 562 1186 Escherichia coli CP032886 562 1186 Salmonella enterica CP039598 28901 1186 Chryseobacterium shandongense CP033913 1493872 59732 Chryseobacterium balustinum CP033935 246 59732 Bordetella parapertussis HE965804 519 517 Xanthomonas fragariae CP016832 48664 338 Xanthomonas fragariae LT853884 48664 338 Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter aurescens CP000475 43663 29330 Paenarthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP03751 1405				
Escherichia coli CP011142 562 1186 Salmonella enterica CP016566 28901 1186 Enterobacteriaceae CP011842 543 1186 Escherichia coli GU214746 562 1186 Escherichia coli CP032886 562 1186 Salmonella enterica CP039598 28901 1186 Chryseobacterium shandongense CP033913 1493872 59732 Chryseobacterium balustinum CP033935 246 59732 Bordetella parapertussis HE965804 519 517 Xanthomonas fragariae CP016832 48664 338 Xanthomonas fragariae LT853884 48664 338 Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter aurescens CP000475 43663 29330 Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP03788 2576356 1663 Bacillus thuringiensis CP007623 64104 </td <td></td> <td></td> <td></td> <td></td>				
Salmonella enterica CP016566 28901 1186 Enterobacteriaceae CP011842 543 1186 Escherichia coli GU214746 562 1186 Escherichia coli CP032886 562 1186 Salmonella enterica CP039598 28901 1186 Chryseobacterium shandongense CP033913 1493872 59732 Chryseobacterium balustinum CP033935 246 59732 Bordetella parapertussis HE965804 519 517 Xanthomonas fragariae CP016832 48664 338 Xanthomonas fragariae LT853884 48664 338 Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter aurescens CP000475 43663 29330 Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus mycoides CP020751 1405 86661 Bacillus pseudomycoides CP007623 64				
Enterobacteriaceae CP011842 543 1186 Escherichia coli GU214746 562 1186 Escherichia coli CP032886 562 1186 Salmonella enterica CP039598 28901 1186 Chryseobacterium shandongense CP033913 1493872 59732 Chryseobacterium balustinum CP033935 246 59732 Bordetella parapertussis HE965804 519 517 Xanthomonas fragariae CP016832 48664 338 Xanthomonas fragariae LT853884 48664 338 Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter aurescens CP000475 43663 29330 Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus mycoides CP020435 1839798 86661 Bacillus pseudomycoides CP044981 1428 86661 Bacillus cereus CP000044 139				
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Chryseobacterium shandongense CP033913 1493872 59732 Chryseobacterium balustinum CP033935 246 59732 Bordetella parapertussis HE965804 519 517 Xanthomonas fragariae CP016832 48664 338 Xanthomonas fragariae LT853884 48664 338 Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter aurescens CP000475 43663 29330 Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus mycoides CP020435 1839798 86661 Bacillus pseudomycoides CP044981 1428 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434				
Chryseobacterium balustinum CP033935 246 59732 Bordetella parapertussis HE965804 519 517 Xanthomonas fragariae CP016832 48664 338 Xanthomonas fragariae LT853884 48664 338 Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter aurescens CP000475 43663 29330 Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus mycoides CP020435 1839798 86661 Bacillus thuringiensis CP020751 1405 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434				
Bordetella parapertussis HE965804 519 517 Xanthomonas fragariae CP016832 48664 338 Xanthomonas fragariae LT853884 48664 338 Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter aurescens CP000475 43663 29330 Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus mycoides CP020435 1839798 86661 Bacillus thuringiensis CP020751 1405 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434				
Xanthomonas fragariae CP016832 48664 338 Xanthomonas fragariae LT853884 48664 338 Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter aurescens CP000475 43663 29330 Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus p. FDAARGOS_235 CP020435 1839798 86661 Bacillus mycoides CP020751 1405 86661 Bacillus thuringiensis CP044981 1428 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434	· ·			
Xanthomonas fragariae LT853884 48664 338 Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter aurescens CP000475 43663 29330 Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus sp. FDAARGOS_235 CP020435 1839798 86661 Bacillus mycoides CP020751 1405 86661 Bacillus thuringiensis CP044981 1428 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434				
Alicyclobacillus acidocaldarius CP001730 405212 29330 Paenarthrobacter aurescens CP000475 43663 29330 Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus sp. FDAARGOS_235 CP020435 1839798 86661 Bacillus mycoides CP020751 1405 86661 Bacillus thuringiensis CP044981 1428 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434				
Paenarthrobacter aurescens CP000475 43663 29330 Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus sp. FDAARGOS_235 CP020435 1839798 86661 Bacillus mycoides CP020751 1405 86661 Bacillus thuringiensis CP044981 1428 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434				
Arthrobacter crystallopoietes CP018865 37928 1663 Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus sp. FDAARGOS_235 CP020435 1839798 86661 Bacillus mycoides CP020751 1405 86661 Bacillus thuringiensis CP044981 1428 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434			405212	29330
Bacillus sp. FDAARGOS_527 CP033788 2576356 1663 Bacillus sp. FDAARGOS_235 CP020435 1839798 86661 Bacillus mycoides CP020751 1405 86661 Bacillus thuringiensis CP044981 1428 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434	Paenarthrobacter aurescens	CP000475	43663	29330
Bacillus sp. FDAARGOS_235 CP020435 1839798 86661 Bacillus mycoides CP020751 1405 86661 Bacillus thuringiensis CP044981 1428 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434				
Bacillus mycoides CP020751 1405 86661 Bacillus thuringiensis CP044981 1428 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434	Bacillus sp. FDAARGOS_527	CP033788	2576356	1663
Bacillus thuringiensis CP044981 1428 86661 Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434	Bacillus sp. FDAARGOS_235	CP020435	1839798	86661
Bacillus pseudomycoides CP007623 64104 86661 Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434		CP020751	1405	86661
Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434		CP044981	1428	86661
Bacillus cereus CP000044 1396 86661 Gluconobacter oxydans AB086443 442 86661 Acetobacter pasteurianus AP011127 438 434	Bacillus pseudomycoides	CP007623	64104	86661
Acetobacter pasteurianus AP011127 438 434		CP000044	1396	86661
Acetobacter pasteurianus AP011127 438 434	Gluconobacter oxydans	AB086443	442	86661
•		AP011127	438	434
	Escherichia albertii	CP030786	208962	434

scientificName	nuccoreAcc	taxid	parent
Escherichia albertii	CP034167	208962	434
Escherichia albertii	CP025678	208962	434
Escherichia coli	CP012492	562	434
Escherichia albertii	CP030779	208962	434
Escherichia coli	CP027438	562	434
Escherichia coli	CP012500	562	434
Escherichia coli	CP042296	562	434
Escherichia coli	CP012498	562	434
Escherichia coli	CP002732	562	434
Escherichia coli	CP028195	562	434
Escherichia coli	CP042619	562	434
Escherichia coli	CP022280	562	434
Escherichia coli	AB024946	562	434
Escherichia coli	AP019857	562	434
Shigella	CP026835	620	434
Shigella	CP026879	620	434
Shigella	CP026783	620	434
Shigella	CP012142	620	434
Enterobacteriaceae	CP001064	543	434
Enterobacteriaceae	AY879342	543	434
Enterobacteriaceae	CP026798	543	434
Shigella boydii	CP026733	621	434
Escherichia coli	CP025854	562	434
Escherichia coli	CP024227	562	434
Escherichia coli	CP024255	562	434
Escherichia coli	CP025921	562	434
Escherichia coli	NC_007635	562	434
Escherichia coli	$\overline{\text{CP023352}}$	562	434
Escherichia coli	CP024277	562	434
Escherichia coli	LT174529	562	434
Escherichia coli	FN649418	562	434
Escherichia coli	CP000799	562	434
Streptococcus thermophilus	AY312234	1308	434
Streptococcus thermophilus	DQ295022	1308	434
Cupriavidus malaysiensis	CP017756	367825	106589
Cupriavidus sp. USMAHM13	CP017753	1389192	2640874
Pseudomonas sp.	MK376337	306	2583993
Pseudomonas	KX353853	286	2583993
Pseudomonas	KX353851	286	2583993
Sphingobium	AP010807	165695	41297
Sphingomonas wittichii	CP021192	160791	41297
Sphingomonadaceae	CP013271	41297	41297
Sphingobium yanoikuyae	AB265740	13690	165695
Sphingomonas sp. IC081	CP029769	304378	165695
Spiningomonos Sp. 10001	01 020100	001010	100000

scientificName	nuccoreAcc	taxid	parent
Sphingomonas sp. IC081	CP029768	304378	165695
Sphingobium xenophagum	AY787146	121428	165695
Sphingobium sp. TKS	CP005092	1315974	2611147
Sphingobium herbicidovorans	CP020542	76947	2611147
Lactobacillus backii	CP014631	375175	2611147
Lactobacillus backii	CP014892	375175	2611147
Lactobacillus backii	CP014882	375175	2611147
Lactobacillus malefermentans	CP042372	176292	1578
Pediococcus damnosus	CP012296	51663	1578
Pediococcus pentosaceus	CP021475	1255	1253
Lactobacillus helveticus	CP019583	1587	1578
Lactobacillus farciminis	CP011953	1612	1578
Lactobacillus pentosus	CP032661	1589	1578
Lactobacillus futsaii	CP040737	938155	1578
Lactobacillus plantarum	KT149390	1590	1578
Lactobacillus plantarum	CP013166	1590	1578
Lactobacillus plantarum	CP017356	1590	1578
Lactobacillus plantarum	CP017377	1590	1578
Lactobacillus plantarum	CP013152	1590	1578
Lactobacillus plantarum	CP035559	1590	1578
Lactobacillus plantarum	CP021931	1590	1578
Lactobacillus plantarum	CP018326	1590	1578
Lactobacillus plantarum	CP025415	1590	1578
Lactobacillus helveticus	CP002430	1587	1578
Lactobacillus helveticus	CP031020	1587	1578
Lactobacillus helveticus	CP015497	1587	1578
Lactobacillus brevis	CP021673	1580	1578
Lactobacillus paracollinoides	CP014919	240427	1578
Lactobacillus helveticus	CP019582	1587	1578
Lactobacillus paracasei	AY673957	1597	655183
Bacillus	AP019715	1386	655183
Lactococcus lactis	HM021329	1358	655183
Lactococcus lactis	CP016715	1358	655183
Lactococcus lactis	CP016747	1358	655183
Lactococcus lactis	CP003158	1358	655183
Lactococcus lactis	DQ149244	1358	655183
Lactococcus lactis	CP029293	1358	655183
Lactococcus lactis	CP016693	1358	655183
Lactococcus lactis	CP003135	1358	655183
Lactococcus lactis	HM021328	1358	655183
Lactococcus lactis	CP020605	1358	655183
Lactococcus lactis	CP020608	1358	655183
Vibrio campbellii	CP026319	680	717610
Vibrio campbellii	CP026317	680	717610

scientificName	nuccoreAcc	taxid	parent
Vibrio campbellii	CP026320	680	717610
Sodalis glossinidius	LN854559	63612	84565
Sodalis glossinidius	AP008235	63612	84565
Borrelia miyamotoi	CP037272	47466	84565
Borrelia miyamotoi	CP037267	47466	84565
Borrelia miyamotoi	CP036968	47466	84565
Acinetobacter wuhouensis	CP033124	1879050	84565
Acinetobacter sp. ACNIH2	CP026413	1758189	84565
Acinetobacter sp. SWBY1	MH999418	2079596	196816
Acinetobacter	CP040082	469	196816
Acinetobacter	CP007713	469	196816
Acinetobacter	CP003968	469	196816
Acinetobacter pittii	CP033543	48296	196816
Acinetobacter baumannii	CP026126	470	196816
Acinetobacter baumannii	CP010400	470	196816
Acinetobacter baumannii	LR026972	470	196816
Acinetobacter	CP014655	469	196816
Acinetobacter	CP033528	469	196816
Acinetobacter pittii	CP033521	48296	196816
Acinetobacter baumannii	CP018862	470	196816
Acinetobacter	CP029391	469	196816
Acinetobacter	CP032107	469	196816
Acinetobacter	CP033122	469	196816
Acinetobacter	CP043308	469	196816
Acinetobacter sp. WCHA55	CP032283	2004646	196816
Acinetobacter junii	CP028799	40215	469
Acinetobacter lwoffii	CP032114	28090	469
Klebsiella pneumoniae	CP044048	573	469
Acinetobacter johnsonii	CP010353	40214	469
Acinetobacter sp. M131	JX101641	1280052	469
Acinetobacter wuhouensis	CP031715	1879050	469
Acinetobacter	JX101643	469	469
Acinetobacter	CP032277	469	469
Acinetobacter	CP026421	469	469
Acinetobacter	AP019746	469	469
Acinetobacter wuhouensis	CP031714	1879050	469
Acinetobacter nosocomialis	CP033554	106654	909768
Acinetobacter defluvii	CP029392	1871111	469
Acinetobacter lwoffii	CP032123	28090	469
Novosphingobium sp. PP1Y	FR856859	702113	2644732
Sphingomonas sp. AAP5	CP037915	1523415	196159
Agrobacterium tumefaciens	KY000060	358	196159
Agrobacterium vitis	KY000056	373	357
Rhizobiaceae	KY000042	82115	356

scientificName	nuccoreAcc	taxid	parent
Rhizobiaceae	AE007871	82115	356
Rhizobiaceae	MF511177	82115	356
Agrobacterium	CP042277	357	227290
Agrobacterium	KY000067	357	227290
Agrobacterium	KY000041	357	227290
Agrobacterium	KY000027	357	227290
Agrobacterium	KY000039	357	227290
Agrobacterium	CP000630	357	227290
Agrobacterium	CP039926	357	227290
Sinorhizobium meliloti	CP021816	382	227290
Bifidobacterium catenulatum	AB713429	1686	1678
Bifidobacterium catenulatum	DQ011664	1686	1678
Bifidobacterium longum	DQ452864	216816	1678
Bifidobacterium longum	KP691636	216816	1678
Bifidobacterium longum	AY112724	216816	1678
Enterococcus faecium	LC495616	1352	1678
Enterococcus faecium	CP012438	1352	1678
Enterococcus faecium	CP041272	1352	1678
Enterococcus faecium	CP044266	1352	1678
Enterococcus faecium	CP040742	1352	1678
Enterococcus faecium	CP040238	1352	1678
Enterococcus faecium	CP025393	1352	1678
Lactobacillus	CP006249	1578	1678
Lactobacillus	CP012123	1578	1678
Lactobacillus	CP027196	1578	1678
Lactobacillus	CP002223	1578	1678
Lactobacillus	CP013151	1578	1678
Lactobacillus	CP018211	1578	1678
Lactobacillus plantarum	CP015859	1590	1678
Lactobacillus plantarum	CP035148	1590	1678
Lactobacillus plantarum	CP006039	1590	1678
Lactobacillus plantarum	CP025692	1590	1678
Lactobacillus plantarum	CP024414	1590	1678
Lactobacillus pentosus	CP032655	1589	1678
Lactobacillus pentosus	CP032758	1589	1678
Lactobacillus pentosus	CP022131	1589	1678
Lactobacillus plantarum	CP017383	1590	1678
Lactobacillus plantarum	CP035157	1590	1678
Lactobacillus plantarum	CP023302	1590	1678
Lactobacillus plantarum	CP032754	1590	1678
Lactobacillus plantarum	CP017409	1590	1678
Lactobacillus plantarum	CP017380	1590	1678
Lactobacillus buchneri	CP002653	1581	1578
Lactobacillus parabuchneri	CP018798	152331	1578

scientificName	nuccoreAcc	taxid	parent
Lactobacillus plantarum	CP017958	1590	1578
Lactobacillus plantarum	CP018327	1590	1578
Lactobacillus plantarum	CP037434	1590	1578
Lactobacillus plantarum	CP032756	1590	1578
Lactobacillus plantarum	CP035171	1590	1578
Lactobacillus plantarum	CP006248	1590	1578
Lactobacillus plantarum	CP020096	1590	1578
Lactobacillus plantarum	CP025588	1590	1578
Lactobacillus manihotivorans	CP045069	88233	1578
Pediococcus acidilactici	CP021485	1254	1670797
Pediococcus acidilactici	CP018765	1254	1670797
Pediococcus pentosaceus	CP023007	1255	1670797
Pediococcus pentosaceus	CP021926	1255	1670797
Lactobacillus coryniformis	CP017698	1610	1578
Lactobacillus plantarum	CP017408	1590	1578
Lactobacillus plantarum	CP012651	1590	1578
Lactobacillus plantarum	CP025283	1590	1578
Lactobacillus plantarum	CP013150	1590	1578
Lactobacillus hordei	CP018178	468911	1578
Oenococcus oeni	JX416329	1247	46254
Pediococcus parvulus	MF766019	54062	1253
Lactobacillus plantarum	CP035570	1590	1253
Thermus sp. 4C	EF407947	446041	2619321
Sodalis glossinidius	LN854558	63612	2619321
Serratia symbiotica	AP019532	138074	613
Candidatus Hamiltonella defensa	CP021664	138072	613
Candidatus Hamiltonella defensa	CP021667	138072	613
Candidatus Hamiltonella defensa	CP023990	138072	613
Acinetobacter pittii	CP040913	48296	613
Acinetobacter pittii	CP021429	48296	613
Acinetobacter pittii	CP029611	48296	613
Acinetobacter sp. DUT-2	CP014652	1809055	196816
Acinetobacter sp. DUT-2	CP014654	1809055	196816
Acinetobacter baumannii	CP042210	470	196816
Acinetobacter baumannii	CP038263	470	196816
Acinetobacter baumannii	CP038259	470	196816
Acinetobacter	CP026129	469	196816
Acinetobacter pittii	CP033541	48296	196816
Acinetobacter	CP033546	469	196816
Acinetobacter	CP014653	469	196816
Acinetobacter	CP033559	469	196816
Waddlia chondrophila	CP001929	71667	71666
Mycobacterium	CP040246	1763	71666
Mycobacterium	CP022225	1763	71666

scientificName	nuccoreAcc	taxid	parent
Mycobacterium chimaera	CP015276	222805	120793
Butyrivibrio proteoclasticus	CP001813	43305	830
Buchnera aphidicola	AP019380	9	830
Buchnera aphidicola	CP034853	9	830
Neisseria lactamica	DQ227323	486	482
Pseudomonas fluorescens	JQ737005	294	136843
Pseudomonas fluorescens	CP003042	294	136843
Pseudomonas lurida	CP015640	244566	286
Pseudomonas furukawaii	AP014863	1149133	1232139
Campylobacter concisus	CP000794	199	194
Bacillus thuringiensis	CP010004	1428	194
Bacillus cereus	CP009635	1396	194
Lactobacillus delbrueckii	AF109691	1584	1578
Lactobacillus delbrueckii	CP031024	1584	1578
Lactobacillus delbrueckii	CP002342	1584	1578
Lactobacillus delbrueckii	AF236060	1584	1578
Xenorhabdus bovienii	FO818639	40576	626
Xenorhabdus doucetiae	FO704549	351671	626
Morganellaceae	JX514065	1903414	626
Morganellaceae	CP031120	1903414	626
Morganellaceae	KF364957	1903414	626
Proteobacteria	JX514066	1224	626
Proteobacteria	KF364954	1224	626
Proteobacteria	KM577619	1224	626
Ochrobactrum anthropi	HF913787	529	528
Escherichia coli	MK753225	562	528
Escherichia coli	CP035489	562	528
Pantoea ananatis	CP022428	553	53335
Escherichia coli	KT950741	562	53335
Escherichia coli	KT950740	562	53335
Escherichia coli	MH192349	562	53335
Escherichia coli	AF197335	562	53335
Escherichia coli	CP016009	562	53335
Escherichia coli	CP010185	562	53335
Escherichia coli	CP019956	562	53335
Escherichia coli	CP009169	562	53335
Enterobacteriaceae	AF300473	543	53335
Enterobacteriaceae	CP017223	543	53335
Enterobacteriaceae	HQ230977	543	53335
Enterobacteriaceae	AP019767	543	53335
Salmonella enterica	AY079201	28901	53335
Escherichia coli	AJ001708	562	53335
Enterobacteriaceae	HF570110	543	53335
Enterobacteriaceae	AF282884	543	53335

scientificName	nuccoreAcc	taxid	parent
Salmonella enterica	CP021910	28901	53335
Salmonella enterica	CP033225	28901	53335
Thiomonas	LR131955	32012	224471
Lactobacillus plantarum	CP018213	1590	224471
Lactobacillus brevis	CP031212	1580	224471
Lactobacillus plantarum	CP040375	1590	224471
Lactobacillus fermentum	CP019033	1613	1578
Lactobacillus paragasseri	CP040502	525326	2107999
Lactobacillus gastricus	CP045731	227942	1578
Marivivens sp. JLT3646	CP018573	1920883	2622455
Rhodobacteraceae bacterium	CP021116	1904441	58840
Salmonella enterica	CP022137	28901	58840
Salmonella enterica	CP023469	28901	58840
Salmonella enterica	CP030027	28901	58840
Salmonella enterica	CP026701	28901	58840
Salmonella enterica	CP004058	28901	58840
Salmonella enterica	CP026570	28901	58840
Salmonella enterica	CP007508	28901	58840
Salmonella enterica	CP012348	28901	58840
Salmonella enterica	AY509003	28901	58840
Salmonella enterica	HF969016	28901	58840
Salmonella enterica	CP022660	28901	58840
Salmonella enterica	CP030220	28901	58840
Campylobacter coli	MH634992	195	194
Campylobacter	CP017870	194	72294
Campylobacter	CP044263	194	72294
Campylobacter coli	CP017867	195	72294
Campylobacter coli	CP045792	195	72294
Campylobacter coli	MH634987	195	72294
Campylobacter coli	CP028188	195	72294
Campylobacter jejuni	CP017231	197	194
Lactobacillus brevis	CP016801	1580	194
Lactobacillus brevis	CP031171	1580	194
Lactobacillus plantarum	CP013160	1590	194
Lactobacillus plantarum	CP035573	1590	194
Pediococcus pentosaceus	NC_012031	1255	194
Pediococcus damnosus	$\overline{\text{CP012295}}$	51663	194
Lactobacillus brevis	CP021458	1580	194
Lactobacillus brevis	CP031213	1580	194
Lactobacillus plantarum	CP015128	1590	194
Lactobacillus sp. D1501	CP028328	2108362	2620435
Lactobacillus plantarum	CP016631	1590	2620435
Lactobacillus plantarum	KT149388	1590	2620435
Lactobacillales	CP003162	186826	2620435

scientificName	nuccoreAcc	taxid	parent
Lactobacillales	CP032463	186826	2620435
Lactobacillus coryniformis	CP017700	1610	2620435
Lactobacillus plantarum	CP006034	1590	2620435
Lactobacillus sakei	AP017930	1599	2620435
Lactobacillaceae	CP023006	33958	2620435
Lactobacillaceae	CP015969	33958	2620435
Lactobacillus plantarum	CP037437	1590	2620435
Lactobacillus plantarum	CP018328	1590	2620435
Lactobacillus	CP032656	1578	2620435
Lactobacillus	CP028327	1578	2620435
Lactobacillus	KT149387	1578	2620435
Lactobacillus	CP028983	1578	2620435
Lactobacillus plantarum	CP035118	1590	2620435
Clostridium botulinum	AM412318	1491	1485
Clostridium botulinum	CP013858	1491	1485
Clostridium botulinum	CP013842	1491	1485
Rahnella sp. ERMR1:05	CP019065	1805933	2635087
Rahnella sp. ERMR1:05	CP019064	1805933	2635087
Rhodobacteraceae bacterium SH-1	CP043620	2605946	58840
Rhodobacter sp. LPB0142	CP017782	1850250	196779
Rhodobacteraceae	CP028474	31989	196779
Rhodobacteraceae	CP022197	31989	196779
Celeribacter indicus	CP004396	1208324	875170
Defluviimonas alba	CP012662	1335048	1097466
Rhodobacteraceae bacterium	CP031591	1904441	1097466
Haematobacter massiliensis	CP035507	195105	366614
Haematobacter massiliensis	CP035515	195105	366614
Tabrizicola sp. K13M18	CP034329	2494374	1443919
Helicobacter pylori	CP002984	210	209
Helicobacter pylori	CP032047	210	209
Helicobacter pylori	AP012602	210	209
Helicobacter pylori	DQ239897	210	209
Helicobacter pylori	CP034313	210	209
Helicobacter pylori	AP017634	210	209
Helicobacter pylori	CP003487	210	209
Helicobacter pylori	CP002954	210	209
Helicobacter pylori	AF275307	210	209
Helicobacter pylori	CP032035	210	209
Helicobacter pylori	CP032045	210	209
Helicobacter pylori	CP002333	210	209
Helicobacter acinonychis	AM260523	212	209
Helicobacter pylori	AF469113	210	209
Helicobacter pylori	CP002337	210	209
Helicobacter pylori	KM583817	210	209

scientificName	nuccoreAcc	taxid	parent
Helicobacter pylori	AF077006	210	209
Helicobacter pylori	CP012906	210	209
Helicobacter pylori	CP002335	210	209
Helicobacter pylori	CP000242	210	209
Helicobacter pylori	NC_001756	210	209
Helicobacter pylori	DQ198799	210	209
Helicobacter pylori	CP042212	210	209
Helicobacter pylori	CP002981	210	209
Helicobacter pylori	CP032032	210	209
Gluconobacter oxydans	CP000007	442	209
Gluconobacter oxydans	CP000005	442	209
Campylobacter fetus	CP007001	196	194
Campylobacter fetus	CP008811	196	194
Escherichia coli	CP041577	562	194
Escherichia coli	CP014084	562	194
Enterococcus faecalis	GU046453	1351	194
Enterococcus faecalis	CP041739	1351	194
Enterococcus faecalis	CP028283	1351	194
Enterococcus faecalis	CP022485	1351	194
Enterococcus faecalis	AE016831	1351	194
Enterococcus faecalis	AY855841	1351	194
Enterococcus faecalis	CP002493	1351	194
Enterococcus faecalis	CP008815	1351	194
Enterococcus faecalis	CP041878	1351	194
Enterococcus faecalis	KT290268	1351	194
Enterococcus faecalis	AB374546	1351	194
Enterococcus faecalis	CP028837	1351	194
Klebsiella	CP032224	570	194
Klebsiella	CP009878	570	194
Klebsiella	CP034049	570	194
Klebsiella	CP017988	570	194
Klebsiella	CP023556	570	194
Klebsiella	CP036330	570	194
Klebsiella aerogenes	CP014747	548	194
Klebsiella oxytoca	CP026270	571	194
Raoultella ornithinolytica	CP012557	54291	194
Ornithobacterium rhinotracheale	AY513488	28251	28250
Enterobacteriaceae	CP019901	543	28250
Enterobacteriaceae	CP024432	543	28250
Enterobacteriaceae	CP026209	543	28250
Enterobacteriaceae	CP040996	543	28250
Enterobacteriaceae	CP030069	543	28250
Enterobacteriaceae	CP038509	543	28250
Streptomyces sp. F12	KF602051	1436084	2593670

scientificName	nuccoreAcc	taxid	parent
Streptomyces sp. CdTB01	CP013744	1725411	2593676
Staphylococcus aureus	CP014419	1280	2593676
Staphylococcus aureus	EU366902	1280	2593676
Staphylococcus aureus	CP002145	1280	2593676
Staphylococcus aureus	GU237136	1280	2593676
Staphylococcus	CP030677	1279	2593676
Staphylococcus	CP042084	1279	2593676
Staphylococcus	CP030483	1279	2593676
Staphylococcus	KJ922127	1279	2593676
Staphylococcus	CP030655	1279	2593676
Staphylococcus schleiferi	KP670395	1295	1279
Staphylococcus epidermidis	KR230047	1282	1279
Salmonella enterica	CP024166	28901	1279
Salmonella enterica	CP019182	28901	1279
Salmonella enterica	CP022661	28901	1279
Salmonella enterica	CP019193	28901	1279
Salmonella enterica	CP022492	28901	1279
Citrobacter sp. NMI7904_11	CP045204	2653932	2644389
Edwardsiella tarda	CP023707	636	2644389
Paracoccus sp. 2251	CP040765	2560053	246570
Paracoccus sp. 2251	CP040762	2560053	246570
Paracoccus sp. 2251	CP040760	2560053	246570
Paracoccus sp. 2251	CP040759	2560053	246570
Paracoccus sp. 2251	CP040761	2560053	246570
Staphylococcus aureus	AF241888	1280	246570
Staphylococcus aureus	CP029651	1280	246570
Staphylococcus aureus	MF706324	1280	246570
Staphylococcus	GQ900455	1279	246570
Staphylococcus	GQ900459	1279	246570
Staphylococcus capitis	AP017298	29388	1279
Staphylococcus	JQ861960	1279	1279
Staphylococcus epidermidis	CP022251	1282	1279
Staphylococcus epidermidis	JQ312424	1282	1279
Staphylococcus epidermidis	CP018844	1282	1279
Melissococcus plutonius	AP018527	33970	33969
Sulfobacillus thermotolerans	JN119830	338644	28033
Sulfobacillus thermotolerans	JN119829	338644	28033
Sulfobacillus acidophilus	CP003180	53633	28033
Arthrobacter sp. 31.31	JQ418520	347202	235627
Arthrobacter sp. J3.40	JQ418528	347209	235627
Arthrobacter sp. ZXY-2	CP017425	1806905	235627
Salinibacter ruber	FP565813	146919	146918
Salinibacter ruber	CP030366	146919	146918
Salinibacter ruber	CP030373	146919	146918

scientificName	nuccoreAcc	taxid	parent
Salinibacter ruber	CP030363	146919	146918
Salinibacter ruber	CP030371	146919	146918
Salinibacter ruber	CP020720	146919	146918
Borreliella	CP001308	64895	146918
Borreliella	CP003202	64895	146918
Borreliella	CP028873	64895	146918
Borreliella valaisiana	CP001433	62088	146918
Borreliella spielmanii	CP001469	88916	146918
Borreliella afzelii	CP002950	29518	146918
Borrelia mayonii	CP015795	1674146	146918
Borreliella bissettii	CP002761	64897	146918
Borreliella	CP001524	64895	146918
Borreliella	CP001370	64895	146918
Borrelia sp. CA690	CP044536	1476873	146918
Borreliella chilensis	CP009912	1245910	146918
Zymomonas mobilis	CP003707	542	541
Zymomonas mobilis	CP003705	542	541
Borrelia miyamotoi	CP044649	47466	541
Borrelia miyamotoi	CP036587	47466	541
Borrelia miyamotoi	CP044633	47466	541
Borrelia miyamotoi	CP036599	47466	541
Borrelia miyamotoi	CP036584	47466	541
Burkholderiales	AY540995	80840	28216
Sphingomonadaceae	CP018224	41297	28216
Sphingomonadaceae	CP010955	41297	28216
Sphingomonadaceae	CP029764	41297	28216
Novosphingobium sp. ABRDHK2	CP039696	2571749	2644732
Enterobacteriaceae	CP023647	543	2644732
Enterobacteriaceae	LT985307	543	2644732
Acinetobacter johnsonii	CP010355	40214	2644732
Pasteurella multocida	AY232670	747	745
Pasteurellaceae	EU715370	712	135625
Pasteurellaceae	JX827416	712	135625
Vibrio tubiashii	CP009357	29498	1891919
Lactobacillus backii	CP014901	375175	1891919
Lactobacillaceae	CP014896	33958	1891919
Lactobacillaceae	CP042373	33958	1891919
Lactobacillaceae	CP014921	33958	1891919
Lactobacillaceae	CP012281	33958	1891919
Pediococcus inopinatus	CP019983	114090	1253
Leuconostoc	CP042385	1243	1253
Leuconostoc	CP024926	1243	1253
Leuconostoc mesenteroides	CP014603	1245	1253
Leuconostoc mesenteroides	CP020733	1245	1253

Lactobacillus	scientificName	nuccoreAcc	taxid	parent
Oscillatoria acuminata CP003608 118323 1158 Oscillatoria acuminata CP003609 118323 1158 Enterococcus faecium CP019211 1352 1158 Enterococcus faecium KY595963 1352 1158 Enterococcus faecium CP041265 1352 1158 Enterococcus faecium CP012452 1352 1158 Enterococcus faecium CP012452 1352 1158 Enterococcus faecium CP016167 1352 1158 Enterococcus faecium CP0118534 2109689 39779 Pasteurellaceae AP018534 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae FR687372 749 310966 Frederiksenia canicola JQ319773 760 745	Lactobacillus	CP018177	1578	1253
Oscillatoria acuminata CP003609 118323 1158 Enterococcus faecium CP019211 1352 1158 Enterococcus faecium KY595963 1352 1158 Enterococcus faecium CP041265 1352 1158 Enterococcus faecium CP012452 1352 1158 Enterococcus faecium CP016167 1352 1158 Clostridiales bacterium Chocol16 AP018534 2109689 39779 Pasteurellaceae CP0101992 712 39779 Pasteurellaceae CP001092 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae FR687372 749 310966 Frederiksenia canicola JQ319771 123824 1649317	Lactobacillus rossiae	CP045182	231049	1578
Enterococcus faecium CP019211 1352 1158 Enterococcus faecium KY595963 1352 1158 Enterococcus faecium KY595969 1352 1158 Enterococcus faecium CP041265 1352 1158 Enterococcus faecium CP012452 1352 1158 Enterococcus faecium CP016167 1352 1158 Enterococcus faecium CP016092 122 39779 Pasteurellaceae CP001092 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae FR687372 749 310966 Frederiksenia canicola JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pasteurellac	Oscillatoria acuminata	CP003608	118323	1158
Enterococcus faecium KY595963 1352 1158 Enterococcus faecium CP041265 1352 1158 Enterococcus faecium CP012452 1352 1158 Enterococcus faecium CP012452 1352 1158 Enterococcus faecium CP016167 1352 1158 Enteroclaceae AY86254 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae GU80065 712 39779 Pasteurella paerogenes FR687372 749 310966 Frederiksenia canicola JQ319771 760 745 Pasteurellaceae F1234438 712 745 Pasteurellacea	Oscillatoria acuminata	CP003609	118323	1158
Enterococcus faecium KY595969 1352 1158 Enterococcus faecium CP041265 1352 1158 Enterococcus faecium CP012452 1352 1158 Enterococcus faecium CP016167 1352 1158 Clostridiales bacterium Chocol16 AP018534 2109689 39779 Pasteurellaceae AY362554 712 39779 Pasteurellaceae CP001092 712 39779 Pasteurellaceae AY862435 712 39779 Pasteurellaceae GU080065 712 39779 Pasteurellaceae GU800065 712 39779 Pasteurellaceae FR687372 749 330779 Pasteurella stomatis JQ319771 123824 1649317 Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pediococcus damnosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphy	Enterococcus faecium	CP019211	1352	1158
Enterococcus faecium CP041265 1352 1158 Enterococcus faecium CP012452 1352 1158 Enterococcus faecium CP016167 1352 1158 Enterococcus faecium CP016167 1352 1158 Enterococcus faecium CP016167 1352 1158 Clostridiales bacterium Chocol16 AP018534 2109689 39779 Pasteurellaceae AY362554 712 39779 Pasteurellaceae CP001092 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae GU080065 712 39779 Pasteurellaceae GU080065 712 39779 Pasteurellaceae GU080065 712 39779 Pasteurellaceae FR687372 749 310966 Frederiksenia canicola JQ319771 123824 1649317 Pasteurellaceae FJ234438 712 745 Pasteurellaceae FJ234438 712 745 Pasteurellaceae<	Enterococcus faecium	KY595963	1352	1158
Enterococcus faecium CP012452 1352 1158 Enterococcus faecium CP016167 1352 1158 Clostridiales bacterium Chocol16 AP018534 2109689 39779 Pasteurellaceae AY362554 712 39779 Pasteurellaceae CP001092 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae GU080065 712 39779 Pasteurellaceae FR687372 749 310966 Frederiksenia canicola JQ319771 123824 1649317 Pasteurellaceae FJ234438 712 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus	Enterococcus faecium	KY595969	1352	1158
Enterococcus faecium CP016167 1352 1158 Clostridiales bacterium Choco116 AP018534 2109689 39779 Pasteurellaceae AY362554 712 39779 Pasteurellaceae CP001092 712 39779 Pasteurellaceae AY862435 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae GU080065 712 39779 Pasteurella erogenes FR687372 749 310966 Frederiksenia canicola JQ319771 123824 1649317 Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pasteurellaceae FJ2	Enterococcus faecium	CP041265	1352	1158
Clostridiales bacterium Choco116 AP018534 2109689 39779 Pasteurellaceae AY362554 712 39779 Pasteurellaceae CP001092 712 39779 Pasteurellaceae AY862435 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae GU080065 712 39779 Pasteurella erogenes FR687372 749 310966 Frederiksenia canicola JQ319771 123824 1649317 Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Patteurellaceae FJ234438 712 745 Pasteurellaceae FJ234438 712 745 Lactobacillus plantarum KU	Enterococcus faecium	CP012452	1352	1158
Pasteurellaceae AY362554 712 39779 Pasteurellaceae CP001092 712 39779 Pasteurellaceae AY862435 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae GU080065 712 39779 [Pasteurella] aerogenes FR687372 749 310966 Frederiksenia canicola JQ319771 123824 1649317 Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pediococcus damnosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Staphylococcus aureus EU350088 1279 745 Staphylococcus EU350088 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococc	Enterococcus faecium	CP016167	1352	1158
Pasteurellaceae CP001092 712 39779 Pasteurellaceae AY862435 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellalceae GU0800655 712 39779 Pasteurellal aerogenes FR687372 749 310966 Frederiksenia canicola JQ319773 760 745 Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pediococcus damnosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Staphylococcus aureus EU185047 1578 745 Staphylococcus EU350088 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdumensis NC_002093 28035 745 Staphylococcus cohni	Clostridiales bacterium Choco116	AP018534	2109689	39779
Pasteurellaceae AY862435 712 39779 Pasteurellaceae KP164834 712 39779 Pasteurellaceae GU080065 712 39779 Pasteurellal aerogenes FR687372 749 310966 Frederiksenia canicola JQ319771 123824 1649317 Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pediococcus damnosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus colnii CP014418 1279 745 Staphyloco	Pasteurellaceae	AY362554	712	39779
Pasteurellaceae KP164834 712 39779 Pasteurellaceae GU080065 712 39779 [Pasteurella] aerogenes FR687372 749 310966 Frederiksenia canicola JQ319771 123824 1649317 Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pediococcus damnosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus EU350088 1279 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus cohnii CP014418 1279 745 Staphylococcus cohnii CP019599 29382 745 Sta	Pasteurellaceae	CP001092	712	39779
Pasteurellaceae GU080065 712 39779 [Pasteurella] aerogenes FR687372 749 310966 Frederiksenia canicola JQ319771 123824 1649317 Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pediococcus damosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus AP020312 1280 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026966 1280 745 Staphylococcus aureus EU185047 1578 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus cohnii CP014418 1279 745 Staphyl	Pasteurellaceae	AY862435	712	39779
[Pasteurella] aerogenes FR687372 749 310966 Frederiksenia canicola JQ319771 123824 1649317 Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pediococcus damnosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus AP020312 1280 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Staphylococcus EU350088 1279 745 Staphylococcus LU350088 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus cohnii CP019559 29382 745 Staphylococcus simulans HQ170521 1286 745 Staph	Pasteurellaceae	KP164834	712	39779
Frederiksenia canicola JQ319771 123824 1649317 Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pediococcus damnosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus AP020312 1280 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Lactobacillus EU185047 157 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus LC012933 1279 745 Staphylococcus cohnii CP014418 1279 745 Staphylococcus simulans HQ170521 1286 745 Staphylococcus aure	Pasteurellaceae	GU080065	712	39779
Pasteurella stomatis JQ319773 760 745 Pasteurellaceae FJ234438 712 745 Pediococcus damnosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus AP020312 1280 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Staphylococcus aureus EU185047 1578 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus cohnii CP019393 1279 745 Staphylococcus simulans HQ170521 1286 745 Staphylococcus warneri AB125342 1292 745 Staphylococcus p	[Pasteurella] aerogenes	FR687372	749	310966
Pasteurellaceae FJ234438 712 745 Pediococcus damnosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus AP020312 1280 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Lactobacillus EU185047 1578 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus LC012933 1279 745 Staphylococcus cohnii CP019599 29382 745 Staphylococcus warneri AB125342 1292 745 Staphylococcus aureus EF537646 1280 745 Staphylococcus aureus	Frederiksenia canicola	JQ319771	123824	1649317
Pediococcus damnosus CP012293 51663 745 Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus AP020312 1280 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Lactobacillus EU185047 1578 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus LC012933 1279 745 Staphylococcus cohnii CP019599 29382 745 Staphylococcus simulans HQ170521 1286 745 Staphylococcus warneri AB125342 1292 745 Staphylococcus aureus CP009121 283734 1279 Staphylococcus aur	Pasteurella stomatis	JQ319773	760	745
Lactobacillus plantarum KU896918 1590 745 Staphylococcus aureus AP020312 1280 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Lactobacillus EU185047 1578 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus cohnii CP019599 29382 745 Staphylococcus simulans HQ170521 1286 745 Staphylococcus warneri AB125342 1292 745 Staphylococcus pseudintermedius CP009121 283734 1279 Staphylococcus aureus CP013624 1280 1279 Staphylococcus aureus HE805623 1280 1279 <td< td=""><td>Pasteurellaceae</td><td>FJ234438</td><td>712</td><td>745</td></td<>	Pasteurellaceae	FJ234438	712	745
Staphylococcus aureus AP020312 1280 745 Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Lactobacillus EU185047 1578 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus cohnii CP019599 29382 745 Staphylococcus simulans HQ170521 1286 745 Staphylococcus warneri AB125342 1292 745 Staphylococcus aureus EF537646 1280 745 Staphylococcus pseudintermedius CP001121 283734 1279 Staphylococcus aureus CP013624 1280 1279 Staphylococcus aureus HE805623 1280 1279 Staphylococcus aureus CP029171 1280 1279 S	Pediococcus damnosus	CP012293	51663	745
Staphylococcus aureus CP026969 1280 745 Staphylococcus aureus CP026956 1280 745 Lactobacillus EU185047 1578 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus LC012933 1279 745 Staphylococcus cohnii CP019599 29382 745 Staphylococcus simulans HQ170521 1286 745 Staphylococcus warneri AB125342 1292 745 Staphylococcus pseudintermedius CP009121 283734 1279 Staphylococcus aureus CP013624 1280 1279 Staphylococcus aureus HE805623 1280 1279 Staphylococcus aureus CP029171 1280 1279 Staphylococcus aureus CP031840 1280 1279	Lactobacillus plantarum	KU896918	1590	745
Staphylococcus aureus CP026956 1280 745 Lactobacillus EU185047 1578 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus LC012933 1279 745 Staphylococcus cohnii CP019599 29382 745 Staphylococcus simulans HQ170521 1286 745 Staphylococcus warneri AB125342 1292 745 Staphylococcus aureus EF537646 1280 745 Staphylococcus pseudintermedius CP009121 283734 1279 Staphylococcus aureus CP014694 1279 1279 Staphylococcus aureus HE805623 1280 1279 Staphylococcus aureus CP029171 1280 1279 Staphylococcus aureus CP031840 1280 1279	Staphylococcus aureus	AP020312	1280	745
Lactobacillus EU185047 1578 745 Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus cohnii CP019599 29382 745 Staphylococcus simulans HQ170521 1286 745 Staphylococcus warneri AB125342 1292 745 Staphylococcus aureus EF537646 1280 745 Staphylococcus aureus CP009121 283734 1279 Staphylococcus aureus CP013624 1280 1279 Staphylococcus aureus HE805623 1280 1279 Staphylococcus aureus AB539725 1279 1279 Staphylococcus aureus CP029171 1280 1279 Staphylococcus aureus CP031840 1280 1279	Staphylococcus aureus	CP026969	1280	745
Staphylococcus EU350088 1279 745 Staphylococcus JQ861958 1279 745 Staphylococcus CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus cohnii CP019599 29382 745 Staphylococcus simulans HQ170521 1286 745 Staphylococcus warneri AB125342 1292 745 Staphylococcus aureus EF537646 1280 745 Staphylococcus pseudintermedius CP009121 283734 1279 Staphylococcus aureus CP013624 1280 1279 Staphylococcus aureus CP014694 1279 1279 Staphylococcus aureus AB539725 1279 1279 Staphylococcus aureus CP029171 1280 1279 Staphylococcus aureus CP031840 1280 1279	Staphylococcus aureus	CP026956	1280	745
Staphylococcus JQ861958 1279 745 Staphylococcus lugdunensis CP019567 1279 745 Staphylococcus lugdunensis NC_002093 28035 745 Staphylococcus CP014418 1279 745 Staphylococcus cohnii CP019599 29382 745 Staphylococcus simulans HQ170521 1286 745 Staphylococcus warneri AB125342 1292 745 Staphylococcus aureus EF537646 1280 745 Staphylococcus pseudintermedius CP009121 283734 1279 Staphylococcus aureus CP013624 1280 1279 Staphylococcus aureus CP014694 1279 1279 Staphylococcus aureus HE805623 1280 1279 Staphylococcus aureus CP029171 1280 1279 Staphylococcus aureus CP029171 1280 1279 Staphylococcus aureus CP031840 1280 1279	Lactobacillus	EU185047	1578	745
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Staphylococcus aureus CP031840 1280 1279	- v	CP029171	1280	1279
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		CP013618	1280	1279

scientificName	${\it nuccoreAcc}$	taxid	parent
Staphylococcus aureus	CP029170	1280	1279
Staphylococcus	NC_007165	1279	1279
Staphylococcus	CP015175	1279	1279
Staphylococcus epidermidis	AY092027	1282	1279
Staphylococcus	FR714928	1279	1279
Rickettsia australis	CP003339	787	114277
Rickettsia amblyommatis	CP003337	33989	114277
Rickettsia felis	CP000055	42862	114277
Rickettsia africae	CP001613	35788	114277
Rickettsia	CP010971	780	33988
Rickettsia amblyommatis	CP003335	33989	33988
Rickettsia	CP000684	780	33988
Rickettsia	CP003343	780	33988
Rickettsia	CP015014	780	33988
Rickettsia	CP010970	780	33988
Onion yellows phytoplasma	AB480166	100379	85620
Onion yellows phytoplasma	AB479509	100379	85620
'Brassica napus' phytoplasma	HQ637382	469009	85620
Candidatus Phytoplasma	FJ905104	33926	2146
Candidatus Phytoplasma	KF801472	33926	2146
Onion yellows phytoplasma	AB479513	100379	2146
Candidatus Phytoplasma	AB064396	33926	2146
Candidatus Phytoplasma	HQ332529	33926	2146
Periwinkle leaf yellowing phytoplasma	HQ332530	619518	85620
Periwinkle leaf yellowing phytoplasma	HQ332527	619518	85620
Periwinkle leaf yellowing phytoplasma	HQ332528	619518	85620
Periwinkle leaf yellowing phytoplasma	HQ332531	619518	85620
Aster yellows witches'-broom phytoplasma	CP000064	229545	85620
Aster yellows witches'-broom phytoplasma	CP000062	229545	85620
Aster yellows witches'-broom phytoplasma	CP000063	229545	85620
Aster yellows witches'-broom phytoplasma	CP000065	229545	85620
Wheat blue dwarf phytoplasma	JX668987	321961	85620
Wheat blue dwarf phytoplasma	JX668988	321961	85620
Wheat blue dwarf phytoplasma	JX668989	321961	85620
Chinaberry witches'-broom phytoplasma	JF827298	389343	85620
Paulownia witches'-broom phytoplasma	EF426472	39647	85620
Paulownia witches'-broom phytoplasma	EF426473	39647	85620
Periwinkle little leaf phytoplasma	JN835187	137854	85635
Rice orange leaf phytoplasma	KY086101	146897	85635
'Catharanthus roseus' aster yellows phytoplasma	CP035950	1193712	85620
Bacillus thuringiensis	CP016196	1428	85620
Bacillus sp. BS98	CP043831	2608254	185979
Bacillus	CP009595	1386	185979

scientificName	nuccoreAcc	taxid	parent
Bacillus thuringiensis	CP017574	1428	185979
Bacillus cereus	CP009591	1396	185979
Bacillus thuringiensis	CP009336	1428	185979
Bacillus thuringiensis	CP002509	1428	185979
Bacillus thuringiensis	CP002510	1428	185979
Bacillus sp. JAS24-2	CP031070	2217832	86661
Sphingomonadaceae	AF079317	41297	86661
Sphingomonadaceae	CP033228	41297	86661
Sphingomonas sp. ERG5	KF494257	1381597	196159
Sphingomonadales	CP009294	204457	28211
Sphingomonadales	CP011771	204457	28211
Croceicoccus naphthovorans	CP011772	1348774	1295327
Enterobacteriaceae	CP008717	543	1295327
Escherichia coli	JN253636	562	1295327
Enterobacteriaceae	CP003038	543	1295327
Enterobacteriaceae	CP006785	543	1295327
Enterobacteriaceae	AP019768	543	1295327
Escherichia coli	CP001833	562	1295327
Enterobacterales	CP010877	91347	1295327
Enterobacterales	CP023264	91347	1295327
Escherichia coli	KJ484633	562	1295327
Escherichia coli	CP018984	562	1295327
Escherichia coli	CP005932	562	1295327
Escherichia coli	AP019858	562	1295327
Escherichia coli	CP019270	562	1295327
Escherichia coli	MK599282	562	1295327
Escherichia coli	CP041119	562	1295327
Escherichia coli	CP041120	562	1295327
Enterobacter sp. FY-07	CP012490	1692238	1295327
Pseudomonas aeruginosa	EU410482	287	1295327
Escherichia coli	CP032423	562	1295327
Escherichia coli	CP028467	562	1295327
Bacillus safensis	CP015608	561879	1386
Bacillus subtilis	CP035408	1423	653685
Bacillus filamentosus	CP015329	1402861	1386
Gammaproteobacteria	CP012954	1236	1386
Acinetobacter baumannii	CP038652	470	1386
Acinetobacter baumannii	CP042562	470	1386
Acinetobacter sp. WCHA45	CP028559	2004644	196816
Acinetobacter	LN873256	469	196816
Acinetobacter	LN873255	469	196816
Acinetobacter wuhouensis	CP033128	1879050	196816
Acinetobacter baumannii	CP012953	470	196816
Acinetobacter nosocomialis	CP033565	106654	196816
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Escherichia coli	scientificName	nuccoreAcc	taxid	parent
Escherichia coli CP009074 562 196816 Escherichia coli FJ914220 562 196816 Escherichia coli LS992173 562 196816 Enterobacteriaceae CP018662 543 196816 Salmonella enterica CP023438 28901 196816 Escherichia coli CP029182 562 196816 Enterobacteriaceae MG825381 543 196816 Enterobacteriaceae CP022453 543 196816 Shigella sp. MO17 HE5578057 1072658 2629414 Enterobacteriaceae CP010164 543 2629414 Salmonella enterica CP022072 28901 2629414 Escherichia coli CP035345 562 2629414 Escherichia coli CP042608 562 2629414 Escherichia coli CP042689 562 2629414 Escherichia coli CP02060 562 2629414 Staphylococcus aureus AP020317 1280 2629414 St				
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Staphylococcus aureus CP027494 1280 2629414 Staphylococcus aureus CP013625 1280 2629414 Staphylococcus aureus AM990995 1280 2629414 Staphylococcus haemolyticus AP006717 1283 2629414 Staphylococcus aureus KR870314 1280 2629414 Staphylococcus aureus KR870313 1280 2629414 Staphylococcus aureus CP042009 1280 2629414 Staphylococcus aureus KR870311 1280 2629414 Staphylococcus aureus KR870311 1280 2629414 Staphylococcus aureus MH785245 1280 2629414 Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 44488 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Rhodococcus opacus CP003953 37919 1827 Clostridium perfringens AB604032 1502				2629414
Staphylococcus aureus CP013625 1280 2629414 Staphylococcus aureus AM990995 1280 2629414 Staphylococcus haemolyticus AP006717 1283 2629414 Staphylococcus aureus KR870314 1280 2629414 Staphylococcus aureus KR870313 1280 2629414 Staphylococcus aureus CP042009 1280 2629414 Staphylococcus aureus KR870311 1280 2629414 Staphylococcus aureus KR870311 1280 2629414 Staphylococcus aureus MH785245 1280 2629414 Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 444888 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485				2629414
Staphylococcus aureus AM990995 1280 2629414 Staphylococcus haemolyticus AP006717 1283 2629414 Staphylococcus aureus KR870314 1280 2629414 Staphylococcus aureus KR870313 1280 2629414 Staphylococcus aureus CP042009 1280 2629414 Staphylococcus equorum CP013983 246432 2629414 Staphylococcus aureus KR870311 1280 2629414 Staphylococcus aureus MH785245 1280 2629414 Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 444888 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485		CP013625	1280	2629414
Staphylococcus haemolyticus AP006717 1283 2629414 Staphylococcus aureus KR870314 1280 2629414 Staphylococcus aureus KR870313 1280 2629414 Staphylococcus aureus CP042009 1280 2629414 Staphylococcus equorum CP013983 246432 2629414 Staphylococcus aureus KR870311 1280 2629414 Staphylococcus aureus MH785245 1280 2629414 Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 444888 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Rhodococcus opacus CP003953 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485		AM990995	1280	2629414
Staphylococcus aureus KR870314 1280 2629414 Staphylococcus aureus KR870313 1280 2629414 Staphylococcus aureus CP042009 1280 2629414 Staphylococcus equorum CP013983 246432 2629414 Staphylococcus aureus KR870311 1280 2629414 Staphylococcus aureus MH785245 1280 2629414 Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 444888 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Rhodococcus opacus CP003953 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485		AP006717	1283	2629414
Staphylococcus aureus KR870313 1280 2629414 Staphylococcus aureus CP042009 1280 2629414 Staphylococcus equorum CP013983 246432 2629414 Staphylococcus aureus KR870311 1280 2629414 Staphylococcus aureus MH785245 1280 2629414 Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 444888 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485		KR870314	1280	2629414
Staphylococcus aureus CP042009 1280 2629414 Staphylococcus equorum CP013983 246432 2629414 Staphylococcus aureus KR870311 1280 2629414 Staphylococcus aureus MH785245 1280 2629414 Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 444888 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485		KR870313	1280	2629414
Staphylococcus equorum CP013983 246432 2629414 Staphylococcus aureus KR870311 1280 2629414 Staphylococcus aureus MH785245 1280 2629414 Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 444888 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485		CP042009	1280	2629414
Staphylococcus aureus MH785245 1280 2629414 Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 444888 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Rhodococcus opacus CP003953 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485		CP013983	246432	2629414
Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 44488 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Rhodococcus opacus CP003953 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485	Staphylococcus aureus	KR870311	1280	2629414
Staphylococcus aureus CP042007 1280 2629414 Yersinia CP000718 444888 2629414 Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Rhodococcus opacus CP003953 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485	Staphylococcus aureus	MH785245	1280	2629414
Azotobacter chroococcum CP010418 353 352 Rhodococcus opacus AP011117 37919 1827 Rhodococcus opacus CP003953 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485		CP042007	1280	2629414
Rhodococcus opacus AP011117 37919 1827 Rhodococcus opacus CP003953 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485	Yersinia	CP000718	444888	2629414
Rhodococcus opacus CP003953 37919 1827 Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485	Azotobacter chroococcum	CP010418	353	352
Clostridium perfringens AB236336 1502 1485 Clostridium perfringens AB604032 1502 1485	Rhodococcus opacus	AP011117	37919	1827
Clostridium perfringens AB604032 1502 1485	Rhodococcus opacus	CP003953	37919	1827
	Clostridium perfringens	AB236336	1502	1485
Clostridium perfringens CP013040 1502 1485		AB604032	1502	1485
	Clostridium perfringens	CP013040	1502	1485

scientificName	nuccoreAcc	taxid	parent
Clostridium perfringens	JN689217	1502	1485
Clostridium perfringens	CP025502	1502	1485
Clostridium perfringens	CP013039	1502	1485
Clostridium perfringens	AB236337	1502	1485
Clostridium perfringens	AB444205	1502	1485
Clostridium perfringens	CP019580	1502	1485
Clostridium perfringens	CP023413	1502	1485
Clostridium perfringens	AP017631	1502	1485
Clostridium perfringens	KT020842	1502	1485
Clostridium perfringens	LN835295	1502	1485
Escherichia coli	CP024054	562	1485
Escherichia coli	CP010194	562	1485
Enterobacteriaceae	CP025752	543	1485
Escherichia coli	CP001165	562	1485
Enterobacteriaceae	CP020924	543	1485
Escherichia albertii	CP024283	208962	1485
Escherichia coli	KY446064	562	1485
Klebsiella aerogenes	LR134256	548	1485
Klebsiella aerogenes	LR134212	548	1485
Klebsiella oxytoca	CP026278	571	1485
Dietzia lutea	CP015451	546160	37914
Lactobacillus reuteri	CP006016	1598	37914
Lactobacillus reuteri	CP002846	1598	37914
Streptococcus mutans	AF068250	1309	37914
Enterococcus	MH784601	1350	37914
Enterococcus	CP038169	1350	37914
Enterococcus	CP025078	1350	37914
Enterococcus	CP003584	1350	37914
Enterococcus	MG957432	1350	37914
Enterococcus faecalis	CP041740	1351	37914
Enterococcus faecium	CP036155	1352	37914
Enterococcus faecium	CP014531	1352	37914
Enterococcus	DQ198088	1350	37914
Enterococcus	CP042836	1350	37914
Enterococcus	CP018067	1350	37914
Enterococcus faecium	CP013996	1352	37914
Enterococcus faecium	CP033209	1352	37914
Enterococcus faecium	CP019995	1352	37914
Enterococcus faecium	CP019210	1352	37914
Enterococcus faecium	CP019990	1352	37914
Helicobacter pylori	KM583818	210	37914
Helicobacter pylori	KM583816	210	37914
Helicobacter pylori	KM583811	210	37914
Helicobacter pylori	KM583812	210	37914

scientificName	nuccoreAcc	taxid	parent
Helicobacter pylori	AP017344	210	37914
Helicobacter pylori	KM583821	210	37914
Helicobacter pylori	AP017361	210	37914
Helicobacter pylori	AP017353	210	37914
Helicobacter pylori	AP017347	210	37914
Helicobacter pylori	AP014713	210	37914
Helicobacter pylori	CP002075	210	37914
Helicobacter pylori	CP003484	210	37914
Helicobacter pylori	CP003477	210	37914
Helicobacter pylori	KM583814	210	37914
Helicobacter pylori	CP001583	210	37914
Helicobacter pylori	CP001174	210	37914
Helicobacter pylori	AF469112	210	37914
Helicobacter pylori	AY584531	210	37914
Helicobacter pylori	CP001218	210	37914
Helicobacter pylori	DQ915941	210	37914
Helicobacter pylori	KM583809	210	37914
Helicobacter pylori	AP011942	210	37914
Clavibacter michiganensis	CP011045	28447	1573
Clavibacter michiganensis	AM711866	28447	1573
Clavibacter michiganensis	CP012575	28447	1573
Moraxella catarrhalis	AF129811	480	475
Zymomonas mobilis	CP002853	542	475
Zymomonas mobilis	CP001724	542	475
Zymomonas mobilis	CP001884	542	475
Zymomonas mobilis	CP023681	542	475
Zymomonas mobilis	CP002851	542	475
Zymomonas mobilis	CP001883	542	475
Zymomonas mobilis	CP023679	542	475
Zymomonas mobilis	CP006892	542	475
Zymomonas mobilis	CP002854	542	475
Zymomonas mobilis	CP001723	542	475
Zymomonas mobilis	CP002867	542	475
Zymomonas mobilis	CP002852	542	475
Zymomonas mobilis	CP023678	542	475
Zymomonas mobilis	CP001885	542	475
Zymomonas mobilis	CP021791	542	475
Zymomonas mobilis	CP002866	542	475
Zymomonas mobilis	CP003706	542	475
Lactobacillus plantarum	CP035175	1590	475
Lactobacillus plantarum	CP035135	1590	475
Lactobacillus plantarum	CP006041	1590	475
Lactobacillus plantarum	CP017955	1590	475
Lactobacillus plantarum	CP035114	1590	475
1			

scientificName	nuccoreAcc	taxid	parent
Lactobacillus plantarum	CP013750	1590	475
Lactobacillus plantarum	CP040376	1590	475
Lactobacillus plantarum	CP023176	1590	475
Lactobacillus plantarum	CP006040	1590	475
Lactobacillus plantarum	CP023491	1590	475
Lactobacillus	CP035021	1578	475
Lactobacillus	CP033617	1578	475
Lactobacillus	CP015858	1578	475
Lactobacillus	CP032745	1578	475
Lactobacillus	CP025417	1578	475
Lactobacillus	CP017956	1578	475
Lactobacillus plantarum	CP037435	1590	475
Lactobacillus plantarum	CP035170	1590	475
Lactobacillus plantarum	CP013755	1590	475
Lactobacillus plantarum	CP025993	1590	475
Brevibacillus laterosporus	CP032411	1465	55080
Brevibacillus laterosporus	CP033461	1465	55080
Hoyosella subflava	CP002787	639313	697025
Hoyosella subflava	CP002788	639313	697025
Pantoea ananatis	HE617161	553	697025
Pantoea ananatis	CP028034	553	697025
Borreliella	AE001582	64895	697025
Borreliella	CP001462	64895	697025
Borreliella burgdorferi	CP001274	139	697025
Borreliella burgdorferi	CP002267	139	697025
Riemerella anatipestifer	JF268688	34085	34084
Myroides odoratimimus	CP013691	76832	76831
Azospirillum lipoferum	FQ311874	193	191
Azospirillum sp. M2T2B2	CP029835	682998	2630922
Azospirillum humicireducens	CP028905	1226968	191
Azospirillum sp. TSH100	CP039640	652764	2630922
Azospirillum sp. TSA2s	CP039644	709810	2630922
Azospirillum lipoferum	AP010952	193	2630922
Azospirillum sp. CFH 70021	CP029359	2202148	2630922
Staphylococcus	CP014116	1279	2630922
Staphylococcus	CP020767	1279	2630922
Staphylococcus	CP014131	1279	2630922
Staphylococcus epidermidis	CP034114	1282	2630922
Staphylococcus epidermidis	CP034117	1282	2630922
Staphylococcus epidermidis	CP030249	1282	2630922
Staphylococcus epidermidis	HG813246	1282	2630922
Enterococcus mundtii	CP029067	53346	1350
Enterococcus mundtii	AP013037	53346	1350
Enterococcus mundtii	CP018062	53346	1350

Enterococcus mundtii	scientificName	nuccoreAcc	taxid	parent
Acinetobacter baumannii CP033870 470 1350 Acinetobacter baumannii CP012955 470 1350 Acinetobacter baumannii CP026748 470 1350 Acinetobacter sp. WCHA45 CP028558 2004644 1350 Acinetobacter CP032138 469 1350 Acinetobacter CP0359397 469 1350 Acinetobacter cumulans CP035939 2136182 469 Acinetobacter nosocomialis CP033560 106654 469 Acinetobacter cumulans CP033846 571 469 Arientobacter nosocomialis CP033846 571 469 Klebsiella oxytoca CP038615 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038621 638 637	Enterococcus mundtii	CP029068	53346	1350
Acinetobacter baumannii CP012955 470 1350 Acinetobacter baumannii CP026748 470 1350 Acinetobacter sp. WCHA45 CP028558 2004644 1350 Acinetobacter CP032138 469 1350 Acinetobacter CP035937 469 1350 Acinetobacter cumulans CP035939 2136182 469 Acinetobacter nosocomialis CP033560 106654 469 Klebsiella oxytoca CP038615 638 637 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038626 638 637 <	Acinetobacter baumannii	CP015365	470	1350
Acinetobacter baumannii CP026748 470 1350 Acinetobacter sp. WCHA45 CP028558 2004644 1350 Acinetobacter CP032138 469 1350 Acinetobacter CP035937 469 1350 Acinetobacter cumulans CP035939 2136182 469 Acinetobacter nosocomialis CP033560 106654 469 Klebsiella oxytoca CP0338615 638 637 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038624 638 637 <td< td=""><td>Acinetobacter baumannii</td><td>CP033870</td><td>470</td><td>1350</td></td<>	Acinetobacter baumannii	CP033870	470	1350
Acinetobacter sp. WCHA45 CP028558 2004644 1350 Acinetobacter CP032138 469 1350 Acinetobacter CP035937 469 1350 Acinetobacter cumulans CP035939 2136182 469 Acinetobacter nosocomialis CP033560 106654 469 Klebsiella oxytoca CP038615 638 637 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenophonus nasoniae CP038626 638 637 Str	Acinetobacter baumannii	CP012955	470	1350
Acinetobacter CP032138 469 1350 Acinetobacter CP035937 469 1350 Acinetobacter cumulans CP0379393 2136182 469 Acinetobacter nosocomialis CP0335939 2136182 469 Acinetobacter nosocomialis CP033560 106654 469 Klebsiella oxytoca CP038615 638 637 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038624 638 637	Acinetobacter baumannii	CP026748	470	1350
Acinetobacter CP035937 469 1350 Acinetobacter CP031711 469 1350 Acinetobacter cumulans CP035939 2136182 469 Acinetobacter nosocomialis CP035939 2136182 469 Klebsiella oxytoca CP0338616 638 637 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038617 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038624 638 637 Moraxella bovis GQ998872 476 476 Streptomyces hy	Acinetobacter sp. WCHA45	CP028558	2004644	1350
Acinetobacter CP031711 469 1350 Acinetobacter cumulans CP035939 2136182 469 Acinetobacter nosocomialis CP033560 106654 469 Klebsiella oxytoca CP033846 571 469 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038624 638 637 Stre	Acinetobacter	CP032138	469	1350
Acinetobacter cumulans CP035939 2136182 469 Acinetobacter nosocomialis CP033560 106654 469 Klebsiella oxytoca CP033861 571 469 Klebsiella oxytoca CP038615 638 637 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038617 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus rumiansium CP038625 663 637 <t< td=""><td>Acinetobacter</td><td>CP035937</td><td>469</td><td>1350</td></t<>	Acinetobacter	CP035937	469	1350
Acinetobacter nosocomialis CP033560 106654 469 Klebsiella oxytoca CP033846 571 469 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038617 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038624 638 637 Ar	Acinetobacter	CP031711	469	1350
Klebsiella oxytoca CP038815 638 637 Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038623 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038617 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Moraxella bovis GQ998872 476 475 Streptomyces hygroscopicus CP003277 1912 1883 Streptomy	Acinetobacter cumulans	CP035939	2136182	469
Arsenophonus nasoniae CP038615 638 637 Arsenophonus nasoniae CP038623 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038617 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenop	Acinetobacter nosocomialis	CP033560	106654	469
Arsenophonus nasoniae CP038623 638 637 Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038617 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenop	Klebsiella oxytoca	CP033846	571	469
Arsenophonus nasoniae CP038618 638 637 Arsenophonus nasoniae CP038617 638 637 Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenop	Arsenophonus nasoniae	CP038615	638	637
Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenophonus nasoniae CP003277 1912 1883 Streptomyces placeting prosections CP013569 396 379	Arsenophonus nasoniae	CP038623	638	637
Arsenophonus nasoniae CP038614 638 637 Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Arsenophonus nasoniae CP038624 638 637 Masculation CP045095 2653200 2593676 Streptomyces publication CP013569 396 379 Rhizob	Arsenophonus nasoniae	CP038618	638	637
Arsenophonus nasoniae CP038620 638 637 Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Moraxella bovis GQ998872 476 475 Streptomyces hygroscopicus CP003277 1912 1883 Streptomyces p. GY16 CP045095 2653200 2593676 Streptomyces malaysiensis CP023993 92644 1883 Rhizobium phaseoli CP013569 396 379 Rhizobium phaseoli CP013566 379 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter gallaeciensis CP010646 302485 970 Phaeobacter CP010719 302485 970	Arsenophonus nasoniae	CP038617	638	637
Arsenophonus nasoniae CP038621 638 637 Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Moraxella bovis GQ998872 476 475 Streptomyces hygroscopicus CP003277 1912 1883 Streptomyces sp. GY16 CP045095 2653200 2593676 Streptomyces malaysiensis CP023993 92644 1883 Rhizobium phaseoli CP013569 396 379 Rhizobium phaseoli CP013506 379 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter gallacciensis CP0106970 60890 970 Phaeobacter CP010646 302485 970	Arsenophonus nasoniae	CP038614	638	637
Arsenophonus nasoniae CP038619 638 637 Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Moraxella bovis GQ998872 476 475 Streptomyces hygroscopicus CP003277 1912 1883 Streptomyces sp. GY16 CP045095 2653200 2593676 Streptomyces malaysiensis CP023993 92644 1883 Rhizobium phaseoli CP013569 396 379 Rhizobium phaseoli CP013506 379 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter gallaeciensis CP010632 221822 970 Phaeobacter CP010646 302485 970 Phaeobacter CP010646 302485 970	Arsenophonus nasoniae	CP038620	638	637
Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Moraxella bovis GQ998872 476 475 Streptomyces hygroscopicus CP003277 1912 1883 Streptomyces sp. GY16 CP045095 2653200 2593676 Streptomyces malaysiensis CP023993 92644 1883 Rhizobium phaseoli CP013569 396 379 Rhizobium phaseoli CP013506 379 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter inhibens CP010632 221822 970 Phaeobacter gallaeciensis CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970	Arsenophonus nasoniae	CP038621	638	637
Arsenophonus nasoniae CP038624 638 637 Arsenophonus nasoniae CP038626 638 637 Moraxella bovis GQ998872 476 475 Streptomyces hygroscopicus CP003277 1912 1883 Streptomyces sp. GY16 CP045095 2653200 2593676 Streptomyces malaysiensis CP023993 92644 1883 Rhizobium phaseoli CP013569 396 379 Rhizobium phaseoli CP013506 379 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter inhibens CP010632 221822 970 Phaeobacter gallaeciensis CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970	Arsenophonus nasoniae	CP038619	638	637
Arsenophonus nasoniae CP038626 638 637 Moraxella bovis GQ998872 476 475 Streptomyces hygroscopicus CP003277 1912 1883 Streptomyces sp. GY16 CP045095 2653200 2593676 Streptomyces malaysiensis CP023993 92644 1883 Rhizobium phaseoli CP013569 396 379 Rhizobium phaseoli CP013506 379 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter gallaeciensis CP010632 221822 970 Phaeobacter CP006970 60890 970 Phaeobacter CP010646 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970		CP038624	638	637
Streptomyces hygroscopicus CP003277 1912 1883 Streptomyces sp. GY16 CP045095 2653200 2593676 Streptomyces malaysiensis CP023993 92644 1883 Rhizobium phaseoli CP013569 396 379 Rhizobium phaseoli CP013558 396 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter gallaeciensis CP010632 221822 970 Phaeobacter CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Rhodobacteraceae CP01856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 <t< td=""><td></td><td>CP038626</td><td>638</td><td>637</td></t<>		CP038626	638	637
Streptomyces sp. GY16 CP045095 2653200 2593676 Streptomyces malaysiensis CP023993 92644 1883 Rhizobium phaseoli CP013569 396 379 Rhizobium phaseoli CP013558 396 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter inhibens CP010632 221822 970 Phaeobacter gallaeciensis CP010632 221822 970 Phaeobacter CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008	Moraxella bovis	GQ998872	476	475
Streptomyces malaysiensis CP023993 92644 1883 Rhizobium phaseoli CP013569 396 379 Rhizobium CP013506 379 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter gallaeciensis CP010632 221822 970 Phaeobacter gallaeciensis CP006970 60890 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Streptomyces hygroscopicus	CP003277	1912	1883
Rhizobium phaseoli CP013569 396 379 Rhizobium CP013506 379 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter gallaeciensis CP010632 221822 970 Phaeobacter gallaeciensis CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Rhodobacteraceae CP01856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia gladioli CP002602 28095 32008 Burkholderia glumae CP001506 337 32008	Streptomyces sp. GY16	CP045095	2653200	2593676
Rhizobium CP013506 379 227290 Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter inhibens CP010632 221822 970 Phaeobacter gallaeciensis CP0106970 60890 970 Phaeobacter CP010719 302485 970 Phaeobacter CP016369 1844006 970 Rhodobacteraceae CP018881 31989 970 Rhodobacteraceae CP01856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Streptomyces malaysiensis	CP023993	92644	1883
Rhizobium phaseoli CP013558 396 227290 Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter gallaeciensis CP010632 221822 970 Phaeobacter gallaeciensis CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP01881 31989 970 Rhodobacteraceae CP010856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Rhizobium phaseoli	CP013569	396	379
Selenomonas ruminantium AB003192 971 970 Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter gallaeciensis CP010632 221822 970 Phaeobacter gallaeciensis CP006970 60890 970 Phaeobacter CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Rhizobium	CP013506	379	227290
Selenomonas ruminantium DQ186900 971 970 Phaeobacter inhibens CP010625 221822 970 Phaeobacter inhibens CP010632 221822 970 Phaeobacter gallaeciensis CP006970 60890 970 Phaeobacter CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Rhizobium phaseoli	CP013558	396	227290
Phaeobacter inhibens CP010625 221822 970 Phaeobacter inhibens CP010632 221822 970 Phaeobacter gallaeciensis CP006970 60890 970 Phaeobacter CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018881 31989 970 Rhodobacteraceae CP010856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Selenomonas ruminantium	AB003192	971	970
Phaeobacter inhibens CP010632 221822 970 Phaeobacter gallaeciensis CP006970 60890 970 Phaeobacter CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Rhodobacteraceae CP010856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Selenomonas ruminantium	DQ186900	971	970
Phaeobacter gallaeciensis CP006970 60890 970 Phaeobacter CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Rhodobacteraceae CP010856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Phaeobacter inhibens	CP010625	221822	970
Phaeobacter CP010646 302485 970 Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Rhodobacteraceae CP010856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Phaeobacter inhibens	CP010632	221822	970
Phaeobacter CP010719 302485 970 Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Rhodobacteraceae CP010856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Phaeobacter gallaeciensis	CP006970	60890	970
Phaeobacter porticola CP016369 1844006 970 Rhodobacteraceae CP018081 31989 970 Rhodobacteraceae CP010856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Phaeobacter	CP010646	302485	970
Rhodobacteraceae CP018081 31989 970 Rhodobacteraceae CP010856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia gladioli CP002602 28095 32008 Burkholderia glumae CP001506 337 32008	Phaeobacter	CP010719	302485	970
Rhodobacteraceae CP010856 31989 970 Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia glumae CP001506 337 32008	Phaeobacter porticola	CP016369	1844006	970
Sulfitobacter sp. THAF37 CP045373 2587855 970 Burkholderia gladioli CP002601 28095 32008 Burkholderia gladioli CP002602 28095 32008 Burkholderia glumae CP001506 337 32008	Rhodobacteraceae	CP018081	31989	970
Burkholderia gladioli CP002601 28095 32008 Burkholderia gladioli CP002602 28095 32008 Burkholderia glumae CP001506 337 32008	Rhodobacteraceae	CP010856	31989	970
Burkholderia gladioli CP002602 28095 32008 Burkholderia glumae CP001506 337 32008	Sulfitobacter sp. THAF37	CP045373	2587855	970
Burkholderia glumae CP001506 337 32008	Burkholderia gladioli	CP002601	28095	32008
	Burkholderia gladioli	CP002602	28095	32008
Burkholderia glumae CP001505 337 32008	Burkholderia glumae	CP001506	337	32008
	Burkholderia glumae	CP001505	337	32008

scientificName	nuccoreAcc	taxid	parent
Burkholderia glumae	CP045089	337	32008
Burkholderia glumae	CP001508	337	32008
Burkholderia glumae	CP001507	337	32008
Burkholderia glumae	CP009433	337	32008
Burkholderia glumae	CP045090	337	32008
Burkholderia plantarii	CP007214	41899	32008
Burkholderia cenocepacia	CP015032	95486	87882
Burkholderia cenocepacia	CP015038	95486	87882
Burkholderia pseudomallei	CP009155	28450	111527
[Pseudomonas] mesoacidophila	CP020740	265293	87882
Staphylococcus saprophyticus	AP008935	29385	87882
Staphylococcus saprophyticus	CP014114	29385	87882
Staphylococcus nepalensis	CP017467	214473	1279
Staphylococcus nepalensis	CP017461	214473	1279
Staphylococcus sp. 693-2	DQ390456	373067	91994
Staphylococcus equorum	CP013981	246432	91994
Buchnera aphidicola	AF492591	9	91994
Francisella philomiragia	CP009446	28110	262
Acinetobacter	CP023021	469	262
Acinetobacter	KY499579	469	262
Acinetobacter	CP033542	469	262
Acinetobacter soli	CP016899	487316	469
Acinetobacter larvae	CP018141	1789224	469
Acinetobacter	CP032275	469	469
Acinetobacter	CP035940	469	469
Acinetobacter larvae	CP018142	1789224	469
Klebsiella pneumoniae	CP032210	573	469
Klebsiella pneumoniae	CP020905	573	469
Synechococcus sp. PCC 6312	CP003559	195253	2626047
Acinetobacter	CP021783	469	2626047
Acinetobacter nosocomialis	KC417495	106654	2626047
Acinetobacter	CP021784	469	2626047
Lactobacillus	AY096004	1578	2626047
Lactobacillus	JN601038	1578	2626047
Lactobacillus	CP013168	1578	2626047
Weissella cibaria	EU236595	137591	2626047
Lactobacillus plantarum	CP015127	1590	2626047
Lactobacillus plantarum	CP012654	1590	2626047
Lactobacillus paraplantarum	AF459640	60520	2626047
Singulisphaera acidiphila	CP003365	466153	466152
Sphingomonas sp. MM-1	CP004038	745310	196159
Sphingomonadaceae	CP004041	41297	196159
Sphingomonadaceae	CP005087	41297	196159
Sphingomonas wittichii	CP021186	160791	196159

scientificName	nuccoreAcc	taxid	parent
Sphingobium sp. YBL2	CP010960	484429	2611147
Sphingomonadaceae	CP010959	41297	2611147
Sphingomonadaceae	KU237244	41297	2611147
Sphingobium sp. YBL2	CP010958	484429	2611147
Micrococcus luteus	KC005723	1270	1269
Agrobacterium tumefaciens	CP000632	358	1269
Sinorhizobium fredii	HE616892	380	663276
Sinorhizobium fredii	HE616891	380	663276
Cardinium endosymbiont of Encarsia pergandiella	HE983996	249402	273135
Cardinium endosymbiont of Bemisia tabaci	HG422566	672794	273135
Pseudomonas syringae	JQ418535	317	273135
Streptomyces violaceoruber	AY211023	1935	1883
Streptomyces dengpaensis	CP026654	2049881	1883
Streptomyces sp. FR1	DQ322651	349971	2593676
Streptomyces venezuelae	CP018075	54571	1883
Streptomyces davaonensis	HE971710	1214101	348043
Streptomyces avermitilis	AP005645	33903	1883
Streptomyces sp. SAT1	CP016084	1849967	2593676
Erwinia sp. Ejp617	CP002127	215689	2622719
Erwinia sp. Ejp617	CP002128	215689	2622719
Acetobacteraceae	AP012161	433	2622719
Acetobacteraceae	LN606601	433	2622719
Acetobacter pasteurianus	HF677572	438	2622719
Komagataeibacter nataicola	CP019877	265960	1434011
Candidatus Riesia sp. GBBU	CP012848	1719125	2630307
Candidatus Riesia pthiripubis	CP012847	428412	401618
Pseudomonas sp. GLE121	KC542381	1329969	2583993
Pseudomonas sp.	KY498026	306	2583993
Clostridioides difficile	CP029153	1496	1870884
Clostridioides difficile	CP011969	1496	1870884
Lactobacillus sakei	CP020807	1599	1870884
Rhodobacter capsulatus	CP001313	1061	1060
Staphylococcus aureus	CP027488	1280	1060
Enterococcus faecium	CP033211	1352	1060
Clostridioides difficile	MH229772	1496	1060
Enterococcus faecium	CP041258	1352	1060
Enterococcus faecium	CP012468	1352	1060
Enterococcus	KR936172	1350	1060
Enterococcus	CP006623	1350	1060
Enterococcus	KR066794	1350	1060
Enterococcus faecium	KJ645709	1352	1060
Enterococcus faecium	CP028728	1352	1060
Macrococcus	AP009486	69965	90964
	550 100		

scientificName	nuccoreAcc	taxid	parent
Bacilli	KP698941	91061	1239
Staphylococcus	GU565967	1279	1239
Staphylococcus lugdunensis	KU882683	28035	1239
Sphingobium	AP018667	165695	1239
Sphingomonas wittichii	CP021183	160791	1239
Sphingomonadaceae	CP012703	41297	1239
Sphingomonadaceae	AP018669	41297	1239
Sphingomonas wittichii	CP021188	160791	1239
Rhizorhabdus dicambivorans	CP023453	1850238	1649486
Sphingobium amiense	AP018668	135719	165695
Sphingobium chungbukense	JN180627	56193	165695
Sphingopyxis macrogoltabida	CP012704	33050	165695
Sphingobium baderi	CP013269	1332080	165695
Sphingobium cloacae	AP017661	120107	165695
Tardibacter chloracetimidivorans	CP018222	1921510	2685927
Vibrio cholerae	DQ787203	666	2685927
Vibrio cholerae	KY486774	666	2685927
Vibrio sp. THAF100	CP045353	2587862	2614977
Borrelia miyamotoi	CP044643	47466	2614977
Borrelia miyamotoi	CP036753	47466	2614977
Borrelia miyamotoi	CP044799	47466	2614977
Komagataeibacter nataicola	CP019880	265960	2614977
Komagataeibacter nataicola	CP019881	265960	2614977
Escherichia coli	GQ149345	562	2614977
Serratia marcescens	JF785550	615	2614977
Haemophilus	JQ611727	724	712
Haemophilus	NC_020228	724	712
Neisseria gonorrhoeae	CP020417	485	482
Neisseria gonorrhoeae	DQ355980	485	482
Kingella kingae	LK021334	504	32257
Escherichia coli	MK753226	562	32257
Escherichia coli	KY563785	562	32257
Hungateiclostridium thermocellum	KC920664	1515	2304692
Bacteria	GQ149342	2	2304692
Bacteria	GQ149348	2	2304692
Bacteria	AY123047	2	2304692
Enterobacteriaceae	KY554955	543	2304692
Providencia stuartii	CP031509	588	2304692
Rahnella aquatilis	CP036489	34038	34037
Agrobacterium tumefaciens	AF019744	358	34037
Enterobacteriaceae	JN232518	543	34037
Enterobacteriaceae	AY033516	543	34037
Escherichia coli	KY865324	562	34037
Enterobacter roggenkampii	CP045066	1812935	34037

scientificName	nuccoreAcc	taxid	parent
Serratia marcescens	CP042515	615	34037
Enterobacteriaceae	CP023876	543	34037
Enterobacteriaceae	CP017933	543	34037
Enterobacteriaceae	CP023885	543	34037
Enterobacter cloacae	CP029721	550	34037
Enterobacteriaceae	CP020359	543	34037
Enterobacteriaceae	CP023883	543	34037
Raoultella ornithinolytica	MF788070	54291	34037
Gammaproteobacteria	MK851047	1236	34037
Achromobacter sp. LM16	KM659090	1449778	2626865
Cupriavidus metallidurans	CP026545	119219	106589
Ralstonia mannitolilytica	CP010801	105219	48736
Capnocytophaga canimorsus	EU741249	28188	1016
Lactococcus lactis	NC_009751	1358	1016
Lactococcus garvieae	LC205736	1363	1016
Lactococcus lactis	AP018501	1358	1016
Lactococcus lactis	CP016746	1358	1016
Exiguobacterium sp. S3-2	KF648875	1389960	2644629
Staphylococcus aureus	CP015818	1280	2644629
Staphylococcus aureus	LC102479	1280	2644629
Paenibacillus bovis	CP021170	1616788	44249
Bacillus oceanisediminis	CP015507	665099	1386
Enterococcus	KX976485	1350	1386
Enterococcus	AB206333	1350	1386
Enterococcus	KY290886	1350	1386
Enterococcus	CP018130	1350	1386
Enterococcus	CP041255	1350	1386
Enterobacterales	CP009465	91347	1386
Enterobacterales	MK036884	91347	1386
Enterobacteriaceae	CP018426	543	1386
Enterobacteriaceae	CP012163	543	1386
Bacillus thuringiensis	CP001913	1428	1386
Bacillus thuringiensis	CP011358	1428	1386
Bacillus thuringiensis	CP010581	1428	1386
Aeromonas hydrophila	CP013179	644	642
Aeromonas hydrophila	CP010949	644	642
Aeromonas salmonicida	AY301063	645	642
Aeromonas sobria	MF770241	646	642
Macrococcus caseolyticus	AP009491	69966	69965
Macrococcus caseolyticus	AP009490	69966	69965
Vibrio anguillarum	JQ782192	55601	69965
Leptospira mayottensis	MF974398	1137606	171
Leptospira interrogans	CP006727	173	171
Pseudomonas sp.	MK376346	306	171

Pseudomonas fragi	scientificName	nuccoreAcc	taxid	parent
Polaromonas naphthalenivorans	Pseudomonas fragi	KX353854	296	171
Komagataeibacter xylinus CP025271 28448 52972 Komagataeibacter europaeus AB972538 33995 1434011 Psychrobacter sp. PRwf-1 CP000715 349106 196806 Psychrobacter sp. P11G5 CP012537 1699624 196806 Psychrobacter sp. VP14 CP029793 203895 196806 Sphingobium baderi CP013270 1332080 196806 Sphingobium baderi CP013270 1332080 196806 Bacillus thuringiensis CP003760 1428 196806 Bacillus thuringiensis CP0030893 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Lactobacillus brevis CP0101099 1428 196806 Lactobacillus brevis CP018182 1578 196806 Lactobacillus brevis CP018182 1578 196806 Lactobacillus brevis CP019745 1607 196806 Lactobacillus plantarum CP0205176 1590 196806 Lactobacillus plantarum CP035	Pseudomonas sp. DY-1	CP032615	1755504	2583993
Komagataeibacter europaeus AB 972538 33995 1434011 Psychrobacter sp. PRwf-1 CP000715 349106 196806 Psychrobacter sp. P11G5 CP012537 1699624 196806 Psychrobacter sp. YP14 CP029793 2203895 196806 Sphingobium baderi CP013272 1332080 196806 Sphingobium baderi CP013270 1332080 196806 Bacillus thuringiensis CP003760 1428 196806 Bacillus thuringiensis CP003893 1428 196806 Bacillus thuringiensis CP003893 1428 196806 Bacillus thuringiensis CP003893 1428 196806 Lactobacillus brevis CP0117099 1428 196806 Lactobacillus brevis CP021460 1580 196806 Lactobacillus brevis CP018182 1578 196806 Lactobacillus plantarum CP019745 1580 196806 Lactobacillus plantarum CP020907 1590 196806 Tetragenococcus halophilus A	Polaromonas naphthalenivorans	CP000536	216465	52972
Psychrobacter sp. PRwf-1 CP000715 349106 196806 Psychrobacter sp. P11G5 CP012537 1699624 196806 Psychrobacter sp. YP14 CP029793 2203895 196806 Sphingobium baderi CP013272 1332080 196806 Sphingobium baderi CP013270 1332080 196806 Bacillus thuringiensis CP003893 1428 196806 Bacillus thuringiensis CP003893 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Bacillus thuringiensis CP0110099 1428 196806 Lactobacillus brevis CP021460 1580 196806 Lactobacillus brevis CP018182 1578 196806 Lactobacillus plantarum CP045874 1607 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Tetragenococcus halophilus AB368	Komagataeibacter xylinus	CP025271	28448	52972
Psychrobacter sp. P11G5 CP012537 1699624 196806 Psychrobacter sp. YP14 CP029793 2203895 196806 Sphingobium baderi CP013270 1332080 196806 Sphingobium baderi CP013270 1332080 196806 Bacillus thuringiensis CP003760 1428 196806 Bacillus thuringiensis CP0010099 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Bacillus thuringiensis CP018182 1578 196806 Lactobacillus brevis CP018182 1578 196806 Lactobacillus brevis CP018182 1578 196806 Lactobacillus brevis CP018182 1578 196806 Lactobacillus plantarum CP02097 1590 196806 Lactobacillus plantarum CP0235176 1590 196806 Tetragenococcus AB588179 <	Komagataeibacter europaeus	AB972538	33995	1434011
Psychrobacter sp. YP14 CP029793 2203895 196806 Sphingobium baderi CP013272 1332080 196806 Sphingobium baderi CP013270 1332080 196806 Bacillus thuringiensis CP003760 1428 196806 Bacillus thuringiensis CP003893 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Lactobacillus brevis CP031179 1580 196806 Lactobacillus brevis CP011460 1580 196806 Lactobacillus brevis CP01874 1607 196806 Lactobacillus brevis CP019745 1580 196806 Lactobacillus plantarum CP02097 1590 196806 Lactobacillus plantarum CP02097 1590 196806 Lactobacillus plantarum CP02097 1590 196806 Tetragenococcus halophilus AB362339 51669 51668 Tetragenococcus halophilus AB368178 51668 1852 Lactobacillus plantarum KP71893	Psychrobacter sp. PRwf-1	CP000715	349106	196806
Sphingobium baderi CP013272 1332080 196806 Sphingobium baderi CP013270 1332080 196806 Bacillus thuringiensis CP003760 1428 196806 Bacillus thuringiensis CP003893 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Lactobacillus brevis CP021460 1580 196806 Lactobacillus brevis CP018182 1578 196806 Lactobacillus bifermentans CP045874 1607 196806 Lactobacillus plantarum CP02097 1590 196806 Tetragenococcus halophilus AB362339 51669 51668 Tetragenococcus halophilus AB588178 51668 81852 Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum KP71893	Psychrobacter sp. P11G5	CP012537	1699624	196806
Sphingobium baderi CP013270 1332080 196806 Bacillus thuringiensis CP03760 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Bacillus thuringiensis CP0110099 1428 196806 Lactobacillus brevis CP021460 1580 196806 Lactobacillus bifermentans CP045874 1607 196806 Lactobacillus bifermentans CP045874 1607 196806 Lactobacillus plantarum CP045874 1607 196806 Lactobacillus plantarum CP045874 1607 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Tetragenococcus halophilus AB914743 51669 51668 Tetragenococcus halophilus AB588178 51669 51668 Tetragenococcus halophilus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Lactobacillus plantarum	Psychrobacter sp. YP14	CP029793	2203895	196806
Bacillus thuringiensis CP003760 1428 196806 Bacillus thuringiensis CP003893 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Lactobacillus brevis CP031179 1580 196806 Lactobacillus brevis CP021460 1580 196806 Lactobacillus bifermentans CP045874 1607 196806 Lactobacillus brevis CP019745 1580 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Tetragenococcus halophilus AB914743 51669 51668 Tetragenococcus halophilus AB588179 51668 81852 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Lactobacillus curvatus CP018764 <	Sphingobium baderi	CP013272	1332080	196806
Bacillus thuringiensis CP003893 1428 196806 Bacillus thuringiensis CP010099 1428 196806 Lactobacillus brevis CP031179 1580 196806 Lactobacillus brevis CP018182 1578 196806 Lactobacillus bifermentans CP045874 1607 196806 Lactobacillus brevis CP019745 1580 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Lactobacillus plantarum CP0368 1569 51668 Tetragenococcus halophilus AB362339 51669 51668 Tetragenococcus AB588179 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012855	Sphingobium baderi	CP013270	1332080	196806
Bacillus thuringiensis CP010099 1428 196806 Lactobacillus brevis CP031179 1580 196806 Lactobacillus brevis CP021460 1580 196806 Lactobacillus bifermentans CP018182 1578 196806 Lactobacillus bifermentans CP045874 1607 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Tetragenococcus halophilus AB362339 51669 51668 Tetragenococcus halophilus AB3688179 51668 81852 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Lactobacillus curvatus CP0128764 1254 81852 Lactobacillus plantarum CP012655	Bacillus thuringiensis	CP003760	1428	196806
Lactobacillus brevis CP031179 1580 196806 Lactobacillus brevis CP021460 1580 196806 Lactobacillus brevis CP018182 1578 196806 Lactobacillus bifermentans CP045874 1607 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Tetragenococcus halophilus AB914743 51669 51668 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus plantarum CP012655 1590 81852 Lactobacillus survatus CP026117 2803 <td>Bacillus thuringiensis</td> <td>CP003893</td> <td>1428</td> <td>196806</td>	Bacillus thuringiensis	CP003893	1428	196806
Lactobacillus brevis CP021460 1580 196806 Lactobacillus CP018182 1578 196806 Lactobacillus bifermentans CP045874 1607 196806 Lactobacillus brevis CP019745 1580 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Tetragenococcus halophilus AB914743 51669 51668 Tetragenococcus halophilus AB362339 51669 51668 Tetragenococcus AB588179 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP018764 1254 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus plantarum CP026117 28038 81852 Lactobacillus plantarum CP012878 137591 81852 Lactobacillus plantarum CP012878	Bacillus thuringiensis	CP010099	1428	196806
Lactobacillus CP018182 1578 196806 Lactobacillus bifermentans CP045874 1607 196806 Lactobacillus previs CP019745 1580 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Lactobacillus plantarum AB914743 51669 51668 Tetragenococcus halophilus AB362339 51669 51668 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Tetragenococcus AB588178 51668 81852 Tetragenococcus acidilactici CP018764 1254 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Lactobacillus plantarum CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 <t< td=""><td>Lactobacillus brevis</td><td>CP031179</td><td>1580</td><td>196806</td></t<>	Lactobacillus brevis	CP031179	1580	196806
Lactobacillus bifermentans CP045874 1607 196806 Lactobacillus brevis CP019745 1580 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Tetragenococcus halophilus AB914743 51669 51668 Tetragenococcus halophilus AB362339 51669 51668 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Tetragenococcus AB588179 51668 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus plantarum CP012878 137591 81852	Lactobacillus brevis	CP021460	1580	196806
Lactobacillus brevis CP019745 1580 196806 Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Tetragenococcus halophilus AB914743 51669 51668 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus plantarum CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Lactobacillus plantarum CP012878 137591 81852 Lactobacillus plantarum CP012878	Lactobacillus	CP018182	1578	196806
Lactobacillus plantarum CP020097 1590 196806 Lactobacillus plantarum CP035176 1590 196806 Tetragenococcus halophilus AB914743 51669 51668 Tetragenococcus AB362339 51669 51668 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Pediococcus acidilactici CP018764 1254 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus plantarum CP026117 28038 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Lactobacillus pentosaceus CP0167919 1255 1578 Pediococcus pentosaceus C	Lactobacillus bifermentans	CP045874	1607	196806
Lactobacillus plantarum CP035176 1590 196806 Tetragenococcus halophilus AB914743 51669 51668 Tetragenococcus halophilus AB362339 51669 51668 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Pediococcus acidilactici CP018764 1254 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Weissella cibaria CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Lactobacillus sanfranciscensis CP015919 1255 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP03379	Lactobacillus brevis	CP019745	1580	196806
Tetragenococcus halophilus AB914743 51669 51668 Tetragenococcus halophilus AB362339 51669 51668 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Pediococcus acidilactici CP018764 1254 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Lactobacillus plantarum CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Lactobacillus sanfranciscensis CP002462 1625 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP039379	Lactobacillus plantarum	CP020097	1590	196806
Tetragenococcus AB362339 51669 51668 Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Pediococcus acidilactici CP018764 1254 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Weissella cibaria CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 <td< td=""><td>Lactobacillus plantarum</td><td>CP035176</td><td>1590</td><td>196806</td></td<>	Lactobacillus plantarum	CP035176	1590	196806
Tetragenococcus AB588179 51668 81852 Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Pediococcus acidilactici CP018764 1254 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Weissella cibaria CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Lactobacillus sanfranciscensis CP002462 1625 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis CP016709 <t< td=""><td>Tetragenococcus halophilus</td><td>AB914743</td><td>51669</td><td>51668</td></t<>	Tetragenococcus halophilus	AB914743	51669	51668
Tetragenococcus AB588178 51668 81852 Lactobacillus plantarum AF440277 1590 81852 Pediococcus acidilactici CP018764 1254 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Weissella cibaria CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Lactobacillus sanfranciscensis CP002462 1625 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis L75827 1358	Tetragenococcus halophilus	AB362339	51669	51668
Lactobacillus plantarum AF440277 1590 81852 Pediococcus acidilactici CP018764 1254 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Weissella cibaria CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Lactobacillus sanfranciscensis CP002462 1625 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 <td>Tetragenococcus</td> <td>AB588179</td> <td>51668</td> <td>81852</td>	Tetragenococcus	AB588179	51668	81852
Pediococcus acidilactici CP018764 1254 81852 Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Weissella cibaria CP012878 137591 81852 Lactobacillus sanfranciscensis CP012878 137591 81852 Lactobacillus sanfranciscensis CP002462 1625 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis AF247159 1358	Tetragenococcus	AB588178	51668	81852
Lactobacillus plantarum KP718939 1590 81852 Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Weissella cibaria CP012878 137591 81852 Lactobacillus sanfranciscensis CP002462 1625 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Lactobacillus plantarum	AF440277	1590	81852
Lactobacillus curvatus CP026117 28038 81852 Lactobacillus plantarum CP012655 1590 81852 Weissella cibaria CP012878 137591 81852 Lactobacillus sanfranciscensis CP002462 1625 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF247159 1358 1578	Pediococcus acidilactici	CP018764	1254	81852
Lactobacillus plantarum CP012655 1590 81852 Weissella cibaria CP012878 137591 81852 Lactobacillus sanfranciscensis CP002462 1625 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Lactobacillus plantarum	KP718939	1590	81852
Weissella cibaria CP012878 137591 81852 Lactobacillus sanfranciscensis CP002462 1625 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Lactobacillus curvatus	CP026117	28038	81852
Lactobacillus sanfranciscensis CP002462 1625 1578 Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF247159 1358 1578	Lactobacillus plantarum	CP012655	1590	81852
Pediococcus pentosaceus CP015919 1255 1578 Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Weissella cibaria	CP012878	137591	81852
Pediococcus pentosaceus CP021928 1255 1578 Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Lactobacillus sanfranciscensis	CP002462	1625	1578
Pediococcus pentosaceus CP021471 1255 1578 Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Pediococcus pentosaceus	CP015919	1255	1578
Pediococcus pentosaceus CP039379 1255 1578 Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Pediococcus pentosaceus	CP021928	1255	1578
Lactococcus lactis HQ646604 1358 1578 Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Pediococcus pentosaceus	CP021471	1255	1578
Lactococcus lactis MG813925 1358 1578 Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Pediococcus pentosaceus	CP039379	1255	1578
Lactococcus lactis CP016709 1358 1578 Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Lactococcus lactis	HQ646604	1358	1578
Lactococcus lactis CP016749 1358 1578 Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Lactococcus lactis		1358	1578
Lactococcus lactis L75827 1358 1578 Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Lactococcus lactis	CP016709	1358	1578
Lactococcus lactis NC_008436 1358 1578 Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Lactococcus lactis	CP016749	1358	1578
Lactococcus lactis AF247159 1358 1578 Lactococcus lactis AF116286 1358 1578	Lactococcus lactis	L75827	1358	1578
Lactococcus lactis AF116286 1358 1578	Lactococcus lactis	NC_008436	1358	1578
	Lactococcus lactis	AF247159	1358	1578
Lactococcus lactis JQ821353 1358 1578	Lactococcus lactis	AF116286	1358	1578
	Lactococcus lactis	JQ821353	1358	1578

scientificName	nuccoreAcc	taxid	parent
Lactococcus lactis	DQ149242	1358	1578
Lactococcus lactis	CP043522	1358	1578
Lactococcus lactis	CP034580	1358	1578
Enterobacteriaceae	CP022502	543	1578
Escherichia coli	CP011333	562	1578
Escherichia coli	CP027393	562	1578
Escherichia coli	CP021882	562	1578
Escherichia coli	CP023957	562	1578
Escherichia coli	CP021739	562	1578
Salmonella enterica	CP020494	28901	1578
Salmonella enterica	CP012835	28901	1578
Enterobacteriaceae	KU043116	543	1578
Enterobacteriaceae	CP032938	543	1578
Escherichia coli	CP025846	562	1578
Escherichia coli	CP025866	562	1578
Escherichia fergusonii	CP040808	564	561
Escherichia coli	CP019954	562	561
Escherichia coli	CP023350	562	561
Gloeothece verrucosa	CP002202	497965	2546359
Gloeothece verrucosa	CP002203	497965	2546359
Gloeothece citriformis	CP001294	65393	2546356
Klebsiella pneumoniae	CP028790	573	2546356
Klebsiella pneumoniae	CP026137	573	2546356
Klebsiella pneumoniae	MG764553	573	2546356
Klebsiella pneumoniae	CP023725	573	2546356
Klebsiella pneumoniae	CP023938	573	2546356
Escherichia coli	CP019269	562	2546356
Escherichia coli	$\rm MF535908$	562	2546356
Escherichia coli	MK416152	562	2546356
Citrobacter rodentium	FN543503	67825	544
Enterobacteriaceae	CP020510	543	544
Escherichia coli	CP020057	562	544
Salmonella enterica	CP040652	28901	544
Salmonella enterica	CP040649	28901	544
Borreliella garinii	CP018754	29519	544
Borreliella garinii	CP018753	29519	544
Borreliella afzelii	CP001245	29518	544
Borreliella afzelii	CP000399	29518	544
Borreliella garinii	CP001320	29519	544
Borreliella garinii	CP001306	29519	544
Borreliella garinii	CP028871	29519	544
Bacillus pumilus	AF036712	1408	1386
Bacillus pumilus	MH522715	1408	1386
Bacillus	NC 001764	1386	1386

scientificName	nuccoreAcc	taxid	parent
Bacillus altitudinis	CP040745	293387	1792192
Bacillus pumilus	KM348008	1408	1792192
Bacillus altitudinis	CP040746	293387	1792192
Bacillus pumilus	MH594122	1408	1792192
Bacillus	MH581229	1386	1792192
Bacillus	CP009109	1386	1792192
Bacillus pumilus	AY230134	1408	1792192
Bacillus pumilus	CP016785	1408	1792192
Bacillus safensis	JX134061	561879	1792192
Bacillus pumilus	MH671358	1408	1792192
Bacillus pumilus	GU144016	1408	1792192
Bacillus altitudinis	CP018575	293387	1792192
Bacillus	MF503689	1386	1792192
Bacillus	CP040513	1386	1792192
Bacillus pumilus	MH581228	1408	1792192
Lactobacillus johnsonii	FN357112	33959	1578
Lactobacillus johnsonii	CP016630	33959	1578
Pseudomonas putida	AB434906	303	136845
Pseudomonas putida	AB238971	303	136845
Pseudomonas	AB474758	286	136845
Pseudomonas	CP034538	286	136845
Pseudomonas	MF144194	286	136845
Pseudomonas fluorescens	KY503037	294	136845
Pseudomonas	AB237655	286	136845
Pseudomonas	AY208917	286	136845
Pseudomonas	AF491307	286	136845
Agrobacterium tumefaciens	CP039906	358	136845
Agrobacterium tumefaciens	CP039921	358	136845
Sulfuriferula sp. AH1	CP021139	1985873	2637784
Pseudomonas aeruginosa	MF168945	287	2637784
Pseudomonas putida	MF564291	303	2637784
Burkholderia gladioli	CP009319	28095	2637784
Thiomonas sp. OC7	LR131954	2493107	2625466
Gammaproteobacteria	KF840720	1236	2625466
Pseudomonas aeruginosa	KR106190	287	2625466
Klebsiella pneumoniae	KT070138	573	2625466
Gammaproteobacteria	JQ480155	1236	2625466
Gammaproteobacteria	MH594579	1236	2625466
Gammaproteobacteria	CP024094	1236	2625466
Citrobacter freundii	LS992178	546	2625466
Leclercia adecarboxylata	KX710094	83655	2625466
Alcaligenes faecalis	KY623659	511	507
Nissabacter sp. SGAir0207	CP028038	2126321	2636213
Pantoea dispersa	CP032704	59814	2636213

scientificName	nuccoreAcc	taxid	parent
Pantoea vagans	CP022520	470934	53335
Erwinia gerundensis	LN907829	1619313	551
Pantoea sp. SO10	CP040097	2575375	2630326
Rhizobium leguminosarum	CP022670	384	379
Rhizobium leguminosarum	AM236082	384	379
Rhizobium sp. CIAT894	CP020949	2020312	2613769
Rhizobium leguminosarum	CP018235	384	2613769
Rhizobium leguminosarum	CP022669	384	2613769
Rhizobium leguminosarum	CP016288	384	2613769
Rhizobium leguminosarum	CP007048	384	2613769
Bacillus amyloliquefaciens	CP002635	1390	1938374
Bacillus sp. 275	CP019627	1941347	185979
Bacillus	CP032859	1386	185979
Bacillus subtilis	AF091592	1423	185979
Bacillus	AB243053	1386	185979
Bacillus	CP017765	1386	185979
Bacillus subtilis	CP015223	1423	185979
Bacteria	m JF267654	2	185979
Bacteria	NC_001766	2	185979
Bacillus subtilis	CP022289	1423	185979
Bacillus	DQ140187	1386	185979
Bacillus	MH277364	1386	185979
Bacillus	CP024648	1386	185979
Bacillus amyloliquefaciens	CP013728	1390	185979
Bacillus velezensis	LN999830	492670	185979
Bacillus velezensis	CP022557	492670	185979
Bacillus	CP014701	1386	185979
Bacillus	CP033053	1386	185979
Xanthomonas	CP018727	338	185979
Xanthomonas	CP018469	338	185979
Xanthomonas	CP020968	338	185979
Xanthomonas citri	CP020980	346	185979
Xanthomonas citri	CP011166	346	185979
Xanthomonas	CP017325	338	185979
Xanthomonas	CP018474	338	185979
Xanthomonas	LN811400	338	185979
Xanthomonas campestris	CP034656	339	185979
Bacillus thuringiensis	CP009344	1428	185979
Bacillus thuringiensis	CP003896	1428	185979
Bacillus thuringiensis	EF406356	1428	185979
Bacillus thuringiensis	CP001912	1428	185979
Bacillus thuringiensis	CP012108	1428	185979
Bacillus wiedmannii	CP024692	1890302	185979
Escherichia coli	CP037909	562	185979

scientificName	nuccoreAcc	taxid	parent
Gammaproteobacteria	MH718731	1236	185979
Gammaproteobacteria	CP004059	1236	185979
Gammaproteobacteria	MK330868	1236	185979
Gammaproteobacteria	KP205272	1236	185979
Gammaproteobacteria	KP689347	1236	185979
Enterobacteriaceae	EU266532	543	185979
Pasteurellaceae	AB621552	712	185979
Vibrio	KX575838	662	641
Actinobacillus pleuropneumoniae	AB109805	715	641
Klebsiella	CP003223	570	641
Klebsiella	CP035909	570	641
Klebsiella	CP026134	570	641
Klebsiella	CP014756	570	641
Klebsiella	CP026165	570	641
Klebsiella	CP044034	570	641
Klebsiella	CP032187	570	641
Klebsiella	CP031791	570	641
Klebsiella	CP028550	570	641
Lactobacillus plantarum	AB024514	1590	641
Pediococcus pentosaceus	FN869858	1255	641
Weissella cibaria	CP012877	137591	641
Enterobacteriaceae	CP006802	543	641
Enterobacteriaceae	KX523904	543	641
Klebsiella pneumoniae	CP023931	573	641
Rhodobacteraceae bacterium	CP031589	1904441	641
Rhodobacteraceae bacterium	CP031592	1904441	641
Rhodobacteraceae bacterium	CP031595	1904441	641
Pantoea vagans	CP001893	470934	641
Pantoea vagans	CP038855	470934	641
Pantoea vagans	CP014128	470934	641
Pantoea	CP045722	53335	1903409
Pantoea agglomerans	CP034476	549	1903409
Pantoea agglomerans	CP016892	549	1903409
Borrelia miyamotoi	CP036959	47466	1903409
Borrelia miyamotoi	CP044809	47466	1903409
Borrelia miyamotoi	CP036574	47466	1903409
Borrelia miyamotoi	CP037090	47466	1903409
Borrelia miyamotoi	CP024323	47466	1903409
Borrelia miyamotoi	CP024213	47466	1903409
Salinibacter ruber	FP565811	146919	1903409
Salinibacter ruber	CP030372	146919	1903409
Salinibacter ruber	CP020721	146919	1903409
Salinibacter ruber	CP030360	146919	1903409
Aeromonas caviae	KU644672	648	642

	nuccoreAcc	taxid	parent
Aeromonas sp. ASNIH2	CP026410	1636607	257493
Escherichia coli	KU963390	562	257493
Escherichia coli	CP001927	562	257493
Salmonella enterica	CP001137	28901	257493
Escherichia coli	CP023822	562	257493
Erwinia tasmaniensis	CU468130	338565	551
Clostridioides difficile	CP027015	1496	551
Clostridioides difficile	CP029155	1496	551
Lactobacillus casei	HQ259051	1582	655183
Lactobacillus casei	AB119526	1582	655183
Lactobacillus	JN793951	1578	655183
Lactobacillus	CP007123	1578	655183
Lactobacillus paracasei	CP029549	1597	655183
Lactobacillus paracasei	CP032639	1597	655183
Lactobacillus paracasei	AY662330	1597	655183
Lactobacillus paracasei	EU255257	1597	655183
Acinetobacter haemolyticus	CP041226	29430	469
Acinetobacter haemolyticus	CP038011	29430	469
Acinetobacter sp. WCHAc010034	CP032271	1879049	196816
Acinetobacter baumannii	CP035048	470	196816
Acinetobacter baumannii	MK323042	470	196816
Acinetobacter baumannii	CP039026	470	196816
Acinetobacter baumannii	MH362812	470	196816
Acinetobacter	FM210331	469	196816
Acinetobacter	CP007550	469	196816
Acinetobacter	CP001923	469	196816
Acinetobacter	LT984691	469	196816
Acinetobacter	KT346360	469	196816
Acinetobacter pittii	CP033538	48296	196816
Salinibacter ruber	FP565810	146919	196816
Salinibacter ruber	CP030359	146919	196816
Lactobacillus plantarum	AJ716330	1590	196816
Leuconostoc lactis	L25529	1246	196816
Leuconostoc kimchii	CP001757	136609	1243
Lactobacillales	JN106353	186826	1243
Lactobacillales	KF559315	186826	1243
Lactobacillus plantarum	KC019311	1590	1243
Lactobacillus plantarum	MK167463	1590	1243
Lactobacillus	CP014880	1578	1243
Lactobacillus	CP031207	1578	1243
Runella slithyformis	CP002861	106	105
Runella sp. HYN0085	CP030852	2259595	2631759
Aliivibrio wodanis	LN554848	80852	511678
Aliivibrio fischeri	JQ031552	668	511678

Lactococcus lactis CP028161 1358 511678 Calothrix parietina CP003612 32054 1186 Calothrix parietina CP003611 32054 1186 Calothrix parietina CP003611 32054 1186 Calothrix sp. NIES-4101 AP018277 2005461 2619626 Pediococcus damnosus CP012279 51663 2619626 Lactobacillus lindneri CP014911 53444 1578 Lactobacillus buchneri CP002654 1581 1578 Lactobacillus CP032465 1578 1578 Lactobacillus CP01324 1578 1578 Lactobacillus CP017265 1578 1578 Lactobacillus CP017265 1578 1578 Lactobacillus plantarum CP03322 1578 1578 Lactobacillus plantarum CP035177 1590 1578 Lactobacillus plantarum CP035177 1590 1578 Lactobacillus plantarum CP03177 1590 1578	scientificName	nuccoreAcc	taxid	parent
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Pediococcus damnosus CP012278 51663 1253 Pediococcus damnosus CP012290 51663 1253 Lactobacillus parabuchneri CP018797 152331 1253 Lactobacillus CP014932 1578 1253 Lactobacillus CP027195 1578 1253 Pediococcus inopinatus CP019982 114090 1253 Lactobacillus sp. CBA3605 CP027191 2099788 2620435 Lactobacillus paracollinoides CP014916 240427 2620435 Lactobacillus paracollinoides CP014918 240427 2620435 Lactobacillus paracollinoides CP014918 240427 2620435 Lactobacillus paracollinoides CP014927 240427 2620435 Lactobacillus paracollinoides CP014927 240427 2620435 Lactobacillus paracollinoides CP014928 240427 2620435 Lactobacillus paracollinoides CP014927 240427 2620435 Lactobacillus paracollinoides CP014928 240427 2620435				
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Lactobacillus paracollinoides CP014916 240427 2620435 Lactobacillus paracollinoides CP014914 240427 2620435 Lactobacillus paracollinoides CP014918 240427 2620435 Lactobacillus paracollinoides CP014927 240427 2620435 Lactobacillus paracollinoides CP014928 240427 2620435 Lactobacillus paracasei AY673960 1597 2620435 Lactobacillus brevis CP031205 1580 2620435 Lactobacillus brevis CP019742 1580 2620435 Salmonella enterica CP014997 28901 2620435 Salmonella enterica CP030237 28901 2620435 Salmonella enterica CP022035 590 2620435 Salmonella enterica CP039470 28901 2620435 Salmonella bongori CP029998 28901 2620435 Salmonella bongori CP029732 1703250 2644389 Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389		CP027191	2099788	2620435
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Lactobacillus paracollinoides CP014928 240427 2620435 Lactobacillus paracasei AY673960 1597 2620435 Lactobacillus brevis CP031205 1580 2620435 Lactobacillus brevis CP019742 1580 2620435 Salmonella enterica CP014997 28901 2620435 Salmonella enterica CP030237 28901 2620435 Salmonella enterica JQ418541 28901 2620435 Salmonella enterica CP022035 590 2620435 Salmonella enterica CP039470 28901 2620435 Salmonella bongori CP006609 54736 590 Citrobacter sp. CRE-46 CP029732 1703250 2644389 Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389 Salmonella enterica CP019175 28901 2644389	-	CP014927	240427	2620435
Lactobacillus paracasei AY673960 1597 2620435 Lactobacillus brevis CP031205 1580 2620435 Lactobacillus brevis CP019742 1580 2620435 Salmonella enterica CP014997 28901 2620435 Salmonella enterica CP030237 28901 2620435 Salmonella enterica JQ418541 28901 2620435 Salmonella enterica CP022035 590 2620435 Salmonella enterica CP039470 28901 2620435 Salmonella bongori CP006609 54736 590 Citrobacter sp. CRE-46 CP029732 1703250 2644389 Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389 Salmonella enterica CP019175 28901 2644389	-	CP014928	240427	2620435
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Salmonella enterica CP014997 28901 2620435 Salmonella enterica CP030237 28901 2620435 Salmonella enterica JQ418541 28901 2620435 Salmonella CP022035 590 2620435 Salmonella enterica CP039470 28901 2620435 Salmonella enterica CP029998 28901 2620435 Salmonella bongori CP006609 54736 590 Citrobacter sp. CRE-46 CP029732 1703250 2644389 Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389 Salmonella enterica CP019175 28901 2644389	Lactobacillus brevis	CP031205	1580	2620435
Salmonella enterica CP030237 28901 2620435 Salmonella enterica JQ418541 28901 2620435 Salmonella CP022035 590 2620435 Salmonella enterica CP039470 28901 2620435 Salmonella enterica CP029998 28901 2620435 Salmonella bongori CP006609 54736 590 Citrobacter sp. CRE-46 CP029732 1703250 2644389 Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389 Salmonella enterica CP019175 28901 2644389	Lactobacillus brevis	CP019742	1580	2620435
Salmonella enterica JQ418541 28901 2620435 Salmonella CP022035 590 2620435 Salmonella enterica CP039470 28901 2620435 Salmonella enterica CP029998 28901 2620435 Salmonella bongori CP006609 54736 590 Citrobacter sp. CRE-46 CP029732 1703250 2644389 Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389 Salmonella enterica CP019175 28901 2644389	Salmonella enterica	CP014997	28901	2620435
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Salmonella enterica CP039470 28901 2620435 Salmonella enterica CP029998 28901 2620435 Salmonella bongori CP006609 54736 590 Citrobacter sp. CRE-46 CP029732 1703250 2644389 Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389 Salmonella enterica CP019175 28901 2644389	Salmonella enterica	JQ418541	28901	2620435
Salmonella enterica CP029998 28901 2620435 Salmonella bongori CP006609 54736 590 Citrobacter sp. CRE-46 CP029732 1703250 2644389 Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389 Salmonella enterica CP019175 28901 2644389	Salmonella	CP022035	590	2620435
Salmonella bongori CP006609 54736 590 Citrobacter sp. CRE-46 CP029732 1703250 2644389 Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389 Salmonella enterica CP019175 28901 2644389	Salmonella enterica	CP039470	28901	2620435
Citrobacter sp. CRE-46 CP029732 1703250 2644389 Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389 Salmonella enterica CP019175 28901 2644389	Salmonella enterica	CP029998	28901	2620435
Enterobacter cloacae complex sp. ECNIH7 CP017992 1915310 2644389 Salmonella enterica CP019175 28901 2644389	Salmonella bongori	CP006609	54736	590
Salmonella enterica CP019175 28901 2644389	Citrobacter sp. CRE-46	CP029732	1703250	2644389
Salmonella enterica CP019175 28901 2644389		CP017992	1915310	2644389
Salmonella enterica JQ418540 28901 2644389		CP019175	28901	2644389
	Salmonella enterica	JQ418540	28901	2644389

scientificName	nuccoreAcc	taxid	parent
Salmonella enterica	CP004026	28901	2644389
Bacillus filamentosus	CP015326	1402861	2644389
Bacillus filamentosus	CP015325	1402861	2644389
Bacillus filamentosus	CP026636	1402861	2644389
Enterobacteriaceae	KX839207	543	2644389
Enterobacteriaceae	KU318421	543	2644389
Enterobacteriaceae	CP025467	543	2644389
Raoultella ornithinolytica	CP012556	54291	2644389
Aeromonas sp. ASNIH1	CP026229	1636606	257493
Aeromonas sp. ASNIH2	CP026409	1636607	257493
Aeromonas	JN315885	642	84642
Aeromonas hydrophila	JN315882	644	84642
Aeromonas salmonicida	KT334397	645	84642
Aeromonas sobria	MF770239	646	84642
Borrelia crocidurae	CP003457	29520	84642
Borrelia crocidurae	CP003438	29520	84642
Streptomyces	CP033583	1883	2062
Streptomyces	CP011667	1883	2062
Streptomyces	EU372836	1883	2062
Streptomyces	CP029339	1883	2062
Streptomyces sp. FR-008	CP009803	206662	2593676
Streptomyces sp. HK1	DQ915965	405041	2593676
Bacillus	CP031064	1386	2593676
Bacillus thuringiensis	CP015178	1428	2593676
Bacillus cereus	CP009634	1396	2593676
Rubrobacter radiotolerans	CP007517	42256	42255
Rubrobacter radiotolerans	CP007515	42256	42255
Vibrio	CP010885	662	42255
Enterobacter sp. R4-368	CP005992	1166130	2608935
Kosakonia radicincitans	CP040393	283686	1330547
Kosakonia arachidis	CP045299	551989	1330547
Pantoea sp. At-9b	CP002438	592316	2630326
Pantoea sp. At-9b	CP002435	592316	2630326
Klebsiella pneumoniae	AB759690	573	2630326
Acinetobacter baumannii	CP003907	470	2630326
Acinetobacter baumannii	EU294228	470	2630326
Acinetobacter baumannii	KU500415	470	2630326
Acinetobacter	LR026974	469	2630326
Acinetobacter	CP026417	469	2630326
Acinetobacter	CP033125	469	2630326
Acinetobacter	CP032136	469	2630326
Acinetobacter	CP032281	469	2630326
Acinetobacter	KY617771	469	2630326
Acinetobacter	CP026414	469	2630326

scientificName	nuccoreAcc	taxid	parent
Acinetobacter chinensis	CP032127	2004650	469
Acinetobacter schindleri	CP015618	108981	469
Acinetobacter sp. WCHAc010034	CP032270	1879049	469
Citrobacter freundii	CP011653	546	469
Acinetobacter sp. SWBY1	CP026617	2079596	469
Acinetobacter junii	CP028798	40215	469
Pseudomonas aeruginosa	AM261760	287	469
Laribacter hongkongensis	EF679779	168471	168470
Gammaproteobacteria	GQ149344	1236	168470
Gammaproteobacteria	CP039301	1236	168470
Gammaproteobacteria	MF621616	1236	168470
Klebsiella pneumoniae	CP028819	573	168470
Escherichia coli	AY608912	562	168470
Escherichia coli	KU254581	562	168470
Staphylococcus hominis	CP031279	1290	168470
Staphylococcus chromogenes	CP031273	46126	168470
Phaeobacter	CP010615	302485	168470
Phaeobacter inhibens	CP019309	221822	168470
Sphingobium sp. MI1205	CP005190	407020	2611147
Sphingobium indicum	CP013072	332055	165695
Sphingobium cloacae	AP017659	120107	165695
Sphingobium cloacae	AP017658	120107	165695
Sphingobium japonicum	AP010805	332056	165695
Sphingobium indicum	CP013071	332055	165695
Corynebacterium sp. L2-79-05	DQ390458	373068	2624378
Actinobacteria	AY255627	201174	1783272
Actinobacteria	CP033083	201174	1783272
Glutamicibacter nicotianae	CP033082	37929	1742989
Flavobacterium sp. KI723T1	D26094	408956	196869
Burkholderia cenocepacia	CP019665	95486	196869
Aeromonas	LT635656	642	196869
Aeromonas	LT635653	642	196869
Aeromonas	LT635660	642	196869
Aeromonas	MF770238	642	196869
Aeromonas	AP012343	642	196869
Aeromonas hydrophila	CP013181	644	196869
Aeromonas enteropelogenes	LT635650	29489	642
Aeromonas media	CP007568	651	642
Aeromonas caviae	AP019198	648	642
Aeromonas caviae	LT635654	648	642
Aeromonas veronii	CP028134	654	642
Aeromonas sobria	MF770242	646	642
Aeromonas veronii	LT635657	654	642
Aeromonas salmonicida	CP022173	645	642

scientificName	nuccoreAcc	taxid	parent
Aeromonas salmonicida	KT334396	645	642
Aeromonas sp. ASNIH2	CP026408	1636607	642
Aeromonas veronii	LT635659	654	642
Aeromonas hydrophila	CP010950	644	642
Aeromonas caviae	LT635652	648	642
Vibrio	LN831184	662	642
Shewanella xiamenensis	CP013115	332186	22
Aeromonas hydrophila	CP016381	644	22
Shewanella algae	CP033574	38313	22
Aeromonas salmonicida	CP022170	645	22
Aeromonas sp. ASNIH4	CP026221	1636609	257493
Aeromonas hydrophila	CP028567	644	257493
Citrobacter freundii	NC_019983	546	257493
Enterobacteriaceae	KF793937	543	257493
Enterobacteriaceae	KT225462	543	257493
Klebsiella pneumoniae	CP039980	573	257493
Salmonella enterica	NC_010500	28901	257493
Enterobacteriaceae	CP041049	543	257493
Enterobacteriaceae	KX912255	543	257493
Enterobacteriaceae	JN596280	543	257493
Enterobacteriaceae	CP042486	543	257493
Corynebacterium glutamicum	AF164956	1718	257493
Klebsiella oxytoca	CP011628	571	257493
Thauera aromatica	CP028340	59405	33057
Proteobacteria	HF679279	1224	33057
Proteobacteria	MF564290	1224	33057
Proteobacteria	MF141039	1224	33057
Pseudomonas aeruginosa	KX889311	287	33057
Enterobacter cloacae	KC511628	550	33057
Pseudomonas aeruginosa	MK047609	287	33057
Achromobacter xylosoxidans	LC155906	85698	222
Enterobacter hormaechei	CP011571	158836	222
Enterobacteriaceae	AB723628	543	222
Enterobacteriaceae	CP042870	543	222
Enterobacteriaceae	HQ201416	543	222
Enterobacteriaceae	MG049738	543	222
Enterobacterales	KJ541069	91347	222
Enterobacterales	KJ541071	91347	222
Citrobacter freundii	KX863568	546	222
Enterobacteriaceae	MH121703	543	222
Enterobacteriaceae	MK731977	543	222
Enterobacteriaceae	MH229869	543	222
Enterobacteriaceae	CP041114	543	222
Pantoea sp. CCBC3-3-1	CP034365	2490851	2630320

scientificName	nuccoreAcc	taxid	parent
Listeria monocytogenes	CP025444	1639	2630326
Listeria monocytogenes	CP025564	1639	2630326
Listeria monocytogenes	CP006613	1639	2630326
Listeria	GU244485	1637	186820
Listeria	CP023753	1637	186820
Listeria	CP014251	1637	186820
Listeria innocua	AL592102	1642	1637
Listeria	CP020834	1637	1637
Listeria grayi	FR667693	1641	1637
Listeria monocytogenes	CP014254	1639	1637
Salmonella	CP027680	590	1637
Escherichia coli	CP021881	562	1637
Klebsiella pneumoniae	KJ187751	573	1637
Enterobacteriaceae	CP021681	543	1637
Escherichia coli	CP042872	562	1637
Escherichia coli	CP010131	562	1637
Borrelia miyamotoi	CP037266	47466	1637
Borrelia miyamotoi	CP044804	47466	1637
Borrelia miyamotoi	CP044631	47466	1637
Campylobacter	CP000933	194	1637
Campylobacter	CP044261	194	1637
Campylobacter	CP022471	194	1637
Campylobacter	CP017861	194	1637
Campylobacter	CP002030	194	1637
Campylobacter	CP017877	194	1637
Campylobacter	CP013037	194	1637
Campylobacter	CP013117	194	1637
Campylobacter coli	CP013735	195	1637
Helicobacter apodemus	CP021887	135569	209
Deinococcus sp. AJ005	CP044987	2652443	2623546
Marinovum algicola	CP010857	42444	2623546
Brachyspira intermedia	CP002875	84377	29521
Burkholderia ambifaria	CP001028	152480	87882
Burkholderia vietnamiensis	CP009629	60552	87882
Burkholderia vietnamiensis	CP013454	60552	87882
Burkholderia pseudomultivorans	CP013379	1207504	87882
Staphylococcus aureus	LN831038	1280	87882
Staphylococcus pseudintermedius	CP016074	283734	87882
Staphylococcus aureus	CP031668	1280	87882
Bacteria	EU365622	2	87882
Bacteria	CP016075	2	87882
Bacteria	KM281802	2	87882
Bacteria	CP042006	2	87882
Bacteria	MH090917	2	87882

scientificName	nuccoreAcc	taxid	parent
Staphylococcus warneri	CP031268	1292	87882
Lactobacillaceae	CP014934	33958	87882
Lactobacillaceae	CP013156	33958	87882
Lactobacillaceae	CP035562	33958	87882
Lactobacillaceae	CP031210	33958	87882
Lactobacillus brevis	CP019747	1580	87882
Lactobacillaceae	CP005979	33958	87882
Lactobacillaceae	CP014935	33958	87882
Lactobacillaceae	CP012274	33958	87882
Lactobacillaceae	CP014889	33958	87882
Lactobacillaceae	CP014930	33958	87882
Lactobacillus	AB118106	1578	87882
Lactobacillus	CP014874	1578	87882
Lactobacillus brevis	CP031172	1580	87882
Ochrobactrum anthropi	CP000761	529	87882
Agrobacterium tumefaciens	CP039920	358	87882
Agrobacterium tumefaciens	CP039918	358	87882
Agrobacterium tumefaciens	CP039905	358	87882
Rhizobium pusense	CP039896	648995	379
Agrobacterium tumefaciens	CP039913	358	379
Lactobacillus salivarius	CP007650	1624	1578
Lactobacillus salivarius	CP024066	1624	1578
Lactobacillus salivarius	CP017110	1624	1578
Lactobacillus salivarius	CP020860	1624	1578
Bacillus cytotoxicus	CP024100	580165	86661
Bacillus	CP018932	1386	86661
Bacillus	CP000047	1386	86661
Bacillus	CP009333	1386	86661
Bacillus sp. BD59S	CP034684	2499213	185979
Bacillus thuringiensis	CP019234	1428	185979
Bacillus cereus	CP009640	1396	185979
Bacillus mycoides	CP000905	1405	185979
Bacillus megaterium	CP009921	1404	1386
Bacillus megaterium	CP032528	1404	1386
Bacillus megaterium	CP032532	1404	1386
Bacillus megaterium	CP028089	1404	1386
Bacillus aryabhattai	CP041517	412384	1386
Salmonella	CP016011	590	1386
Salmonella	CP030222	590	1386
Salmonella enterica	CP016409	28901	1386
Salmonella enterica	CP022662	28901	1386
Salmonella enterica	CP022140	28901	1386
Shewanella sp. 33B	FJ626843	592146	196818
Salipiger profundus	CP014803	1229727	263377

scientificName	nuccoreAcc	taxid	parent
Salipiger profundus	CP014801	1229727	263377
Salipiger profundus	CP014804	1229727	263377
Salipiger profundus	CP014802	1229727	263377
Borreliella burgdorferi	AE000791	139	263377
Borreliella burgdorferi	CP002231	139	263377
Borreliella bissettii	CP002755	64897	263377
Borrelia mayonii	CP015787	1674146	263377
Borreliella valaisiana	CP001438	62088	263377
Borreliella burgdorferi	NC 008443	139	263377
Rhodococcus rhodochrous	AB266604	1829	1827
Rhodococcus erythropolis	LC331662	1833	1827
Rhodococcus sp. NJ-530	CP034155	2490853	192944
Aeromonas salmonicida	CP022171	645	192944
Aeromonas salmonicida	KY555070	645	192944
Aeromonas salmonicida	CP022183	645	192944
Aeromonas salmonicida	CP038103	645	192944
Aeromonas salmonicida	NC 009352	645	192944
Aeromonas salmonicida	CP021658	645	192944
Borrelia hermsii	CP014350	140	192944
Borrelia turicatae	CP015630	142	192944
Borrelia anserina	CP014325	143	138
Borrelia	CP000979	138	138
Borrelia	CP003435	138	138
Borrelia miyamotoi	CP044626	47466	138
Borrelia miyamotoi	CP036558	47466	138
Borrelia miyamotoi	CP021873	47466	138
Rhodococcus fascians	CP015237	1828	1827
Rhodococcus sp. PBTS 2	CP015221	1653479	192944
Bacillus	CP024772	1386	192944
Bacillus	CP024773	1386	192944
Bacillus	CP024774	1386	192944
Bacillus	CP041076	1386	192944
Bacillus thuringiensis	CP037887	1428	192944
Bacillus wiedmannii	CP024689	1890302	192944
Bacillus mycoides	CP020745	1405	192944
Bacillus thuringiensis	CP021438	1428	192944
Bacillus thuringiensis	CP019235	1428	192944
Bacillus thuringiensis	CP016195	1428	192944
Bacillus thuringiensis	CP016197	1428	192944
Bacillus thuringiensis	CP016198	1428	192944
Bacillus cereus	CP024656	1396	192944
Bacillus thuringiensis	CP005938	1428	192944
Bacillus thuringiensis	CP005940	1428	192944
Bacillus thuringiensis	CP005939	1428	192944
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scientificName	nuccoreAcc	taxid	parent
Bacillus thuringiensis	CP015351	1428	192944
Bacillus thuringiensis	CP015354	1428	192944
Bacillus thuringiensis	CP015355	1428	192944
Bacillus thuringiensis	CP015356	1428	192944
Staphylococcus aureus	CP042146	1280	192944
Staphylococcus aureus	CP042112	1280	192944
Staphylococcus aureus	CP042052	1280	192944
Staphylococcus aureus	CP042022	1280	192944
Micrococcaceae	CP002381	1268	85006
Micrococcaceae	CP000456	1268	85006
Arthrobacter	JQ418529	1663	1268
Arthrobacter	JQ418530	1663	1268
Arthrobacter	JQ418527	1663	1268
Pasteurellaceae	EF015636	712	1268
Pasteurellaceae	NC_010941	712	1268
Pasteurellaceae	KT355773	712	1268
Escherichia coli	KP143090	562	1268
Corynebacterium	FN825254	1716	1653
Corynebacterium	AF024666	1716	1653
Escherichia coli	AB905284	562	1653
Corynebacterium crudilactis	CP015624	1652495	1716
Escherichia coli	CP014090	562	1716
Corynebacterium crudilactis	CP015623	1652495	1716
Pseudomonas aeruginosa	MH547560	287	1716
Nostoc punctiforme	CP001038	272131	1716
Nostoc sp. 'Peltigera membranacea cyanobiont' N6	CP026682	1261031	1716
Nostoc punctiforme	CP001039	272131	1716
Nostoc sp. 'Lobaria pulmonaria (5183) cyanobiont'	CP026693	1618022	1716
Nostoc flagelliforme	CP024790	2038116	1306274
Vibrio cholerae	DQ787205	666	1306274
Borreliella valaisiana	CP001440	62088	1306274
Borreliella spielmanii	CP001470	88916	1306274
Borreliella bavariensis	CP028875	664662	1306274
Borreliella garinii	CP001304	29519	1306274
Borreliella garinii	CP028863	29519	1306274
Borreliella finlandensis	CP001520	498741	1306274
Borreliella finlandensis	CP001523	498741	1306274
Borreliella burgdorferi	CP001480	139	1306274
Borreliella burgdorferi	CP001272	139	1306274
Borrelia mayonii	CP015792	1674146	1306274
Borreliella bissettii	CP002759	64897	1306274
Borrelia sp. CA690	CP044537	1476873	1306274
Enterobacterales	CP034134	91347	1306274
Enterobacterales	JQ319768	91347	1306274

Enterobacteriaceae CP011586 543 1306274 Enterobacteriaceae CP037446 543 1306274 Klebsiella sp. PO552 CP037445 1972757 1306274 Klebsiella pneumoniae CP026176 573 1306274 Enterobacteriaceae bacterium ENNIH1 CP026195 2066051 36866 Enterobacteriaceae CP026191 91347 36866 Enterobacteriaceae CP014125 543 36866 Enterobacteriaceae CP010513 543 36866 Klebsiella pneumoniae CP020065 573 36866 Klebsiella pneumoniae CP020065 573 36866 Bartonella tribocorum AM260524 85701 773 Bartonella grahamii CP001563 33045 773 Bartonella sp. TT0105 GU173851 596995 2645622	scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae CP037446 543 1306274 Klebsiella sp. PO552 CP037445 1972757 1306274 Klebsiella sp. PU552 CP026176 573 1306274 Enterobacteriaceae bacterium ENNIH1 CP026191 91347 36866 Enterobacteriaceae CP014125 543 36866 Enterobacteriaceae CP010513 543 36866 Klebsiella pneumoniae CP020065 573 36866 Bartonella tribocorum AM260524 85701 773 Bartonella gnamii CP001563 33045 773 Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP065192 407020 194 Sphingomonadaceae CP023452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP017079 41297 194	Enterobacterales	CP026190	91347	1306274
Klebsiella sp. PO552 CP037445 1972757 1306274 Klebsiella pneumoniae CP026176 573 1306274 Enterobacteriaceae bacterium ENNIH1 CP026195 2066051 36866 Enterobacteriaceae CP026191 91347 36866 Enterobacteriaceae CP010513 543 36866 Enterobacteriaceae CP010513 543 36866 Klebsiella pneumoniae CP020065 573 36866 Bartonella tribocorum AM260524 85701 773 Bartonella grahami CP001563 33045 773 Bartonella grahami CP001563 33045 773 Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP043429 1031542 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP023452 41297 194 <td>Enterobacteriaceae</td> <td>CP011586</td> <td>543</td> <td>1306274</td>	Enterobacteriaceae	CP011586	543	1306274
Klebsiella pneumoniae CP026176 573 1306274 Enterobacteriaceae bacterium ENNIH1 CP026195 2066051 36866 Enterobacteriaceae CP026191 91347 36866 Enterobacteriaceae CP014125 543 36866 Enterobacteriaceae CP010513 543 36866 Klebsiella pneumoniae CP020065 573 36866 Klebsiella pneumoniae CP020065 573 36866 Klebsiella pneumoniae CP020065 573 36866 Klebsiella pneumoniae CP001663 33045 773 Bartonella tribocorum AM260524 85701 773 Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingodoacter volucris CP043429 1031542 194 Sphingomonadaceae CP034229 11297 194 Sphingomonadaceae CP012702 41297 194<	Enterobacteriaceae	CP037446	543	1306274
Enterobactériaceae bacterium ENNIH1 CP026191 91347 36866 Enterobacteriales CP026191 91347 36866 Enterobacteriaceae CP014125 543 36866 Enterobacteriaceae CP010513 543 36866 Klebsiella pneumoniae CP020065 573 36866 Bartonella tribocorum AM260524 85701 773 Bartonella grahamii CP001563 33045 773 Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP023329 41297 194 Sphingomonadaceae CP023452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017079 41297 194 <t< td=""><td>Klebsiella sp. PO552</td><td>CP037445</td><td>1972757</td><td>1306274</td></t<>	Klebsiella sp. PO552	CP037445	1972757	1306274
Enterobacteriaceae CP026191 91347 36866 Enterobacteriaceae CP014125 543 36866 Enterobacteriaceae CP010513 543 36866 Klebsiella pneumoniae CP020065 573 36866 Bartonella tribocorum AM260524 85701 773 Bartonella grahamii CP001563 33045 773 Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP023229 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP017079 41297 194 Sphi	Klebsiella pneumoniae	CP026176	573	1306274
Enterobacteriaceae CP014125 543 36866 Enterobacteriaceae CP010513 543 36866 Klebsiella pneumoniae CP020065 573 36866 Bartonella tribocorum AM260524 85701 773 Bartonella grahamii CP001563 33045 773 Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP012709 41297 194 Sphingomonadaceae CP012709 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingo	Enterobacteriaceae bacterium ENNIH1	CP026195	2066051	36866
Enterobacteriaceae CP010513 543 36866 Klebsiella pneumoniae CP020065 573 36866 Bartonella tribocorum AM260524 85701 773 Bartonella grahamii CP001563 33045 773 Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP06192 407020 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017079 41297 194 Lactobaci	Enterobacterales	CP026191	91347	36866
Klebsiella pneumoniae CP020065 573 36866 Bartonella tribocorum AM260524 85701 773 Bartonella grahamii CP001563 33045 773 Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP033452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP003452 41297 194 Sphingomonadaceae CP002966 41297 194 Sphingomonadaceae CP017709 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP005089 41297 194 Lactobacillus plantarum CP01823 1921510 194 La	Enterobacteriaceae	CP014125	543	36866
Bartonella tribocorum AM260524 85701 773 Bartonella grahamii CP001563 33045 773 Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP023452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae CP007079 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017079 41297 194 Lactobacillus plantarum CP017381 1590 194 Lactobac	Enterobacteriaceae	CP010513	543	36866
Bartonella grahamii CP001563 33045 773 Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017382 1921510 194 Lactobacillus plantarum CP017381 1590 194 Lactobacil	Klebsiella pneumoniae	CP020065	573	36866
Bartonella sp. TT0105 GU173851 596995 2645622 Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP023452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP015089 41297 194 Sphingomonadaceae CP0105089 41297 194 Sphingomonadaceae CP0107079 41297 194 Sphingomonadaceae CP0107079 41297 194 Lactobacillus plantarum CP018223 1921510 194 Lactobacillus plantarum CP017381 1590 194 Lac	Bartonella tribocorum	AM260524	85701	773
Campylobacter DQ518172 194 2645622 Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP023452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP005089 41297 194 Sphingomonadaceae CP007179 41297 194 Sphingomonadaceae CP0078089 41297 194 Sphingomonadaceae CP0078089 41297 194 Lactobacillus plantarum CP018233 1921510 194 Lactobacillus plantarum CP015967 1590 194 Lactobacillus	Bartonella grahamii	CP001563	33045	773
Campylobacter volucris CP043429 1031542 194 Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP023452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae KJ009324 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP017361 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus pla	Bartonella sp. TT0105	GU173851	596995	2645622
Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP023452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae KJ009324 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP005089 41297 194 Sphingomonadaceae CP018223 1921510 194 Lactobacillus plantaceae CP018223 1921510 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP015967 1590 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP03569 1590 194	Campylobacter	DQ518172	194	2645622
Sphingobium sp. MI1205 CP005192 407020 194 Sphingomonadaceae CP033229 41297 194 Sphingomonadaceae CP023452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae KJ009324 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP005089 41297 194 Sphingomonadaceae CP018223 1921510 194 Lactobacillus plantaceae CP018223 1921510 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP015967 1590 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP03569 1590 194	Campylobacter volucris	CP043429	1031542	194
Sphingomonadaceae CP023452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae KJ009324 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP005089 41297 194 Tardibacter chloracetimidivorans CP018223 1921510 194 Lactobacillus plantarum CP025691 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP017388 1578 194 Lactobacillus CP017388 1578 194 Lactobacillus plantarum CP032932 1578 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 <td>Sphingobium sp. MI1205</td> <td>CP005192</td> <td>407020</td> <td>194</td>	Sphingobium sp. MI1205	CP005192	407020	194
Sphingomonadaceae CP023452 41297 194 Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae KJ009324 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP005089 41297 194 Tardibacter chloracetimidivorans CP018223 1921510 194 Lactobacillus plantarum CP025691 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP017358 1578 194 Lactobacillus CP017358 1578 194 Lactobacillus plantarum CP032932 1578 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 <td>Sphingomonadaceae</td> <td>CP033229</td> <td>41297</td> <td>194</td>	Sphingomonadaceae	CP033229	41297	194
Sphingomonadaceae CP012702 41297 194 Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae KJ009324 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP005089 41297 194 Sphingomonadaceae CP018223 1921510 194 Lactobacillus chlararum CP018223 1921510 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP017358 1578 194 Lactobacillus CP017358 1578 194 Lactobacillus plantarum CP032932 1578 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus plantarum CP003766 267818 1578 Lactobacillus plantarum CP003890 1590 1578		CP023452	41297	194
Sphingomonadaceae CP009296 41297 194 Sphingomonadaceae KJ009324 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP005089 41297 194 Tardibacter chloracetimidivorans CP018223 1921510 194 Lactobacillus plantarum CP025691 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP017358 1578 194 Lactobacillus CP017358 1578 194 Lactobacillus plantarum CP032932 1578 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP00342 187452 1578 Lactobacillus plantarum CP033890 1590 1578 <td></td> <td>CP012702</td> <td>41297</td> <td>194</td>		CP012702	41297	194
Sphingomonadaceae KJ009324 41297 194 Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP005089 41297 194 Tardibacter chloracetimidivorans CP018223 1921510 194 Lactobacillus plantarum CP025691 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP015967 1590 194 Lactobacillus plantarum CP017358 1578 194 Lactobacillus plantarum CP032932 1578 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP03142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus plantarum CP018183 82688		CP009296	41297	194
Sphingomonadaceae CP017079 41297 194 Sphingomonadaceae CP005089 41297 194 Tardibacter chloracetimidivorans CP018223 1921510 194 Lactobacillus plantarum CP025691 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP015967 1590 194 Lactobacillus CP017358 1578 194 Lactobacillus plantarum CP032932 1578 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP040377 1590		KJ009324	41297	194
Tardibacter chloracetimidivorans CP018223 1921510 194 Lactobacillus plantarum CP025691 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP015967 1590 194 Lactobacillus CP017358 1578 194 Lactobacillus CP032932 1578 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus plantarum CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP040377 1590 1578 Lactobacillus pentosus CP016492 1589	Sphingomonadaceae	CP017079	41297	194
Lactobacillus plantarum CP025691 1590 194 Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP015967 1590 194 Lactobacillus plantarum CP017358 1578 194 Lactobacillus plantarum CP032932 1578 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus plantarum CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP040377 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590<	Sphingomonadaceae	CP005089	41297	194
Lactobacillus plantarum CP017381 1590 194 Lactobacillus plantarum CP015967 1590 194 Lactobacillus CP017358 1578 194 Lactobacillus CP032932 1578 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP040377 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 15	Tardibacter chloracetimidivorans	CP018223	1921510	194
Lactobacillus plantarum CP015967 1590 194 Lactobacillus CP017358 1578 194 Lactobacillus plantarum CP032932 1578 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus nagelii CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP025691	1590	194
Lactobacillus CP017358 1578 194 Lactobacillus plantarum CP032932 1578 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus nagelii CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP017381	1590	194
Lactobacillus CP032932 1578 194 Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus nagelii CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP015967	1590	194
Lactobacillus plantarum CP035574 1590 194 Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus nagelii CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus	CP017358	1578	194
Lactobacillus plantarum CP035569 1590 194 Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus nagelii CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus	CP032932	1578	194
Lactobacillus plantarum CP035132 1590 194 Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus nagelii CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP040377 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus plantarum CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP035574	1590	194
Lactobacillus kefiranofaciens CP002766 267818 1578 Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus nagelii CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP040377 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus plantarum CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP035569	1590	194
Pediococcus claussenii CP003142 187452 1578 Lactobacillus plantarum CP033890 1590 1578 Lactobacillus nagelii CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP040377 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP035132	1590	194
Lactobacillus plantarum CP033890 1590 1578 Lactobacillus nagelii CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP040377 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus kefiranofaciens	CP002766	267818	1578
Lactobacillus nagelii CP018183 82688 1578 Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP040377 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Pediococcus claussenii	CP003142	187452	1578
Lactobacillus plantarum CP021933 1590 1578 Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP040377 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP033890	1590	1578
Lactobacillus plantarum CP028979 1590 1578 Lactobacillus plantarum CP040377 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus nagelii	CP018183	82688	1578
Lactobacillus plantarum CP040377 1590 1578 Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP021933	1590	1578
Lactobacillus plantarum CP032752 1590 1578 Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP028979	1590	1578
Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP040377	1590	1578
Lactobacillus pentosus CP016492 1589 1578 Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578	Lactobacillus plantarum	CP032752	1590	1578
Lactobacillus plantarum CP015862 1590 1578 Lactobacillus brevis AP012168 1580 1578				1578
Lactobacillus brevis AP012168 1580 1578				
	Lactobacillus plantarum			1578

scientificName	nuccoreAcc	taxid	parent
Lactobacillus paraplantarum	CP032746	60520	1578
Lactobacillus coryniformis	CP017699	1610	1578
Lactobacillus brevis	CP031209	1580	1578
Lactobacillus hokkaidonensis	AP014682	1193095	1578
Lactobacillus plantarum	CP035557	1590	1578
Lactobacillus plantarum	CP035015	1590	1578
Pediococcus acidilactici	CP035152	1254	1578
Pediococcus pentosaceus	CP021472	1255	1578
Lactobacillus gasseri	AB436615	1596	1578
Lactobacillus	CP000935	1578	1578
Lactobacillus	CP019031	1578	1578
Lactobacillus	CP011537	1578	1578
Lactobacillus paracasei	AY673958	1597	1578
Lactobacillus plantarum	NC_006377	1590	1578
Lactobacillus plantarum	CP035160	1590	1578
Proteus mirabilis	KU871396	584	1578
Pasteurella multocida	NC_006868	747	1578
Candidatus Hamiltonella defensa	CP022935	138072	1578
Candidatus Hamiltonella defensa	CP017611	138072	1578
Candidatus Hamiltonella defensa	CP021665	138072	1578
Candidatus Hamiltonella defensa	CP017609	138072	1578
Candidatus Hamiltonella defensa	CP001278	138072	1578
Lactococcus lactis	DQ089807	1358	1578
Lactococcus lactis	CP000426	1358	1578
Kineococcus radiotolerans	CP000752	131568	33981
Candidatus Azobacteroides pseudotrichonymphae	AP010659	511435	511434
Candidatus Azobacteroides pseudotrichonymphae	AP010657	511435	511434
Candidatus Azobacteroides pseudotrichonymphae	AP010658	511435	511434
Lactobacillus reuteri	CP006013	1598	511434
Lactobacillus reuteri	CP002847	1598	511434
Lactobacillus reuteri	CP006012	1598	511434
Lactobacillus reuteri	CP030090	1598	511434
Lactobacillus backii	CP014904	375175	511434
Lactobacillus brevis	AP012171	1580	511434
Lactobacillus backii	CP014632	375175	511434
Lactobacillus oligofermentans	LN898145	293371	1578
Lactobacillus paralimentarius	CP045184	83526	1578
Lactobacillus farciminis	CP011954	1612	1578
Lactobacillus brevis	CP000418	1580	1578
Lactobacillus brevis	CP031200	1580	1578
Lactobacillus brevis	CP015340	1580	1578
Lactobacillus brevis	CP021478	1580	1578
Lactobacillus brevis	CP033886	1580	1578
Lactobacillus crustorum	CP017997	392416	1578

scientificName	nuccoreAcc	taxid	parent
Thermoanaerobacterium	CP003067	28895	543371
Clostridium argentinense	CP014175	29341	1485
Aggregatibacter actinomycetemcomitans	GQ866234	714	416916
Campylobacter lari	AB211496	201	194
Campylobacter lari	AB256957	201	194
Campylobacter peloridis	CP007768	488546	194
Campylobacter jejuni	AF301164	197	194
Campylobacter jejuni	CP017855	197	194
Campylobacter jejuni	AY256846	197	194
Campylobacter jejuni	CP017864	197	194
Campylobacter helveticus	CP020481	28898	194
Lactococcus lactis	JQ821357	1358	194
Lactococcus sp. 1JSPR-7	CP032629	2419773	2643510
Salmonella enterica	DQ268764	28901	2643510
Gammaproteobacteria	FJ696404	1236	2643510
Gammaproteobacteria	KT896500	1236	2643510
Gammaproteobacteria	CP026407	1236	2643510
Klebsiella oxytoca	KX946994	571	2643510
Enterobacteriaceae	CP032941	543	2643510
Enterobacteriaceae	MK360095	543	2643510
Escherichia coli	CP021101	562	2643510
Escherichia coli	CP000972	562	2643510
Escherichia coli	CP010128	562	2643510
Enterobacteriaceae	CP041555	543	2643510
Escherichia coli	LT985303	562	2643510
Paracoccus aminophilus	CP006653	34003	265
Rhizobium jaguaris	CP032697	1312183	379
Erwinia piriflorinigrans	HE792893	665097	551
Erwinia	CP023568	551	1903409
Erwinia amylovora	CP024971	552	1903409
Komagataeibacter	AP012160	1434011	433
Komagataeibacter	CP021468	1434011	433
Komagataeibacter	CP023038	1434011	433
Komagataeibacter xylinus	CP004365	28448	433
Komagataeibacter xylinus	CP025270	28448	433
Acetobacter ascendens	CP015170	481146	434
Acetobacter ascendens	CP015169	481146	434
Acetobacter ascendens	CP015165	481146	434
Acetobacter	AP011123	434	433
Acetobacter	CP030872	434	433
Acetobacter pasteurianus	AP011122	438	433
Acetobacter pasteurianus	CP021512	438	433
Acetobacter sp. B6	CP042810	2500548	434
Escherichia coli	CP034733	562	434

scientificName	nuccoreAcc	taxid	parent
Escherichia coli	CP042610	562	434
Escherichia coli	CP018971	562	434
Escherichia coli	CP042604	562	434
Escherichia coli	CP000974	562	434
Klebsiella pneumoniae	CP034051	573	434
Streptomyces albulus	CP007575	68570	434
Streptomyces sp. ADI95-16	CP033585	1522758	2593676
Enterococcus faecium	CP006625	1352	2593676
Enterococcus faecium	CP040705	1352	2593676
Enterococcus faecium	CP018132	1352	2593676
Enterococcus	CP035138	1350	2593676
Enterococcus	HM748980	1350	2593676
Enterococcus	CP003353	1350	2593676
Enterococcus	KU892126	1350	2593676
Enterococcus faecium	CP035658	1352	2593676
Bacilli	CP029169	91061	2593676
Bacilli	CP019212	91061	2593676
Saccharopolyspora endophytica	KM260754	543886	1835
Aeromonas	KT315927	642	1835
Aeromonas	DQ401103	642	1835
Aeromonas	NC_006143	642	1835
Aeromonas sobria	KT315928	646	1835
Lactobacillus	AP014681	1578	1835
Lactobacillus	CP043940	1578	1835
Lactobacillus	CP045183	1578	1835
Lactobacillus	CP032750	1578	1835
Rahnella sp. 'WMR15'	AM167518	360016	2635087
Serratia marcescens	CP003960	615	2635087
Serratia marcescens	CP031315	615	2635087
Yersinia kristensenii	CP032483	28152	2635087
Nitrosococcus halophilus	CP001799	133539	1227
Nitrosococcus	CP002087	1227	1046
Nitrosococcus	AP019848	1227	1046
Catenovulum sp. CCB-QB4	CP026605	2172099	2638362
Pseudoalteromonas spongiae	CP023400	298657	53246
Lactobacillus paracasei	CP017266	1597	53246
Lactobacillus paracasei	CP012189	1597	53246
Lactobacillus paracasei	CP014986	1597	53246
Lactobacillus paracasei	CP031786	1597	53246
Lactobacillus paracasei	CP012190	1597	53246
Lactobacillus paracasei	CP017263	1597	53246
Lactobacillus paracasei	CP012191	1597	53246
Lactobacillus paracasei	CP029538	1597	53246
Lactobacillus acidipiscis	LT996085	89059	1578

scientificName	$\operatorname{nuccoreAcc}$	taxid	parent
Lactobacillus paracasei	CP016356	1597	1578
Lactobacillus paracasei	CP014988	1597	1578
Lactobacillus paracasei	CP017262	1597	1578
Lactobacillus paracasei	CP012188	1597	1578
Lactobacillus paracasei	CP007124	1597	1578
Lactobacillus paracasei	CP029547	1597	1578
Lactobacillus paracasei	AP018393	1597	1578
Lactobacillus paracasei	AP018394	1597	1578
Lactobacillus paracasei	CP014987	1597	1578
Lactobacillus paracasei	CP007125	1597	1578
Lactobacillus	CP002393	1578	1578
Lactobacillus	CP044229	1578	1578
Lactobacillus	CP014202	1578	1578
Lactobacillus	FM179324	1578	1578
Lactobacillus rhamnosus	CP001156	47715	1578
Lactobacillus paracasei	CP000424	1597	1578
Lactobacillus paracasei	CP029548	1597	1578
Lactobacillus	CP025498	1578	1578
Lactobacillus paracasei	CP005487	1597	1578
Lactobacillus paracasei	CP035564	1597	1578
Lactobacillus paracasei	CP029537	1597	1578
Phaeobacter gallaeciensis	CP006973	60890	1578
Phaeobacter inhibens	CP010733	221822	1578
Phaeobacter piscinae	CP010721	1580596	302485
Phaeobacter inhibens	CP010703	221822	302485
Phaeobacter inhibens	CP010714	221822	302485
Enterobacteriaceae	KT225520	543	302485
Enterobacteriaceae	CP033468	543	302485
Klebsiella variicola	KX868552	244366	302485
Enterobacteriaceae	CP022697	543	302485
Enterobacteriaceae	CP014296	543	302485
Enterobacteriaceae	CP043515	543	302485
Enterobacteriaceae	KY020154	543	302485
Enterobacteriaceae	CP016763	543	302485
Enterobacteriaceae	CP032893	543	302485
Klebsiella variicola	CP017283	244366	302485
Enterobacteriaceae	KU318419	543	302485
Enterobacteriaceae	MF190369	543	302485
Bacillus	CP035229	1386	302485
Bacillus glycinifermentans	CP035233	1664069	1386
Bacillus cereus	CP023182	1396	1386
Bacillus cereus	CP001167	1396	1386
Bacillus tropicus	CP041073	2026188	86661
Bacillus pseudomycoides	CP007621	64104	86661

scientificName	nuccoreAcc	taxid	parent
Bacillus cereus	CP000041	1396	86661
Bacteria	AP007213	2	86661
Bacillus	AP007212	1386	86661
Bacillus pseudomycoides	CP007622	64104	86661
Bacillus thuringiensis	CP021444	1428	86661
Lactococcus lactis	CP031544	1358	86661
Lactococcus lactis	CP003165	1358	86661
Lactococcus lactis	CP020610	1358	86661
Lactococcus lactis	MG813926	1358	86661
Lactococcus lactis	CP016711	1358	86661
Acinetobacter baumannii	KY704308	470	86661
Acinetobacter venetianus	DQ278485	52133	469
Acinetobacter sp. WCHA45	CP028557	2004644	469
Acinetobacter pittii	CP033539	48296	469
Acinetobacter haemolyticus	CP041227	29430	469
Acinetobacter johnsonii	CP010356	40214	469
Acinetobacter	KJ616406	469	469
Acinetobacter	CP026422	469	469
Acinetobacter baumannii	KY984046	470	469
Acinetobacter wuhouensis	CP033126	1879050	469
Lactobacillus paracasei	CP032638	1597	469
Lactobacillus paracasei	AY662331	1597	469
Lactobacillus rhamnosus	CP001155	47715	469
Lactobacillus casei	KF986324	1582	469
Bifidobacterium longum	AF540971	216816	469
Bifidobacterium	DQ458911	1678	31953
Bifidobacterium longum	CP002795	216816	31953
Bifidobacterium longum	KP691634	216816	31953
Bifidobacterium longum	AF538869	216816	31953
Bifidobacterium	AF538868	1678	31953
Bifidobacterium	DQ458910	1678	31953
Vibrio scophthalmi	CP016311	45658	662
Vibrio anguillarum	CP034674	55601	662
Vibrio campbellii	CP021147	680	662
Acidovorax carolinensis	CP021367	553814	12916
Acidovorax carolinensis	CP021360	553814	12916
Vitreoscilla filiformis	CP022424	63	59
Sphaerotilus natans	CP035710	34103	34102
Escherichia coli	CP032259	562	34102
Escherichia coli	CP024829	562	34102
Verminephrobacter eiseniae	CP000543	364317	364316
Xylella fastidiosa	GU938459	2371	2370
Xylella fastidiosa	CP006697	2371	2370
Xylella fastidiosa	CP009824	2371	2370
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scientificName	nuccoreAcc	taxid	parent
Clostridium perfringens	JN689218	1502	2370
Clostridium perfringens	CP019570	1502	2370
Clostridium perfringens	MK275626	1502	2370
Bacilli	MH423311	91061	2370
Staphylococcus aureus	U36911	1280	2370
Staphylococcus aureus	GQ900438	1280	2370
Staphylococcus aureus	CP029168	1280	2370
Streptococcus	JF308630	1301	1300
Lactobacillus sp. PC121B	AF310974	1248330	2620435
Bacillus sp. #24	KC991136	1476571	185979
Erysipelothrix rhusiopathiae	KM576795	1648	1647
Sphingobium yanoikuyae	CP020927	13690	1647
Sphingobium sp. YG1	AP018520	2082188	2611147
Sphingomonas panacis	CP014169	1560345	13687
Sphingobium sp. YBL2	CP010957	484429	13687
Sphingomonas sp. MM-1	AB549721	745310	13687
Sphingomonadaceae	CP004040	41297	13687
Sphingobium sp. MI1205	CP005193	407020	13687
Borreliella	CP002942	64895	13687
Borreliella garinii	CP028866	29519	13687
Borreliella bavariensis	CP028876	664662	13687
Borreliella bissettii	CP002756	64897	13687
Borreliella valaisiana	CP001439	62088	13687
Borrelia mayonii	CP015788	1674146	13687
Borreliella finlandensis	CP001519	498741	13687
Borreliella burgdorferi	CP001527	139	13687
Borreliella burgdorferi	AE000793	139	13687
Borrelia sp. CA690	CP044540	1476873	13687
Vibrio	CP045357	662	13687
Vibrio	CP009266	662	13687
Vibrio	CP031474	662	13687
Vibrio coralliilyticus	CP020455	190893	662
Rhodobacter sphaeroides	CP012965	1063	1060
Rhodobacter sphaeroides	CP031753	1063	1060
Pseudomonas fluorescens	MH061179	294	1060
Pseudomonas thivervalensis	MH061178	86265	286
Rippkaea orientalis	CP001704	395962	2546366
Lactobacillus salivarius	AF488832	1624	2546366
Lactobacillus salivarius	CP011405	1624	2546366
Lactobacillus gasseri	CP008840	1596	2546366
Lactobacillus gastricus	CP045730	227942	2546366
Lactobacillus salivarius	AF488831	1624	2546366
Lactobacillus fermentum	CP019032	1613	2546366
Lactobacillus paracasei	AY673959	1597	2546366
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scientificName	nuccoreAcc	taxid	parent
Lactobacillus reuteri	CP045050	1598	2546366
Microcoleus sp. PCC 7113	CP003632	1173027	2642155
Microcoleus sp. PCC 7113	CP003631	1173027	2642155
Shigella sonnei	CP019691	624	620
Escherichia coli	CP019249	562	620
Enterobacteriaceae	CP011337	543	620
Enterobacteriaceae	CP022060	543	620
Streptococcus thermophilus	AF022180	1308	620
Marinococcus halophilus	NC_002094	1371	1370
Acinetobacter wuhouensis	CP033121	1879050	1370
Acinetobacter cumulans	CP035943	2136182	1370
Bacteria	GQ149343	2	1370
Bacteria	CP039166	2	1370
Listeria monocytogenes	U40997	1639	1370
Bacillales	NC_001705	1385	91061
Bacillales	M19465	1385	91061
Staphylococcus aureus	CP013627	1280	91061
Staphylococcus	HE662694	1279	91061
Staphylococcus	CP042083	1279	91061
Staphylococcus aureus	CP014695	1280	91061
Staphylococcus aureus	FN377602	1280	91061
Staphylococcus aureus	CP039760	1280	91061
Staphylococcus aureus	CP013629	1280	91061
Borrelia turcica	CP028887	229155	138
Borrelia turcica	CP028888	229155	138
Bacillus megaterium	CP001985	1404	138
Bacillus megaterium	CP009918	1404	138
Bacilli	DQ367664	91061	138
Bhargavaea cecembensis	HQ833018	394098	941338
Listeria monocytogenes	CP038643	1639	941338
Bacillus thuringiensis	CP010094	1428	941338
Bacillus	CP024099	1386	941338
Bacillus	CP016361	1386	941338
Phaeobacter gallaeciensis	CP006969	60890	941338
Phaeobacter inhibens	CP010708	221822	941338
Phaeobacter inhibens	CP010737	221822	941338
Phaeobacter sp. LSS9	CP031960	681157	2621772
Phaeobacter porticola	CP016366	1844006	2621772
Vibrio	CP022245	662	2621772
Vibrio	CP022246	662	2621772
Vibrio	CP045862	662	2621772
Vibrio parahaemolyticus	CP034567	670	717610
Vibrio parahaemolyticus	CP009849	670	717610
Rhizobium leguminosarum	CP001627	384	717610

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scientificName	nuccoreAcc	taxid	parent
Rhizobium leguminosarum	CP018232	384	717610
Rhizobium leguminosarum	CP016291	384	717610
Rhizobium leguminosarum	CP007049	384	717610
Rhizobium leguminosarum	CP022568	384	717610
Rhizobium leguminosarum	CP025017	384	717610
Rhizobium	CP013637	379	717610
Rhizobium phaseoli	CP013548	396	717610
Rhizobium phaseoli	CP013553	396	717610
Rhizobium phaseoli	CP013528	396	717610
Rhizobium phaseoli	CP020897	396	717610
Rhizobium etli	CP000136	29449	379
Rhizobium	CP013507	379	379
Rhizobium	CP021026	379	379
Clostridium kluyveri	AP009050	1534	1485
Clostridium kluyveri	CP018336	1534	1485
Streptomyces sp. SGAir0924	CP027296	2109593	2593676
Streptomyces sp. SGAir0924	CP027299	2109593	2593676
Sulfitobacter sp. AM1-D1	CP018080	1917485	196795
Sulfitobacter sp. THAF37	CP045374	2587855	196795
Sulfitobacter sp. THAF37	CP045376	2587855	196795
Rhodococcus sp. p52	CP016821	935199	192944
Rhodococcus sp. p52	CP016822	935199	192944
Rhodococcus pyridinivorans	CP040722	103816	1827
Rhodococcus ruber	CP024891	1830	1827
Rhodococcus ruber	CP024892	1830	1827
Rhodococcus ruber	CP038031	1830	1827
Rhodococcus sp. WB1	CP015530	1033922	192944
Rhodococcus ruber	CP023712	1830	192944
Bacillaceae	CP002836	186817	192944
Bacillaceae	CP002294	186817	192944
Bacillaceae	CP016623	186817	192944
Geobacillus	CP001795	129337	186817
[Bacillus] caldolyticus	CP025075	1394	1505648
Sphingomonas wittichii	CP000701	160791	1505648
Sphingobium sp. EP60837	CP015989	1855519	2611147
Sphingobium sp. SCG-1	CP026373	2072936	2611147
Acinetobacter baumannii	CP035932	470	2611147
Acinetobacter baumannii	CP039024	470	2611147
Acinetobacter	CP012007	469	2611147
Acinetobacter	CP020596	469	2611147
Methylorubrum	AP014811	223967	2282523
Methylobacterium brachiatum	CP033233	269660	407
Methylobacterium currus	CP028845	2051553	407
Lactococcus piscium	LN774770	1364	1357
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Lactococcus piscium	scientificName	nuccoreAcc	taxid	parent
Lactococcus affinolactis	Lactococcus piscium	LT984414	1364	1357
Enterobacteriaceae EU331425 543 1357 Proteus mirabilis NC_011513 584 1357 Lactobacillus acidipiscis LT907846 89059 1357 Enterococcus durans CP012367 53345 1357 Enterococcus faecium CP032307 1352 1357 Enterococcus faecium CP035221 1352 1357 Enterococcus faecium CP042833 1352 1357 Enterococcus faecium CP043485 1352 1357 Enterococcus faecium CP043485 1352 1357 Enterococcus faecium CP043485 1352 1357 Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP044905 1352 1357 Enterococcus faecium CP044905 1352 1357 Enterococcus faecium CP044850 1352 1357 Enterococcus faecium CP0124801 1352 1357	Lactococcus raffinolactis	CP023394	1366	1357
Proteus mirabilis NC_011513 584 1357 Lactobacillus acidipiscis LT907846 89059 1357 Enterococcus durans CP012367 53345 1357 Enterococcus faecium CP025687 1352 1357 Enterococcus faecium CP032307 1352 1357 Enterococcus faecium CP042833 1352 1357 Enterococcus faecium CP043485 1352 1357 Enterococcus faecium CP043485 1352 1357 Enterococcus faecium CP049395 1352 1357 Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP0418501 1352 1357 Enterococcus faecium CP044905 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP027502 1352 1357	Enterobacteriaceae	NC 011514	543	1357
Lactobacillus acidipiscis	Enterobacteriaceae	EU331425	543	1357
Enterococcus durans CP012367 53345 1357 Enterococcus faecium CP025687 1352 1357 Enterococcus faecium CP032307 1352 1357 Enterococcus faecium CP035221 1352 1357 Enterococcus faecium CP043485 1352 1357 Enterococcus faecium CP027401 1352 1357 Enterococcus faecium AP019395 1352 1357 Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP0490905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP027502 1352 1357	Proteus mirabilis	NC_011513	584	1357
Enterococcus durans CP012367 53345 1357 Enterococcus faecium CP025687 1352 1357 Enterococcus faecium CP032307 1352 1357 Enterococcus faecium CP035221 1352 1357 Enterococcus faecium CP043485 1352 1357 Enterococcus faecium CP027401 1352 1357 Enterococcus faecium AP019395 1352 1357 Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP0490905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP027502 1352 1357	Lactobacillus acidipiscis	LT907846	89059	1357
Enterococcus faecium CP035221 1352 1357 Enterococcus faecium CP035221 1352 1357 Enterococcus faecium CP042833 1352 1357 Enterococcus faecium CP043485 1352 1357 Enterococcus faecium CP027401 1352 1357 Enterococcus faecium AP019395 1352 1357 Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP045013 1352 1357 Enterococcus faecium CP049095 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012411 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP006621 1352 1357		CP012367	53345	1357
Enterococcus faecium CP035221 1352 1357 Enterococcus faecium CP042833 1352 1357 Enterococcus faecium CP027401 1352 1357 Enterococcus faecium AP019395 1352 1357 Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP045013 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP027303 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP0406621 1352 1357 Enterococcus faecium CP013995 1352 1357	Enterococcus faecium	CP025687	1352	1357
Enterococcus faecium CP042833 1352 1357 Enterococcus faecium CP043485 1352 1357 Enterococcus faecium AP019395 1352 1357 Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP045013 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP024805 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP041762 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357	Enterococcus faecium	CP032307	1352	1357
Enterococcus faecium CP043485 1352 1357 Enterococcus faecium CP027401 1352 1357 Enterococcus faecium AP019395 1352 1357 Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP045013 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP023805 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019999 1352 1357	Enterococcus faecium	CP035221	1352	1357
Enterococcus faecium CP027401 1352 1357 Enterococcus faecium AP019395 1352 1357 Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP0123805 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP047502 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP013957 1352 1357	Enterococcus faecium	CP042833	1352	1357
Enterococcus faecium AP019395 1352 1357 Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP045013 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP023805 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP0035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP019989 1352 1357	Enterococcus faecium	CP043485	1352	1357
Enterococcus faecium MG674581 1352 1357 Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP045013 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP023805 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013993 1352 1357 Enterococcus faecium CP0199993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP0198066 1352 1357	Enterococcus faecium	CP027401	1352	1357
Enterococcus faecium CP011829 1352 1357 Enterococcus faecium CP045013 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP023805 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP006621 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019993 1352 1357 Enterococcus faecium CP019999 1352 1357 Enterococcus faecium CP019999 1352 1357 Enterococcus faecium CP01903586 1352 1357 Enterococcus faecium CP018066 1352 1357	Enterococcus faecium	AP019395	1352	1357
Enterococcus faecium CP045013 1352 1357 Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP018066 1352 1357 Clostridium botulinum CP002411 1491 1357	Enterococcus faecium	MG674581	1352	1357
Enterococcus faecium CP040905 1352 1357 Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP023805 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP07502 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP0199993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP019886 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP018066 1352 1357	Enterococcus faecium	CP011829	1352	1357
Enterococcus faecium CP040850 1352 1357 Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP023805 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP006621 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP019886 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP018066 1352 1357	Enterococcus faecium	CP045013	1352	1357
Enterococcus faecium CP012441 1352 1357 Enterococcus faecium CP023805 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP006621 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP013866 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP02411 1491 1357	Enterococcus faecium	CP040905	1352	1357
Enterococcus faecium CP023805 1352 1357 Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP006621 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP019988 1352 1357 Enterococcus faecium CP01866 1352 1357 Enterococcus faecium CP01866 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP002411 1491 1357	Enterococcus faecium	CP040850	1352	1357
Enterococcus faecium CP027513 1352 1357 Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP006621 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP003586 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP002413 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357	Enterococcus faecium	CP012441	1352	1357
Enterococcus faecium CP041262 1352 1357 Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP006621 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP003586 1352 1357 Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP018066 1352 1357 Clostridium botulinum CP002413 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter gallaeciensis CP010680 221822 1357 Phaeobacter CP010589 60890 1357 Phaeobacter CP010717 302485 1357	Enterococcus faecium	CP023805	1352	1357
Enterococcus faecium CP027502 1352 1357 Enterococcus faecium CP006621 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP003586 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP002413 1491 1357 Clostridium botulinum CP002412 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter gallaeciensis CP010630 221822 1357 Phaeobacter CP010589 60890 1357 Phaeobacter CP010717 302485 1357 Phaeobacter porticola CP016365 1844006 1357	Enterococcus faecium	CP027513	1352	1357
Enterococcus faecium CP006621 1352 1357 Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019999 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP003586 1352 1357 Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP002413 1491 1357 Clostridium botulinum CP002412 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter gallaeciensis CP010630 221822 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Chammaproteobacteria CP014764 1236 1357	Enterococcus faecium	CP041262	1352	1357
Enterococcus faecium CP035649 1352 1357 Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP003586 1352 1357 Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP002413 1491 1357 Clostridium botulinum CP002412 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter gallaeciensis CP010630 221822 1357 Phaeobacter CP010589 60890 1357 Phaeobacter CP010717 302485 1357 Phaeobacter CP031957 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 <t< td=""><td>Enterococcus faecium</td><td>CP027502</td><td>1352</td><td>1357</td></t<>	Enterococcus faecium	CP027502	1352	1357
Enterococcus faecium CP013995 1352 1357 Enterococcus faecium CP019993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP003586 1352 1357 Enterococcus faecium CP018066 1352 1357 Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP002413 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter gallaeciensis CP010630 221822 1357 Phaeobacter CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Enterococcus faecium	CP006621	1352	1357
Enterococcus faecium CP019993 1352 1357 Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP003586 1352 1357 Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP002413 1491 1357 Clostridium botulinum CP002412 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter gallaeciensis CP010630 221822 1357 Phaeobacter CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Phaeobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Enterococcus faecium	CP035649	1352	1357
Enterococcus faecium CP019989 1352 1357 Enterococcus faecium CP003586 1352 1357 Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP002413 1491 1357 Clostridium botulinum CP002412 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter gallaeciensis CP010630 221822 1357 Phaeobacter CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Enterococcus faecium	CP013995	1352	1357
Enterococcus faecium CP003586 1352 1357 Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP002413 1491 1357 Clostridium botulinum CP002412 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter gallaeciensis CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Enterococcus faecium	CP019993	1352	1357
Enterococcus faecium CP018066 1352 1357 Clostridium botulinum CP002413 1491 1357 Clostridium botulinum CP002412 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter inhibens CP010630 221822 1357 Phaeobacter gallaeciensis CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Enterococcus faecium	CP019989	1352	1357
Clostridium botulinum CP002413 1491 1357 Clostridium botulinum CP002412 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter gallaeciensis CP010630 221822 1357 Phaeobacter CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP031957 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Enterococcus faecium	CP003586	1352	1357
Clostridium botulinum CP002412 1491 1357 Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter gallaeciensis CP010630 221822 1357 Phaeobacter gallaeciensis CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Enterococcus faecium	CP018066	1352	1357
Clostridium botulinum CP002411 1491 1357 Phaeobacter inhibens CP010624 221822 1357 Phaeobacter inhibens CP010630 221822 1357 Phaeobacter gallaeciensis CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter CP031957 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Clostridium botulinum	CP002413	1491	1357
Phaeobacter inhibens CP010624 221822 1357 Phaeobacter inhibens CP010630 221822 1357 Phaeobacter gallaeciensis CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter CP031957 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Clostridium botulinum	CP002412	1491	1357
Phaeobacter inhibens CP010630 221822 1357 Phaeobacter gallaeciensis CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter CP031957 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Clostridium botulinum	CP002411	1491	1357
Phaeobacter gallaeciensis CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter CP031957 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Phaeobacter inhibens	CP010624	221822	1357
Phaeobacter gallaeciensis CP010589 60890 1357 Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter CP031957 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Phaeobacter inhibens	CP010630	221822	1357
Phaeobacter CP010644 302485 1357 Phaeobacter CP010717 302485 1357 Phaeobacter CP031957 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Phaeobacter gallaeciensis		60890	
Phaeobacter CP031957 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357		CP010644	302485	
Phaeobacter CP031957 302485 1357 Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Phaeobacter	CP010717	302485	
Phaeobacter porticola CP016365 1844006 1357 Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Phaeobacter	CP031957	302485	
Gammaproteobacteria CP014764 1236 1357 Xanthomonas citri CP021021 346 1357	Phaeobacter porticola			
Xanthomonas citri CP021021 346 1357				
	<u> -</u>		346	
	Xanthomonas citri			

scientificName	nuccoreAcc	taxid	parent
Acetobacter pasteurianus	AP011125	438	1357
Escherichia coli	CP030792	562	1357
Escherichia coli	AP019859	562	1357
Enterobacteriaceae	CP000643	543	1357
Edwardsiella tarda	MF925336	636	1357
Enterococcus faecalis	CP028839	1351	1357
Enterococcus	CP002208	1350	1357
Enterococcus	KC954773	1350	1357
Lactococcus lactis	CP016723	1358	1357
Lactobacillus helveticus	CP009908	1587	1357
Lactobacillus helveticus	CP015499	1587	1357
Lactobacillus brevis	CP031204	1580	1357
Streptococcus macedonicus	HE613570	59310	1301
Lactococcus lactis	CP029292	1358	1301
Lactococcus lactis	HM021330	1358	1301
Lactococcus lactis	CP034581	1358	1301
Lactococcus lactis	CP034573	1358	1301
Lactococcus lactis	MG813924	1358	1301
Lactococcus lactis	CP016700	1358	1301
Lactococcus lactis	AF036485	1358	1301
Lactococcus lactis	CP016698	1358	1301
Lactococcus lactis	CP016739	1358	1301
Planococcus citreus	JX847602	1373	1372
Planococcus citreus	JX847604	1373	1372
Planococcus sp. MB-3u-03	CP025127	2058136	1372
Planococcus kocurii	CP013660	1374	1372
Planococcus versutus	CP016542	1302659	1372
Planococcus sp. MB-3u-03	CP025125	2058136	1372
Planococcus antarcticus	CP016535	161360	1372
Staphylococcus aureus	GQ900414	1280	1372
Staphylococcus aureus	GQ900449	1280	1372
Staphylococcus aureus	CP026955	1280	1372
Staphylococcus sciuri	CP041883	1296	1372
Erwinia tasmaniensis	CU468128	338565	1372
Escherichia coli	CP021721	562	1372
Proteus mirabilis	CP029726	584	1372
Pectobacterium carotovorum	KT351737	554	1372
Enterobacteriaceae	MF543358	543	1372
Pantoea	CP009884	53335	1372
Pantoea	CP009870	53335	1372
Salmonella enterica	CP014660	28901	1372
Escherichia coli	AY167049	562	1372
Escherichia coli	CP025946	562	1372
Pectobacterium carotovorum	CP034277	554	1372

scientificName	nuccoreAcc	taxid	parent
Borrelia miyamotoi	CP044632	47466	1372
Borrelia miyamotoi	CP036601	47466	1372
Borrelia miyamotoi	CP044830	47466	1372
Borrelia miyamotoi	CP037524	47466	1372
Borrelia miyamotoi	CP036732	47466	1372
Borrelia miyamotoi	CP017137	47466	1372
Borrelia miyamotoi	CP017135	47466	1372
Borrelia miyamotoi	CP036604	47466	1372
Borrelia miyamotoi	CP036951	47466	1372
Borrelia miyamotoi	CP024212	47466	1372
Borrelia miyamotoi	CP037070	47466	1372
Borrelia miyamotoi	CP037486	47466	1372
Chelativorans sp. BNC1	CP000391	266779	2643807
Shinella sp. HZN7	CP015745	879274	2643807
Shinella sp. HZN7	CP015747	879274	2643807
Shinella sp. HZN7	CP015744	879274	2643807
Streptomyces flavovirens	D14281	52258	1482593
Streptomyces laurentii	AB093554	39478	1883
Streptomyces phaeochromogenes	U23762	1923	1883
Neisseria lactamica	AY532623	486	1883
Neisseria gonorrhoeae	CP034031	485	1883
Neisseria lactamica	DQ223897	486	1883
Neisseria lactamica	DQ229166	486	1883
Borreliella burgdorferi	CP002325	139	1883
Borreliella burgdorferi	CP001377	139	1883
Borreliella burgdorferi	CP031409	139	1883
Borreliella burgdorferi	CP001265	139	1883
Borreliella bissettii	CP002757	64897	1883
Borreliella	CP001198	64895	1883
Borreliella	CP017212	64895	1883
Moraxella bovis	AB169976	476	1883
Vibrio cholerae	AF052650	666	1883
Cyanothece sp. PCC 7425	CP001345	395961	2649277
Cyanothece sp. PCC 7425	CP001346	395961	2649277
Ketogulonicigenium vulgare	CP002225	92945	92944
Haematobacter massiliensis	CP035512	195105	92944
Sulfitobacter sp. SK025	CP025809	1389011	196795
Sulfitobacter pseudonitzschiae	CP022417	1402135	60136
Lactobacillus backii	CP014883	375175	60136
Lactobacillus backii	CP014625	375175	60136
Lactobacillaceae	CP012270	33958	60136
Lactobacillaceae	CP005978	33958	60136
Pediococcus damnosus	CP012280	51663	60136
Pediococcus claussenii	CP014939	187452	60136

scientificName	nuccoreAcc	taxid	parent
Lactobacillus brevis	CP019753	1580	60136
Lactobacillus brevis	CP031202	1580	60136
Lactobacillus brevis	CP005980	1580	60136
Bacillus	CP024776	1386	60136
Bacillus thuringiensis	CP037453	1428	60136
Bacillus thuringiensis	CP015256	1428	60136
Bacillus thuringiensis	CP044982	1428	60136
Aeromonas	LT635649	642	60136
Aeromonas	CP010948	642	60136
Aeromonas	CP044061	642	60136
Aeromonas caviae	LT635651	648	60136
Aeromonas hydrophila	CP028564	644	60136
Rhodothermus marinus	CP001808	29549	29548
Rhodothermus marinus	CP003030	29549	29548
Synechocystis	CP003271	1142	1890428
Methylobacterium nodulans	CP001353	114616	1890428
Methylobacterium nodulans	CP001352	114616	1890428
Borrelia miyamotoi	CP044785	47466	1890428
Borrelia miyamotoi	CP017138	47466	1890428
Borrelia miyamotoi	CP036916	47466	1890428
Borrelia anserina	CP014520	143	1890428
Borrelia	CP000995	138	1890428
Candidatus Borrelia tachyglossi	CP025788	1964448	64895
Borrelia turcica	CP028889	229155	64895
Lactococcus lactis	CP016721	1358	64895
Streptococcus infantis	JX275965	68892	1301
Streptococcaceae	JN172912	1300	186826
Streptococcaceae	CP025421	1300	186826
Rhizobium etli	CP005953	29449	186826
Agrobacterium tumefaciens	JX683454	358	186826
Agrobacterium rhizogenes	AP002086	359	357
Agrobacterium rhizogenes	CP019703	359	357
Neorhizobium galegae	HG938357	399	1525371
Shewanella baltica	CP000567	62322	22
Paracoccus sp. Arc7-R13	CP034812	2500532	246570
Paracoccus sp. Arc7-R13	CP034813	2500532	246570
Aliivibrio fischeri	AY465897	668	246570
Aliivibrio salmonicida	HG983279	40269	511678
Aliivibrio wodanis	LN554849	80852	511678
Aliivibrio wodanis	LN554850	80852	511678
Borrelia miyamotoi	CP044640	47466	511678
Borrelia miyamotoi	CP024222	47466	511678
Borrelia miyamotoi	KT355574	47466	511678
Borrelia hermsii	CP015335	140	511678

scientificName	nuccoreAcc	taxid	parent
Borrelia turicatae	CP019363	142	511678
Borrelia anserina	CP014521	143	511678
Borrelia	CP001000	138	511678
Candidatus Borrelia tachyglossi	CP025790	1964448	511678
Gloeothece citriformis	CP001293	65393	511678
Gloeothece citriformis	CP001292	65393	511678
Zymomonas mobilis	CP021792	542	511678
Zymomonas mobilis	AF030624	542	511678
Brevibacterium linens	AY004211	1703	1696
Brevibacterium linens	CP026735	1703	1696
Acinetobacter johnsonii	CP022299	40214	1696
Acinetobacter radioresistens	CP038025	40216	1696
Acinetobacter	KT852971	469	1696
Acinetobacter	CP028560	469	1696
Acinetobacter sp. ACNIH2	CP026415	1758189	1696
Acinetobacter soli	CP016897	487316	1696
Morganellaceae	CP017056	1903414	1696
Morganellaceae	CP026061	1903414	1696
Proteus mirabilis	CP029129	584	1696
Kozakia baliensis	CP014684	153496	153497
Kozakia baliensis	CP014679	153496	153497
Kozakia baliensis	CP014680	153496	153497
Komagataeibacter nataicola	CP019878	265960	153497
Komagataeibacter saccharivorans	CP023041	265959	1434011
Komagataeibacter europaeus	CP021469	33995	1434011
Komagataeibacter nataicola	CP019879	265960	1434011
Acetobacteraceae	CP015167	433	1434011
Acetobacteraceae	CP004364	433	1434011
Komagataeibacter medellinensis	AP012162	1177712	1434011
Acetobacter pasteurianus	AP011124	438	1434011
Acetobacter ascendens	CP015171	481146	1434011
Gluconobacter oxydans	CP000006	442	1434011
Acetobacter pasteurianus	HF677573	438	1434011
Pseudomonas putida	AP015032	303	1434011
Pseudomonas luteola	CP044087	47886	136846
Pseudomonas aeruginosa	CP027167	287	136846
Pseudomonas monteilii	CP014061	76759	136845
Pseudomonas aeruginosa	CP041355	287	136845
Pseudomonas veronii	LT599585	76761	136843
Pseudomonas aeruginosa	CP017294	287	136843
Paracoccus yeei	CP020445	147645	265
Paracoccus yeei	CP044079	147645	265
Marinovum algicola	CP010863	42444	265
Enterobacterales	CP026759	91347	265

Enterobacterales	scientificName	nuccoreAcc	taxid	parent
Providencia stuartii CP031510 588 265 Neisseria gonorrhoeae AP018378 485 265 Vibrio vulnificus DQ288663 672 662 Pantoea sp. PSNIH1 CP009882 1484158 2630326 Pantoea eucalypti CP045723 470933 53335 Leptotrichia wadei AP019830 157687 32067 Leptotrichia shahii AP019822 157688 32067 Leptotrichia hofstadii AP019832 157687 32067 Leptotrichia wadei AP019834 157688 32067 Cebrobactum anthropi CP000760 529 32067 Ochrobactrum anthropi CP008817 529 32067 Enterobacteriaceae CP031582 543 32067 Enterobacteriaceae CP031582 543 32067 Escherichia coli CP010179 562 32067 Escherichia coli CP010179 562 32067 Escherichia coli CP010179 562 32067 E				
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Borreliella valaisiana CP001436 62088 1163 Borrelia sp. CA690 CP044541 1476873 1163 Borreliella afzelii CP000397 29518 1163 Borreliella afzelii CP001249 29518 1163 Borreliella garinii CP028870 29519 1163 Crinalium epipsammum CP003628 241425 241421 Cylindrospermum sp. A1345 EF452232 380087 2630404				
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Cylindrospermum sp. A1345 EF452232 380087 2630404				
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scientificName	nuccoreAcc	taxid	parent
Lactobacillus brevis	CP000417	1580	2626047
Lactobacillus plantarum	CP017960	1590	2626047
Lactobacillus plantarum	CP017370	1590	2626047
Acinetobacter baumannii	CP018334	470	2626047
Acinetobacter soli	CP016900	487316	2626047
Acinetobacter nosocomialis	CP033555	106654	2626047
Thermus sp. WG	KC491195	1312524	2619321
Thermus aquaticus	CP020571	271	2619321
Leuconostoc	CP015248	1243	2619321
Leuconostoc	LN890334	1243	2619321
Weissella koreensis	CP026848	165096	46255
Leuconostoc carnosum	CP042376	1252	46255
Enterococcus gilvus	CP030935	160453	1350
Acinetobacter	CP043053	469	1350
Acinetobacter	CP032285	469	1350
Acinetobacter	KX426227	469	1350
Acinetobacter baumannii	CP026749	470	1350
Acinetobacter baumannii	CP038501	470	1350
Acinetobacter pittii	CP040912	48296	1350
Acinetobacter indicus	CP044019	756892	469
Acinetobacter	CP033131	469	469
Acinetobacter	CP038502	469	469
Acinetobacter	CP003848	469	469
Acinetobacter	CP038646	469	469
Acinetobacter	KT965093	469	469
Acinetobacter baumannii	CP042558	470	469
Agrobacterium	CP011249	357	469
Agrobacterium	KY000037	357	469
Agrobacterium	X06826	357	469
Agrobacterium	CP039893	357	469
Agrobacterium	DQ058764	357	469
Agrobacterium	KY000074	357	469
Campylobacter fetus	CP007000	196	469
Bacteroides uniformis	EU818711	820	816
Bacteroides fragilis	KJ830768	817	816
Bacteroides salanitronis	CP002533	376805	816
Bacteroides fragilis	CP036548	817	816
Bacteroides fragilis	CP036551	817	816
Xylella fastidiosa	CP016609	2371	816
Xylella fastidiosa	CP001012	2371	816
Xylella fastidiosa	CP014330	2371	816
Xylella fastidiosa	MG879030	2371	816
Piscirickettsia salmonis	CP033939	1238	816
Piscirickettsia salmonis	CP033938	1238	816

scientificName	nuccoreAcc	taxid	parent
Piscirickettsia salmonis	CP033941	1238	816
Piscirickettsia salmonis	CP013763	1238	816
Piscirickettsia salmonis	CP013782	1238	816
Piscirickettsia salmonis	CP033940	1238	816
Acinetobacter	CP026423	469	816
Acinetobacter	CP018261	469	816
Acinetobacter haemolyticus	CP018873	29430	816
Acinetobacter lwoffii	CP043941	28090	816
Acinetobacter	CP038023	469	816
Acinetobacter	KX528688	469	816
Acinetobacter	CP026426	469	816
Acinetobacter	CP015616	469	816
Acinetobacter lwoffii	CP032102	28090	816
Acinetobacter lwoffii	KX426229	28090	816
Acinetobacter lwoffii	CP019144	28090	816
Acinetobacter lwoffii	CP032112	28090	816
Acinetobacter baumannii	CP033753	470	816
Acinetobacter baumannii	CP032218	470	816
Acinetobacter haemolyticus	CP018872	29430	816
Acinetobacter baumannii	CP012956	470	816
Acinetobacter	CP026086	469	816
Acinetobacter	LN833432	469	816
Acinetobacter nosocomialis	CP033563	106654	816
Acinetobacter	AP018825	469	816
Acinetobacter	CP026416	469	816
Acinetobacter sp. WCHAc010034	CP032268	1879049	816
Acinetobacter	KX528687	469	816
Acinetobacter	CP030755	469	816
Acinetobacter schindleri	CP025619	108981	816
Acinetobacter johnsonii	CP010358	40214	816
Meiothermus silvanus	CP002043	52022	65551
Meiothermus silvanus	CP002044	52022	65551
Enterobacteriaceae	CP025711	543	65551
Enterobacteriaceae	MF678351	543	65551
Escherichia coli	CP006788	562	65551
Enterobacteriaceae	KF701335	543	65551
Vibrio cholerae	AY876057	666	65551
Vibrio vulnificus	CP009263	672	65551
Vibrio casei	AP018684	673372	662
Vibrio harveyi	KC306506	669	717610
Vibrio nigripulchritudo	EU156059	28173	662
Vibrio mediterranei	EU159455	689	662
Lactobacillus johnsonii	CP021706	33959	662
Lactobacillus johnsonii	CP024783	33959	662

scientificName	nuccoreAcc	taxid	parent
Acidithiobacillus ferridurans	NC_005023	1232575	119977
Thiomonas intermedia	CP002022	926	32012
Thiomonas intermedia	CP002023	926	32012
Tomitella sp. HY188	CP041766	2597660	2645312
Comamonadaceae	CP002450	80864	2645312
Comamonadaceae	CP027670	80864	2645312
Hydrogenophaga pseudoflava	CP037868	47421	47420
Methylorubrum populi	CP001030	441620	223967
Methylorubrum populi	AP014810	223967	223967
Methylorubrum populi	CP001031	441620	223967
Methylorubrum populi	AP014812	223967	223967
Sphingomonas sp. NIC1	CP015522	1961362	223967
Lactobacillus johnsonii	AY862141	33959	223967
Mycoplasma yeatsii	JX294732	51365	2093
Macrococcus caseolyticus	AP009488	69966	2093
Macrococcus caseolyticus	AP009487	69966	2093
Macrococcus caseolyticus	AP009492	69966	2093
Borrelia miyamotoi	CP044813	47466	2093
Borrelia crocidurae	CP003463	29520	2093
Paracoccus sp. BM15	CP025411	1529068	246570
Roseivivax sp. THAF40	CP045365	2587858	2639302
Roseivivax sp. THAF197b	CP045322	2588299	2639302
Roseovarius	CP045409	74030	2639302
Roseovarius	CP045396	74030	2639302
Rhodobacteraceae	CP021433	31989	2639302
Rhodobacteraceae	CP010680	31989	2639302
Celeribacter manganoxidans	CP021411	1411902	875170
Roseobacter denitrificans	CP000466	2434	2433
Sulfitobacter sp. THAF37	CP045379	2587855	2433
Rhodobacteraceae	CP010722	31989	2433
Rhodobacteraceae	CP018079	31989	2433
Phaeobacter gallaeciensis	CP021046	60890	2433
Celeribacter indicus	CP004397	1208324	2433
Borrelia miyamotoi	CP036595	47466	2433
Borrelia miyamotoi	CP044822	47466	2433
Borrelia miyamotoi	CP036918	47466	2433
Borrelia miyamotoi	CP024385	47466	2433
Borrelia miyamotoi	CP024369	47466	2433
Borrelia miyamotoi	CP024403	47466	2433
Borrelia miyamotoi	CP044663	47466	2433
Borrelia miyamotoi	CP044831	47466	2433
Borrelia miyamotoi	CP044670	47466	2433
Borrelia miyamotoi	CP044661	47466	2433
Borrelia miyamotoi	CP044800	47466	2433

scientificName	nuccoreAcc	taxid	parent
Borrelia miyamotoi	CP044815	47466	2433
Borrelia miyamotoi	CP044674	47466	2433
Borrelia miyamotoi	CP044806	47466	2433
Borrelia miyamotoi	CP036566	47466	2433
Borrelia miyamotoi	CP024345	47466	2433
Borrelia miyamotoi	CP036923	47466	2433
Borrelia miyamotoi	CP044668	47466	2433
Borrelia miyamotoi	CP044644	47466	2433
Gammaproteobacteria	CP000756	1236	2433
Gammaproteobacteria	CP003874	1236	2433
Vibrio campbellii	CP026318	680	2433
Vibrio vulnificus	HG803186	672	2433
Streptomyces clavuligerus	CP032053	1901	1883
Streptomyces vietnamensis	CP010408	362257	1883
Bacillus thuringiensis	CP011357	1428	1883
Bacillus thuringiensis	HM037272	1428	1883
Bacillus	CP010580	1386	1883
Bacillus	CP010110	1386	1883
Bacillus	CP010092	1386	1883
Psychrobacter sp. PRwf-1	CP000714	349106	1883
Acinetobacter	CP040045	469	1883
Acinetobacter	CP033860	469	1883
Psychrobacter sp. YP14	CP029791	2203895	1883
Rhodobacter sphaeroides	CP033445	1063	1883
Rhodobacter sphaeroides	CP033453	1063	1883
Rhodobacter sphaeroides	CP001153	1063	1883
Rhodobacter sphaeroides	CP015213	1063	1883
Rhodobacter sphaeroides	CP036421	1063	1883
Aquisphaera giovannonii	CP042998	406548	1511635
Lactococcus garvieae	HE650695	1363	1511635
Lactococcus lactis	CP016731	1358	1511635
Lactococcus lactis	JQ821354	1358	1511635
Lactococcus lactis	CP043520	1358	1511635
Lactococcus lactis	CP016719	1358	1511635
Candidatus Phytoplasma sp.	AB000510	2155	85635
Candidatus Profftella armatura	CP003469	669502	1381133
Deinococcus sp. NW-56	CP026517	2080419	2623546
Deinococcus sp. NW-56	CP026518	2080419	2623546
Borrelia miyamotoi	CP036590	47466	2623546
Borrelia miyamotoi	CP036612	47466	2623546
Borrelia miyamotoi	CP037092	47466	2623546
Borrelia miyamotoi	CP037509	47466	2623546
Borrelia miyamotoi	CP044667	47466	2623546
V	CP036592		

scientificName	nuccoreAcc	taxid	parent
Borrelia miyamotoi	CP044829	47466	2623546
Enterococcus faecium	KY579372	1352	2623546
Enterococcus faecalis	AP018541	1351	2623546
Enterococcus faecalis	MH830362	1351	2623546
Lactobacillales	AY357120	186826	2623546
Lactobacillales	GU128949	186826	2623546
Lactobacillales	NC_008445	186826	2623546
Enterococcus gilvus	CP030934	160453	2623546
Enterococcus sp. FDAARGOS_553	CP033741	2420313	2608891
Lactobacillales	CP003727	186826	2608891
Lactobacillales	NC_002136	186826	2608891
Pediococcus acidilactici	$DQ\overline{220741}$	1254	2608891
Streptococcaceae	AB290882	1300	2608891
Streptococcaceae	CP024844	1300	2608891
Streptococcus agalactiae	U83488	1311	1301
Enterococcus avium	CP034168	33945	1350
Erythrobacter atlanticus	CP015441	1648404	1041
Croceicoccus marinus	CP019604	450378	1295327
Paenibacillus larvae	CP019658	1464	44249
Paenibacillus larvae	CP019657	1464	44249
Paenibacillus larvae	CP019653	1464	44249
Frankia symbiont of Datisca glomerata	CP002803	2716812	1854
Enterobacter cloacae	KF998104	550	44249
Edwardsiella ictaluri	KC249996	67780	44249
Enterobacter cloacae	MF370188	550	44249
Alcaligenes faecalis	CP021884	511	44249
Bacillus thuringiensis	CP003759	1428	44249
Bacillus thuringiensis	CP032611	1428	44249
Bacillus cereus	CP045609	1396	44249
Bacillus thuringiensis	EU362918	1428	44249
Bacillus	CP009719	1386	44249
Bacillus	CP041064	1386	44249
Bacillus megaterium	CP028088	1404	44249
Bacillus megaterium	CP026737	1404	44249
Bacillus megaterium	CP026738	1404	44249
Bacillus	CP023318	1386	44249
Bacillus	CP024036	1386	44249
Bacillus megaterium	CP025701	1404	44249
Bacillus megaterium	CP032530	1404	44249
Bacillus flexus	CP040366	86664	1386
Bacillus flexus	CP016791	86664	1386
Bacillus megaterium	CP028090	1404	1386
Bacillus megaterium	CP018877	1404	1386
Salmonella enterica	HM231165	28901	1386

scientificName	nuccoreAcc	taxid	parent
Salmonella enterica	CP039608	28901	1386
Lactococcus lactis	DQ288662	1358	1386
Staphylococcus aureus	CP042082	1280	1386
Escherichia coli	CP034731	562	1386
Enterobacteriaceae	KR259132	543	1386
Enterobacteriaceae	KR259134	543	1386
Enterobacterales	NC_010064	91347	1386
Enterobacterales	CP006666	91347	1386
Escherichia coli	KT207463	562	1386
Klebsiella pneumoniae	CP015133	573	1386
Klebsiella pneumoniae	CP042485	573	1386
Acinetobacter baumannii	CP040085	470	1386
Escherichia coli	CP035352	562	1386
Escherichia coli	MF422120	562	1386
Escherichia coli	KM107841	562	1386
Enterococcus faecium	AP019410	1352	1386
Enterococcus faecium	CP003585	1352	1386
Enterococcus faecium	KP842560	1352	1386
Enterococcus faecium	CP014533	1352	1386
Enterococcus faecium	CP025390	1352	1386
Staphylococcus aureus	HE611647	1280	1386
Staphylococcus hyicus	FN677368	1284	1386
Spiroplasma citri	CP042475	2133	2132
Spiroplasma kunkelii	CP012425	47834	2132
Pseudomonas syringae	LT985210	317	2132
Pseudomonas syringae	LT985211	317	2132
Pseudomonas	LT985190	286	2132
Pseudomonas cerasi	LT963397	1583341	2132
Pseudomonas syringae	LT985193	317	2132
Pseudomonas syringae	LT963410	317	2132
Pseudomonas amygdali	CP026560	47877	2132
Pseudomonas syringae group genomosp. 3	AY603979	251701	2132
Pseudomonas savastanoi	FR820586	29438	2132
Pseudomonas amygdali	CP026561	47877	2132
Pseudomonas syringae	CP034080	317	2132
Pseudomonas syringae	CP034079	317	2132
Pseudomonas amygdali	CP031227	47877	2132
Pseudomonas savastanoi	CP000060	29438	2132
Pseudomonas syringae	CP045801	317	2132
Pseudomonas syringae	CP006257	317	2132
Pseudomonas sp. KBS0707	CP041756	2578110	2583993
Pseudomonas syringae	JQ418525	317	2583993
Pseudomonas syringae	CP005971	317	2583993
Pseudomonas syringae	AY342395	317	2583993

scientificName	nuccoreAcc	taxid	parent
Pseudomonas	CP042805	286	2583993
Pseudomonas	KY362372	286	2583993
Pseudomonas syringae	CP007015	317	2583993
Pseudomonas syringae	KY362373	317	2583993
Pseudomonas coronafaciens	KY362367	53409	136849
Crocosphaera subtropica	CP000808	43989	136849
Streptomyces lavendulae	CP024986	1914	1883
Streptomyces katrae	CP020043	68223	1883
Streptomyces sp. W1SF4	CP034352	2305220	2593676
Streptomyces katrae	CP020044	68223	2593676
Streptomyces albidoflavus	CP040467	1886	1477431
Microcystis aeruginosa	NC_004984	1126	1125
Lactobacillus plantarum	CP005944	1590	1125
Lactobacillus plantarum	CP033618	1590	1125
Lactobacillus plantarum	CP017407	1590	1125
Lactobacillus plantarum	CP037430	1590	1125
Lactobacillus casei	AP012545	1582	1125
Leuconostoc mesenteroides	CP020732	1245	1125
Streptomyces incarnatus	CP011500	665007	1883
Rhodoplanes piscinae	LR026982	444923	29407
Alicyclobacillus acidocaldarius	CP001728	405212	29407
Alicyclobacillus acidocaldarius	CP001729	405212	29407
Stanieria cyanosphaera	CP003658	102116	102115
Deinococcus sp. AJ005	CP044991	2652443	102115
Deinococcus sp. AJ005	CP044989	2652443	102115
Helicobacter cetorum	CP003480	138563	209
Helicobacter cetorum	CP003482	138563	209
Helicobacter pylori	CP032028	210	209
Staphylococcus aureus	GQ900429	1280	209
Staphylococcus aureus	CP042145	1280	209
Staphylococcus aureus	CP042113	1280	209
Phaeobacter piscinae	CP010647	1580596	209
Phaeobacter inhibens	CP010621	221822	209
Lactococcus garvieae	HE651326	1363	209
Lactococcus sp. 1JSPR-7	CP032628	2419773	209
Enterococcus hirae	HQ724512	1354	1350
Enterococcus mundtii	AP013039	53346	1350
Enterococcus mundtii	AP013040	53346	1350
Roseobacter litoralis	CP002626	42443	2433
Roseobacter denitrificans	CP000465	2434	2433
Streptococcus suis	KX785327	1307	2433
Streptococcus suis	KX785321	1307	2433
Salmonella enterica	MK033501	28901	2433
Escherichia coli	CP006640	562	2433

Enterobacterales	scientificName	nuccoreAcc	taxid	parent
Enterobacterales CP015505 91347 2433 Enterobacterales CP028999 91347 2433 Enterobacterales CP019200 91347 2433 Klebsiella pneumoniae CP026025 573 2433 Enterobacterales KR091915 91347 2433 Staphylococcus MK587566 1279 2433 Staphylococcus aureus AP019752 1280 2433 Staphylococcus aureus KY436023 1280 2433 Staphylococcus aureus KY436023 1280 2433 Cronobacter condimenti CP012267 1163710 413496 Cronobacter dublinensis CP012267 413497 413496 Cronobacter akazakii CP006732 413503 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter turicensis FN54304 413502 413496 Cronobacter universalis CP012258 535744 413496	Enterobacterales	LS999564	91347	2433
Enterobacterales CP028999 91347 2433 Enterobacterales CP019200 91347 2433 Klebsiella pneumoniae CP026025 573 2433 Enterobacterales KR091915 91347 2433 Staphylococcus KX520649 1279 2433 Staphylococcus aureus AP019752 1280 2433 Staphylococcus aureus MH587577 1280 2433 Staphylococcus aureus KY436023 1280 2433 Staphylococcus aureus KY436023 1280 2433 Cronobacter condimenti CP012267 1163710 413496 Cronobacter dublimensis CP012267 413496 413496 Cronobacter sakazakii CP006732 413503 413496 Cronobacter sakazakii CP006732 413496 413496 Cronobacter sakazakii CP004092 28141 413496 Cronobacter sakazakii CP011048 28141 413496 Cronobacter universalis CP012258 535744 413496				
Enterobacterales CP019200 91347 2433 Klebsiella pneumoniae CP026025 573 2433 Enterobacterales KR091915 91347 2433 Staphylococcus KX520649 1279 2433 Staphylococcus aureus AP019752 1280 2433 Staphylococcus aureus MH587577 1280 2433 Staphylococcus aureus KY436023 1280 2433 Cronobacter condimenti CP012267 1163710 413496 Cronobacter dublinensis CP012267 413497 413496 Cronobacter malonaticus CP006732 413503 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP001048 28141 413496 Cronobacter sakazakii CP010492 28144 413496 Cronobacter sakazakii CP011048 28141 413496 Cronobacter uiricensis FN543094 413502				
Klebsiella pneumoniae CP026025 573 2433 Enterobacterales KR091915 91347 2433 Staphylococcus KX520649 1279 2433 Staphylococcus aureus MH587576 1279 2433 Staphylococcus aureus MH587577 1280 2433 Staphylococcus aureus KY436023 1280 2433 Cronobacter condimenti CP012265 1163710 413496 Cronobacter dublinensis CP012267 413497 413496 Cronobacter akazakii CP006732 413503 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP004092 28141 413496 Cronobacter sakazakii CP004092 28141 413496 Cronobacter universalis CP012258 535744 413502 Escherichia coli CP012258 535744 413496 Escherichia coli CP042614 28901 413496 Escherichia coli CP042614 562 413496<		CP019200		
Enterobacterales KR (991915) 91347 2433 Staphylococcus KX 520649 1279 2433 Staphylococcus aureus MH587576 1279 2433 Staphylococcus aureus MH587577 1280 2433 Staphylococcus aureus KY 436023 1280 2433 Staphylococcus aureus KY 436023 1280 2433 Cronobacter condimenti CP012267 413497 413496 Cronobacter dublinensis CP012267 413497 413496 Cronobacter malonaticus CP006732 413503 413496 Cronobacter sakazakii CP004092 28141 413496 Cronobacter sakazakii CP004092 28141 413496 Cronobacter turicensis FN543094 413502 413496 Cronobacter universalis CP012255 535744 413496 Shigella flexneri KC020049 623 413496 Shigella flexneri KC020049 623 413496 Scherichia coli CP042614 562				
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Staphylococcus MH587576 1279 2433 Staphylococcus aureus AP019752 1280 2433 Staphylococcus aureus MH587577 1280 2433 Staphylococcus aureus KY436023 1280 2433 Cronobacter condimenti CP012265 1163710 413496 Cronobacter dublinensis CP012267 413497 413496 Cronobacter alonaticus CP006732 413503 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP001048 28141 413496 Cronobacter sakazakii CP011048 28141 413496 Cronobacter universalis CP011048 28141 413496 Cronobacter universalis CP012258 535744 413496 Escherichia coli CP042340 562 413496 Shigella flexneri KC020049 623 413496 Shigella enteria CP042614 562 413496 Scherichia coli CP042614 562 4134			1279	
Staphylococcus aureus AP019752 1280 2433 Staphylococcus aureus MH587577 1280 2433 Staphylococcus aureus KY436023 1280 2433 Cronobacter condimenti CP012265 1163710 413496 Cronobacter dublinensis CP006732 413497 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP001048 28141 413496 Cronobacter universalis CP011048 28141 413496 Cronobacter turicensis FN543094 413502 413496 Cronobacter universalis CP0112258 535744 413496 Cronobacter universalis CP012258 535744 413496 Scherichia coli CP042340 562 413496 Scherichia coli CP042614 262 413496 Shigella flexneri KC020049 623 413496 Scherichia coli CP042614 562	- v	MH587576	1279	2433
Staphylococcus aureus MH587577 1280 2433 Staphylococcus aureus KY436023 1280 2433 Cronobacter condimenti CP012265 1163710 413496 Cronobacter dublinensis CP012267 413497 413496 Cronobacter malonaticus CP006732 413503 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP001092 28141 413496 Cronobacter turicensis FN543094 413502 413496 Cronobacter universalis CP012258 535744 413496 Cronobacter universalis CP012258 535744 413496 Escherichia coli CP042340 562 413496 Shigella flexneri KC020049 623 413496 Shigella flexneri KC020049 623 413496 Scherichia coli CP0142614 262 413496 Escherichia coli CP0142614 262 413496 Klebsiella pneumoniae CP024512 573		AP019752	1280	2433
Staphylococcus aureus KY436023 1280 2433 Cronobacter condimenti CP012265 1163710 413496 Cronobacter dublinensis CP012267 413497 413496 Cronobacter malonaticus CP006732 413503 413496 Cronobacter sakzakii CP000785 28141 413496 Cronobacter sakzakii CP04092 28141 413496 Cronobacter sakzakii CP011048 28141 413496 Cronobacter universalis FN543094 413502 413496 Cronobacter universalis CP012258 535744 413496 Escherichia coli CP042340 562 413496 Shigella flexneri KC020049 623 413496 Shigella flexneri KC020049 623 413496 Scherichia coli CP042614 562 413496 Skigella flexneri KC020049 623 413496 Scherichia coli CP042614 562 413496 Skigella flexneri KC020049 52 413496 <td></td> <td>MH587577</td> <td>1280</td> <td>2433</td>		MH587577	1280	2433
Cronobacter condimenti CP012265 1163710 413496 Cronobacter dublinensis CP012267 413497 413496 Cronobacter malonaticus CP006732 413503 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP004092 28141 413496 Cronobacter sakazakii CP011048 28141 413496 Cronobacter turicensis FN543094 413502 413496 Cronobacter universalis CP012258 535744 413496 Cronobacter universalis CP012258 535744 413496 Escherichia coli CP042340 562 413496 Shigella flexneri KC020049 623 413496 Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP019022 562 413496 Lactobacillus reuteri CP024512 573 <td></td> <td>KY436023</td> <td>1280</td> <td>2433</td>		KY436023	1280	2433
Cronobacter malonaticus CP006732 413503 413496 Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP004092 28141 413496 Cronobacter sakazakii CP011048 28141 413496 Cronobacter turicensis FN543094 413502 413496 Cronobacter universalis CP012258 535744 413496 Cronobacter universalis CP042340 562 413496 Escherichia coli CP042340 562 413496 Shigella flexneri KC020049 623 413496 Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP019022 562 413496 Klebsiella pneumoniae CP024512 573 413496 Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri CP006017 1598 <		CP012265	1163710	413496
Cronobacter sakazakii CP000785 28141 413496 Cronobacter sakazakii CP004092 28141 413496 Cronobacter sakazakii CP011048 28141 413496 Cronobacter turicensis FN543094 413502 413496 Cronobacter universalis CP012258 535744 413496 Escherichia coli CP042340 562 413496 Shigella flexmeri KC020049 623 413496 Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Escherichia coli CP019022 562 413496 Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP024512 573 413496 Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri EF432638 1598 413496 Lactobacillus reuteri CP002848 1598 413496	Cronobacter dublinensis	CP012267	413497	413496
Cronobacter sakazakii CP004092 28141 413496 Cronobacter sakazakii CP011048 28141 413496 Cronobacter turicensis FN543094 413502 413496 Cronobacter universalis CP012258 535744 413496 Escherichia coli CP042340 562 413496 Shigella flexneri KC020049 623 413496 Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP019022 562 413496 Klebsiellus reuteri CP006017 1598 413496 Lactobacillus reuteri EF432638 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Acinetobacter lwoffii CP019145 28090 196816 Acinetobacter lwoffii CP032287 28090 19	Cronobacter malonaticus	CP006732	413503	413496
Cronobacter sakazakii CP011048 28141 413496 Cronobacter turicensis FN543094 413502 413496 Cronobacter universalis CP012258 535744 413496 Escherichia coli CP042340 562 413496 Shigella flexneri KC020049 623 413496 Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP019072 562 413496 Klebsiella pneumoniae CP024512 573 413496 Lactobacillus ruteri CP006017 1598 413496 Lactobacillus ruteri CP002848 1598 413496	Cronobacter sakazakii	CP000785	28141	413496
Cronobacter turicensis FN543094 413502 413496 Cronobacter universalis CP012258 535744 413496 Escherichia coli CP042340 562 413496 Shigella flexneri KC020049 623 413496 Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Escherichia coli CP024512 573 413496 Escherichia coli CP024512 573 413496 Klebsiella pneumoniae CP024512 573 413496 Lactobacillus reuteri CP006017 1573 413496 Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Acinetobactlus reuteri CP002848 1598 413496 Acinetobacter lwoffii CP02424 1636603 196816 Acinetobacter lwoffii CP032105 28090 196816	Cronobacter sakazakii	CP004092	28141	413496
Cronobacter universalis CP012258 535744 413496 Escherichia coli CP042340 562 413496 Shigella flexneri KC020049 623 413496 Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP024512 573 413496 Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri EF432638 1598 413496 Lactobacillus reuteri CP006017 1598 413496 Acinetobacter sp. ACNIH1 CP026424 1636603 196816 Acinetobacter lwoffii CP019145 28090 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Borrelia miyamotoi CP036603 47466 196816	Cronobacter sakazakii	CP011048	28141	413496
Escherichia coli CP042340 562 413496 Shigella flexneri KC020049 623 413496 Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP024512 573 413496 Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Lactobacillus reuteri CP026424 1636603 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816	Cronobacter turicensis	FN543094	413502	413496
Shigella flexneri KC020049 623 413496 Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP024512 573 413496 Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Lactobacillus reuteri CP028424 1636603 196816 Acinetobacter lwoffii CP019145 28090 196816 Acinetobacter lwoffii CP032125 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 <t< td=""><td>Cronobacter universalis</td><td>CP012258</td><td>535744</td><td>413496</td></t<>	Cronobacter universalis	CP012258	535744	413496
Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP024512 573 413496 Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri EF432638 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Acinetobacter lwoffii CP026424 1636603 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP032287 28090 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Borrelia miyamotoi CP036752 47466 196816 Bacillus thuringiensis CP010012 1428 <td< td=""><td>Escherichia coli</td><td>CP042340</td><td>562</td><td>413496</td></td<>	Escherichia coli	CP042340	562	413496
Salmonella enterica CP011434 28901 413496 Escherichia coli CP042614 562 413496 Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP024512 573 413496 Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri EF432638 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Acinetobacter lwoffii CP026424 1636603 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP032287 28090 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Borrelia miyamotoi CP036752 47466 196816 Bacillus thuringiensis CP010012 1428 <td< td=""><td>Shigella flexneri</td><td>KC020049</td><td>623</td><td>413496</td></td<>	Shigella flexneri	KC020049	623	413496
Escherichia coli CP019022 562 413496 Klebsiella pneumoniae CP024512 573 413496 Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri EF432638 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Acinetobacter sp. ACNIH1 CP026424 1636603 196816 Acinetobacter lwoffii CP019145 28090 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP036752 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 </td <td></td> <td>CP011434</td> <td>28901</td> <td>413496</td>		CP011434	28901	413496
Klebsiella pneumoniae CP024512 573 413496 Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri EF432638 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Acinetobacter sp. ACNIH1 CP026424 1636603 196816 Acinetobacter lwoffii CP019145 28090 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Borrelia miyamotoi CP036752 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 17	Escherichia coli	CP042614	562	413496
Lactobacillus reuteri CP006017 1598 413496 Lactobacillus reuteri EF432638 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Acinetobacter sp. ACNIH1 CP026424 1636603 196816 Acinetobacter lwoffii CP019145 28090 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716	Escherichia coli	CP019022	562	413496
Lactobacillus reuteri EF432638 1598 413496 Lactobacillus reuteri CP002848 1598 413496 Acinetobacter sp. ACNIH1 CP026424 1636603 196816 Acinetobacter lwoffii CP019145 28090 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Klebsiella pneumoniae	CP024512	573	413496
Lactobacillus reuteri CP002848 1598 413496 Acinetobacter sp. ACNIH1 CP026424 1636603 196816 Acinetobacter lwoffii CP019145 28090 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Lactobacillus reuteri	CP006017	1598	413496
Acinetobacter sp. ACNIH1 CP026424 1636603 196816 Acinetobacter lwoffii CP019145 28090 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Lactobacillus reuteri	EF432638	1598	413496
Acinetobacter lwoffii CP019145 28090 196816 Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Lactobacillus reuteri	CP002848	1598	413496
Acinetobacter lwoffii CP032105 28090 196816 Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Acinetobacter sp. ACNIH1	CP026424	1636603	196816
Acinetobacter lwoffii CP032287 28090 196816 Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Acinetobacter lwoffii	CP019145	28090	196816
Acinetobacter johnsonii CP010354 40214 196816 Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Bacillus thuringiensis CP036752 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Acinetobacter lwoffii	CP032105	28090	196816
Borrelia miyamotoi CP036603 47466 196816 Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Borrelia miyamotoi CP036752 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Acinetobacter lwoffii	CP032287	28090	196816
Borrelia miyamotoi CP036747 47466 196816 Borrelia miyamotoi CP044648 47466 196816 Borrelia miyamotoi CP036752 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Acinetobacter johnsonii	CP010354	40214	196816
Borrelia miyamotoi CP044648 47466 196816 Borrelia miyamotoi CP036752 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Borrelia miyamotoi	CP036603	47466	196816
Borrelia miyamotoi CP036752 47466 196816 Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Borrelia miyamotoi	CP036747	47466	196816
Bacillus thuringiensis CP010012 1428 196816 Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Borrelia miyamotoi	CP044648	47466	196816
Bacillus thuringiensis CP003767 1428 196816 Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Borrelia miyamotoi	CP036752	47466	196816
Bacillus thuringiensis CP010096 1428 196816 Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Bacillus thuringiensis	CP010012	1428	196816
Bacillus thuringiensis AP014870 1428 196816 Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816		CP003767	1428	196816
Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Bacillus thuringiensis	CP010096	1428	196816
Corynebacterium FM164414 1716 196816 Corynebacterium CP021253 1716 196816	Bacillus thuringiensis	AP014870	1428	196816
· ·		FM164414	1716	196816
· ·	Corynebacterium	CP021253	1716	196816
	Burkholderia	CP003091	32008	119060

scientificName	nuccoreAcc	taxid	parent
Burkholderia	CP000617	32008	119060
Mesorhizobium	BA000013	68287	69277
Mesorhizobium	AP017606	68287	69277
Staphylococcus cohnii	CP033734	29382	69277
Staphylococcus saprophyticus	CP022092	29385	69277
Staphylococcus condimenti	CP018777	70255	1279
Staphylococcus cohnii	CP027420	29382	1279
Staphylococcus saprophyticus	CP022057	29385	1279
Staphylococcus lugdunensis	KU882686	28035	1279
Staphylococcus	GQ900402	1279	1279
Staphylococcus	CP016859	1279	1279
Staphylococcus	CP014118	1279	1279
Staphylococcus	CP029661	1279	1279
Staphylococcus haemolyticus	CP033813	1283	1279
Staphylococcus epidermidis	CP034113	1282	1279
Staphylococcus epidermidis	CP030248	1282	1279
Staphylococcus epidermidis	CP020462	1282	1279
Staphylococcus epidermidis	CP024409	1282	1279
Staphylococcus epidermidis	KP702950	1282	1279
Aggregatibacter actinomycetemcomitans	JX436327	714	1279
Aggregatibacter actinomycetemcomitans	AF302424	714	1279
Aggregatibacter actinomycetemcomitans	GQ866235	714	1279
Pasteurella multocida	KX753679	747	1279
Sulfuricurvum kujiense	CP002357	148813	286130
Sulfuricurvum kujiense	CP002356	148813	286130
Sulfuricurvum kujiense	CP002358	148813	286130
Borreliella burgdorferi	AE000787	139	286130
Borrelia anserina	CP014605	143	286130
Lactococcus lactis	AE001272	1358	286130
Lactococcus lactis	KX138409	1358	286130
Streptococcus infantarius	CP003296	102684	1301
Lactococcus lactis	JN172910	1358	1301
Lactococcus lactis	CP016705	1358	1301
Acetobacter pasteurianus	AP011126	438	1301
Komagataeibacter saccharivorans	CP036410	265959	1301
Acetobacter pasteurianus	AP014885	438	1301
Escherichia coli	CP014088	562	1301
Rhodococcus opacus	AP011118	37919	1301
Ketogulonicigenium robustum	CP019938	92947	92944
Xanthomonas citri	CP003779	346	92944
Kozakia baliensis	CP014678	153496	92944
Borreliella burgdorferi	CP001530	139	92944
Borreliella afzelii	AY100628	29518	92944
Borrelia mayonii	CP015790	1674146	92944

scientificName	nuccoreAcc	taxid	parent
Borreliella valaisiana	CP001442	62088	92944
Borreliella spielmanii	CP001465	88916	92944
Borreliella afzelii	CP002947	29518	92944
Borreliella afzelii	CP009066	29518	92944
Candidatus Accumulibacter phosphatis	CP001716	327160	327159
Candidatus Accumulibacter phosphatis	CP001718	327160	327159
Candidatus Accumulibacter phosphatis	CP001717	327160	327159
Shewanella sp. ANA-3	CP000470	94122	196818
Leclercia	CP042507	83654	543
Leclercia	CP042495	83654	543
Leclercia	CP026170	83654	543
Leclercia	CP035380	83654	543
Brevirhabdus pacifica	CP019125	1267768	543
Brevirhabdus pacifica	CP019130	1267768	543
Roseivivax sp. THAF40	CP045364	2587858	543
Phaeobacter inhibens	CP010627	221822	543
Roseivivax	CP045362	93682	31989
Roseivivax sp. THAF197b	CP045321	2588299	31989
Rhodobacteraceae bacterium	CP021115	1904441	31989
Thioclava nitratireducens	CP019439	1915078	285107
Roseovarius indicus	CP031601	540747	285107
Brevirhabdus pacifica	CP019126	1267768	285107
Octadecabacter sp. SW4	CP042820	2602067	196158
Sulfitobacter pseudonitzschiae	CP022422	1402135	196158
Sulfitobacter sp. D7	CP020696	1968541	196795
Confluentimicrobium sp. EMB200-NS6	CP010871	1609966	2643318
Marinobacter adhaerens	CP001980	1033846	2742
Staphylococcus aureus	CP042020	1280	2742
Bacillus megaterium	CP009919	1404	2742
Bacillus megaterium	CP032534	1404	2742
Bacillus megaterium	CP032533	1404	2742
Bacillus megaterium	CP001988	1404	2742
Bacillus megaterium	CP018879	1404	2742
Bacillus pseudofirmus	CP001879	79885	1386
Bacillus pseudofirmus	CP001880	79885	1386
Borreliella burgdorferi	CP001557	139	1386
Borrelia mayonii	CP015793	1674146	1386
Borreliella bissettii	CP002760	64897	1386
Borreliella burgdorferi	CP001537	139	1386
Borreliella burgdorferi	CP002230	139	1386
Borreliella burgdorferi	CP019763	139	1386
Borreliella afzelii	CP002949	29518	1386
Borreliella garinii	CP001317	29519	1386
Borreliella garinii	CP001301	29519	1386

scientificName	nuccoreAcc	taxid	parent
Borreliella bavariensis	CP028874	664662	1386
Staphylococcus aureus	GQ900439	1280	1386
Enterococcus faecium	CP033377	1352	1386
Lactococcus raffinolactis	CP023393	1366	1386
Lactococcus piscium	LN774771	1364	1386
Lactococcus garvieae	KM007160	1363	1386
Lactobacillus plantarum	CP035173	1590	1386
Enterococcus durans	CP012368	53345	1386
Listeria monocytogenes	CP014253	1639	1386
Tetragenococcus	CP027784	51668	1386
Tetragenococcus	CP027769	51668	1386
Tetragenococcus koreensis	CP027787	290335	51668
Lactococcus lactis	CP016736	1358	51668
Enterococcus faecium	CP034945	1352	51668
Enterococcus faecium	CP034947	1352	51668
Lactococcus lactis	CP016722	1358	51668
Lactococcus lactis	KX138410	1358	51668
Carnobacterium inhibens	CP006813	147709	51668
Lactococcus lactis	DQ149243	1358	51668
Lactococcus lactis	CP016741	1358	51668
Vagococcus teuberi	CP017268	519472	2737
Enterococcus faecium	CP044267	1352	2737
Vibrio sp. dhg	CP028945	2163016	2614977
Vibrio azureus	CP018618	512649	717610
Advenella kashmirensis	CP003556	310575	290425
Advenella mimigardefordensis	CP003916	302406	290425
Staphylococcus	CP030247	1279	290425
Staphylococcus	GQ900465	1279	290425
Staphylococcus	AP019699	1279	290425
Staphylococcus hominis	CP033731	1290	290425
Staphylococcus	CP017465	1279	290425
Staphylococcus	MK046688	1279	290425
Staphylococcus	LN866850	1279	290425
Staphylococcus epidermidis	CP033781	1282	290425
Geobacillus	CP027305	129337	290425
Geobacillus	AM886060	129337	290425
Parageobacillus thermoglucosidasius	CP016624	1426	1906945
Geobacillus thermodenitrificans	CP000558	33940	129337
Geobacillus thermodenitrificans	CP020031	33940	129337
Geobacillus thermodenitrificans	CP017691	33940	129337
Geobacillus thermodenitrificans	CP020032	33940	129337
Lactococcus garvieae	HE650697	1363	129337
Lactococcus lactis	CP003161	1358	129337
Enterococcus faecalis	AP018540	1351	129337

scientificName	$\operatorname{nuccoreAcc}$	taxid	parent
Enterococcus faecalis	CP028726	1351	129337
Lactococcus lactis	CP002368	1358	129337
Lactococcus lactis	CP043527	1358	129337
Lactococcus lactis	CP016686	1358	129337
Lactococcus lactis	CP016707	1358	129337
Lactococcus lactis	DQ534432	1358	129337
Lactococcus lactis	CP016702	1358	129337
Lactococcus lactis	CP016699	1358	129337
Lactococcus lactis	CP043526	1358	129337
Lactococcus lactis	CP003133	1358	129337
Lactococcus lactis	CP016729	1358	129337
Lactococcus lactis	DQ149245	1358	129337
Lactococcus lactis	CP016745	1358	129337
Lactococcus lactis	CP003159	1358	129337
Lactococcus lactis	HM197723	1358	129337
Lactococcus lactis	CP016734	1358	129337
Lactococcus lactis	CP016688	1358	129337
Lactococcus lactis	AP018503	1358	129337
Lactococcus lactis	FJ649478	1358	129337
Lactococcus lactis	JN225497	1358	129337
Lactococcus lactis	LT599052	1358	129337
Lactococcus lactis	LT599053	1358	129337
Lactococcus lactis	CP001835	1358	129337
Lactococcus lactis	CP016726	1358	129337
Lactococcus lactis	CP042409	1358	129337
Salmonella	CP022036	590	129337
Natranaerobius thermophilus	CP001036	375929	375928
Cronobacter	CP000784	413496	375928
Cronobacter	FN543095	413496	375928
Leclercia sp. LSNIH3	CP026388	1920116	2627398
Salmonella enterica	CP045053	28901	2627398
Klebsiella pneumoniae	EU383016	573	2627398
Enterobacterales	CP045219	91347	2627398
Enterobacterales	CP035200	91347	2627398
Enterobacterales	CP026384	91347	2627398
Enterobacterales	AE017044	91347	2627398
Serratia marcescens	CP018922	615	2627398
Enterobacterales	CP022119	91347	2627398
Salmonella enterica	CP019191	28901	2627398
Escherichia coli	MH580300	562	2627398
Escherichia coli	CP019074	562	2627398
Enterobacteriaceae	CP045839	543	2627398
Enterobacteriaceae	CP010168	543	2627398
Escherichia coli	KC853434	562	2627398

Escherichia coli	scientificName	nuccoreAcc	taxid	parent
Aeromonas EF495198 642 2627398 Enterobacterales CP045559 91347 2627398 Enterobacterales CP034849 91347 2627398 Klebsiella pneumoniae KX434882 573 2627398 Enterobacterales CP027855 91347 2627398 Klebsiella pneumoniae CP035774 573 2627398 Acinetobacter baumannii LR026973 470 2627398 Acinetobacter baumannii LR026973 470 2627398 Leuconostoc CP001754 1243 2627398 Leuconostoc CP042395 1243 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP033867 46255 81850 Lactobacillus CP033887 1578 81850 Lactobacillus CP025138 1578 81850 Lactobacillaceae CP015921 1578 81850 Lact	Escherichia coli	KX518744	562	2627398
Enterobacterales CP045559 91347 2627398 Enterobacterales CP034849 91347 2627398 Klebsiella pneumoniae KX434882 573 2627398 Enterobacterales CP027855 91347 2627398 Klebsiella pneumoniae CP035774 573 2627398 Proteus mirabilis KY43363 584 2627398 Proteus mirabilis KY43363 584 2627398 Leuconostoc CP042395 1243 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP033610 46255 81850 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP033610 46255 81850 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP035269 46255 81850 Lactobacillacea CP015129 1578 81850	Phaeobacter inhibens	CP010616	221822	2627398
Enterobacterales CP045559 91347 2627398 Enterobacterales CP034849 91347 2627398 Klebsiella pneumoniae KX343882 573 2627398 Enterobacterales CP027855 91347 2627398 Klebsiella pneumoniae CP035774 573 2627398 Proteus mirabilis KY43363 584 2627398 Proteus mirabilis KY43363 584 2627398 Leuconostoc CP042395 1243 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP033610 46255 81850 Weissella CP033610 46255 81850 Lactobacillus CP025138 1578 81850 Lactobacillus CP015129 1578 81850 Lactobacillaceae CP035887 33958 81850 Lactobacillaceae CP015992 1578 81850 Lactobacillace	Aeromonas		642	2627398
Enterobacterales CP034849 91347 2627398 Klebsiella pneumoniae KX434882 573 2627398 Enterobacterales CP027855 91347 2627398 Klebsiella pneumoniae CP035774 573 2627398 Acinetobacter baumannii LR026973 470 2627398 Proteus mirabilis KY333363 584 2627398 Leuconostoc CP01754 1243 2627398 Leuconostoc CP042395 1243 2627398 Leuconostoc mesenteroides CP0160404 1245 2627398 Leuconostoc mesenteroides CP013606 46255 81850 Leuconostoc descerta CP033607 46255 81850 Leuconostoc descerta CP033887 1578 81850 Lactobacillus CP025138 1578 81850 Lactobacillus CP015129 1578 81850 Lactobacillaceae CP0133887 33958 81850 Lactobacillaceae CP015921 33958 81850	Enterobacterales	CP045559	91347	
Enterobacterales CP027855 91347 2627398 Klebsiella pneumoniae CP035774 573 2627398 Acinetobacter baumannii LR026973 470 2627398 Proteus mirabilis KY433363 584 2627398 Leuconostoc CP001754 1243 2627398 Leuconostoc CP042395 1243 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP035269 46255 81850 Weissella CP035269 46255 81850 Weissella CP025138 1578 81850 Lactobacillus CP025138 1578 81850 Lactobacillaceae CP051329 1578 81850 Lactobacillaceae CP015129 1578 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015921 33958 81850 Weissella bellenica CP042402 46255 46255 Pediococcus pentosaceus	Enterobacterales	CP034849	91347	
Enterobacterales CP027855 91347 2627398 Klebsiella pneumoniae CP035774 573 2627398 Acinetobacter baumannii LR026973 470 2627398 Proteus mirabilis KY433363 584 2627398 Leuconostoc CP001754 1243 2627398 Leuconostoc CP042395 1243 2627398 Leuconostoc mesenteroides CP014604 1243 2627398 Weissella CP035269 46255 81850 Weissella CP035269 46255 81850 Lactobacillus CP025138 1578 81850 Lactobacillus CP015129 1578 81850 Lactobacillaceae CP033887 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015921 33958 81850 Veissella hellenica CP042402 46256 46255 Pediococcus pentosaceus CP021473 1255 46255 Weissella soli	Klebsiella pneumoniae	KX434882	573	2627398
Acinetobacter baumannii LR026973 470 2627398 Proteus mirabilis KY433363 584 2627398 Leuconostoc CP001754 1243 2627398 Leuconostoc CP042395 1243 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP033610 46255 81850 Weissella CP035269 46255 81850 Lactobacillus CP025138 1578 81850 Lactobacillus CP015129 1578 81850 Lactobacillaceae CP033887 33958 81850 Lactobacillaceae CP015129 1578 81850 Lactobacillaceae CP015129 1578 81850 Lactobacillaceae CP015129 1578 81850 Lactobacillaceae CP015129 1578 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP014		CP027855	91347	2627398
Proteus mirabilis KY43363 584 2627398 Leuconostoc CP001754 1243 2627398 Leuconostoc CP014395 1243 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP033610 46255 81850 Weissella CP035269 46255 81850 Lactobacillus CP025138 1578 81850 Lactobacillus AP012172 1578 81850 Lactobacillaceae CP033887 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015968<	Klebsiella pneumoniae	CP035774	573	2627398
Proteus mirabilis KY43363 584 2627398 Leuconostoc CP001754 1243 2627398 Leuconostoc CP014395 1243 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP033610 46255 81850 Weissella CP035269 46255 81850 Lactobacillus CP025138 1578 81850 Lactobacillus AP012172 1578 81850 Lactobacillaceae CP033887 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015968<	-		470	
Leuconostoc CP001754 1243 2627398 Leuconostoc CP042395 1243 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP033610 46255 81850 Weissella CP035269 46255 81850 Lactobacillus CP015129 1578 81850 Lactobacillaceae CP015129 1578 81850 Lactobacillaceae CP033887 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP01402402 46256 46255 Weissella hellenica CP042402 46256 46255 Weissella soli CP024402 46256 46255 Weissella soli CP042		KY433363	584	
Leuconostoc CP042395 1243 2627398 Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP035269 46255 81850 Lactobacillus CP025138 1578 81850 Lactobacillus CP015129 1578 81850 Lactobacillaceae CP015129 1578 81850 Lactobacillaceae CP013887 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP014402 46256 46255 Pediococcus pentosaceus CP021473 1255 46255 Weissella soli CP024279 15586 46255 Weissella soli <	Leuconostoc		1243	
Leuconostoc mesenteroides CP014604 1245 2627398 Weissella CP033610 46255 81850 Weissella CP035269 46255 81850 Lactobacillus CP025138 1578 81850 Lactobacillus AP012172 1578 81850 Lactobacillaceae CP033887 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP0142402 46256 46255 Veissella hellenica CP042402 46256 46255 Veissella hellenica CP042473 1255 46255 Leuconostocitrium sp. 4-46 <td></td> <td></td> <td></td> <td></td>				
Weissella CP035269 46255 81850 Weissella CP035269 46255 81850 Lactobacillus CP025138 1578 81850 Lactobacillus AP012172 1578 81850 Lactobacillaceae CP033887 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP015968 33958 81850 Lactobacillaceae CP0149402 46256 46255 Veissella hellenica CP042473 1255 46255 Pediococcus pentosaceus CP021473 1255 46255 Weissella soli CP042379 155866 46255 Leuconostoc citreum CP042415 33964 46255 Methylobacterium sp. 4-46 CP000944 426117 2615210 Methylobacterium sp. 4-46 CP000944 426117 2615210 Shewanella sp. SNU WT4 CP041152 2590015 196818 P				
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Lactobacillus CP025138 1578 81850 Lactobacillus CP015129 1578 81850 Lactobacillus AP012172 1578 81850 Lactobacillaceae CP038887 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015968 33958 81850 Weissella hellenica CP042402 46256 46255 Pediococcus pentosaceus CP021473 1255 46255 Pediococcus pentosaceus CP021473 1255 46255 Veissella soli CP042379 155866 46255 Weissella soli CP042415 33964 46255 Methylobacterium sp. 4-46 CP000945 426117 2615210 Methylobacterium sp. 4-46 CP000984 426117 2615210 Shewanella sp. SNU WT4 CP041152 2590015 196818 Proteobacteria CP039914 1224 196818 Proteobacteria CP039914 1224 196818	Weissella		46255	81850
Lactobacillus CP015129 1578 81850 Lactobacillus AP012172 1578 81850 Lactobacillaceae CP033887 33958 81850 Lactobacillaceae CP015921 33958 81850 Lactobacillaceae CP015968 33958 81850 Weissella hellenica CP042402 46256 46255 Weissella soli CP021473 1255 46255 Weissella soli CP042379 155866 46255 Leuconostoc citreum CP042415 33964 46255 Methylobacterium sp. 4-46 CP000945 426117 2615210 Methylobacterium sp. 4-46 CP000944 426117 2615210 Shewanella baltica CP000944 426117 2615210 Shewanella sp. SNU WT4 CP041152 2590015 196818 Proteobacteria CP03914 1224 196818 Proteobacteria EU315244 1224 196818 Proteobacteria CP020047 1224 196818 <t< td=""><td>Lactobacillus</td><td></td><td></td><td></td></t<>	Lactobacillus			
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Lactobacillaceae CP015968 33958 81850 Weissella hellenica CP042402 46256 46255 Pediococcus pentosaceus CP021473 1255 46255 Weissella soli CP042379 155866 46255 Leuconostoc citreum CP042415 33964 46255 Methylobacterium sp. 4-46 CP000945 426117 2615210 Methylobacterium sp. 4-46 CP000944 426117 2615210 Shewanella baltica CP000894 62322 2615210 Shewanella sp. SNU WT4 CP041152 2590015 196818 Proteobacteria CP039914 1224 196818 Proteobacteria EU315244 1224 196818 Proteobacteria MF495477 1224 196818 Proteobacteria CP020047 1224 196818 Proteobacteria KT937281 67780 196818 Yersinia enterocolitica F1696405 630 196818 Yersinia enterocolitica F7696405 630 196818				
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Pediococcus pentosaceus CP021473 1255 46255 Weissella soli CP042379 155866 46255 Leuconostoc citreum CP042415 33964 46255 Methylobacterium sp. 4-46 CP000945 426117 2615210 Methylobacterium sp. 4-46 CP000894 426117 2615210 Shewanella baltica CP000894 62322 2615210 Shewanella sp. SNU WT4 CP041152 2590015 196818 Proteobacteria CP099154 1224 196818 Proteobacteria CP039914 1224 196818 Proteobacteria EU315244 1224 196818 Proteobacteria CP020047 1224 196818 Proteobacteria CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Rabnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 263508				
Weissella soli CP042379 155866 46255 Leuconostoc citreum CP042415 33964 46255 Methylobacterium sp. 4-46 CP000945 426117 2615210 Methylobacterium sp. 4-46 CP0009944 426117 2615210 Shewanella baltica CP000894 62322 2615210 Shewanella sp. SNU WT4 CP041152 2590015 196818 Proteobacteria CP009154 1224 196818 Proteobacteria CP039914 1224 196818 Proteobacteria EU315244 1224 196818 Proteobacteria MF495477 1224 196818 Proteobacteria CP020047 1224 196818 Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rabnella sp. WMR66 FN429027 657337 2635087	Pediococcus pentosaceus		1255	46255
Leuconostoc citreum CP042415 33964 46255 Methylobacterium sp. 4-46 CP000945 426117 2615210 Methylobacterium sp. 4-46 CP000944 426117 2615210 Shewanella baltica CP000894 62322 2615210 Shewanella sp. SNU WT4 CP041152 2590015 196818 Proteobacteria CP009154 1224 196818 Proteobacteria CP039914 1224 196818 Proteobacteria EU315244 1224 196818 Proteobacteria MF495477 1224 196818 Proteobacteria CP020047 1224 196818 Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Klebsiella pneumoniae CP033826 2488567 <td< td=""><td>-</td><td></td><td>155866</td><td></td></td<>	-		155866	
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Methylobacterium sp. 4-46 CP000944 426117 2615210 Shewanella baltica CP000894 62322 2615210 Shewanella sp. SNU WT4 CP041152 2590015 196818 Proteobacteria CP009154 1224 196818 Proteobacteria CP039914 1224 196818 Proteobacteria EU315244 1224 196818 Proteobacteria MF495477 1224 196818 Proteobacteria CP020047 1224 196818 Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella pneumoniae CP041098 573 2635087		CP000945	426117	
Shewanella baltica CP000894 62322 2615210 Shewanella sp. SNU WT4 CP041152 2590015 196818 Proteobacteria CP009154 1224 196818 Proteobacteria CP039914 1224 196818 Proteobacteria EU315244 1224 196818 Proteobacteria MF495477 1224 196818 Proteobacteria CP020047 1224 196818 Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella pneumoniae CP041098 573 2635087		CP000944	426117	2615210
Shewanella sp. SNU WT4 CP041152 2590015 196818 Proteobacteria CP009154 1224 196818 Proteobacteria CP039914 1224 196818 Proteobacteria EU315244 1224 196818 Proteobacteria MF495477 1224 196818 Proteobacteria CP020047 1224 196818 Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella pneumoniae CP041098 573 2635087	· -		62322	
Proteobacteria CP009154 1224 196818 Proteobacteria CP039914 1224 196818 Proteobacteria EU315244 1224 196818 Proteobacteria MF495477 1224 196818 Proteobacteria CP020047 1224 196818 Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087	Shewanella sp. SNU WT4		2590015	196818
Proteobacteria EU315244 1224 196818 Proteobacteria MF495477 1224 196818 Proteobacteria CP020047 1224 196818 Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087	-	CP009154	1224	196818
Proteobacteria MF495477 1224 196818 Proteobacteria CP020047 1224 196818 Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087	Proteobacteria	CP039914	1224	196818
Proteobacteria CP020047 1224 196818 Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087	Proteobacteria	EU315244	1224	196818
Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087	Proteobacteria	MF495477	1224	196818
Escherichia coli CP022687 562 196818 Edwardsiella ictaluri KT937281 67780 196818 Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087	Proteobacteria		1224	
Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087	Escherichia coli	CP022687	562	
Yersinia enterocolitica FJ696405 630 196818 Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087	Edwardsiella ictaluri	KT937281	67780	196818
Raoultella planticola CP023881 575 196818 Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087				
Rahnella sp. WMR66 FN429027 657337 2635087 Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087	Raoultella planticola			
Pectobacterium carotovorum CP034278 554 2635087 Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087				
Salmonella enterica CP039506 28901 2635087 Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087	-			
Klebsiella sp. FDAARGOS_511 CP033826 2488567 2635087 Klebsiella pneumoniae CP041098 573 2635087				
Klebsiella pneumoniae CP041098 573 2635087				
	-			

scientificName	nuccoreAcc	taxid	parent
Leclercia adecarboxylata	CP040890	83655	2635087
Klebsiella variicola	CP023983	244366	2635087
Klebsiella michiganensis	CP035219	1134687	2635087
Dickeya fangzhongdai	CP025004	1778540	204037
Acetobacter aceti	AF110140	435	151157
Acetobacter pasteurianus	CP021513	438	151157
Acetobacter ascendens	CP015166	481146	151157
Acetobacter sp. B6	CP042811	2500548	151157
Sphingomonadaceae	CP018225	41297	151157
Sphingomonadaceae	CP034356	41297	151157
Sphingobium sp. YBL2	CP010956	484429	151157
Sphingobium baderi	CP013265	1332080	151157
Sphingomonas	CP004037	13687	41297
Sphingomonas	CP021182	13687	41297
Sphingobium fuliginis	CP041018	336203	165695
Sphingobium	CP002800	165695	165695
Novosphingobium sp. ABRDHK2	CP039699	2571749	165695
Sphingomonadaceae	AP017656	41297	165695
Sphingomonadaceae	CP011450	41297	165695
Sphingomonas koreensis	CP018821	93064	13687
Novosphingobium resinovorum	CP017078	158500	165696
Pannonibacter phragmitetus	CP013069	121719	227873
Marinovum algicola	CP010864	42444	227873
Aureimonas sp. AU20	CP006370	1349819	2615206
Francisella philomiragia	EU850813	28110	2615206
Francisella tularensis	AF121418	263	262
Vibrio coralliilyticus	JQ728484	190893	262
Carnobacterium sp. CP1	CP010819	1564681	257487
Sphingobium cloacae	AP017657	120107	257487
Sphingobium sp. MI1205	CP005191	407020	257487
Sphingobium amiense	AP018665	135719	257487
Sphingobium yanoikuyae	CP020926	13690	257487
Erwinia pyrifoliae	FN392237	79967	551
Erwinia pyrifoliae	FN392236	79967	551
Lactobacillus	CP019735	1578	551
Lactobacillus	AB370337	1578	551
Lactobacillus	CP031175	1578	551
Lactobacillus	CP031170	1578	551
Buchnera aphidicola	AY546103	9	551
Buchnera aphidicola	AY438025	9	551
Buchnera aphidicola	LR025086	9	551
Bacillus thuringiensis	CP021066	1428	551
Bacillus thuringiensis	CP010097	1428	551
Bacillus thuringiensis	NC 005567	1428	551

scientificName	nuccoreAcc	taxid	parent
Bacillus thuringiensis	AP014871	1428	551
Bacillus thuringiensis	CP001909	1428	551
Bacillus thuringiensis	CP010010	1428	551
Bacillus wiedmannii	CP024690	1890302	551
Rhizobium leguminosarum	CP001195	384	551
Sinorhizobium fredii	AY316746	380	551
Shewanella baltica	CP000564	62322	551
Salipiger profundus	CP014799	1229727	551
Salipiger profundus	CP014800	1229727	551
Haematobacter massiliensis	CP035509	195105	551
Haematobacter massiliensis	CP035508	195105	551
Haematobacter massiliensis	CP035506	195105	551
Ruegeria sp. PR1b	AF416330	185588	2625375
Rhodobacteraceae bacterium SH-1	CP043622	2605946	2625375
Phaeobacter	CP010611	302485	2625375
Rhodobacteraceae	CP010590	31989	2625375
Rhodobacteraceae	CP021042	31989	2625375
Rhodobacteraceae	CP010707	31989	2625375
Phaeobacter inhibens	CP010619	221822	2625375
Dinoroseobacter shibae	CP000833	215813	309512
Dinoroseobacter shibae	CP000831	215813	309512
Rhodobacteraceae	CP021916	31989	309512
Rhodobacteraceae	CP014798	31989	309512
Confluentimicrobium sp. EMB200-NS6	CP010870	1609966	309512
Phaeobacter inhibens	CP010727	221822	309512
Rhodobacteraceae bacterium	CP031590	1904441	309512
Rhodobacteraceae bacterium SH-1	CP043619	2605946	309512
Acinetobacter ursingii	AP018826	108980	469
Acinetobacter defluvii	CP029389	1871111	469
Anabaena sp. 90	CP003288	46234	2619674
Geminocystis sp. NIES-3709	AP014825	1617448	2625037
Lactobacillus reuteri	NC 001757	1598	2625037
Staphylococcus aureus	$\overline{\text{CP042127}}$	1280	2625037
Staphylococcus aureus	CP042126	1280	2625037
Methylobacterium radiotolerans	CP001008	31998	2625037
Xanthomonas euvesicatoria	CP018464	456327	2625037
Burkholderia vietnamiensis	CP000620	60552	2625037
Xanthomonas oryzae	CP033195	347	2625037
Paraburkholderia	CP022994	1822464	119060
Paraburkholderia	CP026110	1822464	119060
Bacillus thuringiensis	CP003690	1428	119060
Bacillus cereus	CP001180	1396	119060
Bacillus sp. FDAARGOS_527	CP033793	2576356	119060
Bacillus thuringiensis	CP004133	1428	119060
Daemas mannistensis	O1 004199	1440	113000

scientificName	nuccoreAcc	taxid	parent
Bacillus thuringiensis	CP017573	1428	119060
Bacillus thuringiensis	CP009350	1428	119060
Bacillus toyonensis	CP006864	155322	86661
Bacillus cereus	CP029456	1396	86661
Rhodococcus qingshengii	CP025961	334542	1827
Rhodococcus sp. YL-1	CP017301	1045808	192944
Rhodococcus sp. NJ-530	CP034154	2490853	192944
Vibrio vulnificus	AP005352	672	192944
Vibrio vulnificus	CP012741	672	192944
Vibrio campbellii	CP021150	680	192944
Enterococcus faecalis	AP018542	1351	192944
Enterococcus faecalis	CP030046	1351	192944
Weissella hellenica	CP033609	46256	192944
Weissella jogaejeotgali	CP014333	1631871	46255
Leuconostoc	DQ489737	1243	46255
Leuconostoc	JN106352	1243	46255
Weissella cibaria	CP035268	137591	46255
Weissella cibaria	CP012874	137591	46255
Weissella cibaria	CP013935	137591	46255
Weissella cibaria	CP041194	137591	46255
Buchnera aphidicola	CP002649	9	46255
Buchnera aphidicola	CP034865	9	46255
Buchnera aphidicola	AP001071	9	46255
Buchnera aphidicola	CP002646	9	46255
Buchnera aphidicola	CP034892	9	46255
Buchnera aphidicola	CP034868	9	46255
Buchnera aphidicola	CP034856	9	46255
Buchnera aphidicola	CP009254	9	46255
Buchnera aphidicola	CP034889	9	46255
Buchnera aphidicola	CP034895	9	46255
Buchnera aphidicola	CP034898	9	46255
Buchnera aphidicola	CP034886	9	46255
Buchnera aphidicola	AF041836	9	46255
Buchnera aphidicola	CP034859	9	46255
Buchnera aphidicola	CP029162	9	46255
Tsukamurella tyrosinosolvens	LR134466	57704	2060
Paraoceanicella profunda	CP040821	2579971	2683599
Salinibacter ruber	CP030370	146919	2683599
Salinibacter ruber	CP030367	146919	2683599
Klebsiella michiganensis	CP029140	1134687	2683599
Klebsiella pneumoniae	CP023935	573	2683599
Klebsiella pneumoniae	CP030066	573	2683599
Klebsiella pneumoniae	CP012989	573	2683599
Enterobacter asburiae	CP011590	61645	2683599

scientificName	nuccoreAcc	taxid	parent
Klebsiella pneumoniae	CP013712	573	2683599
Shigella flexneri	CP012732	623	2683599
Escherichia coli	CP035353	562	2683599
Escherichia coli	CP035335	562	2683599
Yersinia frederiksenii	m JF937655	29484	629
Escherichia coli	KX528699	562	629
Escherichia coli	CP037908	562	629
Pantoea sp. PSNIH1	CP010325	1484158	629
Pantoea sp. PSNIH1	CP010326	1484158	629
Thioalkalivibrio sp. K90mix	CP001906	396595	2621013
Helicobacter pylori	HM125987	210	2621013
Helicobacter pylori	AF056496	210	2621013
Helicobacter pylori	KM583808	210	2621013
Helicobacter pylori	KM583810	210	2621013
Helicobacter pylori	AP017340	210	2621013
Helicobacter pylori	AY267368	210	2621013
Helicobacter pylori	KM583815	210	2621013
Helicobacter pylori	CP022410	210	2621013
Helicobacter pylori	KM583820	210	2621013
Helicobacter pylori	CP034312	210	2621013
Helicobacter pylori	AP011944	210	2621013
Achromobacter xylosoxidans	CP002289	85698	2621013
Achromobacter insolitus	CP026974	217204	222
Rubrobacter indicoceani	CP031116	2051957	42255
Rubrobacter radiotolerans	CP007516	42256	42255
Enterobacterales	CP029124	91347	42255
Enterobacteriaceae	CP003996	543	42255
Escherichia coli	CP025947	562	42255
Enterobacteriaceae	CP032943	543	42255
Gammaproteobacteria	MH674200	1236	42255
Lactobacillus gallinarum	CP012892	52242	1578
Lactobacillus gallinarum	CP012891	52242	1578
Lactobacillus helveticus	CP015445	1587	1578
Lactobacillus pentosus	KJ868088	1589	1578
Lactobacillus backii	CP014898	375175	1578
Lactobacillus farciminis	EU429343	1612	1578
Lactobacillus curvatus	AP018704	28038	1578
Lactobacillus plantarum	CP013170	1590	1578
Lactobacillus plantarum	CP019714	1590	1578
Lactobacillaceae	AB370334	33958	1578
Lactobacillus plantarum	MG944248	1590	1578
Rippkaea orientalis	CP001288	41431	2546366
Rippkaea orientalis	CP001702	395962	2546366
Escherichia coli	CP030113	562	2546366

Escherichia coli	scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae AY028316 543 2546366 Escherichia coli CP042592 562 2546366 Escherichia coli AP010957 562 2546366 Escherichia coli CP033763 562 2546366 Escherichia coli CP032942 562 2546366 Enterobacteriaceae DQ286390 543 2546366 Enterobacteriaceae CP019023 543 2546366 Enterobacteriaceae CP016042 562 2546366 Escherichia coli AP019681 562 2546366 Enterobacteriaceae FJ228229 91347 2546366 Enterobacteriaceae CP023979 543 2546366 Enterobacteriaceae CP022066 543 2546366 Enterobacteriaceae CP022066 543 2546366 Enterobacteriaceae CP022348 477976 548865 Borrelia turcica CP022348 477976 548865 Candidatus Borrelia tachyglossi CP025786 196448 548865	Escherichia coli	CP041680	562	2546366
Escherichia coli AP010957 562 2546366 Escherichia coli CP033763 562 2546366 Escherichia coli CP032942 562 2546366 Enterobacteriaceae HQ659758 543 2546366 Enterobacteriaceae CP019023 543 2546366 Enterobacteriaceae CP016042 562 2546366 Escherichia coli AP019681 562 2546366 Escherichia coli AP019681 562 2546366 Enterobacteriaceae CP023979 543 2546366 Enterobacteriaceae CP023979 543 2546366 Enterobacteriaceae CP022966 543 2546366 Enterobacteriaceae CP022978 343 2546366 Enterobacteriaceae CP0229885 229155 545865 Calditerrivibrio nitroreducens CP022966 543 2546366 Calditerrivibrio nitroreducens CP022868 1964448 545865 Santhomonas CP025786 1964448 545865 </td <td>Enterobacteriaceae</td> <td>AY028316</td> <td>543</td> <td>2546366</td>	Enterobacteriaceae	AY028316	543	2546366
Escherichia coli CP033763 562 2546366 Escherichia coli CP032942 562 2546366 Enterobacteriaceae HQ659758 543 2546366 Enterobacteriaceae DQ286390 543 2546366 Enterobacteriaceae CP019023 543 2546366 Escherichia coli AP019681 562 2546366 Enterobacteriaceae F1228229 91347 2546366 Enterobacteriaceae CP023979 543 2546366 Enterobacteriaceae CP022966 543 2546366 Calditerrivibrio nitroreducens CP022966 543 2546366 Enterobacteriaceae CP022966 543 2546366 Calditerrivibrio nitroreducens CP022885 229155 545865 Borrelia turcica CP022885 229155 545865 Candidatus Borrelia tachyglossi CP022978 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas CP011162 338 545865	Escherichia coli	CP042592	562	2546366
Escherichia coli CP032942 562 2546366 Enterobacteriaceae HQ659758 543 2546366 Enterobacteriaceae DQ286390 543 2546366 Enterobacteriaceae CP019023 543 2546366 Escherichia coli CP016042 562 2546366 Escherichia coli AP019681 562 2546366 Enterobacteriaceae CP023979 543 2546366 Enterobacteriaceae CP022066 543 2546366 Enterobacteriaceae CP022066 543 2546366 Calditerrivbiro nitroreducens CP023885 229155 54566 Calditerrivbiro introreducens CP022885 229155 545665 Candidatus Borrelia tachyglossi CP025786 1964448 545865 Xanthomonas CP020978 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP0111251 346 545865 Xanthomonas citri CP0211251 346 545865 <	Escherichia coli	AP010957	562	2546366
Enterobacteriaceae HQ659758 543 2546366 Enterobacteriaceae DQ286390 543 2546366 Enterobacteriaceae CP019023 543 2546366 Escherichia coli CP016042 562 2546366 Escherichia coli AP019681 562 2546366 Enterobacterales FJ228229 91347 2546366 Enterobacteriaceae CP023979 543 2546366 Enterobacteriaceae CP0229066 543 2546366 Calditerrivibrio nitroreducens CP002348 477976 545865 Candidatus Borrelia tachyglossi CP022885 229155 545865 Candidatus Borrelia tachyglossi CP029978 338 545865 Xanthomonas CP029978 338 545865 Xanthomonas CP0211161 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP023157 346 545865 Xanthomonas CP011162 338 545865 <tr< td=""><td>Escherichia coli</td><td>CP033763</td><td>562</td><td>2546366</td></tr<>	Escherichia coli	CP033763	562	2546366
Enterobacteriaceae DQ286390 543 2546366 Enterobacteriaceae CP019023 543 2546366 Escherichia coli CP016042 562 2546366 Escherichia coli AP019681 562 2546366 Enterobacteriales FJ228229 91347 2546366 Enterobacteriaceae CP023979 543 2546366 Calditerrivibrio nitroreducens CP022086 543 2546366 Calditerrivibrio nitroreducens CP02348 477976 545865 Candidatus Borrelia tachyglossi CP025786 1964448 545865 Candidatus Borrelia tachyglossi CP020978 338 545865 Xanthomonas CP020978 338 545865 Xanthomonas CP020978 338 545865 Xanthomonas CP011251 346 545865 Xanthomonas CP011251 346 545865 Xanthomonas citri CP023157 346 545865 Xanthomonas oryzae KR071788 347 545865 <td>Escherichia coli</td> <td>CP032942</td> <td>562</td> <td>2546366</td>	Escherichia coli	CP032942	562	2546366
Enterobacteriaceae CP019023 543 2546366 Escherichia coli CP016042 562 2546366 Escherichia coli AP019681 562 2546366 Enterobacterial FJ228229 91347 2546366 Enterobacteriaceae CP023979 543 2546366 Enterobacteriaceae CP022066 543 2546366 Calditerrivibrio nitroreducens CP022885 229155 545865 Sorrelia turcica CP028885 229155 545865 Candidatus Borrelia tachyglossi CP020978 338 545865 Xanthomonas CP020978 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP011192 338 545865 Xanthomonas citri CP017192 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae KR071788 347 545865	Enterobacteriaceae	HQ659758	543	2546366
Escherichia coli CP016042 562 2546366 Escherichia coli AP019681 562 2546366 Enterobacterales FJ228229 91347 2546366 Enterobacteriaceae CP023979 543 2546366 Enterobacteriaceae CP022066 543 2546366 Calditerrivibrio nitroreducens CP02348 477976 545865 Borrelia turcica CP028885 229155 545865 Candidatus Borrelia tachyglossi CP025786 1964448 545865 Cantinomonas CP020978 338 545865 Xanthomonas CP020978 338 545865 Xanthomonas CP01161 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP011251 346 545865 Xanthomonas citri CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas vasicola CP013227 347 545865 Xa	Enterobacteriaceae	DQ286390	543	2546366
Escherichia coli AP019681 562 2546366 Enterobacterales FJ228229 91347 2546366 Enterobacteriaceae CP023979 543 2546366 Cnterobacteriaceae CP022066 543 2546366 Calditerrivibrio nitroreducens CP022348 477976 545865 Borrelia turcica CP028885 229155 545865 Candidatus Borrelia tachyglossi CP025786 1964448 545865 Xanthomonas CP020978 338 545865 Xanthomonas CP020978 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP0111251 346 545865 Xanthomonas citri CP023157 346 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP034651 56459 338	Enterobacteriaceae	CP019023	543	2546366
Enterobacteriaceae FJ228229 91347 2546366 Enterobacteriaceae CP023079 543 2546366 Enterobacteriaceae CP002348 477976 545865 Calditerrivibrio nitroreducens CP002348 477976 545865 Borrelia turcica CP028885 229155 545865 Candidatus Borrelia tachyglossi CP025786 1964448 545865 Xanthomonas CP020978 338 545865 Xanthomonas CP020978 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP011251 346 545865 Xanthomonas citri CP023157 346 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736	Escherichia coli	CP016042	562	2546366
Enterobacteriaceae CP023979 543 2546366 Enterobacteriaceae CP022066 543 2546366 Calditerrivibrio nitroreducens CP002348 477976 545865 Borrelia turcica CP028885 229155 545865 Candidatus Borrelia tachyglossi CP025786 1964448 545865 Xanthomonas CP020978 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP011251 346 545865 Xanthomonas citri CP013157 346 545865 Xanthomonas CP011792 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas vasicola CP019227 347 545865 Xanthomonas vasicola CP01934651 56459 338 Ralstonia s	Escherichia coli	AP019681	562	2546366
Enterobacteriaceae CP022066 543 2546366 Calditerrivibrio nitroreducens CP002348 477976 545865 Borrelia turcica CP028885 229155 545865 Candidatus Borrelia tachyglossi CP020978 338 545865 Xanthomonas CP020978 338 545865 Xanthomonas AY228335 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP011251 346 545865 Xanthomonas CP0111251 346 545865 Xanthomonas CP011122 338 545865 Xanthomonas CP011122 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas vasicola CP0192227 347 545865 Xanthomonas oryzae K	Enterobacterales	FJ228229	91347	2546366
Calditerrivibrio nitroreducens CP002348 477976 545865 Borrelia turcica CP028885 229155 545865 Candidatus Borrelia tachyglossi CP025786 1964448 545865 Xanthomonas CP020978 338 545865 Xanthomonas AY228335 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP011251 346 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas vasicola CP019227 347 545865 Xanthomonas vasicola CP019227 347 545865 Xanthomonas vasicola CP090221 1085 1081 Thalassococcus sp. S3	Enterobacteriaceae	CP023979	543	2546366
Borrelia turcica CP028885 229155 545865 Candidatus Borrelia tachyglossi CP025786 1964448 545865 Xanthomonas CP020978 338 545865 Xanthomonas AY228335 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP011251 346 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP002361 1085 1081 Thalassococcus sp. S3 CP002305 2017482 2633072 Paenibacillus pop	Enterobacteriaceae	CP022066	543	2546366
Borrelia turcica CP028885 229155 545865 Candidatus Borrelia tachyglossi CP025786 1964448 545865 Xanthomonas CP020978 338 545865 Xanthomonas AY228335 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP011251 346 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP002361 1085 1081 Thalassococcus sp. S3 CP002305 2017482 2633072 Paenibacillus pop	Calditerrivibrio nitroreducens	CP002348	477976	545865
Xanthomonas CP020978 338 545865 Xanthomonas AY228335 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP011251 346 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP00231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus equorum CP013715 246432 44249 Staphyloc	Borrelia turcica	CP028885		545865
Xanthomonas CP020978 338 545865 Xanthomonas AY228335 338 545865 Xanthomonas CP011161 338 545865 Xanthomonas citri CP011251 346 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP00231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus equorum CP013715 246432 44249 Staphyloc	Candidatus Borrelia tachyglossi	CP025786	1964448	545865
Xanthomonas CP011161 338 545865 Xanthomonas citri CP011251 346 545865 Xanthomonas citri CP023157 346 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP000231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249		CP020978	338	545865
Xanthomonas citri CP011251 346 545865 Xanthomonas citri CP023157 346 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP000231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium nucleatum CP007063 851 848 <tr< td=""><td>Xanthomonas</td><td>AY228335</td><td>338</td><td>545865</td></tr<>	Xanthomonas	AY228335	338	545865
Xanthomonas citri CP023157 346 545865 Xanthomonas CP017192 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP000231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP015586 257708 125216	Xanthomonas	CP011161	338	545865
Xanthomonas CP017192 338 545865 Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas vasicola CP019227 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP000231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216	Xanthomonas citri	CP011251	346	545865
Xanthomonas CP011162 338 545865 Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP000231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216	Xanthomonas citri	CP023157	346	545865
Xanthomonas oryzae KR071788 347 545865 Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP000231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus subtilis CP025942 1423 <t< td=""><td>Xanthomonas</td><td>CP017192</td><td>338</td><td>545865</td></t<>	Xanthomonas	CP017192	338	545865
Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP000231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus subtilis CP025942 1423 2617492	Xanthomonas	CP011162	338	545865
Xanthomonas oryzae CP019227 347 545865 Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP000231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus subtilis CP025942 1423 2617492	Xanthomonas oryzae	KR071788	347	545865
Xanthomonas vasicola CP034651 56459 338 Ralstonia solanacearum FP885893 305 48736 Rhodospirillum rubrum CP000231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus subtilis CP025942 1423 2617492		CP019227	347	545865
Rhodospirillum rubrum CP000231 1085 1081 Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus subtilis CP025942 1423 2617492		CP034651	56459	338
Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492	Ralstonia solanacearum	FP885893	305	48736
Thalassococcus sp. S3 CP022305 2017482 2633072 Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus subtilis CP025942 1423 2617492	Rhodospirillum rubrum	CP000231	1085	1081
Paenibacillus popilliae DQ925488 78057 44249 Paenibacillus popilliae AB931111 78057 44249 Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492		CP022305	2017482	2633072
Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492		DQ925488	78057	44249
Lactococcus lactis AF056207 1358 44249 Staphylococcus sciuri CP041884 1296 44249 Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492	Paenibacillus popilliae	AB931111	78057	44249
Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492		AF056207	1358	44249
Staphylococcus sciuri CP041918 1296 44249 Staphylococcus equorum CP013715 246432 44249 Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492	Staphylococcus sciuri	CP041884	1296	44249
Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492		CP041918	1296	44249
Fusobacterium AF159249 848 203492 Fusobacterium nucleatum CP007063 851 848 Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492	Staphylococcus equorum	CP013715	246432	44249
Fusobacterium nucleatum CP013123 851 848 Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492			848	
Roseomonas gilardii CP015586 257708 125216 Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492	Fusobacterium nucleatum	CP007063	851	848
Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492	Fusobacterium nucleatum	CP013123	851	848
Roseomonas sp. FDAARGOS_362 CP024586 2018065 2617492 Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492	Roseomonas gilardii			
Bacillus safensis CP015609 561879 2617492 Bacillus subtilis CP025942 1423 2617492				
Bacillus subtilis CP025942 1423 2617492			561879	2617492
	Bacillus subtilis			
	Bacillus paralicheniformis			653685

scientificName	nuccoreAcc	taxid	parent
Bacillus licheniformis	CP035190	1402	653685
Psychrobacter sp. DAB_AL109bw	JQ245702	1028409	196806
Mycobacterium	CP000520	1763	196806
Mycobacterium sp. JS623	CP003081	212767	2642494
Mycobacterium sp. YC-RL4	CP015597	1682113	2642494
Proteobacteria	CP034557	1224	2642494
Pantoea agglomerans	EU092237	549	2642494
Rahnella aquatilis	FN429026	34038	2642494
Rahnella aquatilis	FN429025	34038	2642494
Pectobacterium atrosepticum	FJ176937	29471	122277
Rahnella sp. WMR114	FN429022	657335	2635087
Rahnella sp. WMR120	FN429024	657336	2635087
Rahnella sp. WMR114	FN429023	657335	2635087
Borrelia miyamotoi	CP036586	47466	2635087
Borrelia miyamotoi	CP044798	47466	2635087
Borrelia miyamotoi	CP037076	47466	2635087
Borrelia miyamotoi	CP037273	47466	2635087
Klebsiella variicola	CP020849	244366	2635087
Enterobacteriaceae	CP006924	543	2635087
Enterobacteriaceae	AY424310	543	2635087
Enterobacteriaceae	AP014807	543	2635087
Escherichia coli	LT985230	562	2635087
Enterobacteriaceae	CP022068	543	2635087
Klebsiella oxytoca	CP011627	571	2635087
Escherichia coli	LT985233	562	2635087
Citrobacter freundii	CP016765	546	2635087
Citrobacter freundii	KX064436	546	2635087
Yersinia massiliensis	CP028488	419257	629
Erwinia tasmaniensis	CU468133	338565	629
Bacillus thuringiensis	CP003757	1428	629
Bacillus thuringiensis	CP002178	1428	629
Bacillus thuringiensis	CP004871	1428	629
Bacillus	AP007211	1386	629
Bacillus	CP033790	1386	629
Bacillus mycoides	CP020750	1405	629
Bacillus cereus	CP009589	1396	629
Bacillus cereus	CP020939	1396	629
Bacillus mycoides	CP031073	1405	629
Clostridium tetani	AF528097	1513	1485
Clostridium tetani	HG530136	1513	1485
Aureimonas sp. AU20	CP006371	1349819	1485
Aureimonas sp. AU20	CP006372	1349819	1485
Aureimonas sp. AU20	CP006374	1349819	1485
Clostridium pasteurianum	CP003262	1501	1485
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scientificName	nuccoreAcc	taxid	parent
Clostridium acetobutylicum	AE001438	1488	1485
Clostridium estertheticum	CP015757	238834	1485
Klebsiella pneumoniae	CP039978	573	1485
Klebsiella pneumoniae	CP006921	573	1485
Shigella	CP000640	620	1485
Shigella sonnei	CP019694	624	1485
Borrelia miyamotoi	CP037501	47466	1485
Borrelia miyamotoi	CP024343	47466	1485
Borrelia miyamotoi	CP017134	47466	1485
Borrelia miyamotoi	CP017132	47466	1485
Borrelia miyamotoi	CP024388	47466	1485
Borrelia miyamotoi	CP037280	47466	1485
Bartonella tribocorum	EU595645	85701	1485
Bartonella	CP042964	773	772
Bartonella	CP042965	773	772
Aeromonas salmonicida	AY301065	645	772
Aeromonas hydrophila	CP013180	644	772
Aeromonas salmonicida	KT781681	645	772
Aeromonas sobria	MF770240	646	772
Aeromonas salmonicida	KT334398	645	772
Mycobacterium avium	CP040251	1764	120793
Mycobacterium avium	CP036221	1764	120793
Mycobacterium avium	CP029334	1764	120793
Mycobacterium chimaera	CP012887	222805	120793
Streptomyces hygroscopicus	CP003276	1912	120793
Streptomyces sp. ETH9427	CP029625	2211357	2593676
Streptomyces sp. RLB1-9	CP041652	2594454	2593676
Streptomyces avermitilis	AP017380	33903	2593676
Enterococcus faecium	EU370687	1352	2593676
Streptococcus thermophilus	MF807214	1308	2593676
Streptococcus thermophilus	CP000421	1308	2593676
Streptococcus thermophilus	AF177168	1308	2593676
Streptococcus thermophilus	AY250830	1308	2593676
Streptococcus thermophilus	KU574030	1308	2593676
Streptococcus thermophilus	NC_005098	1308	2593676
Borrelia hermsii	CP014823	140	2593676
Borrelia hermsii	CP000277	140	2593676
Rhizobium etli	CP000135	29449	2593676
Rhizobium	CP013512	379	2593676
Rhizobium leguminosarum	CP001626	384	2593676
Rhizobium leguminosarum	CP018233	384	2593676
Rhizobium leguminosarum	CP022569	384	2593676
Rhizobium leguminosarum	CP016293	384	2593676
Rhizobium leguminosarum	AM236083	384	2593676

scientificName	nuccoreAcc	taxid	parent
Rhizobium leguminosarum	CP007050	384	2593676
Rhizobium leguminosarum	CP025016	384	2593676
Rhizobium leguminosarum	CP001194	384	2593676
Rhizobium sp. CIAT894	CP020948	2020312	2593676
Enterococcus faecalis	CP028836	1351	2593676
Enterococcus faecalis	KX579977	1351	2593676
Enterococcus faecalis	LC499744	1351	2593676
Enterococcus faecalis	KY513281	1351	2593676
Enterococcus faecalis	CP022484	1351	2593676
Streptococcus gallolyticus	FR824044	315405	1301
Pasteurellaceae	AY359464	712	1301
Streptococcus agalactiae	M29725	1311	1301
Arcobacter cibarius	CP043858	255507	28196
Borrelia miyamotoi	CP044646	47466	28196
Borrelia miyamotoi	CP044820	47466	28196
Borrelia miyamotoi	CP044662	47466	28196
Bacillus mycoides	CP009690	1405	28196
Bacillus mycoides	AJ871638	1405	28196
Bacillus thuringiensis	EU362917	1428	28196
Bacillus cereus	CP012485	1396	28196
Bacillus thuringiensis	CP009345	1428	28196
Bacillus thuringiensis	CP012105	1428	28196
Bacillus cereus	CP012484	1396	28196
Bacillus mycoides	AJ871637	1405	28196
Bacillus cereus	CP003189	1396	28196
Bacillus cereus	CP015729	1396	28196
Bacillus anthracis	CP031645	1392	86661
Bacillus toyonensis	CP006865	155322	86661
Bacillus sp. FDAARGOS_527	CP033792	2576356	86661
Bacillus cereus	CP001168	1396	86661
Bacillus cereus	CP001286	1396	86661
Bacillus cereus	CP000043	1396	86661
Bacillus thuringiensis	CP013281	1428	86661
Paenibacillus sp. IHB B 3084	CP013205	867076	86661
Paenibacillus sp. IHB B 3084	CP013209	867076	86661
Pseudanabaena sp. PCC 7367	CP003593	82654	2593292
Rhodococcus sp. S2-17	CP021357	1990687	192944
Rhodococcus opacus	CP009113	37919	192944
Borreliella burgdorferi	CP001210	139	192944
Borreliella burgdorferi	CP019923	139	192944
Borreliella burgdorferi	CP001423	139	192944
Borreliella burgdorferi	CP001456	139	192944
Borreliella burgdorferi	CP002265	139	192944
Borreliella garinii	AY100633	29519	192944

Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015632 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP003750 1396 2631504 Bacillus cereus CP019356 142 2631504 Acromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504	scientificName	nuccoreAcc	taxid	parent
Francisella tularensis CP010104 263 192944 Francisella hispaniensis CP018094 622488 262 Zymomonas mobilis CP001725 542 262 Bacillus thuringiensis CP003688 1428 262 Bacillus thuringiensis CP020004 1428 262 Bacillus thuringiensis CP010108 1428 262 Acinetobacter MF078634 469 262 Aquifex acolicus AE000667 63363 2713 Vibrio cholerae DQ787204 666 2713 Spongiibacter sp. IMCC21906 CP011478 1620392 2631504 Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019365 142 2631504	Legionella pneumophila	CP003886	446	192944
Francisella hispaniensis CP018094 622488 262 Zymomonas mobilis CP001725 542 262 Bacillus thuringiensis CP003688 1428 262 Bacillus thuringiensis CP020004 1428 262 Bacillus thuringiensis CP010108 1428 262 Actinetobacter MF078634 469 262 Acquifex aeolicus AE000667 63363 2713 Vibrio cholerae DQ787204 666 2713 Spongiibacter sp. IMCC21906 CP011478 1620392 2631504 Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP015636 142 2631504 Borrelia turicatae CP015636 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019366 142 2631504	Francisella tularensis	KF640086	263	192944
Zymomonas mobilis CP001725 542 262 Bacillus thuringiensis CP003688 1428 262 Bacillus thuringiensis CP010108 1428 262 Bacillus thuringiensis CP010108 1428 262 Acinetobacter MF078634 469 262 Aquifex acolicus AE000667 63363 2713 Vibrio cholerae DQ787204 666 2713 Spongiibacter sp. IMCC21906 CP011478 1620392 2631504 Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 <t< td=""><td>Francisella tularensis</td><td>CP010104</td><td>263</td><td>192944</td></t<>	Francisella tularensis	CP010104	263	192944
Bacillus thuringiensis CP003688 1428 262 Bacillus thuringiensis CP020004 1428 262 Bacillus thuringiensis CP010108 1428 262 Acinetobacter MF078634 469 262 Aquifex aeolicus AE000667 63363 2713 Vibrio cholerae DQ787204 666 2713 Spongiibacter sp. IMCC21906 CP011478 1620392 2631504 Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015632 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019366 142 2631504	Francisella hispaniensis	CP018094	622488	262
Bacillus thuringiensis CP020004 1428 262 Bacillus thuringiensis CP010108 1428 262 Acinetobacter MF078634 469 262 Aquifex aeolicus AE000667 63363 2713 Vibrio cholerae DQ787204 666 2713 Spongiibacter sp. IMCC21906 CP011478 1620392 2631504 Borrelia turicatae CP015632 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504	Zymomonas mobilis	CP001725	542	262
Bacillus thuringiensis CP010108 1428 262 Acinetobacter MF078634 469 262 Aquifex aeolicus AE000667 63363 2713 Vibrio cholerae DQ787204 666 2713 Spongiibacter sp. IMCC21906 CP011478 1620392 2631504 Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015632 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019366 142 2631504	Bacillus thuringiensis	CP003688	1428	262
Acinetobacter MF078634 469 262 Aquifex aeolicus AE000667 63363 2713 Vibrio cholerae DQ787204 666 32363 2713 Spongiibacter sp. IMCC21906 CP011478 1620392 2631504 Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015632 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019366 142 2631504	Bacillus thuringiensis	CP020004	1428	262
Aquifex aeolicus AE000667 63363 2713 Vibrio cholerae DQ787204 666 2713 Spongiibacter sp. IMCC21906 CP011478 1620392 2631504 Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015632 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP01366 142 2631504	Bacillus thuringiensis	CP010108	1428	262
Vibrio cholerae DQ787204 666 2713 Spongiibacter sp. IMCC21906 CP011478 1620392 2631504 Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015632 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP0193750 1396 2631504	Acinetobacter	MF078634	469	262
Spongiibacter sp. IMCC21906 CP011478 1620392 2631504 Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015632 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Bacillus cereus CP018376 1396 2631504	Aquifex aeolicus	AE000667	63363	2713
Borrelia turicatae CP015635 142 2631504 Borrelia turicatae CP015632 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019636 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP003750 1396 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP003750 1396 2631504 Borrelia turicatae CP003270 337 2631504 Acinetobacter CP043101 469 2631504	Vibrio cholerae	DQ787204	666	2713
Borrelia turicatae CP015632 142 2631504 Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019366 142 2631504 Borrelia turicatae CP019366 142 2631504 Bacillus cereus CP003750 1396 2631504 Bacillus cereus CP015591 1396 2631504 Acromonas caviae LT635662 648 2631504 Aeromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504	Spongiibacter sp. IMCC21906	CP011478	1620392	2631504
Borrelia turicatae CP015634 142 2631504 Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP015636 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Bacillus cereus CP003750 1396 2631504 Bacillus cereus CP015591 1396 2631504 Aeromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504 Burkholderia glumae DQ996270 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter CP043101 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032272 469 2631504	Borrelia turicatae	CP015635	142	2631504
Borrelia turicatae CP019369 142 2631504 Borrelia turicatae CP015636 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Bacillus cereus CP003750 1396 2631504 Bacillus cereus CP015591 1396 2631504 Aeromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504 Burkholderia glumae DQ996270 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter CP032172 469 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter b	Borrelia turicatae	CP015632	142	2631504
Borrelia turicatae CP015636 142 2631504 Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Bacillus cereus CP003750 1396 2631504 Bacillus cereus CP015591 1396 2631504 Acromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504 Burkholderia glumae DQ996270 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter CP032102 2004646 2631504 Acinetobacter woffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter CP042561 470 2631504 Acinetobacter <td>Borrelia turicatae</td> <td>CP015634</td> <td>142</td> <td>2631504</td>	Borrelia turicatae	CP015634	142	2631504
Borrelia turicatae CP019368 142 2631504 Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Bacillus cereus CP003750 1396 2631504 Bacillus cereus CP015591 1396 2631504 Aeromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504 Burkholderia glumae DQ996270 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter CP043310 469 2631504 Acinetobacter sp. WCHA55 CP032104 28090 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Br	Borrelia turicatae	CP019369	142	2631504
Borrelia turicatae CP019365 142 2631504 Borrelia turicatae CP019366 142 2631504 Bacillus cereus CP003750 1396 2631504 Bacillus cereus CP015591 1396 2631504 Aeromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504 Burkholderia glumae DQ996270 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374	Borrelia turicatae	CP015636	142	2631504
Borrelia turicatae CP019366 142 2631504 Bacillus cereus CP003750 1396 2631504 Bacillus cereus CP015591 1396 2631504 Aeromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter CP043310 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014688 1355477 374	Borrelia turicatae	CP019368	142	2631504
Bacillus cereus CP003750 1396 2631504 Bacillus cereus CP015591 1396 2631504 Aeromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504 Burkholderia glumae DQ996270 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffli CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 <td>Borrelia turicatae</td> <td>CP019365</td> <td>142</td> <td>2631504</td>	Borrelia turicatae	CP019365	142	2631504
Bacillus cereus CP015591 1396 2631504 Aeromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504 Burkholderia glumae DQ996270 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Bradyrhizobium diazoefficiens AP014687 135	Borrelia turicatae	CP019366	142	2631504
Aeromonas caviae LT635662 648 2631504 Burkholderia glumae DQ996271 337 2631504 Burkholderia glumae DQ996270 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter baumannii CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 9	Bacillus cereus	CP003750	1396	2631504
Burkholderia glumae DQ996271 337 2631504 Burkholderia glumae DQ996270 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP016031 445 911 Legionella CP025492 445	Bacillus cereus	CP015591	1396	2631504
Burkholderia glumae DQ996270 337 2631504 Acinetobacter CP031712 469 2631504 Acinetobacter CP043310 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP006031 445 911 Legionella CP025492 445 911 </td <td>Aeromonas caviae</td> <td>LT635662</td> <td>648</td> <td>2631504</td>	Aeromonas caviae	LT635662	648	2631504
Acinetobacter CP031712 469 2631504 Acinetobacter CP043310 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Roseobacter litoralis CP002625 42443 911 </td <td>Burkholderia glumae</td> <td>DQ996271</td> <td>337</td> <td>2631504</td>	Burkholderia glumae	DQ996271	337	2631504
Acinetobacter CP043310 469 2631504 Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP002625 42443 911 Roseobacter litoralis CP018078 1917485 911	Burkholderia glumae	DQ996270	337	2631504
Acinetobacter sp. WCHA55 CP032282 2004646 2631504 Acinetobacter lwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter baumannii CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Acinetobacter	CP031712	469	2631504
Acinetobacter Iwoffii CP032104 28090 2631504 Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter baumannii CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Acinetobacter	CP043310	469	2631504
Acinetobacter CP032103 469 2631504 Acinetobacter CP032272 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014659 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Acinetobacter sp. WCHA55	CP032282	2004646	2631504
Acinetobacter CP032272 469 2631504 Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014689 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Acinetobacter lwoffii	CP032104	28090	2631504
Acinetobacter CP042368 469 2631504 Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014689 1355477 374 Bradyrhizobium diazoefficiens AP014659 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Acinetobacter	CP032103	469	2631504
Acinetobacter baumannii CP042561 470 2631504 Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014659 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Acinetobacter	CP032272	469	2631504
Bradyrhizobium diazoefficiens AP014686 1355477 374 Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014659 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Acinetobacter	CP042368	469	2631504
Bradyrhizobium diazoefficiens AP014688 1355477 374 Bradyrhizobium diazoefficiens AP014659 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Acinetobacter baumannii	CP042561	470	2631504
Bradyrhizobium diazoefficiens AP014659 1355477 374 Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Bradyrhizobium diazoefficiens	AP014686	1355477	374
Bradyrhizobium diazoefficiens AP014687 1355477 374 Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Bradyrhizobium diazoefficiens	AP014688	1355477	374
Nitrobacter hamburgensis CP000322 912 911 Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Bradyrhizobium diazoefficiens	AP014659	1355477	374
Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Bradyrhizobium diazoefficiens	AP014687	1355477	374
Nitrobacter hamburgensis CP000320 912 911 Legionella CP016031 445 911 Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Nitrobacter hamburgensis	CP000322	912	911
Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Nitrobacter hamburgensis	CP000320	912	911
Legionella CP025492 445 911 Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	Legionella	CP016031	445	911
Roseobacter litoralis CP002625 42443 911 Sulfitobacter sp. AM1-D1 CP018078 1917485 911	~	CP025492	445	911
Sulfitobacter sp. AM1-D1 CP018078 1917485 911	~	CP002625	42443	911
	Sulfitobacter sp. AM1-D1	CP018078		911
	Sulfitobacter sp. SK025	CP025811	1389011	911

scientificName nuccoreAcc taxid parent Paraoceanicella profunda CP040823 2579971 911 Confluentimicrobium sp. EMB200-NS6 CP010872 1609966 911 Celeribacter manganoxidans CP021406 1411902 911 Antarctobacter heliothermus CP022541 74033 74032 Paracoccus yeei KM659097 147645 74032 Rhodopseudomonas palustris BX571964 1076 1073 Streptomyces sp. F11 AY943952 319318 259367 Streptomyces sp. 11-1-2 CP022546 1851167 259367 Mycobacterium avium AP020327 1764 259367 Mycobacterium sp. MS1601 CP019421 1936029 264249 Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium AP010806 165695 264249 Sphingobium CP005088 165695 264249 Sphingobium CP03868
Confluentimicrobium sp. EMB200-NS6 CP010872 1609966 911 Celeribacter manganoxidans CP021406 1411902 911 Antarctobacter heliothermus CP022541 74033 74032 Paracoccus yeei KM659097 147645 74032 Rhodopseudomonas palustris BX571964 1076 1073 Streptomyces sp. F11 AY943952 319318 259367 Streptomyces tsukubensis CP020702 83656 1883 Streptomyces sp. 11-1-2 CP022546 1851167 259367 Mycobacterium avium AP020327 1764 259367 Mycobacterium sp. MS1601 CP019421 1936029 264249 Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium AP010806 165695 264249 Sphingobium CP004039 745310 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP039698
Celeribacter manganoxidans CP021406 1411902 911 Antarctobacter heliothermus CP022541 74033 74032 Paracoccus yeei KM659097 147645 74032 Rhodopseudomonas palustris BX571964 1076 1073 Streptomyces sp. F11 AY943952 319318 2593670 Streptomyces tsukubensis CP020702 83656 1883 Streptomyces sp. 11-1-2 CP022546 1851167 2593670 Mycobacterium avium AP020327 1764 2593670 Mycobacterium sp. MS1601 CP019421 1936029 264249 Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium AP010806 165695 264249 Sphingobium CP00588 165695 264249 Sphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP025980
Antarctobacter heliothermus CP022541 74033 74032 Paracoccus yeei KM659097 147645 74032 Rhodopseudomonas palustris BX571964 1076 1073 Streptomyces sp. F11 AY943952 319318 259367 Streptomyces tsukubensis CP020702 83656 1883 Streptomyces sp. 11-1-2 CP022546 1851167 259367 Mycobacterium avium AP020327 1764 259367 Mycobacterium sp. MS1601 CP019421 1936029 264249 Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium AP010806 165695 264249 Sphingobium CP005088 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP03698 2571749 264249 Escherichia coli CP0025981 149973 561 Escherichia marmotae CP025981 149973
Paracoccus yeei KM659097 147645 74032 Rhodopseudomonas palustris BX571964 1076 1073 Streptomyces sp. F11 AY943952 319318 2593676 Streptomyces tsukubensis CP020702 83656 1883 Streptomyces sp. 11-1-2 CP022546 1851167 2593676 Mycobacterium avium AP020327 1764 2593676 Mycobacterium sp. MS1601 CP019421 1936029 264249 Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium AP010806 165695 264249 Sphingobium CP005088 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia amrmotae CP025981 1499973 561 Escherichia marmotae CP025980 1499973
Rhodopseudomonas palustris BX571964 1076 1073 Streptomyces sp. F11 AY943952 319318 2593676 Streptomyces tsukubensis CP020702 83656 1883 Streptomyces sp. 11-1-2 CP022546 1851167 2593676 Mycobacterium avium AP020327 1764 2593676 Mycobacterium sp. MS1601 CP019421 1936029 264249 Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium CP004039 745310 264249 Sphingobium CP0040806 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia marmotae CP025981 1499973 561 Escherichia marmotae CP025980 1499973 561 Escherichia abertii CP022563 76759
Streptomyces sp. F11 AY943952 319318 2593676 Streptomyces tsukubensis CP020702 83656 1883 Streptomyces sp. 11-1-2 CP022546 1851167 2593676 Mycobacterium avium AP020327 1764 2593676 Mycobacterium sp. MS1601 CP019421 1936029 264249 Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium fuliginis CP044039 745310 264249 Sphingobium AP010806 165695 264249 Sphingobium CP005088 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP02733 562 264249 Escherichia marmotae CP025981 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas putida KY270855 303 <t< td=""></t<>
Streptomyces tsukubensis CP020702 83656 1883 Streptomyces sp. 11-1-2 CP022546 1851167 2593676 Mycobacterium avium AP020327 1764 2593676 Mycobacterium sp. MS1601 CP019421 1936029 264249 Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingobium AP010806 165695 264249 Sphingobium CP005088 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP002733 562 264249 Escherichia marmotae CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida CP039372 303 561
Streptomyces sp. 11-1-2 CP022546 1851167 2593676 Mycobacterium avium AP020327 1764 2593676 Mycobacterium sp. MS1601 CP019421 1936029 264249 Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingomonas sp. MM-1 CP004039 745310 264249 Sphingobium AP010806 165695 264249 Sphingobium CP005088 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP002733 562 264249 Escherichia marmotae CP025981 1499973 561 Escherichia albertii CP025980 1499973 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Streptococcus pseudopneumoniae AF047385 1313
Mycobacterium avium AP020327 1764 2593670 Mycobacterium sp. MS1601 CP019421 1936029 2642490 Sphingobium fuliginis JX312671 336203 2642490 Sphingobium fuliginis CP041021 336203 2642490 Sphingomonas sp. MM-1 CP004039 745310 2642490 Sphingobium AP010806 165695 2642490 Sphingobium CP005088 165695 2642490 Sphingobium CP013268 165695 2642490 Sphingobium CP039698 2571749 2642490 Sphingobium sp. ABRDHK2 CP039698 2571749 2642490 Escherichia coli CP002733 562 2642490 Escherichia marmotae CP025981 1499973 561 Escherichia albertii CP025980 1499973 561 Pseudomonas monteilii CP024288 208962 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pseudopneumoniae AF047385 1313 1
Mycobacterium sp. MS1601 CP019421 1936029 264249 Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingomonas sp. MM-1 CP004039 745310 264249 Sphingobium AP010806 165695 264249 Sphingobium CP05088 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP002733 562 264249 Escherichia marmotae CP025981 1499973 561 Escherichia marmotae CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pseudopneumoniae CP002926 257758 1301
Sphingobium fuliginis JX312671 336203 264249 Sphingobium fuliginis CP041021 336203 264249 Sphingomonas sp. MM-1 CP004039 745310 264249 Sphingobium AP010806 165695 264249 Sphingobium CP005088 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP002733 562 264249 Escherichia marmotae CP0027981 1499973 561 Escherichia albertii CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pseudopneumoniae AF047385 1313 1301 Streptococcus suis CP017089 1307 1301
Sphingobium fuliginis CP041021 336203 264249 Sphingomonas sp. MM-1 CP004039 745310 264249 Sphingobium AP010806 165695 264249 Sphingobium CP005088 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP002733 562 264249 Escherichia marmotae CP025981 1499973 561 Escherichia albertii CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Sphingomonas sp. MM-1 CP004039 745310 264249 Sphingobium AP010806 165695 264249 Sphingobium CP005088 165695 264249 Sphingobium CP013268 165695 264249 Sphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP002733 562 264249 Escherichia marmotae CP025981 1499973 561 Escherichia albertii CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Sphingobium AP010806 165695 264249 Sphingobium CP005088 165695 264249 Sphingobium CP013268 165695 264249 Novosphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP002733 562 264249 Escherichia marmotae CP025981 1499973 561 Escherichia marmotae CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida HM626202 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Sphingobium CP013268 165695 264249 Novosphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP002733 562 264249 Escherichia marmotae CP025981 1499973 561 Escherichia albertii CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Novosphingobium sp. ABRDHK2 CP039698 2571749 264249 Escherichia coli CP002733 562 264249 Escherichia marmotae CP025981 1499973 561 Escherichia marmotae CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida HM626202 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Escherichia coli CP002733 562 264249 Escherichia marmotae CP025981 1499973 561 Escherichia marmotae CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida HM626202 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Escherichia coli CP002733 562 264249 Escherichia marmotae CP025981 1499973 561 Escherichia marmotae CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida HM626202 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Escherichia marmotae CP025980 1499973 561 Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida HM626202 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Escherichia albertii CP024288 208962 561 Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida HM626202 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Pseudomonas monteilii CP022563 76759 561 Pseudomonas putida KY270855 303 561 Pseudomonas putida HM626202 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Pseudomonas putida KY270855 303 561 Pseudomonas putida HM626202 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Pseudomonas putida HM626202 303 561 Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Pseudomonas putida CP039372 303 561 Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Streptococcus pneumoniae AF047385 1313 1301 Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Streptococcus pseudopneumoniae CP002926 257758 1301 Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Streptococcus suis CP017089 1307 1301 Tsukamurella tyrosinosolvens LR134464 57704 1301
Tsukamurella tyrosinosolvens LR134464 57704 1301
Streptomyces albogriseolus CP042595 1887 1883
5010 p 1001 1001 1001 1001 1001 1001 100
Blattabacterium sp. (Mastotermes darwiniensis) CP003095 39768 264758
Blattabacterium CP003536 34098 39782
Blattabacterium CP003016 34098 39782
Blattabacterium CP029845 34098 39782
Blattabacterium CP029821 34098 39782
Blattabacterium CP001430 34098 39782
Blattabacterium CP003606 34098 39782
Blattabacterium sp. (Nauphoeta cinerea) CP005489 1316444 264758
Blattabacterium sp. (Blattella germanica) CP002849 624186 264758
Pseudomonas migulae JX891462 78543 136843
Pseudomonas stutzeri CP007510 316 578833
Pseudomonas veronii CP039632 76761 578833
Escherichia coli CP035346 562 578833

scientificName	nuccoreAcc	taxid	parent
Shewanella baltica	CP000566	62322	578833
Pseudomonas chlororaphis	CP011111	587753	136842
Paraclostridium bifermentans	CP032453	1490	1849822
Brevirhabdus pacifica	CP019131	1267768	1849822
Antarctobacter heliothermus	CP022543	74033	1849822
Enterobacter roggenkampii	CP017185	1812935	1849822
Enterobacter cloacae	CP017473	550	1849822
Enterobacter	AP019635	547	1849822
Enterobacter cloacae complex sp.	LC467982	2027919	354276
Enterobacter cloacae	CP033469	550	354276
Acidithiobacillus caldus	CP002575	33059	119977
Gammaproteobacteria	MF925338	1236	119977
Gammaproteobacteria	CP026401	1236	119977
Rippkaea orientalis	CP001290	41431	119977
Rippkaea orientalis	CP001703	395962	119977
Paeniclostridium sordellii	LN681235	1505	1849828
Paeniclostridium sordellii	LN681232	1505	1849828
Paeniclostridium sordellii	MG205643	1505	1849828
Bacillus coagulans	EF015591	1398	1386
Lactococcus lactis	AF243383	1358	1386
Lactococcus lactis	CP043518	1358	1386
Lactococcus lactis	JN172911	1358	1386
Streptococcus thermophilus	AF177167	1308	1386
Lactococcus lactis	CP016742	1358	1386
Lactococcus lactis	KF278750	1358	1386
Clostridium perfringens	CP019569	1502	1386
Clostridium perfringens	AB736082	1502	1386
Clostridium perfringens	CP013038	1502	1386
Clostridium perfringens	MK275624	1502	1386
Clostridium perfringens	AB189671	1502	1386
Clostridium perfringens	CP023411	1502	1386
Clostridium perfringens	$\rm MK275625$	1502	1386
Clostridium perfringens	M32882	1502	1386
Clostridium perfringens	CP000314	1502	1386
Rahnella aquatilis	CP003246	34038	1386
Yersinia pestis	CP002179	632	1386
Yersinia pestis	CP002181	632	1386
Sinorhizobium fredii	CP003568	380	1386
Sinorhizobium fredii	HE616893	380	1386
Sinorhizobium fredii	CP003567	380	1386
Sinorhizobium fredii	CP029235	380	1386
Serratia marcescens	LT575491	615	1386
Serratia marcescens	CP027301	615	1386
Serratia marcescens	HQ896493	615	1386

scientificName	nuccoreAcc	taxid	parent
Serratia marcescens	AP019010	615	1386
Serratia marcescens	CP041128	615	1386
Serratia liquefaciens	CP033894	614	613
Serratia sp. SCBI	CP003425	488142	2647522
Serratia marcescens	CP041133	615	2647522
Serratia marcescens	CP013047	615	2647522
Acinetobacter cumulans	CP035941	2136182	2647522
Acinetobacter pittii	CP033523	48296	2647522
Acinetobacter defluvii	CP029394	1871111	2647522
Acinetobacter baumannii	CP042564	470	2647522
Acinetobacter johnsonii	CP010352	40214	2647522
Acinetobacter sp. WCHAc010034	CP032269	1879049	2647522
Sphingobium hydrophobicum	CP022747	1673076	2647522
Sphingobium hydrophobicum	CP022749	1673076	2647522
Sphingomonas wittichii	CP000700	160791	2647522
Sphingobium hydrophobicum	CP022748	1673076	2647522
Borrelia miyamotoi	CP036772	47466	2647522
Borrelia miyamotoi	CP036605	47466	2647522
Borrelia miyamotoi	CP036582	47466	2647522
Borrelia miyamotoi	CP036568	47466	2647522
Borrelia miyamotoi	CP036739	47466	2647522
Neisseria lactamica	DQ229165	486	2647522
Aminobacter sp. MSH1	CP026267	374606	2644704
Bosea sp. F3-2	CP042333	2599640	2653178
Acinetobacter baumannii	CP035050	470	2653178
Acinetobacter baumannii	CP042560	470	2653178
Acinetobacter baumannii	CP044358	470	2653178
Acinetobacter baumannii	CP042208	470	2653178
Acinetobacter baumannii	KY984045	470	2653178
Acinetobacter baumannii	CP033871	470	2653178
Acinetobacter baumannii	CP033751	470	2653178
Acinetobacter radioresistens	AP019745	40216	2653178
Acinetobacter	CP032120	469	2653178
Acinetobacter	JX101644	469	2653178
Acinetobacter schindleri	CP015621	108981	2653178
Acinetobacter lwoffii	CP032106	28090	2653178
Acinetobacter lwoffii	CP032122	28090	2653178
Acinetobacter baumannii	LN865144	470	2653178
Acinetobacter lwoffii	CP019152	28090	2653178
Acinetobacter schindleri	CP030757	108981	2653178
Tsukamurella tyrosinosolvens	LR134446	57704	2653178
Hymenobacter sp. PAMC 26628	CP014303	1484118	2615202
Bacillus megaterium	CP001984	1404	2615202
- c. c c. c c Oc. c c c.			

scientificName	nuccoreAcc	taxid	parent
Lactococcus lactis	CP016717	1358	2615202
Lactococcus lactis	DQ011112	1358	2615202
Rhodobacteraceae	CP004398	31989	2615202
Rhodobacteraceae	CP045397	31989	2615202
Phaeobacter inhibens	CP010628	221822	2615202
Sulfitobacter sp. SK025	CP025814	1389011	2615202
Phaeobacter inhibens	CP010704	221822	2615202
Bacillus	CP010109	1386	2615202
Bacillus	CP015728	1386	2615202
Bacillus cereus	CP029457	1396	2615202
Bacillus anthracis	CP031644	1392	2615202
Bacillus thuringiensis	CP032612	1428	2615202
Bacillus mycoides	CP000907	1405	2615202
Proteobacteria	AP018350	1224	2615202
Proteobacteria	AM901564	1224	2615202
Escherichia coli	AB182370	562	2615202
Hirschia baltica	CP001679	2724	2723
Deinococcus grandis	AP021851	57498	1298
Deinococcus grandis	AP021850	57498	1298
Deinococcus actinosclerus	CP029776	1768108	1298
Acidiphilium cryptum	CP000690	524	1298
Acidiphilium cryptum	CP000689	524	1298
Acidiphilium cryptum	CP000691	524	1298
Acidiphilium multivorum	AP012036	62140	1298
Acidiphilium multivorum	AP012038	62140	1298
Acidiphilium multivorum	AP012037	62140	1298
Acidiphilium multivorum	AP012039	62140	1298
Acidiphilium multivorum	AP012041	62140	1298
Acidisarcina polymorpha	CP030843	2211140	2608728
Acidisarcina polymorpha	CP030844	2211140	2608728
Acidisarcina polymorpha	CP030842	2211140	2608728
Acidisarcina polymorpha	CP030841	2211140	2608728
Synechococcus	AF441790	1129	2608728
Synechococcus elongatus	CP033062	32046	1129
Lactobacillus plantarum	CP017367	1590	1129
Lactobacillus plantarum	CP026510	1590	1129
Lactobacillus plantarum	CP020094	1590	1129
Lactobacillus	CP019740	1578	1129
Lactobacillus	CP019349	1578	1129
Lactobacillus pentosus	CP016495	1589	1129
Lactobacillus plantarum	CP025418	1590	1129
Rhodococcus erythropolis	AB127588	1833	1129
Rhodococcus erythropolis	AY178757	1833	1129
Borrelia duttonii	AB073701	40834	1129

scientificName	nuccoreAcc	taxid	parent
Borrelia crocidurae	CP003437	29520	1129
Borrelia duttonii	CP000983	40834	1129
Borrelia duttonii	CP000984	40834	1129
Borrelia duttonii	CP000982	40834	1129
Borrelia duttonii	CP000991	40834	1129
Borrelia recurrentis	CP000997	44449	138
Exiguobacterium sp. S3-2	KF697251	1389960	138
Exiguobacterium sp. S3-2	KF697252	1389960	138
Exiguobacterium sibiricum	CP001024	332410	33986
Pantoea agglomerans	CP034472	549	33986
Pantoea vagans	CP001894	470934	33986
Pantoea vagans	CP022518	470934	33986
Pantoea alhagi	CP019707	1891675	53335
Nostoc sp. CENA543	CP023280	1869241	2593658
Nostoc sp. CENA543	CP023279	1869241	2593658
Nostoc sp. CENA543	CP023282	1869241	2593658
Nostoc sp. CENA543	CP023281	1869241	2593658
Nostoc flagelliforme	CP024788	2038116	2593658
Nostoc flagelliforme	CP024789	2038116	2593658
Nostoc flagelliforme	CP024791	2038116	2593658
Nostoc flagelliforme	CP024787	2038116	2593658
Nostoc flagelliforme	CP024792	2038116	2593658
Leisingera	CP038238	191028	31989
Leisingera aquaemixtae	CP041158	1396826	191028
Streptomyces lividans	AY225511	1916	1883
Streptomyces coelicolor	NC 003903	1902	1477431
Streptomyces glaucescens	CP009439	1907	1883
Streptomyces globosus	CP030863	68209	1883
Bacteria	CP040811	2	1883
Kineococcus radiotolerans	CP000751	131568	1883
Borrelia miyamotoi	CP044655	47466	1883
Borrelia miyamotoi	CP037257	47466	1883
Acinetobacter	CP016901	469	1883
Acinetobacter	CP033566	469	1883
Acinetobacter	CP041228	469	1883
Acinetobacter	CP042563	469	1883
Acinetobacter nosocomialis	CP033549	106654	1883
Acinetobacter pittii	CP028571	48296	1883
Acinetobacter lwoffii	CP019149	28090	1883
Pseudomonas stutzeri	CP003072	316	1883
Pseudomonas sp.	MK376341	306	1883
Pseudomonas sp. ZM1	KJ940992	1523522	2583993
Pseudomonas sp.	MK376349	306	2583993
Synechococcus sp. PCC 7502	CP003595	1173263	2626047

scientificName	nuccoreAcc	taxid	parent
Flavobacterium psychrophilum	AY277637	96345	237
Psychrobacter sp. DAB_AL43B	JQ245700	1028416	196806
Psychrobacter sp. G	CP006267	571800	196806
Agrobacterium vitis	CP000636	373	196806
Agrobacterium vitis	CP000637	373	196806
Ensifer adhaerens	CP007238	106592	106591
Sinorhizobium sp. RAC02	CP016451	1842534	2613772
Agrobacterium tumefaciens	CP029047	358	2613772
Thermus oshimai	CP003250	56957	270
Thermus thermophilus	CP003253	274	270
Thermus thermophilus	LR027520	274	270
Thermus thermophilus	AP019793	274	270
Thermus thermophilus	AP008227	274	270
Thermus thermophilus	AE017222	274	270
Thermus parvatiensis	CP014142	456163	270
Thermus brockianus	CP016313	56956	270
Phaeobacter inhibens	CP010765	221822	270
Phaeobacter inhibens	CP010764	221822	270
Emticicia oligotrophica	CP002963	312279	312278
Emticicia oligotrophica	CP002962	312279	312278
Borrelia miyamotoi	CP036610	47466	312278
Borrelia miyamotoi	CP044834	47466	312278
Lactobacillus	CP031176	1578	312278
Lactobacillus plantarum	CP035023	1590	312278
Lactobacillus plantarum	CP012659	1590	312278
Lactobacillus mali	CP045036	1618	1578
Leuconostoc lactis	CP016600	1246	1578
Carnobacterium maltaromaticum	LN846931	2751	1578
Bacillus	CP010587	1386	1578
Bacillus	CP041068	1386	1578
Bacillus megaterium	CP018878	1404	1578
Bacillus megaterium	CP001987	1404	1578
Bacillus megaterium	CP028087	1404	1578
Bacillus megaterium	CP032535	1404	1578
Bacillus simplex	CP011009	1478	1386
Exiguobacterium sp. N4-1P	CP022237	2051906	2644629
Stenotrophomonas rhizophila	CP031730	216778	40323
Legionella adelaidensis	LR134413	45056	40323
Legionella adelaidensis	LR134424	45056	40323
Legionella adelaidensis	LR134417	45056	40323
Mitsuaria sp. 7	CP011515	1658665	2648776
Lactococcus garvieae	HE650696	1363	2648776
Lactococcus garvieae	AP017399	1363	2648776
Lactobacillales	AP017939	186826	2648776

scientificName	nuccoreAcc	taxid	parent
Lactobacillales	EU555173	186826	2648776
Enterococcus faecium	AY425961	1352	2648776
Lactobacillales	KU707950	186826	2648776
Lactobacillales	CP031007	186826	2648776
Borrelia miyamotoi	CP044636	47466	2648776
Borrelia miyamotoi	CP024319	47466	2648776
Borrelia miyamotoi	CP044795	47466	2648776
Borrelia miyamotoi	CP036740	47466	2648776
Borrelia miyamotoi	CP044634	47466	2648776
Borrelia miyamotoi	CP017136	47466	2648776
Shewanella baltica	CP002812	62322	2648776
Shewanella baltica	CP002813	62322	2648776
Shewanella baltica	CP000565	62322	2648776
Sinorhizobium meliloti	CP002785	382	2648776
Sinorhizobium meliloti	CP021213	382	2648776
Sinorhizobium meliloti	CP021214	382	2648776
Sinorhizobium meliloti	CP021817	382	2648776
Sinorhizobium meliloti	EF066650	382	2648776
Rhizobium favelukesii	HG916853	348824	379
Escherichia coli	KJ721805	562	379
Klebsiella pneumoniae	CP012428	573	379
Rhizobium	CP032688	379	379
Rhizobium gallicum	CP006878	56730	379
Rhizobiaceae	CP002245	82115	379
Rhizobiaceae	CP006987	82115	379
Rhizobiaceae	CP013523	82115	379
Rhizobium tropici	CP004016	398	379
Sphingopyxis	AB534719	165697	41297
Campylobacter coli	CP004068	195	41297
Campylobacter	KF192842	194	41297
Campylobacter	DQ518171	194	41297
Campylobacter coli	AY948116	195	41297
Campylobacter coli	CP007186	195	41297
Campylobacter coli	CP040241	195	41297
Borrelia miyamotoi	CP044637	47466	41297
Borrelia miyamotoi	CP036774	47466	41297
Borrelia miyamotoi	CP036941	47466	41297
Calothrix brevissima	AP018209	938406	41297
Calothrix brevissima	AP018208	938406	41297
Aulosira laxa	AP018309	1541975	212347
Nostocales	AP018249	1161	212347
Nostoc carneum	AP018183	374162	212347
Microchaete diplosiphon	AP018237	1197	212347
	AP013038		

scientificName	nuccoreAcc	taxid	parent
Enterococcus faecium	KP342511	1352	212347
Enterococcus faecium	CP040906	1352	212347
Enterococcus faecium	CP040873	1352	212347
Enterococcus faecium	CP033042	1352	212347
Enterococcus faecium	CP004064	1352	212347
Enterococcus faecium	CP034948	1352	212347
Enterococcus sp. DA9	CP042840	2603296	2608891
Enterococcus faecium	CP027503	1352	2608891
Enterococcus faecium	CP012469	1352	2608891
Enterococcus faecium	CP014534	1352	2608891
Enterococcus faecium	CP033208	1352	2608891
Enterococcus faecium	CP018070	1352	2608891
Enterococcus faecium	CP017789	1352	2608891
Enterococcus faecium	CP023812	1352	2608891
Enterococcus faecium	CP011283	1352	2608891
Enterococcus faecium	CP040851	1352	2608891
Enterococcus faecium	CP016165	1352	2608891
Enterococcus hirae	CP015517	1354	2608891
Enterococcus faecium	CP012457	1352	2608891
Nostoc sp. NIES-2111	AP018190	1973475	2608891
Nostoc sp. NIES-2111	AP018192	1973475	2608891
Nostoc punctiforme	CP001040	272131	2608891
Nostoc punctiforme	CP001041	272131	2608891
Yersinia enterocolitica	CP016941	630	2608891
Yersinia	CP009457	444888	2608891
Yersinia	CP025801	444888	2608891
Buchnera aphidicola	CP034896	9	2608891
Buchnera aphidicola	CP034899	9	2608891
Buchnera aphidicola	CP034890	9	2608891
Buchnera aphidicola	CP034887	9	2608891
Buchnera aphidicola	CP029204	9	2608891
Buchnera aphidicola	CP034860	9	2608891
Buchnera aphidicola	CP009255	9	2608891
Crinalium epipsammum	CP003627	241425	2608891
Crinalium epipsammum	CP003625	241425	2608891
Crinalium epipsammum	CP003622	241425	2608891
Crinalium epipsammum	CP003624	241425	2608891
Crinalium epipsammum	CP003623	241425	2608891
Azospirillum brasilense	CP032327	192	191
Azospirillum brasilense	CP007798	192	191
Azospirillum brasilense	CP032335	192	191
Azospirillum brasilense	CP032344	192	191
Azospirillum brasilense	CP022256	192	191
Azospirillum brasilense	CP032350	192	191

scientificName	nuccoreAcc	taxid	parent
Azospirillum sp. TSH58	CP022365	664962	2630922
Candidatus Azobacteroides pseudotrichonymphae	AP017918	511435	2630922
Candidatus Azobacteroides pseudotrichonymphae	AP017915	511435	2630922
Calothrix sp. NIES-2098	AP018173	1954171	2619626
Microchaete diplosiphon	AP018239	1197	2619626
Chelativorans sp. BNC1	CP000392	266779	2619626
Chelativorans sp. BNC1	CP000389	266779	2619626
Mesorhizobium oceanicum	CP018172	1670800	68287
Granulicella tundricola	CP002485	940615	940557
Piscirickettsia salmonis	CP012416	1238	940557
Piscirickettsia salmonis	CP012509	1238	940557
Methylobacterium radiotolerans	CP001003	31998	940557
Xanthomonas	CP004401	338	940557
Xanthomonas	CP018476	338	940557
Amycolatopsis japonica	CP008954	208439	1813
Clostridium perfringens	CP019579	1502	1813
Clostridium perfringens	MK275620	1502	1813
Sphingobium sp. RAC03	CP016454	1843368	2611147
Sphingobium baderi	CP013267	1332080	2611147
Sphingomonas wittichii	CP021184	160791	2611147
Sphingomonas sp. IC081	CP029767	304378	2611147
Sphingopyxis sp. MG	CP026382	1866325	2614943
Sphingobium sp. RAC03	CP016455	1843368	2614943
Sphingobium hydrophobicum	CP022751	1673076	2614943
Sphingomonas sp. FARSPH	CP029988	2219696	2614943
Lactobacillus pentosus	FN394966	1589	2614943
Lactobacillaceae	CP003139	33958	2614943
Lactobacillus pentosus	KJ868090	1589	2614943
Erwinia tracheiphila	CP013971	65700	551
Pectobacterium parmentieri	CP027261	1905730	122277
Serratia entomophila	AF135182	42906	613
Serratia fonticola	CP013914	47917	613
Serratia fonticola	CP013915	47917	613
Escherichia coli	CP025889	562	613
Escherichia coli	CP024150	562	613
Escherichia coli	CP031896	562	613
Clostridium botulinum	KJ776578	1491	613
Clostridium botulinum	FR745876	1491	613
Clostridium botulinum	KT901798	1491	613
Paenibacillus polymyxa	CP010270	1406	613
Paenibacillus peoriae	CP011513	59893	44249
Paenibacillus polymyxa	HE577055	1406	44249
Burkholderia	CP009547	32008	44249
Burkholderia ubonensis	CP013369	101571	87882

scientificName	nuccoreAcc	taxid	parent
Burkholderia ubonensis	CP013415	101571	87882
Burkholderia	CP011506	32008	87882
Burkholderia	AM747723	32008	87882
Burkholderia cenocepacia	CP011920	95486	87882
Burkholderia cenocepacia	CP000461	95486	87882
Burkholderia contaminans	CP042167	488447	87882
Cylindrospermum stagnale	CP003645	142864	56106
Synechococcus sp. PCC 8807	CP016485	195248	56106
Klebsiella pneumoniae	CP020846	573	56106
Serratia marcescens	CP041127	615	56106
Serratia marcescens	CP018921	615	56106
Yersinia pseudotuberculosis	CP010068	633	1649845
Fischerella sp. NIES-4106	AP018301	2005456	494603
Fischerella sp. NIES-4106	AP018300	2005456	494603
Paracoccus aestuarii	JQ684025	453842	265
Paracoccus marcusii	KC561053	59779	265
Paracoccus yeei	KM659094	147645	265
Pseudomonas syringae	KX009062	317	265
Martelella sp. AD-3	CP014277	686597	2629616
Martelella mediterranea	CP020332	293089	293088
Martelella mediterranea	CP020333	293089	293088
Martelella sp. AD-3	CP014276	686597	293088
Enterobacter hormaechei	CP043769	158836	293088
Klebsiella michiganensis	CP042550	1134687	293088
Rhodococcus erythropolis	AP008932	1833	293088
Rhodococcus qingshengii	CP042916	334542	293088
Rhodococcus sp. 008	CP015204	1723645	192944
Saprospira grandis	CP002832	1008	1007
Proteobacteria	CP022501	1224	1007
Clostridium perfringens	MK275627	1502	1007
Clostridium perfringens	CP000313	1502	1007
Exiguobacterium sibiricum	CP001023	332410	1007
Exiguobacterium sp. N4-1P	CP022241	2051906	1007
Exiguobacterium mexicanum	CP040673	340146	33986
Calothrix brevissima	AP018211	938406	33986
Microchaete diplosiphon	AP018235	1197	33986
Microchaete diplosiphon	AP018241	1197	33986
Sulfitobacter sp. SK012	CP025806	1389005	196795
Sulfitobacter sp. SK012	CP025805	1389005	196795
Paracoccus sp. 2251	CP040763	2560053	196795
Tateyamaria omphalii	CP019319	299262	299261
Brevirhabdus pacifica	CP019127	1267768	299261
Campylobacter	CP000550	194	299261
Campylobacter	CP007184	194	299261

scientificName	nuccoreAcc	taxid	parent
Clostridioides difficile	CP033217	1496	299261
Clostridioides difficile	CP033215	1496	299261
Staphylococcus aureus	CP042011	1280	299261
Leptolyngbya boryana	AP018206	1184	47251
Scytonema sp. HK-05	AP018198	1137095	2618749
Deinococcus geothermalis	CP000856	68909	1298
Deinococcus sp. S14-83	CP034187	2489213	2623546
Paracoccus marcusii	KC561055	59779	2623546
Paracoccus sp. Arc7-R13	CP034816	2500532	2623546
Haemophilus influenzae	AF447808	727	724
Acinetobacter pittii	CP027253	48296	724
Acinetobacter pittii	CP028573	48296	724
Acinetobacter baumannii	CP000864	470	724
Acinetobacter	KY984047	469	724
Acinetobacter pittii	MF078635	48296	724
Xanthomonas citri	CP023156	346	724
Xanthomonas citri	CP023161	346	724
Xanthomonas citri	CP022269	346	724
Xanthomonas citri	CP013007	346	724
Xanthomonas citri	CP022266	346	724
Xanthomonas citri	CP022264	346	724
Borrelia miyamotoi	CP036611	47466	724
Borrelia miyamotoi	CP036609	47466	724
Borrelia miyamotoi	CP036606	47466	724
Borrelia miyamotoi	CP044828	47466	724
Paracoccus marcusii	JQ678602	59779	724
Paracoccus yeei	CP031086	147645	724
Paracoccus marcusii	KC561054	59779	724
Paracoccus sp. Arc7-R13	CP034818	2500532	724
Paracoccus yeei	KM659095	147645	724
Paracoccus yeei	CP031085	147645	724
Paracoccus aminophilus	GQ468939	34003	724
Ketogulonicigenium robustum	CP019940	92947	724
Pasteurellaceae	AM183225	712	724
Pasteurellaceae	AY862436	712	724
Bacillus mycoides	CP031072	1405	724
Bacillus mycoides	CP009691	1405	724
Bacillus thuringiensis	CP003693	1428	724
Bacillus thuringiensis	CP016590	1428	724
Bacillus cereus	CP018741	1396	724
Bacillus thuringiensis	CP009349	1428	724
Bacillus cereus	CP045608	1396	724
Bacillus wiedmannii	CP024686	1890302	724
Bacillus thuringiensis	CP012101	1428	724

Azospirillum sp. TSA2s	scientificName	nuccoreAcc	taxid	parent
Azospirillum sp. TSA2s		CP039651	709810	
Sphingomonas taxi CP009573 1549858 13687 Sphingomonas sp. LK11 CP013917 1390395 196159 Burkholderia gladioli CP002603 28095 196159 Streptomyces alboflavus CP023976 67267 1883 Photobacterium damselae FN597600 38293 1883 Photobacterium damselae DQ060059 38293 1883 Photobacterium damselae AP018047 38293 1883 Photobacterium damselae AP018048 38293 1883 Photobacterium nodulans CP001356 114616 1883 Methylobacterium nodulans CP001355 114616 1883 Leptospira mayottensis CP030146 1137606 1883 Leptospira bergeterium CP040845 28184 171 Leptospira weili CP040845 28184 171 Leptospira borgpetersenii CP012031 174 171 Bacillus megaterium CP018875 1404 171 Bacillus megaterium CP018875 1404 <td>-</td> <td></td> <td></td> <td></td>	-			
Sphingomonas sp. LK11 CP013917 1390395 196159 Burkholderia gladioli CP002603 28095 196159 Streptomyces alboflavus CP023976 67267 1883 Photobacterium damselae FN597600 38293 1883 Photobacterium damselae DQ069059 38293 1883 Photobacterium damselae AP018047 38293 1883 Photobacterium nodulans CP001356 114616 1883 Methylobacterium nodulans CP001355 114616 1883 Methylobacterium nodulans CP001356 114616 1883 Leptospira mayottensis CP03146 1137606 1883 Leptospira borgpetersenii CP03146 1137606 1883 Leptospira borgetersenii CP012031 174 171 Bacillus megaterium CP018875 1404 171 Bacillus megaterium CP018875 1404 171 Bacillus megaterium CP028991 1404 171 Bacillus megaterium CP0218875 14	-			
Burkholderia gladioli CP002603 28095 196159 Streptomyces alboflavus CP023976 67267 1883 Photobacterium damselae FN597600 38293 1883 Photobacterium damselae DQ069059 38293 1883 Photobacterium damselae AP018047 38293 1883 Photobacterium damselae AP018048 38293 1883 Methylobacterium nodulans CP001356 114616 1883 Methylobacterium nodulans CP001355 114616 1883 Methylobacterium nodulans CP001355 114616 1883 Leptospira mayottensis CP001355 114616 1883 Leptospira borgpetersenii CP040845 28184 171 Leptospira borgpetersenii CP012031 174 171 Bacillus megaterium CP018875 1404 171 Bacillus megaterium CP018875 1404 171 Bacillus megaterium CP020899 1404 171 Pleomorphomonas sp. SM30 AP017627 <td< td=""><td>- ~</td><td></td><td></td><td></td></td<>	- ~			
Streptomyces alboflavus CP023976 67267 1883 Photobacterium damselae FN597600 38293 1883 Photobacterium damselae KC344732 38293 1883 Photobacterium damselae DQ669059 38293 1883 Photobacterium damselae AP018048 38293 1883 Photobacterium nodulans CP001355 114616 1883 Methylobacterium nodulans CP001355 114616 1883 Methylobacterium modulans CP001355 114616 1883 Leptospira mayottensis CP030146 1137606 1883 Leptospira borgpetersenii CP012031 174 171 Bacillus megaterium CP012031 174 171 Bacillus megaterium CP018875 1404 171 Pleomorphomonas sp. SM30 AP017627 1885025 2627136 Rubrobacter indicoceani CP031117 2051957 2627136 Rubrobacter masiliensis CP03514 195105 2627136 Mycobacterium chimaera CP003514 </td <td></td> <td></td> <td></td> <td></td>				
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Methylobacterium nodulans CP001355 114616 1883 Leptospira mayottensis CP030146 1137606 1883 Leptospira weilii CP040845 28184 171 Leptospira borgpetersenii CP012031 174 171 Bacillus megaterium CP018875 1404 171 Bacillus megaterium CP01990 1404 171 Bacillus megaterium CP028091 1404 171 Burtobacterium succeatum CP031117 2051957 2627136 Rubrobacteri midicoceani CP035114 195105 2627136 Mycobacterium nucleatum CP0035154 195105 2627136 Mycobacterium chimaera CP015270 1763 2627136		CP001356	114616	
Leptospira mayottensis CP030146 1137606 1883 Leptospira weilii CP040845 28184 171 Leptospira borgpetersenii CP012031 174 171 Bacillus megaterium CP018875 1404 171 Bacillus megaterium CP001990 1404 171 Bacillus megaterium CP028091 1404 171 Pleomorphomonas sp. SM30 AP017627 1885025 2627136 Rubrobacter indicoceani CP031117 2051957 2627136 Sulfitobacter sp. D7 CP020699 1968541 2627136 Haematobacter massiliensis CP035514 195105 2627136 Mycobacterium nucleatum CP000710 851 2627136 Mycobacterium chimaera CP015274 222805 2627136 Mycobacterium chimaera CP015270 1763 2627136 Synechococcus sp. PCC 7002 CP000955 32049 2626047 Synechococcus sp. PCC 7003 CP014647 374981 2626047 Synechococcus sp. PCC 8807 C	· ·		114616	1883
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Bacillus megaterium CP028091 1404 171 Pleomorphomonas sp. SM30 AP017627 1885025 2627136 Rubrobacter indicoceani CP031117 2051957 2627136 Sulfitobacter sp. D7 CP020699 1968541 2627136 Haematobacter massiliensis CP035514 195105 2627136 Fusobacterium nucleatum CP000710 851 2627136 Mycobacterium chimaera CP015274 222805 2627136 Mycobacterium chimaera CP015270 1763 2627136 Mycobacterium CP015270 1763 2627136 Synechococcus sp. PCC 7002 CP016475 374981 2626047 Synechococcus sp. PCC 7003 CP016475 374981 2626047 Synechococcus sp. PCC 8807 CP014002 1129 2626047 Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP003515 1502 2626047 Clostridiu	9		1404	
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Rubrobacter indicoceani CP031117 2051957 2627136 Sulfitobacter sp. D7 CP020699 1968541 2627136 Haematobacter massiliensis CP035514 195105 2627136 Fusobacterium nucleatum CP000710 851 2627136 Mycobacterium chimaera CP015274 222805 2627136 Mycobacterium CP015270 1763 2627136 Synechococcus sp. PCC 7002 CP000955 32049 2626047 Synechococcus sp. PCC 7003 CP016475 374981 2626047 Synechococcus CP040357 1129 2626047 Synechococcus sp. PCC 8807 CP016488 195248 2626047 Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP03515 1502 2626047 Clostridium perfringens MK275619 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Polaromonas nap			1885025	2627136
Sulfitobacter sp. D7 CP020699 1968541 2627136 Haematobacter massiliensis CP035514 195105 2627136 Fusobacterium nucleatum CP000710 851 2627136 Mycobacterium chimaera CP015274 222805 2627136 Mycobacterium CP015270 1763 2627136 Synechococcus sp. PCC 7002 CP000955 32049 2626047 Synechococcus sp. PCC 7003 CP016475 374981 2626047 Synechococcus CP040357 1129 2626047 Synechococcus sp. PCC 8807 CP016488 195248 2626047 Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP03515 1502 2626047 Clostridium perfringens AP013033 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Polaromonas naphth				
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Mycobacterium CP015270 1763 2627136 Synechococcus sp. PCC 7002 CP000955 32049 2626047 Synechococcus sp. PCC 7003 CP016475 374981 2626047 Synechococcus CP040357 1129 2626047 Synechococcus sp. PCC 8807 CP016488 195248 2626047 Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP03515 1502 2626047 Clostridium perfringens AP013033 1502 2626047 Clostridium perfringens MK275619 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Parabur	Fusobacterium nucleatum	CP000710	851	2627136
Synechococcus sp. PCC 7002 CP000955 32049 2626047 Synechococcus sp. PCC 7003 CP016475 374981 2626047 Synechococcus CP040357 1129 2626047 Synechococcus sp. PCC 8807 CP016488 195248 2626047 Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP003515 1502 2626047 Clostridium perfringens AP013033 1502 2626047 Clostridium perfringens MK275619 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 <	Mycobacterium chimaera	CP015274	222805	2627136
Synechococcus sp. PCC 7002 CP000955 32049 2626047 Synechococcus sp. PCC 7003 CP016475 374981 2626047 Synechococcus CP040357 1129 2626047 Synechococcus sp. PCC 8807 CP016488 195248 2626047 Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP003515 1502 2626047 Clostridium perfringens AP013033 1502 2626047 Clostridium perfringens MK275619 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 <	v	CP015270	1763	2627136
Synechococcus CP016475 374981 2626047 Synechococcus CP040357 1129 2626047 Synechococcus CP014002 1129 2626047 Synechococcus sp. PCC 8807 CP016488 195248 2626047 Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP003515 1502 2626047 Clostridium perfringens MK275619 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens MK275621 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc	Synechococcus sp. PCC 7002	CP000955	32049	2626047
Synechococcus CP014002 1129 2626047 Synechococcus sp. PCC 8807 CP016488 195248 2626047 Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP03515 1502 2626047 Clostridium perfringens AP013033 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens MK275621 1502 2626047 Clostridium perfringens MK275621 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464		CP016475	374981	2626047
Synechococcus sp. PCC 8807 CP016488 195248 2626047 Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP003515 1502 2626047 Clostridium perfringens AP013033 1502 2626047 Clostridium perfringens MK275619 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens MK275621 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464	Synechococcus	CP040357	1129	2626047
Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP003515 1502 2626047 Clostridium perfringens AP013033 1502 2626047 Clostridium perfringens MK275619 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens MK275621 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464	· ·	CP014002	1129	2626047
Synechococcus sp. PCC 11901 CP040358 2579791 2626047 Synechococcus sp. PCC 7117 CP016481 195498 2626047 Clostridium perfringens AP003515 1502 2626047 Clostridium perfringens AP013033 1502 2626047 Clostridium perfringens MK275619 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens MK275621 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464		CP016488	195248	2626047
Clostridium perfringens AP003515 1502 2626047 Clostridium perfringens AP013033 1502 2626047 Clostridium perfringens MK275619 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens MK275621 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464		CP040358	2579791	2626047
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Clostridium perfringens AP013033 1502 2626047 Clostridium perfringens MK275619 1502 2626047 Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens MK275621 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464		AP003515	1502	2626047
Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens MK275621 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464		AP013033	1502	2626047
Clostridium perfringens CP013043 1502 2626047 Clostridium perfringens MK275621 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464	Clostridium perfringens	MK275619	1502	2626047
Clostridium perfringens MK275621 1502 2626047 Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464				
Polaromonas naphthalenivorans CP000535 216465 2626047 Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464		MK275621	1502	2626047
Polaromonas sp. W10N MG869623 1840301 2638319 Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464		CP000535	216465	2626047
Paraburkholderia phytofirmans CP001054 261302 1822464 Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464		MG869623	1840301	2638319
Paraburkholderia aromaticivorans CP022993 2026199 1822464 Leuconostoc CP001753 1243 1822464				1822464
Leuconostoc CP001753 1243 1822464				1822464
	Leuconostoc		1243	1822464
	Leuconostoc	DQ489738	1243	1822464

scientificName	nuccoreAcc	taxid	parent
Leuconostoc mesenteroides	CP035749	1245	1822464
Borrelia crocidurae	CP003448	29520	1822464
Borrelia crocidurae	CP003446	29520	1822464
Xanthomonas vasicola	CP034650	56459	1822464
Fibrella aestuarina	HE796684	651143	861914
Bacillus sp. JAMB750	AB125215	253629	185979
Halobacillus halophilus	HE717025	1570	45667
Phaeobacter piscinae	CP010687	1580596	45667
Phaeobacter piscinae	CP010686	1580596	45667
Enterobacteriaceae	CP022275	543	45667
Enterobacteriaceae	MH192342	543	45667
Raoultella ornithinolytica	CP038275	54291	45667
Klebsiella	CP023418	570	45667
Klebsiella	CP024509	570	45667
Klebsiella	AP014954	570	45667
Raoultella electrica	CP041249	1259973	160674
Enterobacterales	CP029448	91347	160674
Enterobacterales	CP018361	91347	160674
Raoultella ornithinolytica	CP038276	54291	160674
Klebsiella oxytoca	CP011634	571	160674
Klebsiella oxytoca	CP026272	571	160674
Klebsiella	CP008843	570	160674
Klebsiella	CP026718	570	160674
Klebsiella oxytoca	CP029127	571	160674
Clostridium taeniosporum	CP017256	394958	1485
Clostridium taeniosporum	CP017255	394958	1485
Sphingobium sp. EP60837	CP015988	1855519	1485
Rhizobium sp. ACO-34A	CP021375	1571470	2613769
Lactobacillus helveticus	CP031017	1587	2613769
Lactobacillus crispatus	CP026504	47770	1578
Lactobacillus paragasseri	CP040501	525326	1578
Lactobacillus gasseri	CP008839	1596	1578
Burkholderia gladioli	CP009320	28095	1578
Burkholderia stabilis	LR025745	95485	87882
Leptotrichia hongkongensis	AP019847	554406	32067
Leptotrichia wadei	AP019837	157687	32067
Vibrio harveyi	CP025540	669	32067
Vibrio harveyi	CP018683	669	32067
Vibrio harveyi	CP018684	669	32067
Vibrio vulnificus	CP014638	672	32067
Vibrio harveyi	CP018682	669	32067
Ochrobactrum anthropi	CP000762	529	32067
Ochrobactrum sp. LM19	KM659091	1449781	239106
Ochrobactrum sp. LM19	KM659092	1449781	239106

Geobacillus kaustophilus AP006520 1462 1505648 Legionella adelaidensis LR134431 45056 1505648 Legionella adelaidensis LR134432 45056 1505648 Legionella adelaidensis LR134428 45056 1505648 Bacteria CP044099 2 1505648 Bacteroides fragilis CP036545 817 1505648 Planktothrix agardhii LO018306 1160 54304 Isosphaera pallida CP002354 128 127 Massilia sp. WG5 CP012641 1707785 2609279 Runella slithyformis CP002864 106 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7002 CP00952 32049 2609279 Synechocystis CP016478 195498 2609279 Synechocystis CP003270 1142 2609279	scientificName	nuccoreAcc	taxid	parent
Geobacillus genomosp. 3 CP006255 1921421 129337 Geobacillus CP008904 129337 129337 Geobacillus CP017693 129337 129337 Geobacillus thermoleovorans CP014336 33941 1505648 Geobacillus kaustophilus AP006520 1462 1505648 Legionella adelaidensis LR134431 45056 1505648 Legionella adelaidensis LR134428 45056 1505648 Bacteria CP044099 2 1505648 Bacteria CP044099 2 1505648 Bacteria CP040999 2 1505648 Bacteria CP040899 2 1505648 Bacteriodes fragilis CP040854 187 1505648 Bacteriodes fragilis CP040850 1160 54304 Isosphaera pallida CP002354 128 127 Massilia sp. WG5 CP012642 1707785 2609279 Massilia sp. WG5 CP012642 1707785 2609279 Runell	Lactobacillus reuteri	HQ015473	1598	239106
Geobacillus CP008904 129337 129337 Geobacillus hermoleovorans CP017693 129337 129337 Geobacillus kaustophilus AP006520 1462 1505648 Geobacillus kaustophilus AP006520 1462 1505648 Legionella adelaidensis LR134431 45056 1505648 Legionella adelaidensis LR134432 45056 1505648 Bacteria CP044099 2 1505648 Bacteria CP004396 1160 5404 Jamela siltater CP00254 128 127 Massilia sp. WG5 CP012641 1707785	Geobacillus sp. WCH70	CP001639	471223	239106
Geobacillus thermoleovorans CP017693 129337 129337 Geobacillus kaustophilus AP006520 1462 1505648 Legionella adelaidensis LR134431 45056 1505648 Legionella adelaidensis LR134432 45056 1505648 Legionella adelaidensis LR134428 45056 1505648 Legionella adelaidensis LR134428 45056 1505648 Bacteria CP044099 2 1505648 Bacteria CP044099 2 1505648 Bacteria gardhii LO018306 1160 54304 Isosphaera pallida CP002354 128 127 Massilia sp. WG5 CP012641 1707785 2609279 Massilia sp. WG5 CP012642 1707785 2609279 Runella slithyformis CP002864 106 2609279 Runella sp. HYN0085 CP03856 2259595 2609279 Synechococcus sp. PCC 7002 CP0369279 32049 2609279 Synechocystis CP0016478 195498	Geobacillus genomosp. 3	CP006255	1921421	129337
Geobacillus thermoleovorans CP014336 33941 1505648 Geobacillus kaustophilus AP006520 1462 1505648 Legionella adelaidensis LR134431 45056 1505648 Legionella adelaidensis LR134428 45056 1505648 Bacteria CP044099 2 1505648 Bacteria CP036545 817 1505648 Bacteria CP036645 817 1505648 Bacteria CP036645 817 1505648 Planktothrix agardhii LO018306 1160 54304 Isosphaera pallida CP02354 128 127 Massilia sp. WG5 CP012641 1707785 2609279 Runella slithyformis CP012641 1707785 2609279 Runella sp. HYN0085 CP020864 106 2609279 Synechococcus sp. PCC 7012 CP000952 32049 2609279 Synechococcus sp. PCC 7117 CP016478 195498 2609279 Synechocystis CP03270 1142 2609279	Geobacillus	CP008904	129337	129337
Geobacillus kaustophilus AP006520 1462 1505648 Legionella adelaidensis LR134431 45056 1505648 Legionella adelaidensis LR134428 45056 1505648 Legionella adelaidensis LR134428 45056 1505648 Bacteria CP044099 2 1505648 Bacteria CP036545 817 1505648 Bacteria CP036545 817 1505648 Bacteria CP002354 128 127 Inscription CP012641 1707785 2609279 Massilia sp. WG5 CP012642 1707785 2609279 Massilia sp. WG5 CP012642 1707785 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7012 CP000852 32049 2609279 Synechocystis CP0016478 195498 2609279 Synechocystis CP0003270 1142 2009279	Geobacillus	CP017693	129337	129337
Legionella adelaidensis LR134431 45056 1505648 Legionella adelaidensis LR134422 45056 1505648 Legionella adelaidensis LR134428 45056 1505648 Bacteria CP040099 2 1505648 Bacteroides fragilis CP036545 817 1505648 Planktothrix agardhii LO018306 1160 54304 Isosphaera pallida CP002354 128 127 Massilia sp. WG5 CP012641 1707785 2609279 Massilia sp. WG5 CP012642 1707785 2609279 Runella slithyformis CP002864 106 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7012 CP000852 32049 2609279 Synechococcus sp. PCC 7117 CP016478 195498 2609279 Synechocystis CP03270 1142 2609279 Photobacterium phosphoreum AY789019 657 <td>Geobacillus thermoleovorans</td> <td>CP014336</td> <td>33941</td> <td>1505648</td>	Geobacillus thermoleovorans	CP014336	33941	1505648
Legionella adelaidensis LR134428 45056 1505648 Legionella adelaidensis LR134428 45056 1505648 Bacteria CP0440999 1505648 Bacteroides fragilis CP036545 817 1505648 Planktothrix agardhii LO018306 1160 54304 Isosphaera pallida CP002354 128 127 Massilia sp. WG5 CP012641 1707785 2609279 Massilia sp. WG5 CP012642 1707785 2609279 Runella slithyformis CP002864 106 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7002 CP000952 32049 2609279 Synechococystis CP0016478 195498 2609279 Synechocystis CP003270 1142 2609279 Synechocystis CP003270 1142 2609279 Synechocystis CP003270 1142 2609279 Photobacterium phosphoreum AY789019 659 657	Geobacillus kaustophilus	AP006520	1462	1505648
Legionella adelaidensis LR134428 45056 1505648 Bacteria CP044099 2 1505648 Bacteroides fragilis CP044099 2 1505648 Bacteroides fragilis CP012645 817 1505648 Planktothrix agardhii LO018306 1160 54304 Isosphaera pallida CP002354 128 127 Massilia sp. WG5 CP012641 1707785 2609279 Massilia sp. WG5 CP012642 1707785 2609279 Runella slithyformis CP002864 106 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7002 CP000952 32049 2609279 Synechocystis CP003270 1142 2609279 Synechocystis CP03276 2259595 2609279 Synechocystis CP033270 1142 2609279 Synechocystis CP033270 1142 2609279 Synechocystis CP034363 38293 2609279	Legionella adelaidensis	LR134431	45056	1505648
Bacteria CP044099 2 1505648 Bacteroides fragilis CP036545 817 1505648 Planktothrix agardhii LO018306 1160 54304 Isosphaera pallida CP002354 128 127 Massilia sp. WG5 CP012641 1707785 2609279 Runella slithyformis CP002864 106 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7002 CP030952 32049 2609279 Synechococcus sp. PCC 7117 CP016478 195498 2609279 Synechocystis CP003270 1142 2609279 Photobacterium damselae CP035463 38293 2609279 Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Acaryochloris marina CP001115 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000841 155978 <t< td=""><td>Legionella adelaidensis</td><td>LR134432</td><td>45056</td><td>1505648</td></t<>	Legionella adelaidensis	LR134432	45056	1505648
Bacteroides fragilis CP036545 817 1505648 Planktothrix agardhii LO018306 1160 54304 Isosphaera pallida CP002354 128 127 Massilia sp. WG5 CP012641 1707785 2609279 Massilia sp. WG5 CP012642 1707785 2609279 Runella slithyformis CP002864 106 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7002 CP000952 32049 2609279 Synechococcus sp. PCC 7117 CP016478 19549 2609279 Synechococtus sp. PCC 7117 CP016478 19549 2609279 Synechocystis CP003270 1142 2609279 Photobacterium damselae CP035463 38293 2609279 Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP0011116 310783 1298 Acaryochloris marina CP000840 155	Legionella adelaidensis	LR134428	45056	1505648
Planktothrix agardhii	Bacteria	CP044099	2	1505648
Isosphaera pallida	Bacteroides fragilis	CP036545	817	1505648
Massilia sp. WG5 CP012641 1707785 2609279 Massilia sp. WG5 CP012642 1707785 2609279 Runella slithyformis CP002864 106 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7002 CP000952 32049 2609279 Synechococcus sp. PCC 7117 CP016478 195498 2609279 Synechocystis CP003270 1142 2609279 Photobacterium damselae CP035463 38293 2609279 Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP001117 310783 1298 Deinococcus deserti CP001117 310783 1298 Deinococcus deserti CP001117 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000842 155	Planktothrix agardhii	LO018306	1160	54304
Massilia sp. WG5 CP012642 1707785 2609279 Runella slithyformis CP002864 106 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7002 CP000952 32049 2609279 Synechococcus sp. PCC 7117 CP016478 195498 2609279 Synechocystis CP003270 1142 2609279 Photobacterium damselae CP035463 38293 2609279 Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP001115 310783 1298 Deinococcus deserti CP001117 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000844 <t< td=""><td>Isosphaera pallida</td><td>CP002354</td><td>128</td><td>127</td></t<>	Isosphaera pallida	CP002354	128	127
Runella slithyformis CP002864 106 2609279 Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7002 CP000952 32049 2609279 Synechococcus sp. PCC 7117 CP016478 195498 2609279 Synechocystis CP003270 1142 2609279 Photobacterium damselae CP035463 38293 2609279 Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP001117 310783 1298 Deinococcus deserti CP001117 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000838 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000841	Massilia sp. WG5	CP012641	1707785	2609279
Runella sp. HYN0085 CP030856 2259595 2609279 Synechococcus sp. PCC 7002 CP000952 32049 2609279 Synechococcus sp. PCC 7117 CP016478 195498 2609279 Synechocystis CP003270 1142 2609279 Photobacterium damselae CP035463 38293 2609279 Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP001115 310783 1298 Deinococcus deserti CP001115 310783 1298 Acaryochloris marina CP001115 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000838 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP00841 155978 155977 Acaryochloris marina CP00842 <t< td=""><td>Massilia sp. WG5</td><td>CP012642</td><td>1707785</td><td>2609279</td></t<>	Massilia sp. WG5	CP012642	1707785	2609279
Synechococcus sp. PCC 7002 CP000952 32049 2609279 Synechococcus sp. PCC 7117 CP016478 195498 2609279 Synechocystis CP003270 1142 2609279 Photobacterium damselae CP035463 38293 2609279 Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP001115 310783 1298 Acaryochloris marina CP001117 310783 1298 Acaryochloris marina CP000840 155978 155978 Acaryochloris marina CP000839 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP015585	Runella slithyformis	CP002864	106	2609279
Synechococcus sp. PCC 7117 CP016478 195498 2609279 Synechocystis CP003270 1142 2609279 Photobacterium damselae CP035463 38293 2609279 Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP001117 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000839 155978 155978 Acaryochloris marina CP000843 155978 155978 Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Roseomonas gilardii CP000842 155978 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 </td <td>Runella sp. HYN0085</td> <td>CP030856</td> <td>2259595</td> <td>2609279</td>	Runella sp. HYN0085	CP030856	2259595	2609279
Synechocystis CP003270 1142 2609279 Photobacterium damselae CP035463 38293 2609279 Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP001117 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000838 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000843 155978 155978 Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000841 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582	Synechococcus sp. PCC 7002	CP000952	32049	2609279
Photobacterium damselae CP035463 38293 2609279 Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP001117 310783 1298 Deinococcus deserti CP001117 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000838 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000841 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 <td>Synechococcus sp. PCC 7117</td> <td>CP016478</td> <td>195498</td> <td>2609279</td>	Synechococcus sp. PCC 7117	CP016478	195498	2609279
Photobacterium phosphoreum AY789019 659 657 Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP001115 310783 1298 Deinococcus deserti CP001117 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000838 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffii CP032111	Synechocystis	CP003270	1142	2609279
Deinococcus deserti CP001116 310783 1298 Deinococcus deserti CP001115 310783 1298 Deinococcus deserti CP001117 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000838 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffli CP032111	Photobacterium damselae	CP035463	38293	2609279
Deinococcus deserti CP001115 310783 1298 Deinococcus deserti CP001117 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000838 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Acaryochloris marina CP000841 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffii CP032111 28090 155977 Melissococcus plutonius AP018494 </td <td>Photobacterium phosphoreum</td> <td>AY789019</td> <td>659</td> <td>657</td>	Photobacterium phosphoreum	AY789019	659	657
Deinococcus deserti CP001117 310783 1298 Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000838 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP000842 155978 155977 Roseomonas sp. FDAARGOS_362 CP024585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffii CP032111 28090 155977 Melissococcus plutonius AP018494 33970 155977 Sphingomonas sp. LK11 CP013918 1390395 155977	Deinococcus deserti	CP001116	310783	1298
Acaryochloris marina CP000840 155978 155977 Acaryochloris marina CP000838 155978 155977 Acaryochloris marina CP000839 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffii CP032111 28090 155977 Legionella adelaidensis LR134430 45056 155977 Sphingomonas sp. LK11 CP013918 1390395 155977	Deinococcus deserti	CP001115	310783	1298
Acaryochloris marina CP000838 155978 155977 Acaryochloris marina CP000839 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffii CP032111 28090 155977 Melissococcus plutonius AP018494 33970 155977 Legionella adelaidensis LR134430 45056 155977 Sphingomonas sp. LK11 CP013918 1390395 155977	Deinococcus deserti	CP001117	310783	1298
Acaryochloris marina CP000839 155978 155977 Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffii CP032111 28090 155977 Melissococcus plutonius AP018494 33970 155977 Legionella adelaidensis LR134430 45056 155977 Sphingomonas sp. LK11 CP013918 1390395 155977	Acaryochloris marina	CP000840	155978	155977
Acaryochloris marina CP000843 155978 155977 Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffii CP032111 28090 155977 Melissococcus plutonius AP018494 33970 155977 Legionella adelaidensis LR134430 45056 155977 Sphingomonas sp. LK11 CP013918 1390395 155977	Acaryochloris marina	CP000838	155978	155977
Acaryochloris marina CP000845 155978 155977 Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffii CP032111 28090 155977 Melissococcus plutonius AP018494 33970 155977 Legionella adelaidensis LR134430 45056 155977 Sphingomonas sp. LK11 CP013918 1390395 155977	Acaryochloris marina	CP000839	155978	155977
Acaryochloris marina CP000844 155978 155977 Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffii CP032111 28090 155977 Melissococcus plutonius AP018494 33970 155977 Legionella adelaidensis LR134430 45056 155977 Sphingomonas sp. LK11 CP013918 1390395 155977	Acaryochloris marina	CP000843	155978	155977
Acaryochloris marina CP000841 155978 155977 Acaryochloris marina CP000842 155978 155977 Roseomonas gilardii CP015585 257708 155977 Roseomonas sp. FDAARGOS_362 CP024587 2018065 155977 Roseomonas sp. FDAARGOS_362 CP024582 2018065 155977 Moraxella catarrhalis AY167745 480 155977 Acinetobacter lwoffii CP032111 28090 155977 Melissococcus plutonius AP018494 33970 155977 Legionella adelaidensis LR134430 45056 155977 Sphingomonas sp. LK11 CP013918 1390395 155977	Acaryochloris marina	CP000845	155978	155977
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Sphingomonas sp. LK11 CP013918 1390395 155977	-			
				155977

scientificName	nuccoreAcc	taxid	parent
Sphingobium chungbukense	GU811235	56193	155977
Sphingobium herbicidovorans	CP020541	76947	155977
Sphingomonas wittichii	CP021189	160791	155977
Planococcus sp. ZOYM	DQ438985	378212	2662419
Planomicrobium glaciei	CP041324	459472	162291
Planococcus antarcticus	CP016536	161360	162291
Borrelia miyamotoi	CP044786	47466	162291
Borrelia miyamotoi	CP024328	47466	162291
Corynebacterium maris	CP003925	575200	1716
Corynebacterium glutamicum	CP014329	1718	1716
Corynebacterium casei	CP004352	160386	1716
Acinetobacter baumannii	CP000522	470	1716
Acinetobacter baumannii	CP034094	470	1716
Acinetobacter tandoii	CP041366	202954	469
Treponema succinifaciens	CP002632	167	157
Campylobacter	CP017417	194	157
Campylobacter	CP018901	194	157
Campylobacter	CP044176	194	157
Bacteroides fragilis	AB646744	817	157
Bacteroides	CP041232	816	815
Bacteroides	AP019728	816	815
Bacteroides fragilis	CP036554	817	815
Roseivivax	CP045319	93682	815
Rhodobacteraceae bacterium	CP031586	1904441	815
Escherichia coli	CP030922	562	815
Buttiauxella sp. 3AFRM03	CP033074	2479367	2634062
Enterobacter cloacae	CP001920	550	2634062
Salmonella enterica	CP029997	28901	2634062
Wigglesworthia glossinidia	AB063523	51229	51228
Candidatus Baumannia cicadellinicola	CP011788	186490	198346
Shewanella oneidensis	AE014300	70863	22
Acinetobacter baumannii	MK360916	470	22
Acinetobacter baumannii	CP038265	470	22
Enterobacteriaceae	CP026203	543	22
Enterobacteriaceae	CP017993	543	22
Shewanella sp. FDAARGOS_354	CP022090	1930557	196818
Bacillus thuringiensis	CP021440	1428	196818
Bacillus thuringiensis	CP021439	1428	196818
Bacillus thuringiensis	CP021441	1428	196818
Yersinia enterocolitica	CP007450	630	196818
Yersinia enterocolitica	CP007449	630	196818
Bacillus thuringiensis	CP003692	1428	196818
Bacillus thuringiensis	CP012103	1428	196818
Bacillus thuringiensis	EU362919	1428	196818

Bacillus mycoides Bacillus screus CP020747 1405 196818 Bacillus cP043832 1386 196818 Bacillus cP043832 1386 196818 Bacillus cP042014 1280 196818 Staphylococcus aureus CP041114 1396 196818 Staphylococcus aureus CP042111 1280 196818 Staphylococcus aureus CP042111 1280 196818 Staphylococcus aureus CP042111 1280 196818 Stelenomonas ruminantium AP012298 971 196818 Selenomonas ruminantium AB003193 971 196818 Selenomonas ruminantium AB003193 971 196818 Vibrio sp. 09022 CP000757 452804 2614977 Vibrio campbellii CP03765 680 2614977 Vibrio campbellii CP03765 680 2614977 Vibrio vulnificus CP019123 672 2614977 Citrobacter freundii CP032182 546 2614977 Aminobacter sp. MSH1 CP028266 374606 2614977 Aminobacter sp. MSH1 CP028267 Aminobacter sp. MSH1 CP028970 374606 2614977 Mesorhizobium soli CP044217 1295366 68287 Rhedococcus pyridinivorans CP06998 Rloss Rlebsiella AY033498 570 68287 Enterobacteriaceae CP011585 543 68287 Enterobacteriaceae CP011585 543 68287 Enterobacteriaceae CP044965 28901 68287 Enterobacteriaceae CP04965 28901 68287 Enterobacteriaceae CP04965 28901 68287 Enterobacteriaceae CP04965 28901 68287 Cupriavidus metallidurans CP063482 543 68287 Cupriavidus metallidurans CP063430 Cupriavidus metallidurans CP064439 106589 119060 Cupriavidus metallidurans CP02646 119219 119060 Cupriavidus metallidurans CP026547 119219 68287 Cupriavidus metallidurans CP026546 119219 119060 Cupriavidus metallidurans CP026547 119219 68287 Cupriavidus metallidurans CP026546 119219 119060 Cupriavidus metallidurans CP026547 119219 119060 Cupriavidus metallidurans CP026546 119219 119060 Cupriavidus metallidurans CP026547 119219 119060 Cupriavidus metallidurans CP026546 119219 119060 Cupriavidus metallidurans CP026547 119219 119060 Cupriavidus metallidurans CP026546 119219 119060 Cupriavidus metallidurans CP026547 119219 119060 Cupriavidus metallidurans CP026546 119219 119060 Cupriavidus metallidurans CP026547 119219 119060 Cupriavidus metallidurans CP026546 119219 119060 Cupriavidus metallidurans CP026547 119219 119060 Cupriavidus metallidur	scientificName	nuccoreAcc	taxid	parent
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Cupriavidus metallidurans CP026547 119219 119060 Sulfitobacter CP040754 60136 31989 Sulfitobacter CP022419 60136 31989 Phaeobacter inhibens CP010728 221822 31989 Burkholderia ubonensis CP013462 101571 31989 Burkholderia sp. JP2-270 CP029827 2217913 2613784 Mycobacterium avium CP040245 1764 2613784 Mycobacterium paragordonae CP025549 1389713 1763 Mycobacterium chimaera CP015275 222805 1763 Mycobacterium avium CP036222 1764 1763 Streptomyces sp. S1A1-7 CP041603 2594459 2593676 Kitasatospora aureofaciens CP038024 40216 2063 Acinetobacter radioresistens CP010903 106654 2063 Streptomyces sp. W75 JQ340175 1170711 2593676	-			
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Acinetobacter radioresistens CP038024 40216 2063 Acinetobacter nosocomialis CP010903 106654 2063 Streptomyces sp. W75 JQ340175 1170711 2593676				
Acinetobacter nosocomialis CP010903 106654 2063 Streptomyces sp. W75 JQ340175 1170711 2593676				
Streptomyces sp. W75 JQ340175 1170711 2593676				
		-		

scientificName	nuccoreAcc	taxid	parent
Mycobacterium	EU271968	1763	2593676
Mycobacterium	BX649209	1763	2593676
Rhodococcus pyridinivorans	CP040723	103816	2593676
Rhodococcus sp. p52	CP016820	935199	2593676
Rhodococcus ruber	CP023713	1830	2593676
Lactobacillus reuteri	GU108604	1598	2593676
Treponema	AF112856	157	137
Bradyrhizobium	CP044544	374	41294
Bradyrhizobium	CP025114	374	41294
Oligotropha carboxidovorans	CP002823	40137	40136
Nitrobacter hamburgensis	CP000321	912	40136
Bradyrhizobium sp. BTAi1	CP000495	288000	2631580
Bosea sp. AS-1	CP022371	2015316	2653178
Bosea sp. AS-1	CP022370	2015316	2653178
Staphylococcus epidermidis	GQ900454	1282	2653178
Staphylococcus warneri	AB125341	1292	2653178
Staphylococcus aureus	CP042090	1280	2653178
Staphylococcus aureus	CP042092	1280	2653178
Staphylococcus sciuri	CP041880	1296	2653178
Acetobacter pasteurianus	HF677576	438	2653178
Komagataeibacter saccharivorans	CP036412	265959	2653178
Acinetobacter johnsonii	CP010357	40214	2653178
Acinetobacter baumannii	CP039931	470	2653178
Acinetobacter baumannii	CP036285	470	2653178
Borrelia turcica	CP028891	229155	2653178
Borrelia turcica	CP028890	229155	2653178
Acetobacter pasteurianus	JQ418524	438	2653178
Acetobacter	CP030873	434	2653178
Acetobacter	HF677571	434	2653178
Acetobacter	CP011122	434	2653178
Acetobacter	CP042809	434	2653178
Acetobacter	CP023190	434	2653178
Acetobacter tropicalis	CP022700	104102	434
Acetobacter pasteurianus	CP013471	438	434
Beijerinckia indica	CP001017	533	532
Beijerinckia indica	CP001018	533	532
Zymomonas mobilis	CP001881	542	532
Zymomonas mobilis	CP023680	542	532
Lactobacillus plantarum	CP032755	1590	532
Lactobacillus plantarum	CP037433	1590	532
Lactobacillus plantarum	CP028980	1590	532
Lactobacillus plantarum	CP037436	1590	532
Lactobacillus plantarum	CP023307	1590	532
Lactobacillus plantarum	CP032462	1590	532

scientificName	nuccoreAcc	taxid	parent
Lactobacillus plantarum	CP012652	1590	532
Lactobacillus plantarum	CP035117	1590	532
Lactobacillus plantarum	CP017357	1590	532
Lactobacillus plantarum	CP017364	1590	532
Lactobacillus plantarum	CP023492	1590	532
Lactobacillus plantarum	CP017412	1590	532
Lactobacillus plantarum	CP033889	1590	532
Lactobacillus plantarum	CP017359	1590	532
Acinetobacter baumannii	MK386684	470	532
Acinetobacter baumannii	CP030107	470	532
Vibrio tapetis	EU573358	52443	662
Photobacterium profundum	CR377818	74109	657
Jannaschia sp. CCS1	CP000265	290400	2645469
Anaerococcus prevotii	CP001709	33034	165779
Streptococcus dysgalactiae	CP044103	1334	119603
Methylobacterium	CP015368	407	119045
Methylobacterium	JX627580	407	119045
Methylorubrum extorquens	CP001299	440085	408
Methylobacterium sp. DM1	CP029174	2067957	2615210
Methylobacterium brachiatum	CP033232	269660	2615210
Methylobacterium sp. XJLW	CP017427	739141	2615210
Methylorubrum extorquens	FP103043	272630	408
Mycobacterium	CP023152	1763	408
Mycobacterium	AP012556	1763	408
Mycobacterium paragordonae	CP025547	1389713	408
Enterococcus faecalis	CP031028	1351	408
Enterococcus faecalis	CP008814	1351	408
Enterococcus faecalis	AB563188	1351	408
Enterococcus faecalis	AP018539	1351	408
Enterococcus faecalis	MK140641	1351	408
Enterococcus faecalis	CP028722	1351	408
Enterococcus faecalis	CP015885	1351	408
Enterococcus faecalis	CP002494	1351	408
Enterococcus faecalis	AE002565	1351	408
Enterococcus faecalis	AE016833	1351	408
Enterococcus faecalis	CP028286	1351	408
Enterococcus faecalis	CP036248	1351	408
Oligotropha carboxidovorans	CP002822	40137	408
Sinorhizobium meliloti	CP021811	382	408
Bacillus	FR675941	1386	408
Bacillus	CP012102	1386	408
Bacillus cereus	CP000042	1396	408
Bacillus thuringiensis	CP019232	1428	408
Bacillus	CP032539	1386	408

scientificName	nuccoreAcc	taxid	parent
Bacillus	MF996509	1386	408
Shigella flexneri	CP012733	623	408
Laribacter hongkongensis	AY858987	168471	408
Vibrio alginolyticus	CP017898	663	717610
Vibrio alginolyticus	CP017894	663	717610
Salmonella enterica	CP034699	28901	717610
Polaromonas sp. H1N	MG869619	1840283	2638319
Polaromonas sp. H8N	MG869622	1840297	2638319
Streptomyces pratensis	CP002476	1169025	1883
Streptomyces sp. PAMC 26508	CP003991	1265601	2593676
Streptomyces sp. S501	CP038146	2420135	2593676
Staphylococcus aureus	GQ900451	1280	2593676
Staphylococcus aureus	U96609	1280	2593676
Campylobacter hominis	CP000775	76517	194
Campylobacter fetus	EF050075	196	194
Desulfovibrio magneticus	AP010905	184917	872
Desulfovibrio carbinolicus	CP026539	296842	872
Methylovorus glucosotrophus	CP001676	266009	81682
Caldicellulosiruptor bescii	CP001395	31899	44000
Bacilli	KC456362	91061	44000
Bacilli	KC561137	91061	44000
Staphylococcus sciuri	AJ579365	1296	44000
Calothrix	AP018256	1186	2661849
Nostoc commune	AP018329	1178	2661849
Nostoc sphaeroides	CP031943	446679	2661849
Nostoc commune	AP018331	1178	2661849
Nostoc flagelliforme	CP024786	2038116	2661849
Nostoc sp. 'Peltigera membranacea cyanobiont' N6	CP026689	1261031	2661849
Nostoc commune	AP018328	1178	2661849
Nostoc sp. 'Peltigera membranacea cyanobiont' N6	CP026686	1261031	2661849
Nostoc sp. 'Peltigera membranacea cyanobiont' N6	CP026687	1261031	2661849
Nostoc sp. 'Peltigera membranacea cyanobiont' N6	CP026685	1261031	2661849
Nostoc sp. 'Lobaria pulmonaria (5183) cyanobiont'	CP026694	1618022	2661849
Nostoc commune	AP018332	1178	2661849
Streptomyces lividans	M21778	1916	2661849
Streptomyces silaceus	KU996353	545123	1883
Desulfomonile tiedjei	CP003361	2358	2357
Thermus scotoductus	CP001963	37636	270
Arsenophonus nasoniae	CP038630	638	270
Arsenophonus nasoniae	CP038629	638	270
Arsenophonus nasoniae	CP038628	638	270
Lactobacillus plantarum	GU195642	1590	270
Octadecabacter antarcticus	CP003741	1217908	53945
Octadecabacter arcticus	CP003743	53946	53945

scientificName	nuccoreAcc	taxid	parent
Octadecabacter arcticus	CP003744	53946	53945
Mycobacterium sp. JS623	CP003079	212767	53945
Caulobacter sp. K31	CP000928	366602	2648921
Weissella soli	CP042378	155866	2648921
Weissella soli	CP042380	155866	2648921
Vibrio mediterranei	CP033579	689	2648921
Vibrio mediterranei	CP018310	689	2648921
Acinetobacter soli	CP016902	487316	2648921
Acinetobacter baumannii	CP021785	470	2648921
Acinetobacter baumannii	CP040052	470	2648921
Acinetobacter baumannii	CP042206	470	2648921
Acinetobacter pittii	CP042369	48296	2648921
Acinetobacter chinensis	CP032129	2004650	2648921
Acinetobacter wuhouensis	CP033129	1879050	2648921
Acinetobacter	CP029393	469	2648921
Acinetobacter lwoffii	CP019147	28090	2648921
Acinetobacter wuhouensis	CP031713	1879050	2648921
Acinetobacter lwoffii	CP019150	28090	2648921
Acinetobacter lwoffii	CP019148	28090	2648921
Acinetobacter lwoffii	CP032288	28090	2648921
Rufibacter tibetensis	CP012645	512763	1379908
Arthrobacter crystallopoietes	CP018864	37928	1379908
Pseudarthrobacter sulfonivorans	CP013748	121292	1742993
Swingsia sp. F3b2	CP038232	2558361	2637697
Neokomagataea sp. Ha5	CP038144	2558360	2637481
Aureimonas sp. AU20	CP006375	1349819	2637481
Lactobacillus oris	CP014789	1632	1578
Staphylococcus aureus	CP042065	1280	1578
Planococcus donghaensis	CP016544	414778	1372
Pelagibaca abyssi	CP015097	1250539	360528
Rhodobacteraceae bacterium	CP031594	1904441	360528
Komagataeibacter medellinensis	AP012164	1177712	360528
Acetobacter pasteurianus	HF677574	438	360528
Acetobacter pomorum	CP023659	65959	360528
Lactobacillus amylolyticus	CP020458	83683	1578
Borrelia miyamotoi	CP036958	47466	1578
Borrelia miyamotoi	CP036952	47466	1578
Borrelia miyamotoi	CP037101	47466	1578
Bacillus thuringiensis	AY822042	1428	1578
Bacillus thuringiensis	CP015361	1428	1578
Bacillus	CP024777	1386	1578
Bacillus thuringiensis	AF516904	1428	1578
Bacillus wiedmannii	CP024691	1890302	1578
Rhodobacter sphaeroides	CP030276	1063	1578

Rhodobacter sphaeroides	scientificName	nuccoreAcc	taxid	parent
Nostoc sp. PCC 7524 CP003553 28072 2593658 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP000120 264691 2593658 Trichormus variabilis CP000120 264691 2593658 Staphylococcus GQ900384 1279 2593658 Staphylococcus CP027492 1279 2593658 Pedobacter sp. BG5 FJ613505 524386 2628918 Bartonella schoenbuchensis CP019790 165694 773 Labrenzia CP045334 478070 31989 Labrenzia CP0453331 478070 31989 Labrenzia CP0453331 478070 31989 Yangia pacifica CP014583 478070 31989 Yangia pacifica CP0145383 478070 31989 Yangia pacifica CP014598 478070 31989 Yangia pacifica CP0145833 478070 31989 Yangia pacifica CP0145838 87882 Yangia pacifica CP01458383 478070 31989 <t< td=""><td>Rhodobacter sphaeroides</td><td>CP012967</td><td>1063</td><td>1578</td></t<>	Rhodobacter sphaeroides	CP012967	1063	1578
Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP026690 1261031 2593658 Trichormus variabilis CP000120 264691 2593658 Staphylococcus GQ900384 1279 2593658 Staphylococcus CP027492 1279 2593658 Pedobacter sp. BG5 FJ613505 524386 2628915 Bartonella schoenbuchensis CP019790 165694 773 Labrenzia CP045331 478070 31989 Labrenzia CP045331 478070 31989 Labrenzia CP045383 478070 31989 Yangia pacifica CP022195 311180 354203 Yangia sp. CCB-MM3 CP014599 1792508 2645806 Burkholderia multivorans AP009388 87883 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia pseudomallei KF418775 28901 2613784 Pantoea stewartii CP017586 66269	Rhodobacter sphaeroides	CP012966	1063	1578
Trichormus variabilis CP000120 264691 2593658 Staphylococcus GQ900384 1279 2593658 Staphylococcus CP027492 1279 2593658 Pedobacter sp. BG5 FJ613505 524386 2628918 Bartonella schoenbuchensis CP019790 165694 773 Labrenzia CP045331 478070 31989 Labrenzia CP0145334 478070 31989 Labrenzia CP045331 478070 31989 Labrenzia CP045383 478070 31989 Yangia pacifica CP014599 311180 354203 Yangia sp. CCB-MM3 CP014599 1792508 2645800 Burkholderia multivorans AP009388 87883 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia sp. KK1 CP016006 1855726 261378 Pantoea stewartii CP017586 66269 261378 Pantoea stewartii CP017587 66269 261378	Nostoc sp. PCC 7524	CP003553	28072	2593658
Staphylococcus GQ900384 1279 2593656 Staphylococcus CP027492 1279 2593656 Pedobacter sp. BG5 FJ613505 524386 2628918 Bartonella schoenbuchensis CP019790 165694 773 Labrenzia CP045334 478070 31989 Labrenzia CP011928 478070 31989 Labrenzia CP045331 478070 31989 Labrenzia CP045333 478070 31989 Yangia pacifica CP045333 478070 31989 Yangia pacifica CP045383 478070 31989 Yangia pacifica CP021955 311180 354203 Yangia pacifica CP020388 8782 Burkholderia multivorans AP009388	Nostoc sp. 'Peltigera membranacea cyanobiont' N6	CP026690	1261031	2593658
Staphylococcus CP027492 1279 2593658 Pedobacter sp. BG5 FJ613505 524386 2628915 Bartonella schoenbuchensis CP019790 165694 773 Labrenzia CP045331 478070 31989 Labrenzia CP045331 478070 31989 Labrenzia CP045383 478070 31989 Labrenzia CP045383 478070 31989 Yangia pacifica CP02195 311180 354203 Yangia sp. CCB-MM3 CP014599 1792508 2645806 Burkholderia multivorans AP009388 87883 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia pseudomallei CP013006 1855726 261378	Trichormus variabilis	CP000120	264691	2593658
Pedobacter sp. BG5 FJ613505 524386 2628915 Bartonella schoenbuchensis CP019790 165694 773 Labrenzia CP045334 478070 31989 Labrenzia CP011928 478070 31989 Labrenzia CP011928 478070 31989 Labrenzia CP045383 478070 31989 Yangia pacifica CP02195 311180 354203 Yangia sp. CCB-MM3 CP014599 1792508 2645800 Burkholderia multivorans AP009388 87883 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia pseudomallei KF418775 28450 <t< td=""><td>Staphylococcus</td><td>GQ900384</td><td>1279</td><td>2593658</td></t<>	Staphylococcus	GQ900384	1279	2593658
Bartonella schoenbuchensis CP019790 165694 773 Labrenzia CP045334 478070 31989 Labrenzia CP045331 478070 31989 Labrenzia CP045333 478070 31989 Labrenzia CP045333 478070 31989 Yangia pacifica CP02195 311180 354203 Yangia sp. CCB-MM3 CP014599 1792508 264800 Burkholderia multivorans AP009388 87882 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia sp. KK1 CP016006 1855726 261378 Salmonella enterica CP030205 28901 261378 Pantoea stewartii CP017586 66269 261378 Pantoea stewartii CP017585 66269 261378 Pantoea stewartii CP017589 66269 261378 Pantoea stewartii CP017589 66269 261378 Pasteurellaceae DQ176855 712 261378 <td< td=""><td>Staphylococcus</td><td>CP027492</td><td>1279</td><td>2593658</td></td<>	Staphylococcus	CP027492	1279	2593658
Labrenzia CP045334 478070 31989 Labrenzia CP045331 478070 31989 Labrenzia CP011928 478070 31989 Labrenzia CP045383 478070 31989 Yangia pacifica CP022195 311180 354203 Yangia sp. CCB-MM3 CP014599 1792508 2645806 Burkholderia multivorans AP009388 87882 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia sp. KK1 CP016006 1855726 2613784 Salmonella enterica CP030205 28901 2613784 Pantoea stewartii CP017586 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784	Pedobacter sp. BG5	FJ613505	524386	2628915
Labrenzia CP045331 478070 31989 Labrenzia CP011928 478070 31989 Labrenzia CP045383 478070 31989 Labrenzia CP045383 478070 31989 Yangia pacifica CP02195 311180 354203 Yangia sp. CCB-MM3 CP014599 1792508 2645806 Burkholderia multivorans AP009388 87882 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia sp. KK1 CP016006 1855726 2613786 Salmonella enterica CP030205 28901 2613786 Pantoea stewartii CP017586 66269 2613786 Pantoea stewartii CP017587 66269 2613786 Pantoea stewartii CP017587 66269 2613786 Pantoea stewartii CP017589 66269 2613786 Pasteurellaceae DQ176855 712 2613786 Pasteurellaceae KR262062 712 2613786 B	Bartonella schoenbuchensis	CP019790	165694	773
Labrenzia CP011928 478070 31989 Labrenzia CP045383 478070 31989 Yangia pacifica CP022195 311180 354203 Yangia sp. CCB-MM3 CP014599 1792508 2645800 Burkholderia multivorans AP009388 87883 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia sp. KK1 CP016006 1855726 2613784 Salmonella enterica CP030205 28901 2613784 Pantoea stewartii CP017586 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Pasteurellaceae KR262062 712 2613784 <tr< td=""><td>Labrenzia</td><td>CP045334</td><td>478070</td><td>31989</td></tr<>	Labrenzia	CP045334	478070	31989
Labrenzia CP045383 478070 31989 Yangia pacifica CP022195 311180 354203 Yangia sp. CCB-MM3 CP014599 1792508 2645800 Burkholderia multivorans AP009388 87883 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia sp. KK1 CP016006 1855726 2613784 Salmonella enterica CP030205 28901 2613784 Pantoea stewartii CP017585 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784	Labrenzia	CP045331	478070	31989
Yangia pacifica CP02195 311180 354203 Yangia sp. CCB-MM3 CP014599 1792508 2645806 Burkholderia multivorans AP009388 87883 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia sp. KK1 CP016006 1855726 2613784 Burkholderia sp. KK1 CP016006 1855726 2613784 Pantoea stewartii CP017586 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus glycinifermentans MF996510 1664069	Labrenzia	CP011928	478070	31989
Yangia sp. CCB-MM3 CP014599 1792508 2645806 Burkholderia multivorans AP009388 87883 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia sp. KK1 CP016006 1855726 2613784 Burkholderia sp. KK1 CP016006 1855726 2613784 Pantoea stewartii CP017586 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423	Labrenzia	CP045383	478070	31989
Burkholderia multivorans AP009388 87883 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia pseudomallei KF418775 28450 87882 Burkholderia sp. KK1 CP016006 1855726 2613784 Salmonella enterica CP030205 28901 2613784 Pantoea stewartii CP017586 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP0235392 1423 2613784 Polaromonas naphthalenivorans CP000530 <td< td=""><td>Yangia pacifica</td><td>CP022195</td><td>311180</td><td>354203</td></td<>	Yangia pacifica	CP022195	311180	354203
Burkholderia pseudomallei KF418775 28450 87882 Burkholderia sp. KK1 CP016006 1855726 2613784 Salmonella enterica CP030205 28901 2613784 Pantoea stewartii CP017586 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP033392 1423 2613784 Polaromonas naphthalenivorans CP00530 216465	Yangia sp. CCB-MM3	CP014599	1792508	2645800
Burkholderia sp. KK1 CP016006 1855726 2613784 Salmonella enterica CP030205 28901 2613784 Pantoea stewartii CP017586 66269 2613784 Pantoea stewartii CP017585 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 15836	Burkholderia multivorans	AP009388	87883	87882
Salmonella enterica CP030205 28901 2613784 Pantoea stewartii CP017586 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Bacillus subtilis CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000530 216465 </td <td>Burkholderia pseudomallei</td> <td>KF418775</td> <td>28450</td> <td>87882</td>	Burkholderia pseudomallei	KF418775	28450	87882
Pantoea stewartii CP017586 66269 2613784 Pantoea stewartii CP017585 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP02038 1396 2613784 Enterobacter hormaechei CP035392 1423 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 3739	Burkholderia sp. KK1	CP016006	1855726	2613784
Pantoea stewartii CP017585 66269 2613784 Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 15836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 37	Salmonella enterica	CP030205	28901	2613784
Pantoea stewartii CP017587 66269 2613784 Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 5336 82986 Raoultella ornithinolytica CP036439 573	Pantoea stewartii	CP017586	66269	2613784
Pantoea stewartii CP017588 66269 2613784 Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 5336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 <td>Pantoea stewartii</td> <td>CP017585</td> <td>66269</td> <td>2613784</td>	Pantoea stewartii	CP017585	66269	2613784
Pantoea stewartii CP017590 66269 2613784 Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Klebsiella pneumoniae CP013339 54291 82986 Klebsiella pneumoniae CP031790 <	Pantoea stewartii	CP017587	66269	2613784
Pantoea stewartii CP017589 66269 2613784 Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Bacillus subtilis CP043384 158836 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Klebsiella pneumoniae CP013739 54291 82986 Klebsiella pneumoniae CP031790	Pantoea stewartii	CP017588	66269	2613784
Pantoea stewartii CP017591 66269 2613784 Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Rebsiella pneumoniae CP013339 54291 82986 Klebsiella pneumoniae CP037554 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454	Pantoea stewartii	CP017590	66269	2613784
Pasteurellaceae DQ176855 712 2613784 Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF12889 53336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060	Pantoea stewartii	CP017589	66269	2613784
Pasteurellaceae KR262062 712 2613784 Bacillus thuringiensis CP003765 1428 2613784 Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Pantoea stewartii	CP017591	66269	2613784
Bacillus thuringiensis CP003765 1428 2613784 Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Pasteurellaceae	DQ176855	712	2613784
Bacillus cereus CP020938 1396 2613784 Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Pasteurellaceae	KR262062	712	2613784
Bacillus glycinifermentans MF996510 1664069 2613784 Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Bacillus thuringiensis	CP003765	1428	2613784
Bacillus subtilis CP035392 1423 2613784 Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP015754 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Bacillus cereus	CP020938	1396	2613784
Enterobacter hormaechei CP043384 158836 2613784 Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 5336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP015754 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Bacillus glycinifermentans	MF996510	1664069	2613784
Polaromonas naphthalenivorans CP000530 216465 2613784 Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP015754 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Bacillus subtilis	CP035392	1423	2613784
Polaromonas naphthalenivorans CP000534 216465 2613784 Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP015754 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Enterobacter hormaechei	CP043384	158836	2613784
Rivularia sp. PCC 7116 CP003551 373994 2676603 Tatumella citrea AF128889 53336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP015754 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Polaromonas naphthalenivorans	CP000530	216465	2613784
Tatumella citrea AF128889 53336 82986 Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP015754 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Polaromonas naphthalenivorans	CP000534	216465	2613784
Raoultella ornithinolytica CP013339 54291 82986 Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP015754 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Rivularia sp. PCC 7116	CP003551	373994	2676603
Klebsiella pneumoniae CP036439 573 82986 Klebsiella pneumoniae CP015754 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Tatumella citrea	AF128889	53336	82986
Klebsiella pneumoniae CP015754 573 82986 Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Raoultella ornithinolytica	CP013339	54291	82986
Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Klebsiella pneumoniae	CP036439	573	82986
Klebsiella pneumoniae CP031790 573 82986 Enterobacter bugandensis CP039454 881260 547 Trichormus azollae CP002060 1164 264688	Klebsiella pneumoniae	CP015754	573	82986
Trichormus azollae CP002060 1164 264688	Klebsiella pneumoniae	CP031790	573	82986
Trichormus azollae CP002060 1164 264688	Enterobacter bugandensis	CP039454	881260	547
Cylindrospermum stagnale CP003644 142864 264688	Trichormus azollae	CP002060	1164	264688
	Cylindrospermum stagnale	CP003644	142864	264688

scientificName	nuccoreAcc	taxid	parent
Anabaena cylindrica	AP018168	1165	264688
Sphaerospermopsis kisseleviana	AP018315	289435	752201
Turneriella parva	CP002960	29510	338321
Agrobacterium	CP016500	357	338321
Streptococcus dysgalactiae	AP018730	1334	338321
Streptococcus dysgalactiae	AP018731	1334	338321
Streptococcus suis	CP012912	1307	338321
Xanthomonas euvesicatoria	AM039948	456327	338321
Marinovum algicola	CP010865	42444	338321
Pelagibaca abyssi	CP015094	1250539	338321
Xanthomonas	CP018851	338	338321
Xanthomonas	CP018732	338	338321
Xanthomonas vesicatoria	CP018468	56460	338321
Tsukamurella paurometabola	CP001967	2061	2060
Tsukamurella tyrosinosolvens	LR134450	57704	2060
Tsukamurella tyrosinosolvens	LR134452	57704	2060
Mycobacterium sp. djl-10	CP016641	1879023	2642494
Mycobacterium sp. djl-10	CP016643	1879023	2642494
Tsukamurella tyrosinosolvens	LR134447	57704	2642494
Tsukamurella tyrosinosolvens	LR134455	57704	2642494
Lawsonia intracellularis	AM180253	29546	41707
Planomicrobium glaciei	CP041325	459472	41707
Mycobacterium chimaera	CP015269	222805	41707
Mycobacterium paragordonae	CP025548	1389713	41707
Nostoc sp. HK-01	AP018324	196308	2593658
Nostoc sp. HK-01	AP018323	196308	2593658
Nostoc sp. HK-01	AP018325	196308	2593658
Nocardia farcinica	AP006620	37329	1817
Nocardia farcinica	CP031420	37329	1817
Nocardia farcinica	AP006619	37329	1817
Nocardia	CP031419	1817	85025
Nocardia	CP026745	1817	85025
Rhodobacteraceae	CP020697	31989	85025
Rhodobacteraceae	CP045387	31989	85025
Yoonia vestfoldensis	CP021432	245188	2211641
Sulfitobacter sp. THAF37	CP045378	2587855	2211641
Rhodobacter sphaeroides	CP000145	1063	2211641
Rhodobacter sphaeroides	CP033452	1063	2211641
Rhodobacter sphaeroides	CP001152	1063	2211641
Rhodobacter sphaeroides	CP033436	1063	2211641
Paracoccus yeei	CP020443	147645	2211641
Paracoccus zhejiangensis	CP025434	1077935	265
Lactobacillus	AB081463	1578	265
Lactobacillus	NC 012222	1578	265
Lactoraciitar	110_012222	1010	200

scientificName	nuccoreAcc	taxid	parent
Lactobacillus paracasei	AP012542	1597	265
Lactobacillus paracasei	CP017264	1597	265
Calothrix	AP018262	1186	265
Enterobacter hormaechei	CP030348	158836	265
Salmonella enterica	CP030228	28901	265
Klebsiella pneumoniae	CP023843	573	265
Enterobacter hormaechei	CP042577	158836	265
Erwinia amylovora	AY123046	552	265
Paracoccus aestuarii	JQ065021	453842	265
Sphingobium yanoikuyae	AB265741	13690	265
Roseobacter denitrificans	CP000464	2434	265
Rhodovulum sulfidophilum	CP015419	35806	34008
Rhodovulum sulfidophilum	AP014802	35806	34008
Rhodobacter blasticus	CP020471	1075	1060
Arcobacter butzleri	KF740631	28197	28196
Arcobacter butzleri	KF740632	28197	28196
Arcobacter butzleri	KF740633	28197	28196
Arcobacter cryaerophilus	KF740634	28198	28196
Rippkaea orientalis	CP001705	395962	28196
Rippkaea orientalis	CP001289	41431	28196
Burkholderia sp. KJ006	CP003517	416344	2613784
Singulisphaera acidiphila	CP003367	466153	2613784
Weissella cibaria	AF546865	137591	2613784
Weissella confusa	CP027564	1583	2613784
Weissella confusa	CP027568	1583	2613784
Weissella cibaria	CP020930	137591	2613784
Weissella cibaria	CP035270	137591	2613784
Aminobacter sp. MSH1	CP028972	374606	2613784
Aminobacter sp. MSH1	CP028973	374606	2613784
Pannonibacter phragmitetus	CP032314	121719	2613784
Rhodobacter sphaeroides	CP031754	1063	2613784
Acinetobacter sp. WCHAc010034	CP032273	1879049	2613784
Acinetobacter sp. TGL-Y2	CP015112	1407071	2613784
Acinetobacter chinensis	CP032128	2004650	2613784
Chryseobacterium glaciei	CP015200	1685010	59732
Bacillus	CP032858	1386	59732
Bacillus subtilis	CP035407	1423	59732
Psychrobacter sp. P11G5	CP012539	1699624	59732
Psychrobacter sp. P11G5	CP012540	1699624	59732
Psychrobacter sp. DAB_AL43B	JQ245701	1028416	59732
Psychrobacter sp. DAB_AL43B	JQ348845	1028416	59732
Psychrobacter sp. P2G3	CP012532	1699622	196806
Psychrobacter urativorans	CP012708	45610	497
Psychrobacter sp. P11G5	CP012538	1699624	497

scientificName	nuccoreAcc	taxid	parent
Fischerella sp. NIES-4106	AP018306	2005456	497
Fischerella sp. NIES-4106	AP018305	2005456	497
Fischerella sp. NIES-4106	AP018302	2005456	497
Lactobacillus sanfranciscensis	CP002463	1625	497
Lactobacillus crustorum	CP017998	392416	497
Micrococcus	KR152226	1269	1268
Micrococcus	KJ599675	1269	1268
Micrococcus	LK056645	1269	1268
Micrococcus	CP025617	1269	1268
Propionibacterium freudenreichii	AF291751	1744	1743
Clostridium butyricum	CP013354	1492	1485
Clostridium butyricum	CP013240	1492	1485
Paracoccus methylutens	EU043115	135742	265
Defluviimonas alba	CP012663	1335048	265
Tabrizicola sp. K13M18	CP034331	2494374	265
Xanthobacter autotrophicus	CP000782	280	279
Rhodobacter sp. LPB0142	CP017783	1850250	279
Phaeobacter piscinae	CP010723	1580596	279
Gemmobacter sp. HYN0069	CP028921	2169400	2636157
Gemmobacter sp. HYN0069	CP028920	2169400	2636157
Borrelia hermsii	CP015333	140	2636157
Borrelia hermsii	CP000279	140	2636157
Borrelia hermsii	CP014812	140	2636157
Borrelia hermsii	CP015331	140	2636157
Borrelia hermsii	CP000276	140	2636157
Borrelia hermsii	CP000281	140	2636157
Vibrio	CP020079	662	2636157
Vibrio	CP013487	662	2636157
Histophilus somni	CP000019	731	214906
Pasteurellaceae	KX966395	712	214906
Pasteurellaceae	MH457197	712	214906
Rhizobium etli	CP000134	29449	214906
Rhizobium	NC_004041	379	214906
Rhizobium	CP020898	379	214906
Rhizobium sp. IE4771	CP006988	1301032	2613769
Escherichia coli	CP019278	562	2613769
Staphylococcus epidermidis	AE015932	1282	2613769
Thermovibrio ammonificans	CP002445	228745	171868
Methylosinus trichosporium	CP023738	426	425
Methylosinus trichosporium	CP023740	426	425
Methylosinus trichosporium	CP023739	426	425
Bacillus cereus	CP001188	1396	425
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Brochothrix thermosphacta	CP016840	2756	2755

scientificName	nuccoreAcc	taxid	parent
Burkholderia sp. KK1	CP016004	1855726	2613784
Deinococcus proteolyticus	CP002538	55148	1298
Deinococcus proteolyticus	CP002540	55148	1298
Muribaculum sp. H5	CP039397	2530393	2622126
Muribaculum sp. H5	CP039398	2530393	2622126
Muribaculum sp. TLL-A4	CP039395	2530390	2622126
Lactobacillus amylovorus	CP002613	1604	1578
Lactobacillus amylovorus	CP002561	1604	1578
Streptomyces sp. X335	JQ621947	1187849	2593676
Sinorhizobium americanum	CP013108	194963	28105
Sinorhizobium fredii	CP024308	380	28105
Sinorhizobium fredii	CP023073	380	28105
Bacillus thuringiensis	CP012106	1428	28105
Virgibacillus sp. SK37	CP007163	403957	2620237
Brachybacterium sp. VR2415	CP022317	2017485	2623841
Streptomyces sp. RLB1-9	CP041653	2594454	2623841
Aeromonas salmonicida	CP000645	645	2623841
Aeromonas salmonicida	CP022176	645	2623841
Aeromonas caviae	AP019196	648	2623841
Aeromonas hydrophila	CP013966	644	2623841
Arcobacter mytili	CP031220	603050	28196
Bacillus cereus	CP009639	1396	28196
Salmonella enterica	CP030197	28901	28196
Salmonella enterica	CP030198	28901	28196
Salmonella enterica	CP030176	28901	28196
Salmonella enterica	CP029990	28901	28196
Salmonella enterica	CP030204	28901	28196
Salmonella enterica	CP030289	28901	28196
Salmonella enterica	CP025255	28901	28196
Salmonella enterica	CP033339	28901	28196
Salmonella enterica	CP024167	28901	28196
Salmonella enterica	CP030200	28901	28196
Burkholderia thailandensis	CP010016	57975	111527
Burkholderia sp. MSMB0266	CP013419	1637837	111527
Enterococcus faecium	CP035665	1352	111527
Methylovorus glucosotrophus	CP001675	266009	111527
Salmonella enterica	CP004028	28901	111527
Enterobacteriaceae	KF220658	543	111527
Enterobacteriaceae	CP028171	543	111527
Gammaproteobacteria	KR059864	1236	111527
Gammaproteobacteria	MH917717	1236	111527
Gammaproteobacteria	JQ739157	1236	111527
Gammaproteobacteria	MH917716	1236	111527
Acinetobacter	CP045561	469	111527

scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	AP018582	543	111527
Acinetobacter sp. WCHA55	CP032284	2004646	111527
Acinetobacter towneri	KT965092	202956	469
Vibrio campbellii	CP019297	680	469
[Clostridium] bolteae	CP022465	208479	2719313
Micrococcus sp. 28	AY034092	161213	2620948
Kocuria indica	CP035505	1049583	57493
Clostridium chauvoei	HG323816	46867	1485
Clostridium chauvoei	CP018631	46867	1485
Clostridium septicum	CP023672	1504	1485
Gordonia polyisoprenivorans	CP003120	84595	2053
Gordonia bronchialis	CP001803	2054	2053
Euhalothece natronophila	CP042329	577489	65097
Euhalothece natronophila	CP042328	577489	65097
Euhalothece natronophila	CP042327	577489	65097
Salmonella enterica	CP030199	28901	65097
Pseudomonas	CP010893	286	65097
Pseudomonas sp. TMW 2.1634	CP016851	1886807	2583993
Lactobacillaceae	AF196967	33958	2583993
Lactobacillaceae	JN084215	33958	2583993
Lactobacillus buchneri	JN084214	1581	2583993
Lactobacillus plantarum	JX174167	1590	2583993
Lactobacillus	HQ622718	1578	2583993
Lactobacillus	EF690364	1578	2583993
Lactobacillus	CP013167	1578	2583993
Lactobacillus	KM272265	1578	2583993
Haliscomenobacter hydrossis	CP002693	2350	2349
Haliscomenobacter hydrossis	CP002692	2350	2349
Pectobacterium carotovorum	KT351735	554	2349
Enterobacter hormaechei	CP041055	158836	2349
Halomonas	CP011053	2745	28256
Arthrobacter sp.	MH067970	1667	235627
Arthrobacter sp.	MH067975	1667	235627
Pseudoalteromonas donghaensis	CP032092	621376	53246
Escherichia coli	CP040266	562	53246
Nocardiopsis sp. 90127	DQ399904	373213	2649073
Gloeothece citriformis	CP001297	65393	2649073
Gloeothece citriformis	CP001296	65393	2649073
Finegoldia magna	AP008972	1260	150022
Lactobacillus backii	CP014633	375175	150022
Lactobacillus backii	CP014628	375175	150022
Lactobacillus backii	CP014885	375175	150022
Lactobacillus backii	CP014887	375175	150022
Lactobacillus backii	CP014888	375175	150022
Lacrobaciii ab baciiii	01 014000	010110	100022

scientificName	nuccoreAcc	taxid	parent
Lactobacillus backii	CP014897	375175	150022
Bacillus licheniformis	AJ577855	1402	150022
Bacillus licheniformis	AJ577854	1402	150022
Geobacillus sp. 610	KC255223	1267277	2642459
Bacillus sp. B-3	AB040121	119423	185979
Haematospirillum jordaniae	CP014527	1549855	1804663
Haematospirillum jordaniae	CP014526	1549855	1804663
Thermobacillus composti	CP003256	377615	76632
Sinorhizobium sp. LM21	KM659098	1449788	2613772
Gluconobacter oxydans	AJ428837	442	2613772
Acetobacter pasteurianus	HF677575	438	2613772
Acetobacter pasteurianus	AP014883	438	2613772
Enterococcus sp. FDAARGOS_375	CP023513	2060307	2608891
Enterococcus sp. FDAARGOS_553	CP033739	2420313	2608891
Sphingomonas sp. FARSPH	CP029987	2219696	2608891
Sphingomonas hengshuiensis	CP010837	1609977	13687
Escherichia coli	CP014075	562	13687
Escherichia coli	AF449498	562	13687
Escherichia coli	MH422552	562	13687
Corynebacterium glutamicum	AF121000	1718	13687
Glutamicibacter arilaitensis	FQ311475	256701	1742989
Bacteroides salanitronis	CP002531	376805	1742989
Sinorhizobium sp. M14	JF809815	430451	2613772
Sinorhizobium sp. M14	KU140623	430451	2613772
Paracoccus pantotrophus	AF482428	82367	265
Rhodobacter blasticus	AB082959	1075	265
Escherichia coli	CP014074	562	265
Chamaesiphon minutus	CP003602	1173032	217161
Acinetobacter lwoffii	CP032289	28090	217161
Ralstonia	CP001648	48736	119060
Ralstonia	CP001070	48736	119060
Pandoraea oxalativorans	CP011521	573737	93217
Paraburkholderia aromaticivorans	CP022995	2026199	93217
Bacillus thuringiensis	CP014851	1428	93217
Bacillus mycoides	CP020748	1405	93217
Bacillus cereus	CP011157	1396	93217
Bacillus thuringiensis	CP005937	1428	93217
Bacillus thuringiensis	CP015353	1428	93217
Bacillus thuringiensis	CP015357	1428	93217
Bacillus thuringiensis	CP021437	1428	93217
Bacillus thuringiensis	CP015254	1428	93217
Bacillus thuringiensis	CP015352	1428	93217
Bacillus cereus	CP024657	1396	93217
Bacillus cereus	CP024658	1396	93217

scientificName	nuccoreAcc	taxid	parent
Erwinia	CP002951	551	93217
Pantoea agglomerans	CP034473	549	93217
Pantoea vagans	CP014126	470934	93217
Erwinia persicina	CP022726	55211	551
Pantoea ananatis	CP020945	553	551
Pantoea ananatis	CP022431	553	551
Pantoea vagans	CP028352	470934	551
Enterococcus faecium	CP006626	1352	551
Enterococcus faecium	CP020487	1352	551
Enterococcus faecium	CP041268	1352	551
Enterococcus faecium	CP040371	1352	551
Enterococcus durans	KY978588	53345	551
Enterococcus mundtii	AP013041	53346	551
Paracoccus yeei	KM659093	147645	551
Magnetospirillum gryphiswaldense	NC_009353	55518	13134
Synechococcus sp. PCC 11901	CP040356	2579791	13134
Synechococcus sp. PCC 7117	CP016480	195498	13134
Synechococcus sp. PCC 73109	CP014001	374982	13134
Anabaena cylindrica	CP003665	1165	13134
Enterobacteriaceae	KY807921	543	13134
Salmonella enterica	MK360094	28901	13134
Gammaproteobacteria	MG800820	1236	13134
Francisella marina	CP043551	2249302	262
Francisella philomiragia	CP009441	28110	262
Francisella philomiragia	CP009437	28110	262
Francisella philomiragia	CP009445	28110	262
Allofrancisella guangzhouensis	CP010428	594679	1869285
Acinetobacter	CP027248	469	1869285
Acinetobacter	CP021348	469	1869285
Acinetobacter	CP027252	469	1869285
Acinetobacter	CP042207	469	1869285
Acinetobacter	CP042367	469	1869285
Acinetobacter	CP035673	469	1869285
Acinetobacter	AY541809	469	1869285
Acinetobacter baumannii	CP038260	470	1869285
Acinetobacter baumannii	CP033752	470	1869285
Acinetobacter	CP028570	469	1869285
Acinetobacter	CP020587	469	1869285
Acinetobacter pittii	CP014479	48296	1869285
Spiroplasma kunkelii	AY528560	47834	1869285
Spiroplasma kunkelii	CP012423	47834	1869285
Spiroplasma kunkelii	CP012424	47834	1869285
Spiroplasma citri	CP042474	2133	1869285
Spiroplasma phoeniceum	CP031089	47835	2132

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scientificName	nuccoreAcc	taxid	parent
Spiroplasma melliferum	CP029200	2134	2132
Spiroplasma phoeniceum	CP031090	47835	2132
Spiroplasma phoeniceum	CP031091	47835	2132
Spiroplasma citri	CP042473	2133	2132
Spiroplasma citri	NC_007101	2133	2132
Oceanithermus profundus	CP002362	187137	208447
Corynebacterium jeikeium	AY266269	38289	208447
Corynebacterium jeikeium	AF401314	38289	208447
Corynebacterium jeikeium	AF486522	38289	208447
Corynebacterium jeikeium	AY263990	38289	208447
Corynebacterium jeikeium	AY048596	38289	208447
Corynebacterium jeikeium	AF364477	38289	208447
Corynebacterium jeikeium	AY079086	38289	208447
Clavibacter michiganensis	CP011046	28447	208447
Clavibacter michiganensis	CP011044	28447	208447
Clavibacter michiganensis	AM711865	28447	208447
Clavibacter michiganensis	CP012574	28447	208447
Clavibacter michiganensis	AM849035	28447	208447
Runella slithyformis	CP002860	106	208447
Flammeovirga sp. MY04	CP003562	1191459	2637820
Legionella israelensis	CP038274	454	445
Lactococcus lactis	CP020607	1358	445
Lactococcus lactis	CP016732	1358	445
Rhizobium sp. WL3	CP042824	2603277	2613769
Rhizobium selenitireducens	LS974446	448181	379
Rhizobium sp. NT-26	FO082821	1125847	2613769
Agrobacterium tumefaciens	CP039912	358	2613769
Citricoccus	CP039425	169133	1268
Citricoccus	CP039426	169133	1268
Spirosoma linguale	CP001770	108	107
Spirosoma linguale	CP001772	108	107
Phaeobacter inhibens	CP010698	221822	107
Sulfitobacter pseudonitzschiae	CP022421	1402135	107
Phaeobacter inhibens	CP010729	221822	107
Roseivivax	CP045363	93682	107
Roseovarius sp. THAF9	CP045407	2587847	107
Phaeobacter inhibens	CP010709	221822	107
Ruegeria sp. THAF33	CP045388	2587853	2625375
Chrococcidiopsis thermalis	CP003598	54299	54298
Gloeocapsa sp. PCC 7428	CP003648	1173026	2623012
Haliscomenobacter hydrossis	CP002694	2350	2623012
Bacillus	CP024775	1386	2623012
Bacillus thuringiensis	CP015253	1428	2623012
Bacillus thuringiensis	CP015251	1428	2623012
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Bacillus thuringiensis Sinorhizobium fredii Sinorhizobium fredii Gluconacetobacter diazotrophicus Kozakia baliensis Corynebacterium callunae	CP015255 AY316747 LN735562 CP001190 CP014677 CP004355 AF092037 JX846826	1428 380 380 33996 153496 1721 1718	2623012 2623012 2623012 2623012 2623012 1716
Sinorhizobium fredii Sinorhizobium fredii Gluconacetobacter diazotrophicus Kozakia baliensis Corynebacterium callunae	LN735562 CP001190 CP014677 CP004355 AF092037 JX846826	380 33996 153496 1721 1718	2623012 2623012 2623012 2623012
Gluconacetobacter diazotrophicus Kozakia baliensis Corynebacterium callunae	CP001190 CP014677 CP004355 AF092037 JX846826	33996 153496 1721 1718	$\begin{array}{c} 2623012 \\ 2623012 \end{array}$
Kozakia baliensis Corynebacterium callunae	CP014677 CP004355 AF092037 JX846826	153496 1721 1718	2623012
Kozakia baliensis Corynebacterium callunae	CP004355 AF092037 JX846826	1721 1718	
· ·	AF092037 JX846826	1718	1716
	JX846826		T110
Corynebacterium glutamicum			1716
Lactobacillus paracasei	CITIONOON	1597	1716
Lactobacillus paracasei	GU380289	1597	1716
Lactobacillus	D88438	1578	1716
Sulfitobacter sp. D7	CP020695	1968541	1716
Tateyamaria omphalii	CP019316	299262	1716
Planktothrix agardhii	AP017993	1160	1716
Planktothrix agardhii	AP017992	1160	1716
Amycolatopsis benzoatilytica	EF375609	346045	1813
Microbacterium sp. TPU 3598	AP017976	1938334	2609290
Methylorubrum extorquens	CP001512	272630	2609290
Methylorubrum extorquens	CP001514	272630	2609290
Methylorubrum extorquens	CP001513	272630	2609290
Sulfitobacter guttiformis	JN172926	74349	60136
Thiomonas	LR131948	32012	60136
Simplicispira suum	CP027671	2109915	352450
Campylobacter concisus	CP000793	199	352450
Campylobacter concisus	CP021643	199	352450
Cedecea neteri	CP023526	158822	158483
Salmonella enterica	CP044966	28901	158483
Escherichia coli	CP023856	562	158483
Salmonella enterica	CP039589	28901	158483
Cupriavidus taiwanensis	DQ459356	164546	106589
Oceanimonas sp. GK1	CP003173	511062	2636315
Aeromonas salmonicida	KU499859	645	2636315
Aeromonas salmonicida	KT334395	645	2636315
Aeromonas salmonicida	AY301064	645	2636315
Aeromonas salmonicida	MF621618	645	2636315
Aeromonas salmonicida	CP021656	645	2636315
Sterolibacterium denitrificans	LT837806	157592	157591
Pseudomonas alcaligenes	U88088	43263	136841
Pseudomonas aeruginosa	NC_007100	287	136841
Gammaproteobacteria	LS998784	1236	136841
Gammaproteobacteria	CP038596	1236	136841
Borrelia crocidurae	CP003433	29520	136841
Borrelia crocidurae	CP003442	29520	136841
Borrelia crocidurae	CP003451	29520	136841
Borrelia crocidurae	CP003439	29520	136841

Borrelia crocidurae	scientificName	nuccoreAcc	taxid	parent
Borrelia recurrentis CP000999 44449 136841 Borrelia crocidurae CP0003431 29520 136841 Borrelia crocidurae CP003444 29520 136841 Borrelia crocidurae CP03644 29520 136841 Bacteroides fragilis CP03650 817 136841 Bacteroides uniformis AP019725 820 136841 Bacteroidales CP036556 171549 200643 Bacteroidales CP042820 171549 200643 Bacteroidales CP014231 171549 200643 Bacteroidales CP018250 287 200643 Pseudomonas aeruginosa CP02502 287 200643 Pseudomonas aeruginosa CP0243422 287 200643 A	Borrelia crocidurae	CP003429	29520	136841
Borrelia crocidurae CP003431 29520 136841 Borrelia crocidurae CP003444 29520 136841 Bacteroides fragilis CP043609 817 136841 Bacteroides fragilis CP043609 817 136841 Bacteroides uniformis AP019725 820 136841 Bacteroidales CP036556 171549 200643 Bacteroidales CP041231 171549 200643 Bacteroidales CP041321 171549 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomona	Borrelia recurrentis	CP000999	44449	
Borrelia crocidurae CP003431 29520 136841 Borrelia crocidurae CP003444 29520 136841 Bacteroides fragilis CP043609 817 136841 Bacteroides fragilis CP043609 817 136841 Bacteroidales CP036556 171549 200643 Bacteroidales CP032820 171549 200643 Bacteroidales CP041231 171549 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aer	Borrelia recurrentis		44449	136841
Borrelia crocidurae CP003444 29520 136841 Bacteroides fragilis CP036540 817 136841 Bacteroides fragilis CP043609 817 136841 Bacteroides uniformis AP019725 820 136841 Bacteroidales CP036556 171549 200643 Bacteroidales CP041231 171549 200643 Bacteroides fragilis CP018939 817 200643 Bacteroides fragilis CP018939 817 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Acidithiobacillus caldus AF325537 33059 2006	Borrelia crocidurae	CP003431	29520	
Bacteroides fragilis CP043609 817 136841 Bacteroidales CP036556 171549 200643 Bacteroidales CP03656 171549 200643 Bacteroidales CP041231 171549 200643 Bacteroidales CP041231 171549 200643 Bacteroides fragilis CP018939 817 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP00159587 33059 2	Borrelia crocidurae		29520	136841
Bacteroides fragilis CP043609 817 136841 Bacteroidales CP036556 171549 200643 Bacteroidales CP03656 171549 200643 Bacteroidales CP041231 171549 200643 Bacteroidales CP041231 171549 200643 Bacteroides fragilis CP018939 817 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP00159587 33059 2	Bacteroides fragilis	CP036540	817	136841
Bacteroidales CP036556 171549 200643 Bacteroidales CP032820 171549 200643 Bacteroidales CP041231 171549 200643 Bacteroides fragilis CP018939 817 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa MH73434 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Hymenobacter sp. DG25B CP010055 1385664 2615202 Vibrio parahaemolyticus CP03256 670	Bacteroides fragilis	CP043609	817	136841
Bacteroidales CP032820 171549 200643 Bacteroidales CP041231 171549 200643 Bacteroides fragilis CP018939 817 200643 Pseudomonas aeruginosa CP025052 287 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa MH734334 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP009587 33059 200643 Hymenobacter sp. DG25B CP010055 1385664 2615202 Vibrio parahaemolyticus CP013250 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio parahaemolyticus CP034568 <td< td=""><td>Bacteroides uniformis</td><td>AP019725</td><td>820</td><td>136841</td></td<>	Bacteroides uniformis	AP019725	820	136841
Bacteroidales CP041231 171549 200643 Bacteroides fragilis CP018939 817 200643 Pseudomonas aeruginosa CP025052 287 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa MH734334 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Aseidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Hymenobacter sp. DG25B CP010055 1385664 2615202 Hymenobacter sp. DG25B CP010055 1385664 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio CP034588 663	Bacteroidales	CP036556	171549	200643
Bacteroides fragilis CP018939 817 200643 Pseudomonas aeruginosa CP025052 287 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa MH734334 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Acidithiobacillus caldus AF325537 3059 200643 Acidithiobacillus caldus CP005574 33059 200643 Hymenobacter sp. DG25B CP010055 138564 2615202 Hymenobacter sp. DG25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP013250 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio CP0418489 662 2615202 Vibrio CP033139 662 2615202 Vibrio CP034188 663 2615202	Bacteroidales	CP032820	171549	200643
Pseudomonas aeruginosa CP025052 287 200643 Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa MH734334 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP005987 33059 200643 Acidithiobacillus caldus CP001556 1385664 2615202 Vibrio DC25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP034188 66 70 2615202 Vibrio parahaemolyticus <td>Bacteroidales</td> <td>CP041231</td> <td>171549</td> <td>200643</td>	Bacteroidales	CP041231	171549	200643
Pseudomonas aeruginosa CP015000 287 200643 Pseudomonas aeruginosa MH734334 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP005987 33059 200643 Acidithiobacillus caldus CP005987 33059 200643 Acidithiobacillus caldus CP005987 33059 200643 Acidithiobacillus caldus CP0015087 33059 200643 Acidithiobacillus caldus CP0015087 33059 200643 Acidithiobacillus caldus CP0015087 33059 200643 Acidithiobacillus CP0013026 670 2615202 Vibrio CP013256 670 2615202 Vibrio CP0314889 662 </td <td>Bacteroides fragilis</td> <td>CP018939</td> <td>817</td> <td>200643</td>	Bacteroides fragilis	CP018939	817	200643
Pseudomonas aeruginosa MH734334 287 200643 Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP005987 33059 200643 Hymenobacter sp. DG25B CP010055 1385664 2615202 Hymenobacter sp. DG25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP034586 670 2615202 Vibrio parahaemolyticus CP034586 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP0341859 662 2615202 Vibrio alginolyticus CP021149 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Vibrio alginolyticus CP026638 1402861	Pseudomonas aeruginosa	CP025052	287	200643
Pseudomonas aeruginosa CP043482 287 200643 Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP005987 33059 200643 Hymenobacter sp. DG25B CP010055 1385664 2615202 Hymenobacter sp. DG25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio parahaemolyticus CP034458 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio CP033139 662 2615202 Vibrio alginolyticus CP021448 663 2615202 Bacillus filamentosus CP02638 1402861 2615202 Bacillus megaterium CP041067 1404 26152	Pseudomonas aeruginosa	CP015000	287	200643
Pseudomonas aeruginosa MN433456 287 200643 Pseudomonas aeruginosa CP020561 287 200643 Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP005987 33059 200643 Hymenobacter sp. DG25B CP010055 1385664 2615202 Hymenobacter sp. DG25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP013250 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio CP033139 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Vibrio alginolyticus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 140 26	Pseudomonas aeruginosa	MH734334	287	200643
Pseudomonas aeruginosa CP020561 287 200643 Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP005987 33059 200643 Hymenobacter sp. DG25B CP010055 1385664 2615202 Hymenobacter sp. DG25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio alginolyticus CP021148 663 2615202 Vibrio alginolyticus CP013488 663 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP0241067 1404	Pseudomonas aeruginosa	CP043482	287	200643
Acidithiobacillus caldus AF325537 33059 200643 Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP005987 33059 200643 Hymenobacter sp. DG25B CP010055 1385664 2615202 Hymenobacter sp. DG25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP03256 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio CP033139 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Vibrio alginolyticus CP013488 663 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202<	Pseudomonas aeruginosa	MN433456	287	200643
Acidithiobacillus caldus CP002574 33059 200643 Acidithiobacillus caldus CP005987 33059 200643 Hymenobacter sp. DG25B CP010055 1385664 2615202 Hymenobacter sp. DG25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio CP021149 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium CP041540 562 31979 <	Pseudomonas aeruginosa	CP020561	287	200643
Acidithiobacillus caldus CP005987 33059 200643 Hymenobacter sp. DG25B CP010055 1385664 2615202 Hymenobacter sp. DG25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP03250 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio CP021149 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium CP043018 562 31979 Escherichia coli CP044014 562 31979 <tr< td=""><td>Acidithiobacillus caldus</td><td>AF325537</td><td>33059</td><td>200643</td></tr<>	Acidithiobacillus caldus	AF325537	33059	200643
Hymenobacter sp. DG25B CP010055 1385664 2615202 Hymenobacter sp. DG25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP013250 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio alginolyticus CP021149 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP004154 1491 2615202 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979	Acidithiobacillus caldus	CP002574	33059	200643
Hymenobacter sp. DG25B CP010056 1385664 2615202 Vibrio parahaemolyticus CP013250 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio CP021149 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979	Acidithiobacillus caldus	CP005987	33059	200643
Vibrio parahaemolyticus CP013250 670 2615202 Vibrio parahaemolyticus CP034568 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio CP021149 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Salmonella enterica CP039495 28901 31979 Enteroocccus faecium CP040707 1352 31979 Enterobacter pasteurianus JQ418523 438 31979 <t< td=""><td>Hymenobacter sp. DG25B</td><td>CP010055</td><td>1385664</td><td>2615202</td></t<>	Hymenobacter sp. DG25B	CP010055	1385664	2615202
Vibrio parahaemolyticus CP034568 670 2615202 Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio CP021149 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus megaterium CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobact	Hymenobacter sp. DG25B	CP010056	1385664	2615202
Vibrio AP014859 662 2615202 Vibrio CP033139 662 2615202 Vibrio CP021149 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobactera	Vibrio parahaemolyticus	CP013250	670	2615202
Vibrio CP033139 662 2615202 Vibrio CP021149 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Ent	Vibrio parahaemolyticus	CP034568	670	2615202
Vibrio CP021149 662 2615202 Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Vibrio	AP014859	662	2615202
Vibrio alginolyticus CP013488 663 2615202 Bacillus filamentosus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Vibrio	CP033139	662	2615202
Bacillus filamentosus CP026638 1402861 2615202 Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Vibrio	CP021149	662	2615202
Bacillus filamentosus CP015328 1402861 2615202 Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Vibrio alginolyticus	CP013488	663	2615202
Bacillus megaterium CP041067 1404 2615202 Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Bacillus filamentosus	CP026638	1402861	2615202
Bacillus megaterium CP028086 1404 2615202 Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Bacillus filamentosus	CP015328	1402861	2615202
Clostridium botulinum CP002415 1491 2615202 Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Bacillus megaterium	CP041067	1404	2615202
Clostridium CP001659 1485 31979 Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Bacillus megaterium	CP028086	1404	2615202
Escherichia coli CP043018 562 31979 Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Clostridium botulinum	CP002415	1491	2615202
Escherichia coli CP041540 562 31979 Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Clostridium	CP001659	1485	31979
Salmonella enterica CP039495 28901 31979 Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Escherichia coli	CP043018	562	31979
Bacillus megaterium CP003020 1404 31979 Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Escherichia coli	CP041540	562	31979
Enterococcus faecium CP040707 1352 31979 Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Salmonella enterica	CP039495	28901	31979
Acetobacter pasteurianus JQ418523 438 31979 Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Bacillus megaterium	CP003020	1404	31979
Enterobacterales CP027797 91347 31979 Enterobacterales CP021954 91347 31979	Enterococcus faecium	CP040707	1352	31979
Enterobacterales CP021954 91347 31979	Acetobacter pasteurianus	JQ418523	438	31979
		CP027797	91347	31979
Enterobacterales CP032206 91347 31979	Enterobacterales	CP021954	91347	31979
	Enterobacterales	CP032206	91347	31979

Enterobacterales	scientificName	nuccoreAcc	taxid	parent
Buchnera aphidicola AP019381 9 31979 Buchnera aphidicola CP034875 9 31979 Lactobacillus reluteri AF205068 1598 31979 Lactobacillus plantarum FJ374272 1590 31979 Lactobacillus amylovorus CP002560 1604 31979 Selenomonas sp. oral taxon 136 CP014240 713030 2637378 Enterococcus faecium AP019396 1352 2637378 Rahnella sp. WMR104 FN429029 657339 2635087 Enterobacter cloacae KU302805 550 2635087 Staphylococcus sciuri KT601170 1296 2635087 Staphylococcus KC206006 1279 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834909 1279 2635087 Staphylococcus JF834909 1279 2635087 Staphylococcus JF834909 1279 2635087 Staphylococcus JF834909 1279 2635087 </td <td>Enterobacterales</td> <td>CP035199</td> <td>91347</td> <td>31979</td>	Enterobacterales	CP035199	91347	31979
Buchnera aphidicola CP034875 9 31979 Lactobacillus reuteri AF205068 1598 31979 Lactobacillus plantarum FJ374272 1590 31979 Lactobacillus amylovorus CP002560 1604 31979 Selenomonas sp. oral taxon 136 CP014240 713030 2637378 Enterococcus faecium AP019396 1352 2637378 Bahnella sp. WMR104 FN429029 657339 2635087 Enterobacter cloacae KU302805 550 2635087 Staphylococcus sciuri KC206006 1279 2635087 Staphylococcus KC206006 1279 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834909 1279 2635087 <td>Buchnera aphidicola</td> <td>CP029163</td> <td>9</td> <td>31979</td>	Buchnera aphidicola	CP029163	9	31979
Lactobacillus reuteri AF205068 1598 31979 Lactobacillus almylovorus CP002560 1604 31979 Selenomonas sp. oral taxon 136 CP014240 713030 2637378 Enterococcus faecium AP019396 1352 2637378 Rahnella sp. WMR104 FN429029 657339 2635087 Enterobacter cloacae KU302805 550 2635087 Staphylococcus sciuri KT601170 1296 2635087 Staphylococcus aureus KU510528 1280 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834909 1279 2635087 Clabribacter manganoxidans CP031260 1463165 2635087 Klebsiella quasipneumoniae CP021407 1411902	Buchnera aphidicola	AP019381	9	31979
Lactobacillus plantarum F.J374272 1590 31979 Lactobacillus amylovorus CP002560 1604 31979 Selenomonas sp. oral taxon 136 CP014240 713030 2637378 Enterococcus faccium AP019396 1352 2637378 Rahnella sp. WMR104 FN429029 657339 2635087 Enterobacter cloacae KU302805 550 2635087 Staphylococcus sciuri KU510528 1280 2635087 Staphylococcus KC206006 1279 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834991 1279 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834991 1279 2635087 Staphylococcus JF834991 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Klebsiella quasipneumoniae CP031260 1414	Buchnera aphidicola	CP034875	9	31979
Lactobacillus amylovorus CP002560 1604 31979 Selenomonas sp. oral taxon 136 CP014240 713030 2637378 Enterococcus faecium AP019396 1352 2637378 Rahnella sp. WMR104 FN429029 657339 2635087 Enterobacter cloacae KU302805 550 2635087 Staphylococcus sciuri KT601170 1296 2635087 Staphylococcus KC206006 1279 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834909 1279 2635087 Staphylococcus JF834909 1279 2635087 Staphylococcus JF834909 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Klebsiella quisipneumoniae CP031260	Lactobacillus reuteri	AF205068	1598	31979
Selenomonas sp. oral taxon 136 CP014240 713030 2637378 Enterococcus faecium AP019396 1352 2637378 Rahnella sp. WMR104 FN429029 657339 2635087 Enterobacter cloacae KU302805 550 2635087 Staphylococcus sciuri KT601170 1296 2635087 Staphylococcus KC206006 1279 2635087 Staphylococcus JF834910 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 <td>Lactobacillus plantarum</td> <td>FJ374272</td> <td>1590</td> <td>31979</td>	Lactobacillus plantarum	FJ374272	1590	31979
Enterococus faecium AP019396 1352 2637378 Rahnella sp. WMR104 FN429029 657339 2635087 Enterobacter cloacae KU302805 550 2635087 Staphylococcus sciuri KT601170 1296 2635087 Staphylococcus KC206006 1279 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834910 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Klebsiella quasipneumoniae CP011054 1504981 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Ceptolyngbya boryana AP014639 1184 2609666 Cryanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoca agglomerans FN868248 549 2629879 Planobispora rosea DQ3024	Lactobacillus amylovorus	CP002560	1604	31979
Rahnella sp. WMR104 FN429029 657339 2635087 Enterobacter cloacae KU302805 550 2635087 Staphylococcus sciuri KT601170 1296 2635087 Staphylococcus KU510528 1280 2635087 Staphylococcus KC206006 1279 2635087 Staphylococcus JF834910 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Klebsiella quasipneumoniae CP011054 1504981 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Ceptolyngbya boryana AP014639 1184 2609666 Crinalium epipsammum CP003626 241425 2609666 Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Palnobispora rosea DQ302475 35762 29298 Calothrix parietina CP03613	Selenomonas sp. oral taxon 136	CP014240	713030	2637378
Enterobacter cloacae KU302805 550 2635087 Staphylococcus sciuri KT601170 1296 2635087 Staphylococcus KC206006 1279 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834909 1279 2635087 Staphylococcus JF834909 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Klebsiella quasipneumoniae CP011054 1504981 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Celeribacter manganoxidans CP024407 1411902 2629879 Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Pancobacterium sp.	Enterococcus faecium	AP019396	1352	2637378
Staphylococcus sciuri KT601170 1296 2635087 Staphylococcus KU510528 1280 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834910 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Klebsiella quasipneumoniae CP011054 1504981 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Leptolyngbya boryana AP014639 1184 2609666 Crinalium epipsammum CP003626 241425 2609666 Cryanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix parietina CP003613 32054 29298 Ralstonia pickettii CP001647 329 48736 Ralstonia pirkettii CP001647	Rahnella sp. WMR104	FN429029	657339	2635087
Staphylococcus KU510528 1280 2635087 Staphylococcus KC206006 1279 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834909 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Halomonas sp. KO116 CP011054 1504981 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Leptolyngbya boryana AP014639 1184 2609666 Crjanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia insidiosa CP01624 190721 48736 Borrelia miyamotoi CP024405 47466	Enterobacter cloacae	KU302805	550	2635087
Staphylococcus KC206006 1279 2635087 Staphylococcus JF834910 1279 2635087 Staphylococcus JF834909 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Klebsiella quasipneumoniae CP011054 1504981 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Celeribyngbya boryana AP014639 1184 2609666 Crinalium epipsammum CP003662 241425 2609666 Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Palanobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia pickettii CP001647 329 48736 Borrelia miyamotoi CP024405	Staphylococcus sciuri	KT601170	1296	2635087
Staphylococcus JF834910 1279 2635087 Staphylococcus JF834909 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Halomonas sp. KO116 CP011054 1504981 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Leptolyngbya boryana AP014639 1184 2609666 Crinalium epipsammum CP003626 241425 2609666 Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix parietinia CP003613 32054 29298 Calothrix parietinia CP003613 32054 29298 Ralstonia insidiosa CP001647 329 48736 Ralstonia miyamotoi CP024405 <td< td=""><td>Staphylococcus aureus</td><td>KU510528</td><td>1280</td><td>2635087</td></td<>	Staphylococcus aureus	KU510528	1280	2635087
Staphylococcus JF834909 1279 2635087 Klebsiella quasipneumoniae CP031260 1463165 2635087 Halomonas sp. KO116 CP011054 1504981 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Leptolyngbya boryana AP014639 1184 2609666 Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix parietina CP003613 32054 29298 Ralstonia insidiosa CP018677 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP044671 474	Staphylococcus	KC206006	1279	2635087
Klebsiella quasipneumoniae CP031260 1463165 2635087 Halomonas sp. KO116 CP011054 1504981 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Leptolyngbya boryana AP014639 1184 2609666 Crinalium epipsammum CP003626 241425 2609666 Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Pantobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 <td>Staphylococcus</td> <td>JF834910</td> <td>1279</td> <td>2635087</td>	Staphylococcus	JF834910	1279	2635087
Halomonas sp. KO116 CP011054 1504981 2609666 Celeribacter manganoxidans CP021407 1411902 2609666 Leptolyngbya boryana AP014639 1184 2609666 Crinalium epipsammum CP003626 241425 2609666 Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwofffii CP032110	Staphylococcus	JF834909	1279	2635087
Celeribacter manganoxidans CP021407 1411902 2609666 Leptolyngbya boryana AP014639 1184 2609666 Crinalium epipsammum CP003626 241425 2609666 Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia pickettii CP001607 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter schindleri CP032124 <	Klebsiella quasipneumoniae	CP031260	1463165	2635087
Leptolyngbya boryana AP014639 1184 2609666 Crinalium epipsammum CP003626 241425 2609666 Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia pickettii CP001647 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffli CP032110 28090 48736 Acinetobacter lwoffli CP032124 28090	Halomonas sp. KO116	CP011054	1504981	2609666
Crinalium epipsammum CP003626 241425 2609666 Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia pickettii CP001647 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP044671 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwofflii CP032110 28090 48736 Acinetobacter lwofflii CP032112 28090 48736 Acinetobacter baumannii CP032115 28090 <td>Celeribacter manganoxidans</td> <td>CP021407</td> <td>1411902</td> <td>2609666</td>	Celeribacter manganoxidans	CP021407	1411902	2609666
Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia pickettii CP001647 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP032023 470	Leptolyngbya boryana	AP014639	1184	2609666
Cyanobacterium sp. HL-69 CP024913 2054282 2629879 Cyanobacterium sp. HL-69 CP024914 2054282 2629879 Pantoea agglomerans FN868248 549 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia pickettii CP001647 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP032023 470	Crinalium epipsammum	CP003626	241425	2609666
Pantoea agglomerans FN868248 549 2629879 Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia pickettii CP001647 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP044671 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468231 470 <td< td=""><td>Cyanobacterium sp. HL-69</td><td>CP024913</td><td>2054282</td><td>2629879</td></td<>	Cyanobacterium sp. HL-69	CP024913	2054282	2629879
Planobispora rosea DQ302475 35762 29298 Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia pickettii CP001647 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468231 470 48736 Acinetobacter baumannii CU468231 470	Cyanobacterium sp. HL-69	CP024914	2054282	2629879
Calothrix parietina CP003613 32054 29298 Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia pickettii CP001647 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP032023 470 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Acinetobacter baumannii CU468231 470 48736 Acinetobacter baumannii CU468231 470	Pantoea agglomerans	FN868248	549	2629879
Calothrix sp. NIES-4101 AP018276 2005461 29298 Ralstonia pickettii CP001647 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP044671 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter lwoffii CP030758 108981 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Acinetobacter baumannii CU468231 470	Planobispora rosea	DQ302475	35762	29298
Ralstonia pickettii CP001647 329 48736 Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP044671 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP019151 28090 48736 Acinetobacter schindleri CP032124 28090 48736 Acinetobacter baumannii CP030758 108981 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Calothrix parietina	CP003613	32054	29298
Ralstonia insidiosa CP016024 190721 48736 Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP044671 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP032115 28090 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Calothrix sp. NIES-4101	AP018276	2005461	29298
Borrelia miyamotoi CP024405 47466 48736 Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP044671 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP019151 28090 48736 Acinetobacter schindleri CP032124 28090 48736 Acinetobacter baumannii CP030758 108981 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Ralstonia pickettii	CP001647	329	48736
Borrelia miyamotoi CP036572 47466 48736 Borrelia miyamotoi CP044671 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP019151 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP032115 28090 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Ralstonia insidiosa	CP016024	190721	48736
Borrelia miyamotoi CP044671 47466 48736 Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP019151 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP023023 470 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Borrelia miyamotoi	CP024405	47466	48736
Borrelia miyamotoi CP036734 47466 48736 Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP019151 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP023023 470 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Borrelia miyamotoi	CP036572	47466	48736
Acinetobacter lwoffii CP032110 28090 48736 Acinetobacter lwoffii CP019151 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP023023 470 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468231 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Borrelia miyamotoi	CP044671	47466	48736
Acinetobacter lwoffii CP019151 28090 48736 Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP023023 470 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Borrelia miyamotoi	CP036734	47466	48736
Acinetobacter lwoffii CP032124 28090 48736 Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP023023 470 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Acinetobacter lwoffii	CP032110	28090	48736
Acinetobacter schindleri CP030758 108981 48736 Acinetobacter baumannii CP023023 470 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Acinetobacter lwoffii	CP019151	28090	48736
Acinetobacter baumannii CP023023 470 48736 Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Acinetobacter lwoffii	CP032124	28090	48736
Acinetobacter lwoffii CP032115 28090 48736 Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Acinetobacter schindleri	CP030758	108981	48736
Acinetobacter baumannii CU468232 470 48736 Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Acinetobacter baumannii	CP023023	470	48736
Acinetobacter baumannii CU468233 470 48736 Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Acinetobacter lwoffii	CP032115	28090	48736
Acinetobacter baumannii CU468231 470 48736 Bifidobacterium longum AY112722 216816 48736	Acinetobacter baumannii	CU468232	470	48736
Bifidobacterium longum AY112722 216816 48736	Acinetobacter baumannii	CU468233	470	48736
	Acinetobacter baumannii	CU468231	470	48736
Bifidobacterium gallinarum CP035465 78344 1678	Bifidobacterium longum	AY112722	216816	48736
-	Bifidobacterium gallinarum	CP035465	78344	1678

scientificName	nuccoreAcc	taxid	parent
Staphylococcus epidermidis	GQ900466	1282	1678
Staphylococcus epidermidis	CP022248	1282	1678
Candidatus Paracaedimonas acanthamoebae	CP008937	244581	2100211
Candidatus Paracaedimonas acanthamoebae	CP008940	244581	2100211
Candidatus Paracaedimonas acanthamoebae	CP008938	244581	2100211
Candidatus Paracaedimonas acanthamoebae	CP008939	244581	2100211
Lactobacillus amylovorus	CP002612	1604	2100211
Lactobacillus johnsonii	CP021705	33959	2100211
Streptococcus equinus	CP020439	1335	1301
Streptococcus sp. FDAARGOS_192	CP020429	1839799	2608887
Streptococcus salivarius	CP015284	1304	1301
Streptococcus salivarius	CP040803	1304	1301
Streptococcus sp. FDAARGOS_192	CP020430	1839799	1301
Escherichia coli	JQ418532	562	1301
Citrobacter sp. LY-1	CP037862	2546350	2644389
Edwardsiella tarda	MF925337	636	2644389
Erwinia sp. Ejp617	CP002129	215689	2644389
Erwinia sp. Ejp617	CP002126	215689	2644389
Erwinia pyrifoliae	FN392239	79967	2644389
Pseudomonas oryzihabitans	CP044073	47885	136845
Pseudomonas oryzihabitans	CP044072	47885	136845
Vibrio coralliilyticus	CP020456	190893	136845
Vibrio tubiashii	CP009359	29498	136845
Gordonia sp. KTR9	CP002908	337191	2657482
Gordonia westfalica	AJ576039	158898	2053
Gordonia alkanivorans	CP027115	84096	2053
Pluralibacter gergoviae	CP014779	61647	1330546
Hoeflea sp. IMCC20628	CP011480	1620421	2614931
Hoeflea sp. IMCC20628	CP011481	1620421	2614931
Weissella confusa	KR350502	1583	2614931
Weissella cibaria	CP041195	137591	2614931
Weissella cibaria	CP020929	137591	2614931
Streptomyces autolyticus	CP019459	75293	1883
Streptomyces autolyticus	CP019465	75293	1883
Lactobacillus plantarum	CP032646	1590	1883
Lactobacillus plantarum	CP018214	1590	1883
Lactobacillus plantarum	JX174168	1590	1883
Lactobacillus plantarum	CP017959	1590	1883
Lactobacillus plantarum	CP035225	1590	1883
Lactobacillus plantarum	CP023178	1590	1883
Lactobacillus pentosus	CP016496	1589	1883
Lactobacillus plantarum	CP028982	1590	1883
Lactobacillus plantarum	KT149389	1590	1883
Lactobacillus plantarum	CP006043	1590	1883

Clostridioides difficile AM180356 1496 2630086 Clostridioides difficile MG019960 1496 2630086 Lactobacillus paracollinoides CP014913 240427 2630086 Lactobacillus paracollinoides CP014923 240427 2630086 Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum NC_006278 1590 2630086 Lactobacillus plantarum CP025695 1590 2630086 Lactobacillus backii CP014630 375175 2630086 Lactobacillus backii CP014886 375175 2630086	scientificName	nuccoreAcc	taxid	parent
Lactobacillus plantarum CP035178 1590 1883 Lactobacillus pentosus CP016494 1589 1883 Pseudomonas syringae JQ418536 317 1883 Pseudomonas avellanae CP026567 46257 1883 Veillonella sp. OK1 JQ004006 1096935 2630086 Clostridioides difficile MG019960 1496 2630086 Clostridioides difficile MG019960 1496 2630086 Lactobacillus paracollinoides CP014913 240427 2630086 Lactobacillus paracollinoides CP014923 240427 2630086 Lactobacillus plantarum CP06567 1590 2630086 Lactobacillus plantarum NC 006278 1590 2630086 Lactobacillus backii CP014866 375175 2630086 Lactobacillus backii CP014866 375175 2630086 Lactobacillus backii CP014866 375175 2630086 Mycobacterium calum KR997898 1764 319705 Mycobacterium avium	Lactobacillus plantarum	CP012660	1590	1883
Lactobacillus pentosus CP016494 1589 1883 Pseudomonas syringae JQ418536 317 1883 Pseudomonas syringae CP026567 46257 1883 Veillonella sp. OK1 JQ004006 1096935 2630086 Clostridioides difficile MG019960 1496 2630086 Lactobacillus paracollinoides CP014913 240427 2630086 Lactobacillus paracollinoides CP014923 240427 2630086 Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum NC_006278 1590 2630086 Lactobacillus backii CP014830 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Mycobacterium celatum	Lactobacillus plantarum	AY096005	1590	1883
Lactobacillus pentosus CP016494 1589 1883 Pseudomonas syringae JQ418536 317 1883 Pseudomonas syringae CP026567 46257 1883 Veillonella sp. OK1 JQ004006 1096935 2630086 Clostridioides difficile MG019960 1496 2630086 Lactobacillus paracollinoides CP014913 240427 2630086 Lactobacillus paracollinoides CP014923 240427 2630086 Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum NC_006278 1590 2630086 Lactobacillus backii CP014830 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Mycobacterium celatum		CP035178	1590	1883
Pseudomonas syringae JQ418536 317 1883 Pseudomonas avellanae CP026567 46257 1883 Veillonella sp. OK1 JQ004006 1096935 2630086 Clostridioides difficile AM180356 1496 2630086 Clostridioides difficile MG019960 1496 2630086 Lactobacillus paracollinoides CP014913 240427 2630086 Lactobacillus paracollinoides CP014923 240427 2630086 Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum CP025695 1590 2630086 Lactobacillus backii CP014830 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Mycobacterium avium KR997898 17663 2630086 Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis <		CP016494	1589	1883
Pseudomonas avellanae CP026567 46257 1883 Veillonella sp. OK1 JQ004006 1096935 2630086 Clostridioides difficile AM180356 1496 2630086 Clostridioides difficile MG019960 1496 2630086 Lactobacillus paracollinoides CP014913 240427 2630086 Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum NC_006278 1590 2630086 Lactobacillus plantarum CP025695 1590 2630086 Lactobacillus backii CP014836 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Lactobacillus capaticiticia CP014886 375175 2630086 Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum		JQ418536	317	1883
Clostridioides difficile AM180356 1496 2630086 Clostridioides difficile MG019960 1496 2630086 Lactobacillus paracollinoides CP014913 240427 2630086 Lactobacillus paracollinoides CP014923 240427 2630086 Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum CP025695 1590 2630086 Lactobacillus backii CP014630 375175 2630086 Lactobacillus backii CP014630 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Lactobacillus backii CP014630 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Mycobacterium celtum KR997898 1763 319705 Mycobacterium celtum AF312688 28045 1763 Streptomyces pratensis <td></td> <td>CP026567</td> <td>46257</td> <td>1883</td>		CP026567	46257	1883
Clostridioides difficile MG019960 1496 2630086 Lactobacillus paracollinoides CP014913 240427 2630086 Lactobacillus paracollinoides CP014923 240427 2630086 Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum CP025695 1590 2630086 Lactobacillus backii CP014830 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Pediococcus damnosus CP012289 51663 2630086 Mycobacterium avium KR997898 1764 319705 Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP004377 1169025 1763 Buchnera aphidicola CP034881 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034877 9 1763 Buchnera aphidicola CP034887 <	Veillonella sp. OK1	JQ004006	1096935	2630086
Lactobacillus paracollinoides CP014913 240427 2630086 Lactobacillus paracollinoides CP014923 240427 2630086 Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum CP025695 1590 2630086 Lactobacillus backii CP014630 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Lactobacillus backii CP014876 1303024 319705 Mycobacterium avium KR997898 1764 319705 Mycobacterium aphidicola CP034871 9 1763 Buchnera aphidicola	Clostridioides difficile	AM180356	1496	2630086
Lactobacillus paracollinoides CP014923 240427 2630086 Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum NC_006278 1590 2630086 Lactobacillus plantarum CP025695 1590 2630086 Lactobacillus backii CP014630 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Pediococcus damnosus CP012289 51663 2630086 Mycobacteriodes abscessus CP004376 1303024 319705 Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034871 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola CP034867 9 1763 Buchnera aphidicola CP034869 9	Clostridioides difficile	MG019960	1496	2630086
Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum NC_006278 1590 2630086 Lactobacillus plantarum CP025695 1590 2630086 Lactobacillus backii CP014630 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Pediococcus damnosus CP012289 51663 2630086 Mycobacterium avium KR997898 1764 319705 Mycobacterium avium AF312688 28045 1763 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034871 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola AP001070 9 1763 Buchnera aphidicola CP034879 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 <	Lactobacillus paracollinoides	CP014913	240427	2630086
Lactobacillus plantarum CP035026 1590 2630086 Lactobacillus plantarum NC_006278 1590 2630086 Lactobacillus plantarum CP025695 1590 2630086 Lactobacillus backii CP014630 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Pediococcus damnosus CP012289 51663 2630086 Mycobacterium avium KR997898 1764 319705 Mycobacterium avium AF312688 28045 1763 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034871 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola AP001070 9 1763 Buchnera aphidicola CP034879 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 <	Lactobacillus paracollinoides	CP014923	240427	2630086
Lactobacillus plantarum CP025695 1590 2630086 Lactobacillus backii CP014630 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Pediococcus damnosus CP012289 51663 2630086 Mycobacteroides abscessus CP004376 1303024 319705 Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034881 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola CP0044877 9 1763 Buchnera aphidicola CP0044877 9 1763 Buchnera aphidicola CP034887 9 1763 Buchnera aphidicola CP034869 9 1763		CP035026	1590	2630086
Lactobacillus backii CP014630 375175 2630086 Lactobacillus backii CP014886 375175 2630086 Pediococcus damnosus CP012289 51663 2630086 Mycobacteroides abscessus CP004376 1303024 319705 Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034881 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP0024879 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034869 9 1763	Lactobacillus plantarum	NC_006278	1590	2630086
Lactobacillus backii CP014886 375175 2630086 Pediococcus damnosus CP012289 51663 2630086 Mycobacteroides abscessus CP004376 1303024 319705 Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034881 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP0348893 9 1763 Buc	Lactobacillus plantarum	CP025695	1590	2630086
Pediococcus damnosus CP012289 51663 2630086 Mycobacteroides abscessus CP004376 1303024 319705 Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034871 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP034879 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP034889 9 1763 Buchnera aphidicola CP034889 9 1763 Buchnera aphi	Lactobacillus backii	CP014630	375175	2630086
Mycobacteroides abscessus CP004376 1303024 319705 Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034881 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP0348857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP0348893 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP0348893 9 1763 Buchnera aphidicola CP0348893 9 1763 Buchnera aphidicola CP0348893 9 1763 Buchnera aphidic	Lactobacillus backii	CP014886	375175	2630086
Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034881 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola AP001070 9 1763 Buchnera aphidicola CP02647 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP0348893 9 1763 Buchnera aphidicola CP0348893 9 1763 Buchnera aphidicola <	Pediococcus damnosus	CP012289	51663	2630086
Mycobacterium avium KR997898 1764 319705 Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034881 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola AP001070 9 1763 Buchnera aphidicola CP02647 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP0348893 9 1763 Buchnera aphidicola CP0348893 9 1763 Buchnera aphidicola <	Mycobacteroides abscessus	CP004376	1303024	319705
Mycobacterium celatum AF312688 28045 1763 Streptomyces pratensis CP002477 1169025 1763 Buchnera aphidicola CP034881 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola AP001070 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP0		KR997898	1764	319705
Buchnera aphidicola CP034881 9 1763 Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola AP001070 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP038893 9 1763 Buchnera aphidicola CP038893 9 1763 Buchnera aphidicola CP034869		AF312688	28045	1763
Buchnera aphidicola CP034872 9 1763 Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola AP001070 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP038893 9 1763 Buchnera aphidicola CP005983 1578 1298 Lactobacillus CP031184	Streptomyces pratensis	CP002477	1169025	1763
Buchnera aphidicola CP034878 9 1763 Buchnera aphidicola AP001070 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Pediococcus pentosaceus CP005983 1578 1298 Lactobacillus CP019984 1578 1298 Lactobacillus CP019984	Buchnera aphidicola	CP034881	9	1763
Buchnera aphidicola AP001070 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP005983 1578 1298 Lactobacillus CP005983 1578 1298 Lactobacillus CP029970 1578 1298 Lactobacillus CP019984 114090 1298 Corynebacterium callunae CP04356	Buchnera aphidicola	CP034872	9	1763
Buchnera aphidicola AP001070 9 1763 Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP005983 1578 1298 Lactobacillus CP005983 1578 1298 Lactobacillus CP029970 1578 1298 Lactobacillus CP019984 114090 1298 Corynebacterium callunae CP04356		CP034878	9	1763
Buchnera aphidicola CP002647 9 1763 Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Buchnera aphidicola CP04984 1298 1298 Lactobacillus CP005983 1578 1298 Lactobacillus CP019984 1578 1298 Leactobacillus CP019984 114090 1298 Corynebacterium callunae CP004356 1721 1298 Corynebacterium efficiens AP005226		AP001070	9	1763
Buchnera aphidicola CP034857 9 1763 Buchnera aphidicola CP034869 9 1763 Buchnera aphidicola CP034893 9 1763 Deinococcus radiopugnans AB473550 57497 1298 Pediococcus pentosaceus AF033858 1255 1298 Lactobacillus CP005983 1578 1298 Lactobacillus CP031184 1578 1298 Lactobacillus CP029970 1578 1298 Pediococcus inopinatus CP019984 114090 1298 Corynebacterium callunae CP004356 1721 1298 Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Giscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716		CP002647	9	1763
Buchnera aphidicola CP034893 9 1763 Deinococcus radiopugnans AB473550 57497 1298 Pediococcus pentosaceus AF033858 1255 1298 Lactobacillus CP005983 1578 1298 Lactobacillus CP031184 1578 1298 Lactobacillus CP029970 1578 1298 Pediococcus inopinatus CP019984 114090 1298 Corynebacterium callunae CP004356 1721 1298 Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716		CP034857	9	1763
Buchnera aphidicola CP034893 9 1763 Deinococcus radiopugnans AB473550 57497 1298 Pediococcus pentosaceus AF033858 1255 1298 Lactobacillus CP005983 1578 1298 Lactobacillus CP031184 1578 1298 Lactobacillus CP029970 1578 1298 Pediococcus inopinatus CP019984 114090 1298 Corynebacterium callunae CP004356 1721 1298 Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716	Buchnera aphidicola	CP034869	9	1763
Deinococcus radiopugnans AB473550 57497 1298 Pediococcus pentosaceus AF033858 1255 1298 Lactobacillus CP005983 1578 1298 Lactobacillus CP031184 1578 1298 Lactobacillus CP029970 1578 1298 Pediococcus inopinatus CP019984 114090 1298 Corynebacterium callunae CP004356 1721 1298 Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716		CP034893	9	1763
Pediococcus pentosaceus AF033858 1255 1298 Lactobacillus CP005983 1578 1298 Lactobacillus CP031184 1578 1298 Lactobacillus CP029970 1578 1298 Pediococcus inopinatus CP019984 114090 1298 Corynebacterium callunae CP004356 1721 1298 Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716		AB473550	57497	1298
Lactobacillus CP031184 1578 1298 Lactobacillus CP029970 1578 1298 Pediococcus inopinatus CP019984 114090 1298 Corynebacterium callunae CP004356 1721 1298 Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716		AF033858	1255	1298
Lactobacillus CP029970 1578 1298 Pediococcus inopinatus CP019984 114090 1298 Corynebacterium callunae CP004356 1721 1298 Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716	Lactobacillus	CP005983	1578	1298
Pediococcus inopinatus CP019984 114090 1298 Corynebacterium callunae CP004356 1721 1298 Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716	Lactobacillus	CP031184	1578	1298
Corynebacterium callunae CP004356 1721 1298 Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716	Lactobacillus	CP029970	1578	1298
Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716	Pediococcus inopinatus	CP019984	114090	1298
Corynebacterium efficiens AP005226 152794 1716 Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716	Corynebacterium callunae	CP004356	1721	1298
Pseudomonas AJ344068 286 1716 Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716	*			
Pseudomonas fluorescens LN713927 294 1716 Gammaproteobacteria CP013795 1236 1716 Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716			286	
Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716	Pseudomonas fluorescens	LN713927	294	
Gammaproteobacteria MG456577 1236 1716 Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716	Gammaproteobacteria	CP013795	1236	1716
Piscirickettsia salmonis CP013800 1238 1716 Rhizobium sp. NT-26 FO082822 1125847 1716	-			
Rhizobium sp. NT-26 FO082822 1125847 1716				
	Rhizobium sp. NT-26			

scientificName	nuccoreAcc	taxid	parent
Enterobacteriaceae	CP021212	543	13687
Enterobacteriaceae	CP024250	543	13687
Enterobacteriaceae	MH450052	543	13687
Enterobacteriaceae	CP025909	543	13687
Enterobacteriaceae	CP042948	543	13687
Enterobacteriaceae	LT985275	543	13687
Enterobacteriaceae	CP020338	543	13687
Escherichia coli	CP024244	562	13687
Escherichia coli	CP025885	562	13687
Escherichia coli	CP024977	562	13687
Escherichia coli	CP000796	562	13687
Escherichia coli	CP027106	562	13687
Pseudomonas	KX009059	286	13687
Pseudomonas	LT963396	286	13687
Pseudomonas fluorescens	KX893538	294	13687
Pseudomonas fluorescens	MH061177	294	13687
Pseudomonas sp. MPC6	CP034782	2498848	2583993
Bacillus	CP043834	1386	2583993
Bacillus mycoides	CP031075	1405	2583993
Silvanigrellales bacterium RF1110005	AP019370	2493639	2493640
Silvanigrellales bacterium RF1110005	AP019369	2493639	2493640
Pseudoalteromonas sp. BSi20327	GU198194	383749	194690
Staphylococcus aureus	CP042124	1280	194690
Staphylococcus aureus	CP042021	1280	194690
Staphylococcus aureus	CP042115	1280	194690
Staphylococcus aureus	CP042125	1280	194690
Agrobacterium vitis	CP000635	373	194690
Rhizobium leguminosarum	CP007070	384	194690
Agrobacterium tumefaciens	CP032924	358	194690
Streptococcus thermophilus	AY312235	1308	194690
Streptococcus suis	KX785325	1307	194690
Agrobacterium vitis	CP000639	373	194690
Agrobacterium tumefaciens	CP039892	358	194690
Avibacterium paragallinarum	AY300023	728	292486
Helicobacter pylori	CP002072	210	292486
Helicobacter pylori	CP032029	210	292486
Sphingobium sp. TKS	CP005086	1315974	292486
Sphingomonas sp. JE1	KM017071	1628059	196159
Xanthomonas fragariae	CP016831	48664	196159
Xanthomonas	CP033203	338	196159
Xanthomonas	FP340277	338	196159
Klebsiella pneumoniae	CP031579	573	196159
Klebsiella sp. PO552	CP037443	1972757	196159
Leuconostoc mesenteroides	AY648696	1245	196159
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-	

scientificName	nuccoreAcc	taxid	parent
Leuconostoc citreum	AB360637	33964	196159
Arthrobacter sp.	MH067971	1667	196159
Arthrobacter sp.	MH067977	1667	196159
Arthrobacter sp.	MH067969	1667	196159
Arthrobacter sp.	MH067976	1667	196159
Bacteroides thetaiotaomicron	AY171301	818	816
Bacteroides uniformis	AP019726	820	816
Lactobacillus lindneri	CP014910	53444	816
Lactobacillus paracollinoides	CP014926	240427	816
Cyanothece sp. PCC 7425	CP001347	395961	816
Maritalea myrionectae	CP021332	454601	623276
Enterobacteriaceae	NC_011511	543	623276
Enterobacteriaceae	KX756454	543	623276
Enterobacteriaceae	CP011334	543	623276
Citrobacter freundii	KX064435	546	623276
Providencia rettgeri	CP012904	587	623276
Enterobacterales	CP032293	91347	623276
Enterobacterales	MF344556	91347	623276
Enterobacterales	MG516910	91347	623276
Raoultella electrica	CP041251	1259973	623276
Dolichospermum sp. UHCC 0315A	CP043059	1914871	2622029
Dolichospermum sp. UHCC 0315A	CP043057	1914871	2622029
Dolichospermum sp. UHCC 0315A	CP043058	1914871	2622029
Nostocales cyanobacterium HT-58-2	CP019638	1940762	1219117
Psychrobacter sp. DAB_AL62B	JQ065022	1028420	196806
Psychrobacter sp. DAB_AL32B	MK422609	1028414	196806
Marinovum algicola	CP010860	42444	196806
Sagittula sp. P11	CP021917	2009329	2624628
Streptomyces sp. SYP-A7193	CP045549	2662065	2593676
Pseudomonas aeruginosa	CP042268	287	2593676
Borrelia miyamotoi	CP036769	47466	2593676
Borrelia miyamotoi	CP036594	47466	2593676
Borrelia miyamotoi	CP044641	47466	2593676
Borrelia miyamotoi	CP036602	47466	2593676
Borrelia miyamotoi	CP037276	47466	2593676
Borrelia miyamotoi	CP037523	47466	2593676
Pseudarthrobacter chlorophenolicus	CP001343	85085	1742993
Arthrobacter sp. YC-RL1	CP013299	1652545	235627
Borrelia miyamotoi	CP036939	47466	235627
Borrelia miyamotoi	CP044635	47466	235627
Borrelia hermsii	CP014351	140	235627
Borrelia hermsii	CP014817	140	235627
Borrelia hermsii	CP014824	140	235627

scientificName	nuccoreAcc	taxid	parent
Borrelia hermsii	CP014826	140	235627
Kozakia baliensis	CP014676	153496	235627
Kozakia baliensis	CP014682	153496	235627
Kozakia baliensis	CP014675	153496	235627
Kozakia baliensis	CP014683	153496	235627
Vibrio sp. THAF190c	CP045342	2587865	2614977
Vibrio sp. THAF190c	CP045343	2587865	2614977
Vibrio sp. THAF190c	CP045341	2587865	2614977
Alteromonas	CP003918	226	72275
Alteromonas	CP018322	226	72275
Alteromonas macleodii	CP012203	28108	226
Alteromonas mediterranea	CP004847	314275	226
Deinococcus wulumuqiensis	CP031164	980427	1298
Burkholderia sp. PAMC 26561	CP014312	1795043	2613784
Magnetospirillum magneticum	AB116387	84159	13134
Haematobacter massiliensis	CP035513	195105	13134
Haematobacter massiliensis	CP035511	195105	13134
Paracoccus aminophilus	GQ410978	34003	13134
Labrenzia	CP045332	478070	13134
Alphaproteobacteria	KU922118	28211	1224
Alphaproteobacteria	CP021187	28211	1224
Roseomonas sp. FDAARGOS_362	CP024589	2018065	1224
Agrobacterium tumefaciens	CP039915	358	1224
Lactobacillus sakei	CP020460	1599	1224
Lactobacillus curvatus	AP018700	28038	1224
Lactobacillus plantarum	CP023493	1590	1224
Lactobacillus brevis	AP012170	1580	1224
Lactobacillus plantarum	CP015861	1590	1224
Lactobacillus brevis	CP032934	1580	1224
Lactobacillus plantarum	CP035144	1590	1224
Crinalium epipsammum	CP003621	241425	1224
Legionella adelaidensis	LR134427	45056	1224
Pseudomonas sp.	MK376338	306	1224
Pseudomonas putida	NC_002518	303	1224
Pseudomonas syringae group genomosp. 3	AY603983	251701	1224
Cylindrospermum sp. NIES-4074	AP018271	2005457	2630404
Cylindrospermum sp. NIES-4074	AP018270	2005457	2630404
Klebsiella oxytoca	CP011594	571	2630404
Klebsiella pneumoniae	CP039970	573	2630404
Klebsiella pneumoniae	CP031578	573	2630404
Paenibacillus crassostreae	CP017771	1763538	44249
Bacillus megaterium	CP001986	1404	44249
Bacillus megaterium	CP009915	1404	44249
Bacillus megaterium	CP032536	1404	44249

scientificName	nuccoreAcc	taxid	parent
Bacillus megaterium	CP003019	1404	44249
Bacillus flexus	CP016792	86664	44249
Bacillus flexus	CP040365	86664	44249
Bacillus megaterium	CP022675	1404	44249
Paracoccus sp. Arc7-R13	CP034815	2500532	44249
Paracoccus sp. Arc7-R13	CP034814	2500532	44249
Bacillus	HQ128580	1386	44249
Bacillales	JQ246438	1385	44249
Staphylococcus epidermidis	KY579373	1282	44249
Staphylococcus hyicus	JF968540	1284	44249
Staphylococcus arlettae	KX274135	29378	1279
Polaromonas	MG869618	52972	80864
Polaromonas	MG869617	52972	80864
Polaromonas	MG869615	52972	80864
Polaromonas sp. E19S	MG869616	1840257	2638319
Tsukamurella tyrosinosolvens	LR134461	57704	2638319
Tsukamurella tyrosinosolvens	LR134445	57704	2638319
Synechocystis	AP004311	1142	2638319
Synechocystis sp. PCC 6714	CP007543	1147	2638319
Synechocystis	AP004310	1142	2638319
Synechocystis	AP006585	1142	2638319
Paracoccus sp. BM15	CP025409	1529068	2638319
Paracoccus zhejiangensis	CP025433	1077935	2638319
Paracoccus zhejiangensis	CP025432	1077935	2638319
Paracoccus sp. BM15	CP025410	1529068	2638319
Xanthomonas citri	CP021010	346	2638319
Xanthomonas citri	CP020997	346	2638319
Bifidobacterium breve	AF085719	1685	1678
Legionella adelaidensis	LR134420	45056	1678
Legionella adelaidensis	LR134422	45056	1678
Legionella adelaidensis	LR134433	45056	1678
Candidatus Riesia pediculicola	CP001086	401619	401618
Candidatus Riesia pediculicola	CP012842	401619	401618
Candidatus Riesia pediculischaeffi	CP012838	428411	401618
Bacillus thuringiensis	CP002486	1428	401618
Bacillus cereus	CP023181	1396	401618
Bacillus thuringiensis	CP017576	1428	401618
Bacillaceae	CP001181	186817	401618
Bacillaceae	CP045536	186817	401618
Bacillus thuringiensis	CP021442	1428	401618
Bacillus thuringiensis	CP021443	1428	401618
Ruegeria sp. TM1040	CP000375	292414	2625375
Ruegeria sp. PR1b	AF416331	185588	2625375
Phaeobacter piscinae	CP010658	1580596	2625375

scientificName	nuccoreAcc	taxid	parent
Phaeobacter piscinae	CP010769	1580596	2625375
Lactobacillus salivarius	CP007649	1624	2625375
Lactobacillus salivarius	CP017109	1624	2625375
Microcystis aeruginosa	D17448	1126	2625375
Sulfitobacter sp. DFL14	JQ418526	1179815	196795
Rhodococcus fascians	JN093097	1828	196795
Rhodococcus erythropolis	AY223810	1833	196795
Rhodococcus erythropolis	CP011297	1833	196795
Rhodococcus erythropolis	AP008931	1833	196795
Gloeothece verrucosa	CP002204	497965	196795
Caldicellulosiruptor kristjanssonii	CP002327	52765	44000
Clostridium botulinum	CP000940	1491	44000
Clostridium botulinum	AB855771	1491	44000
Clostridium botulinum	CP013700	1491	44000
Clostridium botulinum	CP001081	1491	44000
Clostridium botulinum	CP006909	1491	44000
Clostridium botulinum	CP000963	1491	44000
Clostridium botulinum	CP013710	1491	44000
Bacillus thuringiensis	AF050161	1428	44000
Pseudomonas stutzeri	CP003073	316	44000
Mycolicibacterium chubuense	CP003055	710421	1800
Mycobacterium sp. THAF192	CP045327	2587868	2642494
Fusobacterium nucleatum	CP003724	851	2642494
Fusobacterium nucleatum	CP013122	851	2642494
Fusobacterium hwasookii	CP013333	1583098	848
Bacillus pseudomycoides	CP007624	64104	848
Bacillus pseudomycoides	CP007625	64104	848
Bacillus filamentosus	CP015327	1402861	848
Bacillus filamentosus	CP015324	1402861	848
Neokomagataea tanensis	CP032486	661191	1223423
Swingsia samuiensis	CP038142	1293412	1649499
Vibrio parahaemolyticus	KM189195	670	1649499
Glaesserella sp. 15-184	CP023058	2030797	2629322
Haemophilus influenzae	NC_011409	727	2629322
Streptococcus	AY648561	1301	2629322
Streptococcus	CP044104	1301	2629322
Streptococcus dysgalactiae	KJ951051	1334	2629322
Streptococcus pyogenes	KC895877	1314	1301
Streptococcus	AY907345	1301	1301
Streptococcus dysgalactiae	KJ951052	1334	1301
Streptococcus pyogenes	KC895878	1314	1301
Staphylococcus sp. CDC3	GQ900386	678601	91994
Staphylococcus capitis	CP007602	29388	91994
Acetobacter pasteurianus	HF677577	438	91994
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scientificName	nuccoreAcc	taxid	parent
Sphingopyxis sp. EG6	AP017604	1874061	2614943
Bacillus megaterium	CP009916	1404	2614943
Bacillus megaterium	CP032537	1404	2614943
Bacillus megaterium	CP018880	1404	2614943
Bacillus megaterium	CP032529	1404	2614943
Bacillus megaterium	CP018881	1404	2614943
Bacillus flexus	CP040364	86664	2614943
Bacillus filamentosus	CP015330	1402861	2614943
Porphyrobacter sp. YT40	CP041223	2547601	2683265
Sphingobium sp. RAC03	CP016457	1843368	2683265
Granulicella tundricola	CP002484	940615	2683265
Granulicella tundricola	CP002483	940615	2683265
Granulicella tundricola	CP002482	940615	2683265
Agrobacterium fabrum	CP033024	1176649	1183400
Agrobacterium fabrum	CP033036	1176649	1183400
Agrobacterium tumefaciens	CP039925	358	1183400
Agrobacterium fabrum	CP033037	1176649	1183400
Pseudonocardia	CP012186	1847	2070
Pseudonocardia	CP010990	1847	2070
Pseudonocardia sp. EC080625-04	CP010991	1096868	2619320
Pseudonocardia sp. EC080610-09	CP012183	1688404	2619320
Myxococcus fulvus	EU137666	33	32
Ruegeria sp. THAF33	CP045386	2587853	32
Pelagibaca abyssi	CP015089	1250539	32
Rhodoferax ferrireducens	CP000268	192843	28065
Bacillus thuringiensis	CP040785	1428	28065
Bacillus thuringiensis	CP040784	1428	28065
Klebsiella pneumoniae	CP028821	573	28065
Klebsiella pneumoniae	CP042484	573	28065
Geobacillus stearothermophilus	CP008935	1422	129337
Butyrivibrio hungatei	CP017833	185008	830
Borrelia crocidurae	CP003464	29520	830
Borrelia crocidurae	CP003462	29520	830
Borrelia crocidurae	CP003445	29520	830
Klebsiella aerogenes	LR134278	548	830
Klebsiella aerogenes	LR134258	548	830
Comamonas testosteroni	AF076997	285	283
Exiguobacterium sp. S3-2	KF648874	1389960	283
Exiguobacterium mexicanum	CP040675	340146	283
Exiguobacterium sp. N4-1P	CP022239	2051906	283
Xanthomonas citri	CP021005	346	283
Xanthomonas arboricola	FR875157	56448	338
Pseudomonas sp. MRSN12121	CP010894	1611770	2583993
Pandoraea pnomenusa	CP015374	93220	93217

scientificName	nuccoreAcc	taxid	parent
Macrococcus caseolyticus	AP009485	69966	93217
Macrococcus caseolyticus	KM613043	69966	93217
Paracoccus marcusii	JQ684023	59779	93217
Paracoccus marcusii	KC542384	59779	93217
Lactobacillus brevis	CP019737	1580	93217
Lactobacillus brevis	CP016798	1580	93217
Lactobacillus brevis	CP019739	1580	93217
Lactobacillus paracollinoides	CP014917	240427	93217
Azospirillum sp. CFH 70021	CP029360	2202148	93217
Azospirillum sp. TSH100	CP039641	652764	93217
Azospirillum brasilense	CP032338	192	93217
Proteobacteria	CP027173	1224	93217
Proteobacteria	MG958650	1224	93217
Proteobacteria	LT837805	1224	93217
Gammaproteobacteria	CP028565	1236	93217
Gammaproteobacteria	CP026218	1236	93217
Gammaproteobacteria	MF344579	1236	93217
Aeromonas sp. ASNIH1	CP026230	1636606	93217
Vitreoscilla filiformis	CP022425	63	93217
Leisingera	CP035418	191028	93217
Leisingera methylohalidivorans	CP006774	133924	191028
Leisingera aquaemixtae	CP041156	1396826	191028
Nostoc sp. NIES-2111	AP018185	1973475	191028
Nostoc sp. NIES-2111	AP018186	1973475	191028
Nostoc sp. NIES-2111	AP018187	1973475	191028
Trichormus variabilis	CP000119	264691	191028
Trichormus variabilis	AP018217	264691	191028
Trichormus variabilis	AP018219	264691	191028
Phaeobacter porticola	CP016367	1844006	191028
Sulfitobacter pseudonitzschiae	CP022420	1402135	191028
Sulfitobacter sp. D7	CP020698	1968541	191028
Sulfitobacter pseudonitzschiae	CP022418	1402135	191028
Geminocystis sp. NIES-3709	AP014826	1617448	191028
Geminocystis sp. NIES-3709	AP014824	1617448	191028
Corynebacterium halotolerans	CP003698	225326	1716
Corynebacterium sp. L2-79-05	DQ390457	373068	1716
Corynebacterium stationis	CP009252	1705	1716
Corynebacterium marinum	CP007792	349751	1716
Bacillus cytotoxicus	CP000765	580165	1716
Bacillaceae	CP001178	186817	1716
Escherichia coli	CP019281	562	1716
Acinetobacter soli	CP016903	487316	1716
Acinetobacter baumannii	CP034096	470	1716
			1110

scientificName	nuccoreAcc	taxid	parent
Gluconobacter thailandicus	CP043044	257438	441
Gluconobacter oxydans	CP003927	442	441
Gluconobacter thailandicus	CP043045	257438	441
Gluconobacter albidus	CP014690	318683	441
Leptolyngbya boryana	AP014641	1184	441
Sinorhizobium medicae	CP000741	110321	28105
Sinorhizobium meliloti	CP026528	382	28105
Rhizobium leguminosarum	CP025510	384	28105
Rhizobium leguminosarum	AM236081	384	28105
Rhizobium leguminosarum	CP016292	384	28105
Rhizobium leguminosarum	CP018231	384	28105
Rhizobium leguminosarum	CP018234	384	28105
Rhizobium leguminosarum	CP018236	384	28105
Nonomuraea gerenzanensis	LT559119	93944	83681
Couchioplanes caeruleus	AB981620	56438	56433
Methylobacterium radiotolerans	CP001004	31998	56433
Methylobacterium radiotolerans	CP001005	31998	56433
Methylobacterium radiotolerans	CP001007	31998	56433
Methylobacterium oryzae	JX627583	334852	407
Salimicrobium jeotgali	CP011362	1230341	351195
Salimicrobium jeotgali	CP011363	1230341	351195
Enterobacterales	HF560646	91347	351195
Enterobacterales	CP037907	91347	351195
Candidatus Hamiltonella defensa	CP017616	138072	351195
Stanieria cyanosphaera	CP003656	102116	351195
Chondrocystis sp. NIES-4102	AP018284	2005460	2648896
Chondrocystis sp. NIES-4102	AP018282	2005460	2648896
Azospirillum brasilense	CP022261	192	2648896
Azospirillum brasilense	CP032326	192	2648896
Azospirillum brasilense	CP012918	192	2648896
Selenomonas ruminantium	AP012299	971	2648896
Selenomonas ruminantium	AP012293	971	2648896
Microscilla sp. PRE1	AF339846	155537	2622911
Nitrosomonas sp.	AB018481	42353	2609265
Nitrosomonas sp.	AB018480	42353	2609265
Escherichia coli	CP034740	562	2609265
Bacteroides salanitronis	CP002532	376805	2609265
Bacteroides fragilis	CP036543	817	2609265
Acinetobacter sp. WCHAc010034	CP032267	1879049	2609265
Acinetobacter cumulans	CP035942	2136182	2609265
Acinetobacter wuhouensis	CP033120	1879050	2609265
Acinetobacter sp. WCHAc010034	CP032276	1879049	2609265
Lactobacillus plantarum	MH544243	1590	2609265
Lactobacillus plantarum	CP025994	1590	2609265

scientificName	nuccoreAcc	taxid	parent
Escherichia coli	CP035359	562	2609265
Escherichia coli	CP035358	562	2609265
Escherichia coli	CP035342	562	2609265
Escherichia coli	CP035348	562	2609265
Mycolicibacterium fortuitum	M23557	1766	1866885
Synechococcus sp. PCC 7117	CP016482	195498	1866885
Synechococcus	CP040361	1129	1866885
Synechococcus	CP000957	1129	1866885
Synechococcus	CP016489	1129	1866885
Burkholderia pseudomallei	GQ401131	28450	1866885
Microcoleus sp. PCC 7113	CP003636	1173027	1866885
Microcoleus sp. PCC 7113	CP003637	1173027	1866885
Bacillus cereus	CP009594	1396	1866885
Bacillus	CP009599	1386	1866885
Bacillus	CP009638	1386	1866885
Bacillus thuringiensis	CP009332	1428	1866885
Bacillus thuringiensis	CP009718	1428	1866885
Bacillus thuringiensis	CP012104	1428	1866885
Bacillus cereus	CP014487	1396	1866885
Bacillus cereus	CP009637	1396	1866885
Lactobacillus kefiranofaciens	CP002765	267818	1866885
Lactobacillus helveticus	AJ222725	1587	1866885
Lactobacillus gallinarum	CP012893	52242	1866885
Alteromonas stellipolaris	CP013927	233316	226
Vibrio casei	AP018683	673372	226
Aliivibrio salmonicida	CP034238	40269	226
Roseobacter denitrificans	CP000467	2434	226
Sulfitobacter guttiformis	JN172928	74349	226
Nitrosospira multiformis	CP000105	1231	35798
Bacillus licheniformis	AJ748844	1402	35798
Bacillus cereus	CP015590	1396	35798
Salmonella enterica	CP022065	28901	35798
Escherichia coli	CP029060	562	35798
Escherichia coli	CP011336	562	35798
Escherichia coli	CP027396	562	35798
Escherichia coli	CP011338	562	35798
Pelobacter propionicus	CP000483	29543	18
Anabaena cylindrica	CP003664	1165	18
Paracoccus aminophilus	CP006655	34003	18
Paracoccus aminophilus	CP006651	34003	18
Paracoccus aminophilus	GQ468938	34003	18
Xanthomonas euvesicatoria	AM039951	456327	18
Xanthomonas	CP017309	338	18
Xanthomonas	CP020887	338	18

Candidatus Endomicrobium trichonymphae AP017460 1408204 140819 Paeniclostridium sordellii LN680000 1505 140819 Paeniclostridium sordellii CP014149 1505 140819 Prevotella melaninogenica AP018051 28132 838 Prevotella scopos CP016206 589437 838 Rahnella sp. Y9602 CP002507 741091 2635081 Enterobacter sp. 638 CP000654 399742 2608933 Defluviimonas alba CP0194664 1335048 2608933 Thioclava nitratireducens CP019438 1915078 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium baratii CP014203 1561 1485 Streptomyces collinus CP066261 42684 1883 Streptomyces collinus CP066261 42684 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacteraceae bacterium	scientificName	nuccoreAcc	taxid	parent
Xanthomonas campestris CP017324 339 338 Elusimicrobia AP017462 641853 74152 Candidatus Endomicrobium trichonymphae AP017461 1408204 140819 Candidatus Endomicrobium trichonymphae AP017460 1408204 140819 Paeniclostridium sordellii LN680000 1505 140819 Prevotella melaninogenica AP018051 28132 838 Prevotella scopos CP016206 589437 838 Rahnella sp. Y9602 CP002507 741091 2635081 Enterobacter sp. 638 CP010664 1335048 2608933 Defluviimonas alba CP012664 1335048 2608933 Thioclava nitratireducens CP019438 1915078 2608933 Clostridium botulium KT897278 1491 2608933 Clostridium botulium KT897278 1491 2608933 Clostridium baratii CP014203 1561 1485 Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus	Xanthomonas citri	CP022268	346	18
Elusimicrobia	Xanthomonas axonopodis	CP031060	53413	338
Candidatus Endomicrobium trichonymphae AP017461 1408204 140819 Candidatus Endomicrobium trichonymphae AP017460 1408204 140819 Paeniclostridium sordellii LN680000 1505 140819 Paeniclostridium sordellii CP014149 1505 140819 Prevotella melaninogenica AP018051 28132 838 Prevotella scopos CP016206 58437 838 Rahnella sp. Y9602 CP002507 741091 263508 Enterobacter sp. 638 CP000654 399742 2608933 Defluviimonas alba CP012664 1335048 2608933 Thioclava nitratireducens CP019438 1915078 2608933 Paracoccus zhejiangensis CP025431 1077935 260893 Clostridium botulinum KT897278 1491 260893 Clostridium baratii CP014203 1561 1485 Streptomyces collinus CP014203 1561 1485 Streptomyces collinus CP003561 173263 1883 Rhodobacteraceae	Xanthomonas campestris	CP017324	339	338
Candidatus Endomicrobium trichonymphae AP017460 1408204 140819- Paeniclostridium sordellii LN680000 1505 140819- Paeniclostridium sordellii CP014149 1505 140819- Prevotella melaninogenica AP018051 28132 838 Prevotella scopos CP016206 589437 838 Rahnella sp. Y9602 CP002507 741091 2635083 Enterobacter sp. 638 CP000654 399742 2608933 Defluviimonas alba CP019438 1915078 2608933 Thioclava nitratireducens CP019438 1915078 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium baratii CP014203 1561 1485 Streptomyces collinus CP006261 42684 1883 Stynechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae <td>Elusimicrobia</td> <td>AP017462</td> <td>641853</td> <td>74152</td>	Elusimicrobia	AP017462	641853	74152
Candidatus Endomicrobium trichonymphae AP017460 1408204 140819- Paeniclostridium sordellii LN680000 1505 140819- Paeniclostridium sordellii CP014149 1505 140819- Prevotella melaninogenica AP018051 28132 838 Prevotella scopos CP016206 589437 838 Rahnella sp. Y9602 CP002507 741091 2635083 Enterobacter sp. 638 CP000654 399742 2608933 Defluviimonas alba CP019438 1915078 2608933 Thioclava nitratireducens CP019438 1915078 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium baratii CP014203 1561 1485 Streptomyces collinus CP006261 42684 1883 Stynechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae <td>Candidatus Endomicrobium trichonymphae</td> <td>AP017461</td> <td>1408204</td> <td>1408194</td>	Candidatus Endomicrobium trichonymphae	AP017461	1408204	1408194
Paeniclostridium sordellii LN680000 1505 140819- Paeniclostridium sordellii CP014149 1505 140819- Prevotella melaninogenica AP018051 28132 838 Prevotella scopos CP016206 589437 838 Rahnella sp. Y9602 CP002507 741091 2635085 Enterobacter sp. 638 CP000654 399742 260893 Defluviimonas alba CP012664 1335048 260893 Thioclava nitratireducens CP019438 1915078 260893 Paracoccus zhejiangensis CP025431 1077935 260893 Clostridium botulinum KT897278 1491 260893 Clostridium baratii CP014203 1561 1485 Streptomyces collinus CP014203 1561 1485 Streptomyces collinus CP0046261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacteraceae bacterium		AP017460	1408204	1408194
Prevotella melaninogenica AP018051 28132 838 Prevotella scopos CP016206 589437 838 Rahnella sp. Y9602 CP002507 741091 2635081 Enterobacter sp. 638 CP000654 399742 2608933 Defluviimonas alba CP012664 1335048 2608933 Thioclava nitratireducens CP019438 1915078 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium baratii CP014203 1561 1485 Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus CP006261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacteraceae bacterium CP03759 1904441 1883 Moorea producens CP017710 1155739 1155739 Moorea producens CP017709		LN680000	1505	1408194
Prevotella scopos CP016206 589437 838 Rahnella sp. Y9602 CP002507 741091 263508 Enterobacter sp. 638 CP000654 399742 260893 Defluviimonas alba CP012664 1335048 260893 Thioclava nitratireducens CP019438 1915078 260893 Paracoccus zhejiangensis CP025431 1077935 260893 Clostridium botulinum KT897278 1491 260893 Clostridium baratii CP014203 1561 1485 Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus CP006261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP0417155 1396826 196779 Moorea producens CP017710 1155739 1155739 Candidatus Phytoplasma australiense <td< td=""><td>Paeniclostridium sordellii</td><td>CP014149</td><td>1505</td><td>1408194</td></td<>	Paeniclostridium sordellii	CP014149	1505	1408194
Rahnella sp. Y9602 CP002507 741091 263508 Enterobacter sp. 638 CP000654 399742 260893 Defluviimonas alba CP012664 1335048 260893 Thioclava nitratireducens CP019438 1915078 260893 Paracoccus zhejiangensis CP025431 10777935 260893 Clostridium botulinum KT897278 1491 260893 Clostridium baratii CP014203 1561 1485 Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus CP006261 42684 1883 Streptomyces collinus CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP0411155 1396826 196779 Bacillus cereus CP017710 1155739 115573 Moorea producens CP017710 1155739 1155735 Candidatus Phytoplasma australiense D	Prevotella melaninogenica	AP018051	28132	838
Enterobacter sp. 638 CP000654 399742 2608933 Defluviimonas alba CP012664 1335048 2608931 Thioclava nitratireducens CP019438 1915078 2608933 Paracoccus zhejiangensis CP025431 1077935 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium baratii CP014203 1561 1485 Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus CP006261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP03551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP041155 1396826 196779 Moorea producens CP017710 1155739 1155739 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australie	Prevotella scopos	CP016206	589437	838
Defluviimonas alba CP012664 1335048 2608933 Thioclava nitratireducens CP019438 1915078 2608933 Paracoccus zhejjangensis CP025431 1077935 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium baratii CP014203 1561 1485 Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus CP006261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacter aceae bacterium CP031587 1904411 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155733 Moorea producens CP017709 1155739 1155733 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense<	Rahnella sp. Y9602	CP002507	741091	2635087
Thioclava nitratireducens CP019438 1915078 2608933 Paracoccus zhejiangensis CP025431 1077935 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium baratii CP014203 1561 1485 Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus CP006261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Leisingera producens CP003749 1396 196779 Moorea producens CP017710 1155739 1155739 Moorea producens CP017709 1155739 1155739 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. N	Enterobacter sp. 638	CP000654	399742	2608935
Paracoccus zhejiangensis CP025431 1077935 2608933 Clostridium botulinum KT897278 1491 2608933 Clostridium baratii CP014203 1561 1485 Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus CP006261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155739 Moorea producens CP017709 1155739 1155739 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-97	Defluviimonas alba	CP012664	1335048	2608935
Clostridium botulinum KT897278 1491 2608933 Clostridium baratii CP014203 1561 1485 Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus CP006261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155739 Moorea producens CP017709 1155739 1155739 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318777 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Streptosporangium roseum<	Thioclava nitratireducens	CP019438	1915078	2608935
Clostridium baratii CP014203 1561 1485 Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus CP006261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155739 Moorea producens CP017709 1155739 1155739 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae	Paracoccus zhejiangensis	CP025431	1077935	2608935
Paracoccus aestuarii JQ041633 453842 1485 Streptomyces collinus CP006261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155739 Moorea producens CP017709 1155739 1155739 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318777 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP0016085 159 29521 Streptomyces	Clostridium botulinum	KT897278	1491	2608935
Streptomyces collinus CP006261 42684 1883 Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155739 Moorea producens CP017709 1155739 1155739 Candidatus Phytoplasma australiense DQ119295 59748 85632 Candidatus Phytoplasma australiense DQ318777 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001805 159 29521 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis	Clostridium baratii	CP014203	1561	1485
Synechococcus sp. PCC 7502 CP003596 1173263 1883 Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155738 Moorea producens CP017709 1155739 1155739 Candidatus Phytoplasma australiense DQ119295 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001805 159 29521 Brachyspira hyodysenteriae CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis<	Paracoccus aestuarii	JQ041633	453842	1485
Rhodobacteraceae bacterium CP031587 1904441 1883 Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155739 Moorea producens CP017709 1155739 1155739 Candidatus Phytoplasma australiense DQ119295 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Streptosporangium roseum CP0016085 159 29521 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP006306 1535768 1883 Croc	Streptomyces collinus	CP006261	42684	1883
Rhodobacter sp. CZR27 CP023551 2033869 196779 Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155738 Moorea producens CP017709 1155739 1155739 Candidatus Phytoplasma australiense DQ119295 59748 85632 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Streptosporangium roseum CP0016085 159 29521 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP006306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomon	Synechococcus sp. PCC 7502	CP003596	1173263	1883
Leisingera aquaemixtae CP041155 1396826 196779 Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155738 Moorea producens CP017709 1155739 1155738 Candidatus Phytoplasma australiense DQ119295 59748 85632 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP0016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP00811 43989 1883 Pseudomonas sp. K-62 <td>Rhodobacteraceae bacterium</td> <td>CP031587</td> <td>1904441</td> <td>1883</td>	Rhodobacteraceae bacterium	CP031587	1904441	1883
Bacillus cereus CP003749 1396 196779 Moorea producens CP017710 1155739 1155738 Moorea producens CP017709 1155739 1155738 Candidatus Phytoplasma australiense DQ119295 59748 85632 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001898 1049 85072 Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP00811 43989 1883 Pseudomonas sp. K-62 <td>Rhodobacter sp. CZR27</td> <td>CP023551</td> <td>2033869</td> <td>196779</td>	Rhodobacter sp. CZR27	CP023551	2033869	196779
Moorea producens CP017710 1155739 1155738 Moorea producens CP017709 1155739 1155738 Candidatus Phytoplasma australiense DQ119295 59748 85632 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium	Leisingera aquaemixtae	CP041155	1396826	196779
Moorea producens CP017709 1155739 1155738 Candidatus Phytoplasma australiense DQ119295 59748 85632 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreli	Bacillus cereus	CP003749	1396	196779
Candidatus Phytoplasma australiense DQ119295 59748 85632 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001495 139 2583993	Moorea producens	CP017710	1155739	1155738
Candidatus Phytoplasma australiense DQ119295 59748 85632 Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001495 139 2583993	Moorea producens	CP017709	1155739	1155738
Candidatus Phytoplasma australiense DQ318777 59748 85632 Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001495 139 2583993		DQ119295	59748	85632
Candidatus Phytoplasma australiense DQ318776 59748 85632 Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993		DQ318777	59748	85632
Synechococcus sp. NIES-970 AP017960 1827144 85632 Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993		-	59748	85632
Synechococcus sp. NIES-970 AP017961 1827144 85632 Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993		=	1827144	85632
Allochromatium vinosum CP001898 1049 85072 Brachyspira hyodysenteriae CP001360 159 29521 Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993		AP017961	1827144	85632
Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993		CP001898	1049	85072
Brachyspira hyodysenteriae CP016085 159 29521 Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993	Brachyspira hyodysenteriae	CP001360	159	29521
Streptosporangium roseum CP001815 2001 2000 Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993		CP016085	159	29521
Streptomyces AY943953 1883 2000 Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993		CP001815	2001	2000
Streptomyces lunaelactis CP026306 1535768 1883 Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993		AY943953	1883	2000
Crocosphaera subtropica CP000811 43989 1883 Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993				
Pseudomonas sp. K-62 AB714582 76885 2583993 Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993		CP000811	43989	1883
Methylobacterium brachiatum CP033234 269660 2583993 Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993		AB714582	76885	2583993
Borreliella valaisiana CP001434 62088 2583993 Borreliella burgdorferi CP001495 139 2583993			269660	2583993
Borreliella burgdorferi CP001495 139 2583993				2583993
	Borreliella burgdorferi		139	2583993
Dorrellena burgdorien AE001504 159 250599	Borreliella burgdorferi	AE001584	139	2583993
				2583993

scientificName	nuccoreAcc	taxid	parent
Paracoccus haeundaensis	JQ066767	225362	2583993
Ketogulonicigenium vulgare	CP002226	92945	2583993
Corynebacterium glutamicum	AY172684	1718	2583993
Corynebacterium glutamicum	AF479770	1718	2583993
Beet leafhopper transmitted virescence phytoplasma	AY423627	37694	85635
Beet leafhopper transmitted virescence phytoplasma	AY423628	37694	85635
Bacillus thuringiensis	CP032610	1428	85635
Bacillus thuringiensis	CP020757	1428	85635
Bacillus thuringiensis	CP014852	1428	85635
Bacillus thuringiensis	CP020003	1428	85635
Bacillus cereus	CP000229	1396	85635
Bacillus thuringiensis	CP003689	1428	85635
Bacillus mycoides	CP020749	1405	85635
Ammonifex degensii	CP001786	42838	42837
Tetragenococcus halophilus	AB250926	51669	42837
Leuconostocaceae	CP042396	81850	42837
Leuconostocaceae	CP042401	81850	42837
Leuconostoc kimchii	CP001755	136609	42837
Leuconostoc garlicum	CP016330	255248	1243
Leuconostoc lactis	CP042391	1246	1243
Campylobacter helveticus	CP020483	28898	1243
Campylobacter helveticus	CP020482	28898	1243
Vibrio parahaemolyticus	CP028143	670	1243
Vibrio parahaemolyticus	CP028144	670	1243
Rhodovulum sulfidophilum	AP014801	35806	1243
Rhodovulum sp. MB263	CP020385	308754	2631432
Paracoccus sp. Arc7-R13	CP034817	2500532	2631432
Mycobacterium intracellulare	JQ657805	1767	120793
Mycobacterium	CP006836	1763	120793
Mycobacterium marinum	AP018497	1781	1763
Mycobacterium chimaera	CP015268	222805	1763
Rhodococcus opacus	CP003952	37919	1763
Rhodococcus opacus	CP003950	37919	1763
Rhodococcus opacus	CP003958	37919	1763
Herpetosiphon aurantiacus	CP000876	65	64
Herpetosiphon aurantiacus	CP000877	65	64
Azotobacter chroococcum	CP010416	353	64
Azotobacter chroococcum	CP010417	353	64
Leptotrichia wadei	AP019842	157687	64
Leptotrichia hofstadii	AP019825	157688	64
Acidibrevibacterium fodinaquatile	CP029179	1969806	2603324
Acidibrevibacterium fodinaquatile	CP029178	1969806	2603324
Rickettsia raoultii	CP010972	369822	114277
Rickettsia bellii	CP015011	33990	1129742
Tonovola bolli	01 010011	00000	1120,12

scientificName	nuccoreAcc	taxid	naront
			parent
Rickettsia peacockii	CP001228	47589	114277
Rickettsia monacensis	EF564599	109232	114277
Rickettsia endosymbiont of Ixodes pacificus	KR611317	1133329	114295
Rickettsia rhipicephali	CP013134	33992	114277
Rickettsia asembonensis	CP011517	1068590	114277
Streptomyces sp. 44030	DQ322649	364102	2593676
Exiguobacterium sp. S3-2	KF697250	1389960	2593676
Exiguobacterium mexicanum	CP040674	340146	2593676
Xylella fastidiosa	AE003851	2371	2593676
Xylella fastidiosa	CP009886	2371	2593676
Calothrix	AP018258	1186	2593676
Calothrix	AP018259	1186	2593676
Hydrocarboniclastica marina	CP031094	2259620	2650549
Marinobacter sp. NP-4(2019)	CP034144	2488665	83889
Shinella sp. HZN7	CP015743	879274	83889
Shinella sp. HZN7	CP015742	879274	83889
Bacillus megaterium	CP022678	1404	83889
Bacillus megaterium	CP022679	1404	83889
Spirosoma linguale	CP001775	108	83889
Spirosoma linguale	CP001773	108	83889
Aeromonas hydrophila	CP028562	644	83889
Azotobacter salinestris	CP045301	69964	352
Thauera sp. MZ1T	CP001282	85643	2609274
Pelobacter propionicus	CP000484	29543	2609274
Sphaerotilus natans	CP035709	34103	2609274
Sulfitobacter guttiformis	JN172927	74349	2609274
Lysinibacillus sphaericus	CP000818	1421	2609274
Xylanimonas cellulosilytica	CP001822	186189	186188
Acidithiobacillus caldus	CP002576	33059	186188
Acidithiobacillus caldus	EU421841	33059	186188
Acidithiobacillus caldus	CP002577	33059	186188
Acidithiobacillus caldus	CP026330	33059	186188
Acidithiobacillus caldus	CP005988	33059	186188
Nostoc sp. NIES-4103	AP018289	2005458	2593658
Mycobacterium sp. KMS	CP000519	189918	2642494
Mycolicibacterium gilvum	CP000657	350054	2642494
Mycolicibacterium gilvum	CP002386	278137	1804
Mycobacterium sp. ELW1	CP032156	1547487	2642494
Mycobacterium sp. MS1601	CP019422	1936029	2642494
Crocosphaera subtropica	CP000810	43989	2642494
Psychrobacter sp. DAB_AL60	JQ245704	1028419	196806
Psychrobacter sp. P2G3	CP012531	1699622	196806
Brevibacillus laterosporus	CP007808	1465	196806
Brevibacillus laterosporus	CP033463	1465	196806
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Vibrio parahaemolyticus CP010886 670 196806 Vibrio vulnificus CP016323 672 196806 Roseomonas mucosa CP044118 207340 125216 Roseomonas sp. FDAARGOS_362 CP024584 2018065 125216 Roseomonas gilardii CP013255 257708 125216 Kocuria flava CP013255 446860 57493 Kocuria flava CP013256 446860 57493 Aquabacterium olei CP029211 1296669 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP026684 1261031 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP026684 1261031 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP026684 1261031 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP026684 1261031 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP026684 1261031 92793 Nostoc sp. Sp. Beld-1 AY297818 233067 192944 Rhodococus spacea KP011119 37919 </th <th>scientificName</th> <th>nuccoreAcc</th> <th>taxid</th> <th>parent</th>	scientificName	nuccoreAcc	taxid	parent
Vibrio vulnificus CP016323 672 196806 Roseomonas mucosa CP044181 207340 125216 Roseomonas sp. FDAARGOS_362 CP015587 257708 125216 Roseomonas gilardii CP013255 446860 57493 Kocuria flava CP013256 446860 57493 Aquabacterium olei CP029211 1296669 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP02684 1261031 92793 Rhodococcus sp. B2641 AP018272 2005457 92793 Rhodococcus sp. B2641 AP018172 230675 92793 Rhodococcus sp. B2641 AP018171 37919 192944 Streptococcus suis FM252033 1307 192944 Streptococcus suis KX785328 1307 192944 Streptomyces seoulensis CP023230 73044 183 Streptomyces seoulensis CP032230 73044 1883 Streptomyces subsp. MK376343 306 188 Streptomyces ambofaciens CP012383	Vibrio parahaemolyticus	CP010886	670	196806
Roseomonas mucosa CP044118 207340 125216 Roseomonas p. FDAARGOS_362 CP024584 2018065 125216 Roseomonas gilardii CP015325 446860 57493 Kocuria flava CP013255 446860 57493 Kocuria flava CP013256 446860 57493 Aquabacterium olei CP029211 1296669 92793 Nostoc sp. "Peltigera membranacea cyanobiont" N6 CP029684 1261031 92793 Nostoc sp. "Peltigera membranacea cyanobiont" N6 CP029684 1261031 92793 Cylindrospermum sp. NIES-4074 AP018272 2005457 92793 Rhodococcus sp. E264-1 AY297818 233067 192944 Streptococcus suis CP012333 1307 192944 Streptococcus suis KX785328 1307 192944 Streptomyces leeuwnhoekii LNS31788 1437453 1883 Streptomyces seoulensis CP032230 73044 1883 Streptomyces sp. WAC8241 CP042280 258870 2593676 Strept	- v			
Roseomonas gilardii CP024584 2018065 125216 Roseomonas gilardii CP013557 257708 125216 Kocuria flava CP013255 446860 57493 Kocuria flava CP013256 446860 57493 Aquabacterium olei CP029211 1296669 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP02684 1261031 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP02684 1261031 92793 Rhodococcus sp. B264-1 AY297818 233067 192944 Rhodococcus spacus AP011119 37919 192944 Streptococcus suis FM252033 1307 192944 Streptococcus suis KX785328 1307 192944 Streptomyces leeuwenhoekii LNS31788 1437453 1883 Streptomyces soulensis CP023939 1307 192944 Streptomyces soulensis CP012383 1889 1883 Streptomyces soulensis CP012383 1889 1883 Streptomyces soulensis				
Roseomonas gilardii CP015587 257708 125216 Kocuria flava CP013255 446860 57493 Kocuria flava CP013256 446860 57493 Aquabacterium olei CP029211 1296669 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' No CP026684 1261031 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' No CP026684 1261031 92793 Rhodococcus sp. Sef41 AP018272 2005457 92793 Rhodococcus sp. Segosus AP011119 37919 192944 Streptococcus suis CP029399 1307 192944 Streptococcus suis KX785328 1307 192944 Streptomyces leeuwenhoekii LN831788 1437453 1883 Streptomyces seoulensis CP022320 73044 1883 Streptomyces sp. WAC8241 CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376348 306 1883 Pseudomoas sp. 109				
Kocuria flava CP013255 446860 57493 Kocuria flava CP013256 446860 57493 Aquabacterium olei CP029211 129669 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' NG CP026684 1261031 92793 Cylindrospermum sp. NIES-4074 AP018272 2005457 92793 Rhodococcus sp. B264-1 AY297818 233067 192944 Rhodococcus opacus AP011119 37919 192944 Streptococcus suis FM252033 1307 192944 Streptococcus suis CP029399 1307 192944 Streptomyces leeuwenhoekii LN831788 1437453 1883 Streptomyces seoulensis CP029399 1307 192944 Streptomyces seoulensis CP032230 73044 1883 Streptomyces seoulensis CP012383 1889 1883 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376348 306 1883 Azospira sp. 109 AP018719	-			
Kocuria flava CP013256 446860 57493 Aquabacterium olei CP029211 1296669 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP026684 1261031 92793 Nodococcus sp. B264-1 AP018272 2005457 92793 Rhodococcus opacus AP011119 37919 192944 Streptococcus suis FM252033 1307 192944 Streptococcus suis KX785328 1307 192944 Streptococcus suis KX785328 1307 192944 Streptomyces leeuwenhoekii LN831788 1437453 1883 Streptomyces seoulensis CP032230 73044 1883 Streptomyces sp. WAC8241 CP042280 2593676 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376348 306 1883 Pseudomonas sp. MK376348 306 1883 Pseudomonas sp. AP018719 2211108 2211107 Methylobacterium CP013469 407 2211107 <td></td> <td></td> <td></td> <td></td>				
Aquabacterium olei CP029211 1296669 92793 Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP026684 1261031 92793 Cylindrospermum sp. NIES-4074 AP018272 2005457 92793 Rhodococcus sp. B264-1 AY297818 233067 192944 Rhodococcus sous AP011119 37919 192944 Streptococcus suis FM252033 1307 192944 Streptococcus suis CP029399 1307 192944 Streptococcus suis KX785328 1307 192944 Streptomyces leeuwenhoekii LN831788 1437453 1883 Streptomyces seoulensis CP032230 73044 1883 Streptomyces seoulensis CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Sterptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376348 306 1883 Azospira sp. 109 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B				
Nostoc sp. 'Peltigera membranacea cyanobiont' N6 CP026684 1261031 92793 Cylindrospermum sp. NIES-4074 AP018272 2005457 92793 Rhodococcus sp. B264-1 AY297818 23067 192944 Rhodococcus opacus AP011119 37919 192944 Streptococcus suis FM252033 1307 192944 Streptococcus suis KX785328 1307 192944 Streptomyces leewenhoekii LN831788 1437453 1883 Streptomyces soulensis CP032230 73044 1883 Streptomyces seoulensis CP012383 1889 1883 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376340 306 1883 Pseudomonas sp. MK376348 306 1883 Pseudomonas sp. AP018719 2211108 2211107 Methylobacterium JX627582 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP034292 <td< td=""><td>Aquabacterium olei</td><td></td><td></td><td></td></td<>	Aquabacterium olei			
Cylindrospermum sp. NIES-4074 AP018272 2005457 92793 Rhodococcus sp. B264-1 AY297818 233067 192944 Rhodococcus opacus AP011119 37919 192944 Streptococcus suis FM252033 1307 192944 Streptococcus suis CP029399 1307 192944 Streptomyces leeuwenhoekii LN831788 1437453 1883 Streptomyces seeulensis CP032230 73044 1883 Streptomyces seoulensis CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Steudomonas sp. MK376340 306 1883 Pseudomonas sp. MK376348 306 1883 Pseudomonas sp. MK18716349 200269 Ster	-		1261031	
Rhodococcus sp. B264-1 AY297818 233067 192944 Rhodococcus opacus AP011119 37919 192944 Streptococcus suis FM252033 1307 192944 Streptococcus suis CP029399 1307 192944 Streptomyces leeuwenhoekii LN831788 1437453 1883 Streptomyces seoulensis CP032230 73044 1883 Streptomyces sp. WAC8241 CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376348 306 1883 Pseudomonas sp. MK376348 306 1883 Azospira sp. I09 AP018719 2211108 2211107 Methylobacterium JX627582 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP003242 28095 2211107 Burkholderia gladioli CP03324 28095 2211107 Burkholderia epacia CP013426 1637869 8			2005457	
Rhodococcus opacus AP011119 37919 192944 Streptococcus suis FM252033 1307 192944 Streptococcus suis CP029399 1307 192944 Streptococcus suis KX785328 1307 192944 Streptomyces leeuwenhoekii LN831788 1437453 1883 Streptomyces soulensis CP032230 73044 1883 Streptomyces sp. WAC8241 CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376340 306 1883 Azospira sp. 109 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP009321 28095 2211107 Burkholderia gladioli CP032429 28095 2211107 Burkholderia py. MSMB0856 CP012984 292 87882		AY297818	233067	192944
Streptococcus suis FM252033 1307 192944 Streptococcus suis CP029399 1307 192944 Streptococcus suis KX785328 1307 192944 Streptomyces leeuwenhoekii LN831788 1437453 1883 Streptomyces seoulensis CP032230 73044 1883 Streptomyces sp. WAC8241 CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376344 306 1883 Azospira sp. I09 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211108 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP0033429 28095 2211107 Burkholderia gladioli CP0033429 28095 2211107 Burkholderia sp. MSMB0856 CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426	-		37919	
Streptococcus suis KX785328 1307 192944 Streptomyces leeuwenhoekii LN831788 1437453 1883 Streptomyces seoulensis CP032230 73044 1883 Streptomyces sp. WAC8241 CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376348 306 1883 Azospira sp. I09 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211108 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP009321 28095 2211107 Burkholderia gladioli CP033429 28095 2211107 Burkholderia cepacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP06997 103816 87882 Rhodococcus sp. NS1 DQ888171	-	FM252033	1307	
Streptomyces leeuwenhoekii LN831788 1437453 1883 Streptomyces seoulensis CP032230 73044 1883 Streptomyces sp. WAC8241 CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376348 306 1883 Azospira sp. I09 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211108 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP003321 28095 2211107 Burkholderia gladioli CP033429 28095 2211107 Burkholderia cepacia CP012984 292 87882 Rhodococcus pyridinivorans CP013426 1637869 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Methylobacterium aquaticum AP014708 270351 407 Methylobacterium aquaticum AP0147	Streptococcus suis	CP029399	1307	192944
Streptomyces seoulensis CP032230 73044 1883 Streptomyces sp. WAC8241 CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376340 306 1883 Azospira sp. I09 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211108 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP00321 28095 2211107 Burkholderia gladioli CP033429 28095 2211107 Burkholderia cepacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus pyridinivorans CP036549 817 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 </td <td>-</td> <td>KX785328</td> <td>1307</td> <td>192944</td>	-	KX785328	1307	192944
Streptomyces seoulensis CP032230 73044 1883 Streptomyces sp. WAC8241 CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376340 306 1883 Azospira sp. 109 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211108 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP00321 28095 2211107 Burkholderia gladioli CP033429 28095 2211107 Burkholderia cepacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708	-	LN831788	1437453	1883
Streptomyces sp. WAC8241 CP042280 2588708 2593676 Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376340 306 1883 Pseudomonas sp. MK376348 306 1883 Azospira sp. I09 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211108 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP003321 28095 2211107 Burkholderia gladioli CP03429 28095 2211107 Burkholderia cepacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus pyridinivorans CP036549 817 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014709		CP032230	73044	1883
Streptomyces ambofaciens CP012383 1889 1883 Pseudomonas sp. MK376340 306 1883 Pseudomonas sp. MK376348 306 1883 Azospira sp. I09 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211108 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP009321 28095 2211107 Burkholderia gladioli CP033429 28095 2211107 Burkholderia gladioli CP012984 292 87882 Burkholderia sp. MSMB0856 CP012984 292 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus pyridinivorans CP036549 817 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylobacterium aquaticum KJ598491 <td< td=""><td></td><td>CP042280</td><td>2588708</td><td>2593676</td></td<>		CP042280	2588708	2593676
Pseudomonas sp. MK376348 306 1883 Pseudomonas sp. MK376348 306 1883 Azospira sp. I09 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211108 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP009321 28095 2211107 Burkholderia gladioli CP033429 28095 2211107 Burkholderia epacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylobacterium aquaticum AP014709 270351 407 Methylobium KJ598491 316612 224471 Burkholderia latens CP013436 488446		CP012383	1889	1883
Pseudomonas sp. MK376348 306 1883 Azospira sp. I09 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211108 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP009321 28095 2211107 Burkholderia gladioli CP033429 28095 2211107 Burkholderia gladioli CP023524 28095 2211107 Burkholderia sp. MSMB0856 CP012984 292 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylobacterium aquaticum AP014709 270351 407 Methylobacterium fodinaquatile CP013436 488446 87882 Acidibrevibacterium fodinaquatile	- *	MK376340	306	1883
Azospira sp. I09 AP021845 1765049 2609269 Sterolibacteriaceae bacterium J5B AP018719 2211108 2211107 Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP009321 28095 2211107 Burkholderia gladioli CP023524 28095 2211107 Burkholderia cepacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP041688<		MK376348	306	1883
Methylobacterium CP015369 407 2211107 Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP009321 28095 2211107 Burkholderia gladioli CP033429 28095 2211107 Burkholderia gladioli CP012984 28095 2211107 Burkholderia sp. MSMB0856 CP012984 292 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688	Azospira sp. I09	AP021845	1765049	2609269
Methylobacterium JX627582 407 2211107 Burkholderia gladioli CP009321 28095 2211107 Burkholderia gladioli CP033429 28095 2211107 Burkholderia gladioli CP023524 28095 2211107 Burkholderia cepacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP0	Sterolibacteriaceae bacterium J5B	AP018719	2211108	2211107
Burkholderia gladioli CP009321 28095 2211107 Burkholderia gladioli CP033429 28095 2211107 Burkholderia gladioli CP023524 28095 2211107 Burkholderia cepacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylibium AP014709 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. KACC 21233 CP043507 <	Methylobacterium	CP015369	407	2211107
Burkholderia gladioli CP033429 28095 2211107 Burkholderia gladioli CP023524 28095 2211107 Burkholderia cepacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Methylobacterium	JX627582	407	2211107
Burkholderia gladioli CP023524 28095 2211107 Burkholderia cepacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Burkholderia gladioli	CP009321	28095	2211107
Burkholderia cepacia CP012984 292 87882 Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Burkholderia gladioli	CP033429	28095	2211107
Burkholderia sp. MSMB0856 CP013426 1637869 87882 Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Burkholderia gladioli	CP023524	28095	2211107
Rhodococcus pyridinivorans CP006997 103816 87882 Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Burkholderia cepacia	CP012984	292	87882
Rhodococcus sp. NS1 DQ888171 402236 192944 Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylobacterium aquaticum AP014709 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Burkholderia sp. MSMB0856	CP013426	1637869	87882
Bacteroides fragilis CP036549 817 192944 Methylobacterium aquaticum AP014708 270351 407 Methylobacterium aquaticum AP014709 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Rhodococcus pyridinivorans	CP006997	103816	87882
Methylobacterium aquaticum AP014708 270351 407 Methylobacterium aquaticum AP014709 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Rhodococcus sp. NS1	DQ888171	402236	192944
Methylobacterium aquaticum AP014709 270351 407 Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Bacteroides fragilis	CP036549	817	192944
Methylibium KJ598491 316612 224471 Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Methylobacterium aquaticum	AP014708	270351	407
Burkholderia latens CP013436 488446 87882 Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Methylobacterium aquaticum	AP014709	270351	407
Acidibrevibacterium fodinaquatile CP029177 1969806 87882 Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Methylibium	KJ598491	316612	224471
Pseudomonas stutzeri CP040459 316 87882 Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Burkholderia latens	CP013436	488446	87882
Bacillus smithii CP012025 1479 1386 Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Acidibrevibacterium fodinaquatile	CP029177	1969806	87882
Chryseobacterium sp. SNU WT5 CP041688 2594269 2593645 Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Pseudomonas stutzeri	CP040459	316	87882
Acetobacter sp. KACC 21233 CP043507 2592655 2628570	Bacillus smithii	CP012025	1479	1386
Acetobacter sp. KACC 21233 CP043507 2592655 2628570		CP041688	2594269	2593645
	Acetobacter sp. KACC 21233	CP043507	2592655	2628570
Acetobacter sp. KACU 21233 CP043508 2592655 2628570	Acetobacter sp. KACC 21233	CP043508	2592655	2628570
Acetobacter ghanensis LN609303 431306 2628570	Acetobacter ghanensis	LN609303	431306	2628570

scientificName	nuccoreAcc	taxid	parent
Acetobacter orientalis	AP018516	146474	434
Streptomyces sp. FR-008	CP009804	206662	434
Streptomyces sp. SM17	CP029341	565560	2593676
Agrobacterium tumefaciens	CP039891	358	2593676
Agrobacterium fabrum	CP033025	1176649	2593676
Agrobacterium tumefaciens	CP039919	358	2593676
Vibrionaceae	AB453229	641	2593676
Methylophaga frappieri	CP003381	754477	40222
Gammaproteobacteria	CP006601	1236	40222
Gammaproteobacteria	CP044223	1236	40222
Corynebacterium casei	AB444587	160386	40222
Corynebacterium glutamicum	NC_001791	1718	40222
Erwinia	FP236830	551	40222
Erwinia	CP037949	551	40222
Erwinia billingiae	CP031696	182337	551
Enterobacteriaceae	CP031580	543	551
Enterobacteriaceae	CP042869	543	551
Klebsiella variicola	CP020850	244366	551
Streptococcus parasanguinis	EU685104	1318	1301
Streptococcus anginosus	LC229233	1328	671232
Staphylococcus equorum	CP013719	246432	671232
Staphylococcus equorum	CP013718	246432	671232
Blastomonas sp. RAC04	CP016461	1842535	671232
Blastomonas sp. RAC04	CP016459	1842535	671232
Selenomonas ruminantium	AF113972	971	671232
Klebsiella pneumoniae	CP024518	573	671232
Streptomyces violaceusniger	CP002996	68280	1883
Streptomyces violaceusniger	CP002995	68280	1883
Yangia pacifica	CP022192	311180	1883
Pelagibaca abyssi	CP015090	1250539	1883
Salipiger profundus	CP014797	1229727	1883
Staphylococcus aureus	CP042147	1280	1883
Campylobacter jejuni	CP038863	197	1883
Lactobacillus salivarius	CP000234	1624	1883
Lactobacillus salivarius	CP007647	1624	1883
Lactobacillus salivarius	CP017108	1624	1883
Lactobacillus salivarius	CP024065	1624	1883
Lactobacillus salivarius	CP011404	1624	1883
Lactobacillus salivarius	CP020859	1624	1883
Lactobacillus salivarius	CP024064	1624	1883
Asticcacaulis excentricus	CP002397	78587	76890
Asticcacaulis excentricus	AP018829	78587	76890
Desulfohalobium retbaense	CP001735	45663	45662
Moraxella osloensis	CP024444	34062	45662

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scientificName	nuccoreAcc	taxid	parent
Moraxella osloensis	CP040258	34062	45662
Moraxella osloensis	CP024450	34062	45662
Phaeobacter piscinae	CP010645	1580596	45662
Epibacterium mobile	CP015234	1265309	379347
Paenibacillus polymyxa	CP040831	1406	379347
Paenibacillus sp. IHB B 3084	CP013208	867076	379347
Borrelia miyamotoi	CP044630	47466	379347
Borrelia miyamotoi	CP036579	47466	379347
Scytonema sp. NIES-4073	AP018266	2005464	379347
Scytonema sp. NIES-4073	AP018267	2005464	379347
Scytonema sp. NIES-4073	AP018265	2005464	379347
Bacillus megaterium	CP001989	1404	379347
Bacillus megaterium	CP041069	1404	379347
Bacillus megaterium	CP028085	1404	379347
Glaesserella sp. 15-184	CP023060	2030797	379347
Haemophilus parahaemolyticus	CP038818	735	724
Nocardia sp. 107	DQ399903	373212	2637762
Nocardia aobensis	GU066867	257277	1817
Sphingopyxis alaskensis	CP000357	117207	165697
Novosphingobium pentaromativorans	CP009295	205844	165696
Acidiphilium cryptum	CP000695	524	165696
Acidiphilium cryptum	CP000694	524	165696
Fibrisoma limi	HE805917	663275	861913
Borrelia crocidurae	CP003443	29520	861913
Borrelia crocidurae	CP003441	29520	861913
Borrelia crocidurae	CP003461	29520	861913
Borrelia crocidurae	CP003434	29520	861913
Lactobacillus helveticus	J04240	1587	861913
Lactobacillus plantarum	HQ116412	1590	861913
Lactobacillus plantarum	NC_006376	1590	861913
Pseudomonas	DQ126685	286	861913
Pseudomonas	MK047610	286	861913
Pseudomonas	CP003739	286	861913
Pseudomonas	KP873171	286	861913
Pseudomonas	CP016446	286	861913
Pseudomonas	KY630469	286	861913
Rhodovulum sulfidophilum	AP014803	35806	861913
Rhodovulum sp. MB263	CP020386	308754	861913
Rhodovulum sp. P5	CP015043	1564506	2631432
Anabaena cylindrica	CP003663	1165	2631432
Anabaena cylindrica	AP018167	1165	2631432
Paracoccus aminophilus	CP006654	34003	2631432
Paracoccus aminovorans	LN832560	34004	265
Acinetobacter tandoii	CP041367	202954	265

Aliivibrio fischeri	scientificName	nuccoreAcc	taxid	parent
Methylobacterium sp. AMS5 CP006995 925818 2615 Aliivibrio fischeri CP001134 668 2615 Nostocales AP018252 1161 2615 Microchaete diplosiphon AP018243 1197 2615 Microchaete diplosiphon AP018247 1197 2615 Microchaete diplosiphon AP018240 1197 2615 Microchaete diplosiphon AP018322 196308 2615 Nostoc sp. HK-01 AP018322 196308 2615 Mesorhizobium loti AP017607 381 6828' Mesorhizobium loti AP017607 381 6828' Riemerella anatipestifer AF048718 34085 6828' Vibrio EU574928 66 62 6828' Pseudodesulfovibrio profundus LT907976 57320 2035 Streptococcus suis KX785326 1307 2035 Streptococcus suis KX785323 1307 2035 Streptococcus suis KX785326 1307 2035	Acinetobacter baumannii	CP008709	470	265
Aliivibrio fischeri	Methylorubrum extorquens	CP001300	440085	265
Nostocales AP018252 1161 26155 Microchaete diplosiphon AP018243 1197 26155 Microchaete diplosiphon AP018238 1197 26155 Microchaete diplosiphon AP018247 1197 26155 Microchaete diplosiphon AP018240 1197 26155 Microchaete diplosiphon AP018242 1196308 26155 Mesorhizobium loti AP017608 381 68287 Mesorhizobium loti AP017607 381 68287 Riemerella anatipestifer AF082180 34085 68287 Riemerella anatipestifer AF082180 34085 68287 Vibrio EU574928 662 68287 Streptococcus suis KX785326 1307 20356 Streptococcus suis KX785323 1307 20356	Methylobacterium sp. AMS5	CP006995	925818	2615210
Microchaete diplosiphon AP018233 1197 26152 Microchaete diplosiphon AP018237 1197 26152 Microchaete diplosiphon AP018247 1197 26152 Microchaete diplosiphon AP018240 1197 26152 Nostoc sp. HK-01 AP018322 196308 26152 Mesorhizobium loti AP017607 381 68287 Mesorhizobium loti AP017607 381 68287 Riemerella anatipestifer AF048718 34085 68287 Riemerella anatipestifer AF082180 34085 68287 Vibrio EU574928 662 68287 Pseudodesulfovibrio profundus LT907976 57320 20358 Streptococcus suis KX785326 1307 20358 Streptococcus suis KX785323 1307 20358 <td>Aliivibrio fischeri</td> <td>CP001134</td> <td>668</td> <td>2615210</td>	Aliivibrio fischeri	CP001134	668	2615210
Microchaete diplosiphon AP018238 1197 26157 Microchaete diplosiphon AP018247 1197 26157 Microchaete diplosiphon AP018240 1197 26157 Mostoc sp. HK-01 AP018322 196308 26157 Mesorhizobium loti AP017607 381 68287 Mesorhizobium loti AP017607 381 68287 Riemerella anatipestifer AF048718 34085 68287 Riemerella anatipestifer AF082180 34085 68287 Vibrio EU574928 662 68287 Pseudodesulfovibrio profundus LT907976 57320 20358 Streptococcus suis KX785323 1307 20358	Nostocales	AP018252	1161	2615210
Microchaete diplosiphon AP018247 1197 26157 Microchaete diplosiphon AP018240 1197 26157 Nostoc sp. HK-01 AP018322 196308 26157 Mesorhizobium loti AP017607 381 68287 Mesorhizobium loti AP017607 381 68287 Riemerella anatipestifer AF082180 34085 68287 Riemerella anatipestifer AF082180 34085 68287 Vibrio EU574928 662 68287 Pseudodesulfovibrio profundus LT907976 57320 20358 Streptococcus suis KX785326 1307 20358 Streptococcus suis KX785323 1307 20358 <tr< td=""><td>Microchaete diplosiphon</td><td>AP018243</td><td>1197</td><td>2615210</td></tr<>	Microchaete diplosiphon	AP018243	1197	2615210
Microchaete diplosiphon AP018240 1197 26157 Nostoc sp. HK-01 AP018322 196308 26157 Mesorhizobium loti AP017607 381 68287 Mesorhizobium loti AP017607 381 68287 Mesorhizobium loti AP018718 34085 68287 Riemerella anatipestifer AF082180 34085 68287 Vibrio EU574928 662 68287 Pseudodesulfovibrio profundus LT907976 57320 20357 Streptococcus suis KX785326 1307 20358 Streptococcus suis KX785323 1307 20358 Streptococcus suis KX785323 1307 20358 Streptococcus suis KX785326 1307 20358 Streptococcus suis KX785326 1307 20358 Streptococcus suis KX785323 1307 20358 Streptococcus suis KX785326 1307 20358 Streptococcus suis KX785326 1307 20358 <	Microchaete diplosiphon	AP018238	1197	2615210
Nostoc sp. HK-01 AP018322 196308 26152 Mesorhizobium loti AP017608 381 68287 Mesorhizobium loti AP017607 381 68287 Riemerella anatipestifer AF048718 34085 68287 Riemerella anatipestifer AF082180 34085 68287 Vibrio EU574928 662 68287 Pseudodesulfovibrio profundus LT907976 57320 20358 Streptococcus suis KX785326 1307 20358 Streptococcus suis KX785323 1307 20358	Microchaete diplosiphon	AP018247	1197	2615210
Mesorhizobium loti AP017608 381 6828' Mesorhizobium loti AP017607 381 6828' Riemerella anatipestifer AF048718 34085 6828' Riemerella anatipestifer AF082180 34085 6828' Vibrio EU574928 662 6828' Pseudodesulfovibrio profundus LT907976 57320 2035' Streptococcus suis KX785326 1307 2035' Streptococcus suis KX785323 1307 2035' Pseudonocardia dioxanivorans CP002594 240495 1847' Pseudonocardia dioxanivorans NC_016601 240495 1847' Pseudonocardia dioxanivorans NC_016600 240495 1847' Pseudonocardia dioxanivorans NC_016600 240495 1847' Frondihabitans sp. PAMC 28766 CP014514 1795630 2626' Frondihabitans sp. PAMC 28766 CP014516 1795630 2626' Frondihabitans sp. PAMC 28766 CP014515 1795630 2626' Frondihabitans sp. PAMC 28766	Microchaete diplosiphon	AP018240	1197	2615210
Mesorhizobium loti AP017607 381 6828' Riemerella anatipestifer AF048718 34085 6828' Riemerella anatipestifer AF082180 34085 6828' Vibrio EU574928 662 6828' Pseudodesulfovibrio profundus LT907976 57320 2035' Streptococcus suis KX785326 1307 2035' Streptococcus suis KX785326 1307 2035' Pseudonocardia dioxanivorans CP002594 240495 1847' Pseudonocardia dioxanivorans NC_016600 240495 1847' Pseudonocardia dioxanivorans NC_016600 240495 1847' Pseudonocardia dioxanivorans NC_016600 240495 1847' Frondihabitans sp. PAMC 28766 CP014514 1795630 2626' Frondihabitans sp. PAMC 28766 CP014515 1795630 2626' Pseudarthrobacter phenanthrenivorans CP002380 361575 1742' Arthrobacter sp. AK-1 EF495211 415095 2356' Arthrobacter sp.	Nostoc sp. HK-01	AP018322	196308	2615210
Riemerella anatipestifer AF048718 34085 68287 Riemerella anatipestifer AF082180 34085 68287 Vibrio EU574928 662 68287 Pseudodesulfovibrio profundus LT907976 57320 20358 Streptococcus suis KX785326 1307 20358 Streptococcus suis KX785323 1307 20358 Pseudonocardia dioxanivorans CP002594 240495 1847 Pseudonocardia dioxanivorans NC_016601 240495 1847 Pseudonocardia dioxanivorans NC_016600 240495 1847 Pseudonocardi	Mesorhizobium loti	AP017608	381	68287
Riemerella anatipestifer AF082180 34085 6828 Vibrio EU574928 662 6828 Pseudodesulfovibrio profundus LT907976 57320 2035 Streptococcus suis KX785326 1307 2035 Streptococcus suis KX785323 1307 2035 Pseudonocardia dioxanivorans CP002594 240495 1847 Pseudonocardia dioxanivorans NC_016601 240495 1847 Pseudonocardia dioxanivorans NC_016600 240495 1847 Pseudonocardia dioxanivorans NC_016601 240495 1847 Pseudonocardia dioxanivorans NC_016601 240495 1847 Pseudonocardi	Mesorhizobium loti	AP017607	381	68287
Vibrio EU574928 662 6828' Pseudodesulfovibrio profundus LT907976 57320 20358' Streptococcus suis KX785326 1307 20358' Streptococcus suis KX785323 1307 20358' Pseudonocardia dioxanivorans CP002594 240495 1847' Pseudonocardia dioxanivorans NC_016601 240495 1847' Pseudonocardia dioxanivorans NC_016600 240495 1847' Frondihabitans sp. PAMC 28766 CP014514 1795630 2626' Frondihabitans sp. PAMC 28766 CP014516 1795630 2626' Frondihabitans sp. PAMC 28766 CP014515 1795630 2626' Pseudarthrobacter phenanthrenivorans CP002380 361575 1742' Arthrobacter sp. AK-1 EF495211 415095 2356' Arthrobacter sp. ZXY-2 CP017422 1806905 2356' Arthrobacter sp. ZXY-2 CP017424 1806905 2356' Arthrobacter sp. ZXY-2 CP017424 1806905 2356' Therm	Riemerella anatipestifer	AF048718	34085	68287
Pseudodesulfovibrio profundus LT907976 57320 20358 Streptococcus suis KX785326 1307 20358 Streptococcus suis KX785323 1307 20358 Pseudonocardia dioxanivorans CP002594 240495 1847 Pseudonocardia dioxanivorans NC_016601 240495 1847 Pseudonocardia dioxanivorans NC_016600 240495 1847 Frondihabitans sp. PAMC 28766 CP014514 1795630 26265 Frondihabitans sp. PAMC 28766 CP014515 1795630 26265 Frondihabitans sp. PAMC 28766 CP014515 1795630 26265 Frondihabitans sp. PAMC 28766 CP014515 1795630 26265 Pseudarthrobacter phenanthrenivorans CP002380 361575 17429 Arthrobacter sp. AK-1 EF495211 415095 23565 Arthrobacter sp. ZXY-2 CP017422 1806905 23565 Arthrobacter sp. ZXY-2 CP017424 1806905 23565 Arthrobacter sp. ZXY-2 CP017424 1806905 23565 <	Riemerella anatipestifer	AF082180	34085	68287
Streptococcus suis KX785326 1307 20358 Streptococcus suis KX785323 1307 20358 Pseudonocardia dioxanivorans CP002594 240495 1847 Pseudonocardia dioxanivorans NC_016601 240495 1847 Pseudonocardia dioxanivorans NC_016600 240495 1847 Frondihabitans sp. PAMC 28766 CP014514 1795630 26262 Frondihabitans sp. PAMC 28766 CP014515 1795630 26262 Pseudarthrobacter phenanthrenivorans CP002380 361575 17429 Arthrobacter sp. AK-1 EF495211 415095 23562 Arthrobacter sp. ZXY-2 CP017422 1806905 23562 Arthrobacter sp. ZXY-2 CP017424 1806905 23562 Thermus sp. 4C EF407946 446041 26193	Vibrio	EU574928	662	68287
Streptococcus suis KX785323 1307 20358 Pseudonocardia dioxanivorans CP002594 240495 1847 Pseudonocardia dioxanivorans NC_016601 240495 1847 Pseudonocardia dioxanivorans NC_016600 240495 1847 Frondihabitans sp. PAMC 28766 CP014514 1795630 26262 Frondihabitans sp. PAMC 28766 CP014515 1795630 26262 Frondihabitans sp. PAMC 28766 CP014515 1795630 26262 Frondihabitans sp. PAMC 28766 CP014515 1795630 26262 Pseudarthrobacter phenanthrenivorans CP002380 361575 17429 Arthrobacter sp. AK-1 EF495211 415095 23562 Arthrobacter sp. ZXY-2 CP017422 1806905 23562 Arthrobacter sp. ZXY-2 CP017424 1806905 23562 Arthrobacter sp. ZXY-2 CP017424 1806905 23562 Deinococcus peraridilitoris CP003384 432329 1298 Thermus sp. 4C EF407946 446041 26193	Pseudodesulfovibrio profundus	LT907976	57320	2035811
Pseudonocardia dioxanivorans CP002594 240495 1847 Pseudonocardia dioxanivorans NC_016601 240495 1847 Pseudonocardia dioxanivorans NC_016600 240495 1847 Frondihabitans sp. PAMC 28766 CP014514 1795630 26265 Frondihabitans sp. PAMC 28766 CP014515 1795630 26265 Frondihabitans sp. PAMC 28766 CP014515 1795630 26265 Pseudarthrobacter phenanthrenivorans CP002380 361575 17429 Arthrobacter sp. AK-1 EF495211 415095 23565 Arthrobacter sp. ZXY-2 CP017422 1806905 23565 Arthrobacter sp. ZXY-2 CP017423 1806905 23565 Arthrobacter sp. ZXY-2 CP017424 1806905 23565 Peimococcus peraridilitoris CP003384 432329 1298 Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter oligotrophus CP032319 2319843 26193	Streptococcus suis	KX785326	1307	2035811
Pseudonocardia dioxanivorans NC_016601 240495 1847 Pseudonocardia dioxanivorans NC_016600 240495 1847 Frondihabitans sp. PAMC 28766 CP014514 1795630 26262 Frondihabitans sp. PAMC 28766 CP014515 1795630 26262 Frondihabitans sp. PAMC 28766 CP014515 1795630 26262 Pseudarthrobacter phenanthrenivorans CP002380 361575 17422 Arthrobacter sp. AK-1 EF495211 415095 23562 Arthrobacter sp. ZXY-2 CP017422 1806905 23562 Arthrobacter sp. ZXY-2 CP017423 1806905 23562 Arthrobacter sp. ZXY-2 CP017424 1806905 23562 Pseudomocacus peraridilitoris CP003384 432329 1298 Thermus sp. 4C EF407946 446041 26193	Streptococcus suis	KX785323	1307	2035811
Pseudonocardia dioxanivorans NC_016600 240495 1847 Frondihabitans sp. PAMC 28766 CP014514 1795630 26263 Frondihabitans sp. PAMC 28766 CP014516 1795630 26263 Frondihabitans sp. PAMC 28766 CP014515 1795630 26263 Pseudarthrobacter phenanthrenivorans CP002380 361575 17429 Arthrobacter sp. AK-1 EF495211 415095 23563 Arthrobacter sp. ZXY-2 CP017422 1806905 23563 Arthrobacter sp. ZXY-2 CP017424 1806905 23563 Arthrobacter sp. ZXY-2 CP017424 1806905 23563 Arthrobacter sp. ZXY-2 CP017424 1806905 23563 Deinococcus peraridilitoris CP03384 432329 1298 Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193	Pseudonocardia dioxanivorans	CP002594	240495	1847
Frondihabitans sp. PAMC 28766 CP014514 1795630 26263 Frondihabitans sp. PAMC 28766 CP014516 1795630 26263 Frondihabitans sp. PAMC 28766 CP014515 1795630 26263 Pseudarthrobacter phenanthrenivorans CP002380 361575 17429 Arthrobacter sp. AK-1 EF495211 415095 23563 Arthrobacter sp. ZXY-2 CP017422 1806905 23563 Arthrobacter sp. ZXY-2 CP017424 1806905 23563 Arthrobacter sp. ZXY-2 CP017424 1806905 23563 Arthrobacter sp. ZXY-2 CP017424 1806905 23563 Peinococcus peraridilitoris CP003384 432329 1298 Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193	Pseudonocardia dioxanivorans	NC_016601	240495	1847
Frondihabitans sp. PAMC 28766 CP014516 1795630 26263 Frondihabitans sp. PAMC 28766 CP014515 1795630 26263 Pseudarthrobacter phenanthrenivorans CP002380 361575 17429 Arthrobacter sp. AK-1 EF495211 415095 23563 Arthrobacter sp. ZXY-2 CP017422 1806905 23563 Arthrobacter sp. ZXY-2 CP017424 1806905 23563 Arthrobacter sp. ZXY-2 CP017424 1806905 23563 Deinococcus peraridilitoris CP003384 432329 1298 Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003578 380 26193	Pseudonocardia dioxanivorans	NC_016600	240495	1847
Frondihabitans sp. PAMC 28766 CP014515 1795630 26262 Pseudarthrobacter phenanthrenivorans CP002380 361575 17429 Arthrobacter sp. AK-1 EF495211 415095 23562 Arthrobacter sp. ZXY-2 CP017422 1806905 23562 Arthrobacter sp. ZXY-2 CP017423 1806905 23562 Arthrobacter sp. ZXY-2 CP017424 1806905 23562 Arthrobacter sp. ZXY-2 CP017424 1806905 23562 Deinococcus peraridilitoris CP003384 432329 1298 Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003578 380 26193 Sinorhizobiu	Frondihabitans sp. PAMC 28766	CP014514	1795630	2626248
Pseudarthrobacter phenanthrenivorans CP002380 361575 17429 Arthrobacter sp. AK-1 EF495211 415095 23565 Arthrobacter sp. ZXY-2 CP017422 1806905 23565 Arthrobacter sp. ZXY-2 CP017423 1806905 23565 Arthrobacter sp. ZXY-2 CP017424 1806905 23565 Deinococcus peraridilitoris CP003384 432329 1298 Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003578 380 26193 Sinorhizobium fredii CP003578 380 26193	Frondihabitans sp. PAMC 28766	CP014516	1795630	2626248
Arthrobacter sp. AK-1 EF495211 415095 23565 Arthrobacter sp. ZXY-2 CP017422 1806905 23565 Arthrobacter sp. ZXY-2 CP017423 1806905 23565 Arthrobacter sp. ZXY-2 CP017424 1806905 23565 Deinococcus peraridilitoris CP003384 432329 1298 Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003578 380 26193 Sinorhizobium fredii CP003578 380 26193	Frondihabitans sp. PAMC 28766	CP014515	1795630	2626248
Arthrobacter sp. ZXY-2 CP017422 1806905 23562 Arthrobacter sp. ZXY-2 CP017423 1806905 23562 Arthrobacter sp. ZXY-2 CP017424 1806905 23562 Deinococcus peraridilitoris CP003384 432329 1298 Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus sp. 4C EF407946 446041 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Pseudarthrobacter phenanthrenivorans	CP002380	361575	1742993
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Arthrobacter sp. ZXY-2 CP017424 1806905 23565 Deinococcus peraridilitoris CP003384 432329 1298 Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus sp. 4C EF407946 446041 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Arthrobacter sp. ZXY-2	CP017422	1806905	235627
Deinococcus peraridilitoris CP003384 432329 1298 Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus sp. 4C EF407946 446041 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Arthrobacter sp. ZXY-2	CP017423	1806905	235627
Thermus sp. CCB_US3_UF1 CP003127 1111069 26193 Thermus sp. 4C EF407946 446041 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Arthrobacter sp. ZXY-2	CP017424	1806905	235627
Thermus sp. 4C EF407946 446041 26193 Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Deinococcus peraridilitoris	CP003384	432329	1298
Thermus thermophilus AP017921 274 26193 Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Thermus sp. CCB_US3_UF1	CP003127	1111069	2619321
Hymenobacter sp. DG25B CP010057 1385664 26193 Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Thermus sp. 4C	EF407946	446041	2619321
Hymenobacter oligotrophus CP032319 2319843 26193 Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Thermus thermophilus	AP017921	274	2619321
Yersinia pseudotuberculosis BX936400 633 26193 Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Hymenobacter sp. DG25B	CP010057	1385664	2619321
Buttiauxella sp. 3AFRM03 CP033075 2479367 26193 Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Hymenobacter oligotrophus	CP032319	2319843	2619321
Sinorhizobium fredii CP003570 380 26193 Sinorhizobium fredii CP003578 380 26193	Yersinia pseudotuberculosis	BX936400	633	2619321
Sinorhizobium fredii CP003578 380 26193	Buttiauxella sp. 3AFRM03	CP033075	2479367	2619321
	Sinorhizobium fredii	CP003570	380	2619321
Helphaeillug helphilug	Sinorhizobium fredii	CP003578	380	2619321
11a10bacinus naiopinius 11E/17024 1570 2019.	Halobacillus halophilus	HE717024	1570	2619321
		CP000540	80864	2619321
Comamonadaceae CP021370 80864 26193	Comamonadaceae	CP021370	80864	2619321
Pandoraea pnomenusa CP015372 93220 26193	Pandoraea pnomenusa	CP015372	93220	2619321
		NC_001456	1718	2619321

Corynebacterium glutamicum X90817 1718 2619321 Planococcus sp. Y42 CP019641 2213202 2662419 Planococcus sp. Y42 CP019641 2213202 2662419 Enterococcus faecalis CP003728 1351 2662419 Enterococcus faecalis KY303941 1351 2662419 Enterococcus faecalis CP015884 1351 2662419 Klebsiella CP02676 570 2662419 Klebsiella CP026779 570 2662419 Enterobacterales CP015396 91347 2662419 Enterobacterales CP020062 91347 2662419 Enterobacterales CP020062 91347 2662419 Kathomonas campestris CP030088 1386 2662419 Xanthomonas campestris CP017320 339 266	scientificName	nuccoreAcc	taxid	parent
Planococcus sp. Y42 CP019641 2213202 2662419 Planococcus sp. Y42 CP019641 2213202 2662419 Enterococcus faecalis CP003728 1351 2662419 Enterococcus faecalis KY303941 1351 2662419 Enterococcus faecalis KY270848 1351 2662419 Enterococcus faecalis CP015884 1351 2662419 Klebsiella CP02676 570 2662419 Klebsiella CP026779 570 2662419 Enterobacterales CP015336 91347 2662419 Enterobacterales CP015336 91347 2662419 Enterobacterales CP015336 91347 2662419 Enterobacterales CP020622 91347 2662419 Klebsiella aerogenes LR134255 548 2662419 Klebsiella variicola CP020852 24336 2662419 Kathomonas campestris CP017321 339 2662419 Kanthomonas campestris CP017320 339 2662419	Corynebacterium glutamicum	X90817	1718	2619321
Enterococcus faecalis CP003728 1351 2662419 Enterococcus faecalis KY303941 1351 2662419 Enterococcus faecalis KY270848 1351 2662419 Enterococcus faecalis CP015884 1351 2662419 Enterococcus faecalis CP015884 1351 2662419 Klebsiella CP026179 570 2662419 Enterobacterales CP007736 91347 2662419 Enterobacterales CP015396 91347 2662419 Enterobacterales CP020062 91347 2662419 Enterobacterales CP020062 91347 2662419 Klebsiella aerogenes LR134255 548 2662419 Klebsiella varicola CP020852 244366 2662419 Kathomonas campestris CP030098 1386 2662419 Kanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacteriaceae CP021177 543 2662419 </td <td>Planococcus sp. Y42</td> <td>CP019642</td> <td>2213202</td> <td>2662419</td>	Planococcus sp. Y42	CP019642	2213202	2662419
Enterococcus faecalis KY303941 1351 2662419 Enterococcus faecalis KY270848 1351 2662419 Enterococcus faecalis CP015884 1351 2662419 Klebsiella CP026776 570 2662419 Klebsiella CP026179 570 2662419 Enterobacterales CP015396 91347 2662419 Enterobacterales CP020062 91347 2662419 Enterobacterales CP020062 91347 2662419 Klebsiella aerogenes LR134255 548 2662419 Klebsiella variicola CP0200852 244366 2662419 Klebsiella variicola CP0200852 244366 2662419 Klebsiella variicola CP030988 1386 2662419 Kanthomonas campestris CP017320 339 2662419 Kanthomonas campestris CP0177320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacteriaceae CP021177 543 2662419		CP019641	2213202	2662419
Enterococus faecalis KY270848 1351 2662419 Enterococcus faecalis CP015884 1351 2662419 Klebsiella CP026276 570 2662419 Klebsiella CP026179 570 2662419 Enterobacterales CP007736 91347 2662419 Enterobacterales CP020062 91347 2662419 Enterobacterales CP020062 91347 2662419 Enterobacterales CP020062 91347 2662419 Klebsiella variicola CP0200852 244366 2662419 Klebsiella variicola CP030098 1386 2662419 Kanthomonas campestris CP0107321 339 2662419 Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacteriaceae CP0117320 339 2662419 Escherichia coli MK293485 562 2662419 Escherichia coli KW34886 573 2662419 <tr< td=""><td>Enterococcus faecalis</td><td>CP003728</td><td>1351</td><td>2662419</td></tr<>	Enterococcus faecalis	CP003728	1351	2662419
Enterococcus faecalis CP015884 1351 2662419 Klebsiella CP026276 570 2662419 Enterobacterales CP001736 91347 2662419 Enterobacterales CP007736 91347 2662419 Enterobacterales CP020062 91347 2662419 Enterobacterales CP020062 91347 2662419 Klebsiella aerogenes LR134255 548 2662419 Klebsiella variicola CP0200852 244366 2662419 Bacillus CP030098 1386 2662419 Xanthomonas campestris CP017321 339 2662419 Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacteriaceae CP021177 543 2662419 Enterobacter hormacchei CP031568 158836 2662419 Escherichia coli KK293945 562 2662419 Escherichia coli KU994859 562 2662419 <	Enterococcus faecalis	KY303941	1351	2662419
Klebsiella CP026276 570 2662419 Klebsiella CP026179 570 2662419 Enterobacterales CP007736 91347 2662419 Enterobacterales CP015396 91347 2662419 Enterobacterales CP020062 91347 2662419 Klebsiella aerogenes LR134255 548 2662419 Klebsiella variicola CP020852 244366 2662419 Klebsiella variicola CP030098 1386 2662419 Kanthomonas campestris CP017321 339 2662419 Xanthomonas campestris CP017320 339 2662419 Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacteriaceae CP021177 543 2662419 Enterobacteriaceae CP021177 543 2662419 Salmonella enterica CP031568 155836 2662419 Salmonella enterica CP006057 28901 2662419	Enterococcus faecalis	KY270848	1351	2662419
Klebsiella CP026179 570 2662419 Enterobacterales CP007736 91347 2662419 Enterobacterales CP015396 91347 2662419 Enterobacterales CP020062 91347 2662419 Klebsiella aerogenes LR134255 548 2662419 Klebsiella variicola CP030098 1386 2662419 Bacillus CP030098 1386 2662419 Xanthomonas campestris CP017321 339 2662419 Xanthomonas campestris CP017321 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacteriaceae CP021177 543 2662419 Enterobacter hormaechei CP031568 15883 2662419 Salmonella enterica CP001777 28901 2662419 Scherichia coli KU994859 562 2662419 Scherichia coli KU994859 562 2662419 Schaldella termitidis CP001741 826 32068	Enterococcus faecalis	CP015884	1351	2662419
Enterobacterales CP007736 91347 2662419 Enterobacterales CP015396 91347 2662419 Enterobacterales CP020062 91347 2662419 Klebsiella aerogenes LR134255 548 2662419 Klebsiella variicola CP020852 244366 2662419 Bacillus CP030098 1386 2662419 Xanthomonas campestris CP017321 339 2662419 Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacteriaceae CP021177 543 2662419 Enterobacter hormaechei CP031568 158836 2662419 Enterobacter hormaechei CP031568 158836 2662419 Salmonella enterica CP006057 28901 2662419 Scherichia coli KU994859 562 2662419 Klebsiella pneumoniae KX434880 573 2662419 Schaldella termitidis CP001741 826 32068 </td <td>Klebsiella</td> <td>CP026276</td> <td>570</td> <td>2662419</td>	Klebsiella	CP026276	570	2662419
Enterobacterales CP015396 91347 2662419 Enterobacterales CP020062 91347 2662419 Klebsiella aerogenes LR134255 548 2662419 Klebsiella variicola CP030098 1386 2662419 Bacillus CP030098 1386 2662419 Xanthomonas campestris CP017321 339 2662419 Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacteriaceae CP021177 543 2662419 Enterobacter hormaechei CP031568 158836 2662419 Salmonella enterica CP031568 158836 2662419 Salmonella enterica CP00657 28901 2662419 Scherichia coli KU994859 562 2662419 Sebaldella termitidis CP00657 28901 2662419 Klebsiella pneumoniae KX434880 573 2662419 Scbaldella termitidis CP016725 1358 32068 <td>Klebsiella</td> <td>CP026179</td> <td>570</td> <td>2662419</td>	Klebsiella	CP026179	570	2662419
Enterobacterales CP020062 91347 2662419 Klebsiella aerogenes LR134255 548 2662419 Klebsiella variicola CP020852 244366 2662419 Bacillus CP030098 1386 2662419 Xanthomonas campestris CP017321 339 2662419 Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacter hormaechei CP031568 158836 2662419 Enterobacter hormaechei CP031568 158836 2662419 Enterobacter hormaechei CP031568 158836 2662419 Salmonella enterica CP006057 28901 2662419 Salmonella enterica CP006057 28901 2662419 Sebaldella termitidis CP001741 826 22662419 Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP016725 1358 32068 Cupriavidus metallidurans CP016725 1358	Enterobacterales	CP007736	91347	2662419
Klebsiella aerogenes LR134255 548 2662419 Klebsiella variicola CP020852 244366 2662419 Bacillus CP030098 1386 2662419 Xanthomonas campestris CP017321 339 2662419 Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacter hormaechei CP021177 543 2662419 Enterobacter hormaechei CP031568 158836 2662419 Escherichia coli MK293945 562 2662419 Salmonella enterica CP006057 28901 2662419 Scherichia coli KU994859 562 2662419 Sescherichia coli KU994859 562 2662419 Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP001741 826 32068 Cupriavidus pauculus CP0033971 82633 106589	Enterobacterales	CP015396	91347	2662419
Klebsiella variicola CP020852 244366 2662419 Bacillus CP030098 1386 2662419 Xanthomonas campestris CP017321 339 2662419 Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacter hormaechei CP031568 158836 2662419 Enterobacter hormaechei CP031568 158836 2662419 Escherichia coli MK293945 562 2662419 Salmonella enterica CP006057 28901 2662419 Scherichia coli KU994859 562 2662419 Scherichia coli KV3434880 573 2662419 Scherichia coli KV3434880 573 2662419 Scherichia coli KV434880 573 2662419	Enterobacterales	CP020062	91347	2662419
Bacillus CP030098 1386 2662419 Xanthomonas campestris CP017321 339 2662419 Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacter hormaechei CP021177 543 2662419 Enterobacter hormaechei CP031568 158836 2662419 Escherichia coli MK293945 562 2662419 Salmonella enterica CP006057 28901 2662419 Sebenichia coli KU994859 562 2662419 Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP0016725 1358 32068 Cupriavidus metallidurans CP016725 1358 32068 Cupriavidus pauculus CP016725 1358 32068 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 1	Klebsiella aerogenes	LR134255	548	2662419
Xanthomonas campestris CP017321 339 2662419 Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacter hormaechei CP021177 543 2662419 Enterobacter hormaechei CP031568 158836 2662419 Escherichia coli MK293945 562 2662419 Salmonella enterica CP006057 28901 2662419 Escherichia coli KU994859 562 2662419	Klebsiella variicola	CP020852	244366	2662419
Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacteriaceae CP021177 543 2662419 Enterobacter hormaechei CP031568 158836 2662419 Escherichia coli MK293945 562 2662419 Salmonella enterica CP060657 28901 2662419 Sebancella entericia KU994859 562 2662419 Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP016725 1358 32068 Cupriavidus metallidurans CP003355 119219 32068 Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP033971 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP023040 26	Bacillus	CP030098	1386	2662419
Xanthomonas campestris CP017320 339 2662419 Enterobacteriaceae KX434883 543 2662419 Enterobacter laceae CP021177 543 2662419 Enterobacter hormaechei CP031568 158836 2662419 Escherichia coli MK293945 562 2662419 Escherichia coli KU994859 562 2662419 Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP016725 1358 32068 Cupriavidus metallidurans CP003357 19219 32068 Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP003222 1408191 1716 Komagataeibacter saccharivorans CP023040	Xanthomonas campestris	CP017321	339	2662419
Enterobacteriaceae KX434883 543 2662419 Enterobacteriaceae CP021177 543 2662419 Enterobacter hormaechei CP031568 158836 2662419 Escherichia coli MK293945 562 2662419 Salmonella enterica CP006057 28901 2662419 Escherichia coli KU994859 562 2662419 Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP016725 1358 32068 Cupriavidus metallidurans CP000355 119219 32068 Cupriavidus pauculus CP033971 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Komagataeibacter saccharivorans CP023040 <td></td> <td>CP017320</td> <td>339</td> <td>2662419</td>		CP017320	339	2662419
Enterobacter hormaechei CP031568 158836 2662419 Escherichia coli MK293945 562 2662419 Salmonella enterica CP006057 28901 2662419 Escherichia coli KU994859 562 2662419 Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP016725 1358 32068 Cupriavidus metallidurans CP000355 119219 32068 Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium glutamicum CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Enterobacterales CP012488<		KX434883	543	2662419
Escherichia coli MK293945 562 2662419 Salmonella enterica CP006057 28901 2662419 Escherichia coli KU994859 562 2662419 Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP016725 1358 32068 Cupriavidus metallidurans CP000355 119219 32068 Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium efficiens CP007723 1718 106589 Corynebacterium glutamicum CP003239 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406	Enterobacteriaceae	CP021177	543	2662419
Salmonella enterica CP006057 28901 2662419 Escherichia coli KU994859 562 2662419 Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP016725 1358 32068 Cupriavidus metallidurans CP000355 119219 32068 Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023049 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP012488 1692238 1716 Kosakonia radicincitans CP018018<	Enterobacter hormaechei	CP031568	158836	2662419
Escherichia coli KU994859 562 2662419 Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP016725 1358 32068 Cupriavidus metallidurans CP000355 119219 32068 Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP035396	Escherichia coli	MK293945	562	2662419
Klebsiella pneumoniae KX434880 573 2662419 Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP016725 1358 32068 Cupriavidus metallidurans CP000355 119219 32068 Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP035396 1423 1716 Bacillus subtilis CP035396 </td <td>Salmonella enterica</td> <td>CP006057</td> <td>28901</td> <td>2662419</td>	Salmonella enterica	CP006057	28901	2662419
Sebaldella termitidis CP001741 826 32068 Lactococcus lactis CP016725 1358 32068 Cupriavidus metallidurans CP000355 119219 32068 Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP035396 1423 1716 Bacillus velezensis CP019039 <td>Escherichia coli</td> <td>KU994859</td> <td>562</td> <td>2662419</td>	Escherichia coli	KU994859	562	2662419
Lactococcus lactis CP016725 1358 32068 Cupriavidus metallidurans CP000355 119219 32068 Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP035396 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 <td>Klebsiella pneumoniae</td> <td>KX434880</td> <td>573</td> <td>2662419</td>	Klebsiella pneumoniae	KX434880	573	2662419
Cupriavidus metallidurans CP000355 119219 32068 Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Sebaldella termitidis	CP001741	826	32068
Cupriavidus pauculus CP033971 82633 106589 Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis KX711616 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Lactococcus lactis	CP016725	1358	32068
Cupriavidus pauculus CP044066 82633 106589 Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis KX711616 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Cupriavidus metallidurans	CP000355	119219	32068
Corynebacterium efficiens AP005225 152794 106589 Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis CP035396 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Cupriavidus pauculus	CP033971	82633	106589
Corynebacterium glutamicum CP007723 1718 106589 Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis KX711616 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Cupriavidus pauculus	CP044066	82633	106589
Corynebacterium deserti CP009222 1408191 1716 Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis CP035396 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Corynebacterium efficiens	AP005225	152794	106589
Komagataeibacter saccharivorans CP023039 265959 1716 Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis CP035396 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Corynebacterium glutamicum	CP007723	1718	106589
Komagataeibacter saccharivorans CP023040 265959 1716 Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis CP035396 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Corynebacterium deserti	CP009222	1408191	1716
Yersinia enterocolitica FJ696406 630 1716 Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis CP035396 1423 1716 Bacillus velezensis KX711616 1423 1716 Salmonella enterica CP022659 28901 1716	Komagataeibacter saccharivorans	CP023039	265959	1716
Enterobacterales CP020504 91347 1716 Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis CP035396 1423 1716 Bacillus subtilis KX711616 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Komagataeibacter saccharivorans	CP023040	265959	1716
Enterobacter sp. FY-07 CP012488 1692238 1716 Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis CP035396 1423 1716 Bacillus subtilis KX711616 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Yersinia enterocolitica	FJ696406	630	1716
Kosakonia radicincitans CP018018 283686 1716 Bacillus subtilis CP032856 1423 1716 Bacillus subtilis CP035396 1423 1716 Bacillus subtilis KX711616 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Enterobacterales	CP020504	91347	1716
Bacillus subtilis CP032856 1423 1716 Bacillus subtilis CP035396 1423 1716 Bacillus subtilis KX711616 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Enterobacter sp. FY-07	CP012488	1692238	1716
Bacillus subtilis CP035396 1423 1716 Bacillus subtilis KX711616 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Kosakonia radicincitans	CP018018	283686	1716
Bacillus subtilis KX711616 1423 1716 Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Bacillus subtilis	CP032856	1423	1716
Bacillus velezensis CP019039 492670 1716 Salmonella enterica CP022659 28901 1716	Bacillus subtilis	CP035396	1423	1716
Salmonella enterica CP022659 28901 1716	Bacillus subtilis	KX711616	1423	1716
	Bacillus velezensis	CP019039	492670	1716
Yangia sp. CCB-MM3 CP014598 1792508 1716	Salmonella enterica	CP022659	28901	1716
	Yangia sp. CCB-MM3	CP014598	1792508	1716

scientificName	nuccoreAcc	taxid	parent
Yangia sp. CCB-MM3	CP014597	1792508	1716
Yangia sp. CCB-MM3	CP014601	1792508	1716
Nostocaceae	AP003604	1162	1716
Nostoc sp. NIES-2111	AP018191	1973475	1716
Nostoc sp. NIES-2111	AP018193	1973475	1716
Nostoc sp. PCC 7120	AP003605	103690	1716
Nostoc sp. NIES-2111	AP018189	1973475	1716
Campylobacter	CP008812	194	1716
Campylobacter	CP018794	194	1716
Campylobacter	CP008809	194	1716
Campylobacter fetus	CP014570	196	1716
Bacillus thuringiensis	CP004135	1428	1716
Bacillus	CP016596	1386	1716
Bacillus	CP015730	1386	1716
Bacillus thuringiensis	CP014289	1428	1716
Psychrobacter urativorans	CP012707	45610	1716
Psychrobacter urativorans	CP012709	45610	1716
Marinobacter hydrocarbonoclasticus	CP000516	2743	2742
Marinobacter sp. NP-4(2019)	CP034143	2488665	2742
Marinobacter salarius	CP021334	1420917	2742
Cyanobacterium aponinum	CP003948	379064	102234
Deinococcus radiodurans	CP015084	1299	1298
Deinococcus wulumuqiensis	CP031162	980427	1298
Lactobacillus plantarum	CP024415	1590	1298
Lactobacillus plantarum	CP018210	1590	1298
Desulfosporosinus acidiphilus	CP003641	885581	79206
Rhodobacter sphaeroides	CP000666	1063	79206
Ketogulonicigenium robustum	CP019939	92947	79206
Vibrio anguillarum	CP023056	55601	79206
Vibrio anguillarum	CP023312	55601	79206
Vibrio breoganii	CP016179	553239	662
Thermus oshimai	CP003251	56957	662
Thermus aquaticus	CP010824	271	662
Paenibacillus larvae	CP019656	1464	662
Paenibacillus larvae	CP020558	1464	662
Lactobacillales	MF807213	186826	662
Lactobacillus pentosus	KJ868092	1589	662
Allochromatium vinosum	CP001897	1049	662
Deinococcus radiodurans	CP015083	1299	662
Deinococcus proteolyticus	CP002539	55148	662
Deinococcus wulumuqiensis	CP031159	980427	662
Roseovarius	CP045395	74030	662
Antarctobacter heliothermus	CP022542	74033	662
Candidatus Fukatsuia symbiotica	CP021660	1878942	1927833
J	21 021000		00

scientificName	nuccoreAcc	taxid	parent
Candidatus Fukatsuia symbiotica	CP021662	1878942	1927833
Candidatus Fukatsuia symbiotica	CP021661	1878942	1927833
Enterobacteriaceae	CP032306	543	1927833
Enterobacteriaceae	CP031139	543	1927833
Halomonas sp. ZM3	JX569338	1250400	2609666
Marinobacter salarius	CP020932	1420917	2609666
Staphylococcus	CP015174	1279	2609666
Staphylococcus aureus	MH785246	1280	2609666
Planctomycetes bacterium ElP	CP036427	2527974	473814
Planctomycetes bacterium ElP	CP036428	2527974	473814
Planctomycetes bacterium ElP	CP036431	2527974	473814
Staphylococcus aureus	CP042019	1280	473814
Staphylococcus aureus	CP042016	1280	473814
Staphylococcus aureus	CP042056	1280	473814
Staphylococcus aureus	CP042024	1280	473814
Pseudomonas	CP000059	286	473814
Pseudomonas savastanoi	AF141883	29438	473814
Pseudomonas antarctica	CP015601	219572	286
Borrelia hermsii	CP014816	140	286
Borrelia hermsii	CP014871	140	286
Borrelia hermsii	CP014820	140	286
Borrelia hermsii	CP014825	140	286
Enterococcus faecalis	MH830363	1351	286
Enterococcus faecalis	CP030044	1351	286
Enterococcus casseliflavus	CP032740	37734	1350
Enterococcus sp. FDAARGOS_375	CP023514	2060307	1350
Leuconostoc	CP035140	1243	1350
Leuconostoc carnosum	CP003855	1252	1350
Leuconostoc gelidum	LN890333	1244	1350
Clostridium botulinum	AB910391	1491	1350
Clostridium botulinum	CP014172	1491	1350
Clostridium botulinum	CP000729	1491	1350
Streptomyces dengpaensis	CP026653	2049881	1350
Streptomyces sp. S1D4-14	CP041605	2594461	2593676
Streptomyces sp. 769	CP003988	1262452	2593676
Anabaenopsis circularis	AP018177	109266	110103
Nostoc sp. HK-01	AP018321	196308	110103
Calothrix brevissima	AP018212	938406	110103
Clostridium botulinum	CP002414	1491	110103
Clostridiaceae bacterium 14S0207	CP026602	2082193	189971
Sinorhizobium fredii	CP003576	380	189971
Sinorhizobium fredii	CP003582	380	189971
Xanthomonas citri	CP015974	346	189971
Xanthomonas citri	AY125331	346	189971

•	scientificName	nuccoreAcc	taxid	parent
Nitrosomonas eutropha CP000451 916 914 Nitrosomonas eutropha CP000451 916 914 Nitrosomonas stercoris AP019756 1444684 914 Bacillus thuringiensis CP003764 1428 914 Leclercia adecarboxylata CP042496 83655 914 Leclercia ape. LSNIH1 CP026168 1920114 2627398 Lelliottia sp. WB101 CP028521 2153385 2642424 Clostridium carboxidivorans CP011804 217159 1485 Acinetobacter indicus CP044020 756892 1485 Acinetobacter baumannii CP042209 470 1485 Microcoleus sp. PCC 7113 CP03635 1173027 1485 Microcoleus sp. PCC 7113 CP06375 117645 308865 Borreliella spielmanii CP01467 88916 308865 Borreliella spielmanii CP01464 88916 308865 Borreliella bavariensis CP03144 48764 156885 Paracoccus yeei CP031083 <td< td=""><td>Dinoroseobacter shibae</td><td>CP000835</td><td>215813</td><td>189971</td></td<>	Dinoroseobacter shibae	CP000835	215813	189971
Nitrosomonas eutropha CP000451 916 914 Nitrosomonas stercoris AP019756 14444684 914 Nitrosomonas stercoris AP019756 1444684 914 Leclercia adecarboxylata CP042496 83655 914 Leclercia adecarboxylata MH909330 83655 914 Leclercia sp. LSNIH1 CP026168 1920114 2627398 Lelliottia sp. WB101 CP026851 2153385 2642424 Clostridium carboxidivorans CP011804 217159 1485 Acinetobacter indicus CP044020 756892 1485 Acinetobacter baumannii CP042209 470 1485 Microcoleus sp. PCC 7113 CP003635 1173027 1485 Clostridium perfringens MK275622 1502 1485 Elizabethkingia anophelis CP016375 1117645 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP0044	Calothrix	AP018257	1186	189971
Nitrosomonas stercoris AP019756 1444684 914 Bacillus thuringiensis CP003764 1428 914 Leclercia adecarboxylata CP042496 83655 914 Leclercia adecarboxylata MH909330 83655 914 Leclercia sp. LSNIH1 CP026168 1920114 2627398 Lelliottia sp. WB101 CP028521 2153385 2642424 Clostridium carboxidivorans CP044020 756892 1485 Acinetobacter indicus CP044020 756892 1485 Acinetobacter baumannii CP042209 470 1485 Microcoleus sp. PCC 7113 CP003635 1173027 1485 Microcoleus sp. PCC 7113 CP016375 1117645 308865 Borreliella valaisiana CP016375 1117645 308865 Borreliella spielmanii CP014464 88916 308865 Borreliella afzelii CP001466 88916 308865 Borreliella bavariensis CP00406 29518 308865 Borreliella bavariensis CP0	Nitrosomonas eutropha	CP000452	916	914
Bacillus thuringiensis CP003764 1428 914 Leclercia adecarboxylata CP042496 83655 914 Leclercia adecarboxylata MH909330 83655 914 Leclercia sp. LSNIH1 CP026168 1920114 2627398 Lelliottia sp. WB101 CP028521 2153385 2642424 Clostridium carboxidivorans CP014020 756892 1485 Acinetobacter indicus CP044020 756892 1485 Acinetobacter baumannii CP042209 470 1485 Acinetobacter baumannii CP042209 470 1485 Microcoleus sp. PCC 7113 CP003635 1173027 1485 Clostridium perfringens MK275622 1502 1485 Bilizabethkingia anophelis CP016375 1117645 308865 Borreliella valaisiana CP001437 62088 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella bavariensis CP02	Nitrosomonas eutropha	CP000451	916	914
Leclercia adecarboxylata CP042496 83655 914 Leclercia adecarboxylata MH909330 83655 914 Leclercia apecarboxylata MH909330 83655 914 Leclercia apecarboxylata CP0268 1920114 2627398 Lelliottia sp. WB101 CP028521 2153385 2642424 Clostridium carboxidivorans CP011804 217159 1485 Acinetobacter indicus CP044020 756892 1485 Acinetobacter baumannii CP042209 470 1485 Microcoleus sp. PCC 7113 CP003635 1173027 1485 Clostridium perfringens MK275622 1502 1485 Elizabethkingia anophelis CP016375 1117645 308865 Borreliella spielmanii CP001476 88916 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella afzelii CP000406 29518 308865 Borreliella bavariensis CP028883 664662 308865 Paracoccus yeei CP0310	Nitrosomonas stercoris	AP019756	1444684	914
Leclercia adecarboxylata MH909330 83655 914 Leclercia sp. LSNIH1 CP026168 1920114 2627398 Lelliottia sp. WB101 CP028521 2153385 2642424 Clostridium carboxidivorans CP044020 756892 1485 Acinetobacter indicus CP044209 470 1485 Acinetobacter baumannii CP042209 470 1485 Microcoleus sp. PCC 7113 CP003635 1173027 1485 Clostridium perfringens MK275622 1502 1485 Bizabethkingia anophelis CP016375 1117645 308865 Borreliella valaisiana CP001466 88916 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella afzelii CP001466 88916 308865 Borreliella bavariensis CP028883 664662 308865 Borreliella bavariensis CP028883 664662 308865 Borreliella perimanii CP003052 80679 156885 Paracoccus yeei CP031083<	Bacillus thuringiensis	CP003764	1428	914
Leclercia sp. LSNIH1 CP026168 1920114 2627398 Lelliottia sp. WB101 CP028521 2153385 2642424 Clostridium carboxidivorans CP011804 217159 1485 Acinetobacter indicus CP044209 756892 1485 Acinetobacter baumannii CP042209 470 1485 Microcoleus sp. PCC 7113 CP003635 1173027 1485 Clostridium perfringens MK275622 1502 1485 Borreliella valaisiana CP016375 111764 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella bavariensis CP000466 29518 308865 Borreliella bavariensis CP028883 664662 308865 Thioflavicoccus mobilis CP031083 147645 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP031083 147645 156885 Lactobacillus AB370335	Leclercia adecarboxylata	CP042496	83655	914
Lelliottia sp. WB101 CP028521 2153385 2642424 Clostridium carboxidivorans CP011804 217159 1485 Acinetobacter indicus CP044020 756892 1485 Microcoleus sp. PCC 7113 CP03635 1173027 1485 Microcoleus sp. PCC 7113 CP003635 1173027 1485 Clostridium perfringens MK275622 1502 1485 Elizabethkingia anophelis CP016375 1117645 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella bavariensis CP00406 29518 308865 Borreliella bavariensis CP028883 664662 308865 Borreliella bavariensis CP030052 80679 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus plantarum CP031084 <td>Leclercia adecarboxylata</td> <td>MH909330</td> <td>83655</td> <td>914</td>	Leclercia adecarboxylata	MH909330	83655	914
Clostridium carboxidivorans CP011804 217159 1485 Acinetobacter indicus CP044020 756892 1485 Acinetobacter baumannii CP042209 470 1485 Microcoleus sp. PCC 7113 CP03635 1173027 1485 Clostridium perfringens MK275622 1502 1485 Elizabethkingia anophelis CP016375 1117645 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella afzelii CP000406 29518 308865 Borreliella bavariensis CP028883 664662 308865 Borreliella bavariensis CP03052 80679 15685 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus AB370335 1578 156885 Lactobacillus PN667595 1578 156885 Lactobacillus plantarum CP031084 147645<	Leclercia sp. LSNIH1	CP026168	1920114	2627398
Acinetobacter indicus CP044020 756892 1485 Acinetobacter baumannii CP042209 470 1485 Microcoleus sp. PCC 7113 CP003635 1173027 1485 Clostridium perfringens MK275622 1502 1485 Elizabethkingia anophelis CP016375 1117645 308865 Borreliella valaisiana CP001437 62088 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella bavariensis CP004040 29518 308865 Borreliella bavariensis CP028883 664662 308865 Thioflavicoccus mobilis CP03052 80679 15685 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP020444 147645 156885 Lactobacillus AB370335 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP037439 1590 </td <td>Lelliottia sp. WB101</td> <td>CP028521</td> <td>2153385</td> <td>2642424</td>	Lelliottia sp. WB101	CP028521	2153385	2642424
Acinetobacter baumannii CP042209 470 1485 Microcoleus sp. PCC 7113 CP003635 1173027 1485 Clostridium perfringens MK275622 1502 1485 Elizabethkingia anophelis CP016375 1117645 308865 Borreliella valaisiana CP001447 62088 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella bavariensis CP000406 29518 308865 Borreliella bavariensis CP028883 664662 308865 Thioflavicoccus mobilis CP030052 8067 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus AB370335 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP03104 147645 156885 Lactobacillus plantarum CP013162 15	Clostridium carboxidivorans	CP011804	217159	1485
Microcoleus sp. PCC 7113 CP003635 1173027 1485 Clostridium perfringens MK275622 1502 1485 Elizabethkingia anophelis CP016375 1117645 308865 Borreliella valaisiana CP001447 62088 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP000406 29518 308865 Borreliella drzelii CP000406 29518 308865 Borreliella bavariensis CP028883 664662 308865 Borreliella bavariensis CP031083 147645 156885 Paracocus yeei CP031083 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP03164 147645 156885 Lactobacillus plantarum CP013162 1590 156885 Lactobacillus plantarum CP03300 470	Acinetobacter indicus	CP044020	756892	1485
Clostridium perfringens MK275622 1502 1485 Elizabethkingia anophelis CP016375 1117645 308865 Borreliella valaisiana CP001437 62088 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella bavariensis CP000406 29518 308865 Borreliella bavariensis CP028883 664662 308865 Thioflavicoccus mobilis CP031083 147645 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Lactobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 </td <td>Acinetobacter baumannii</td> <td>CP042209</td> <td>470</td> <td>1485</td>	Acinetobacter baumannii	CP042209	470	1485
Elizabethkingia anophelis CP016375 1117645 308865 Borreliella valaisiana CP001437 62088 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella bavariensis CP002883 664662 308865 Borreliella bavariensis CP03052 80679 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP031084 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP031084 147645 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP03162 1590 156885 Lactobacillus plantarum CP0013162 1590 156885 Lactobacillus plantarum CP013162 1590<	Microcoleus sp. PCC 7113	CP003635	1173027	1485
Borreliella valaisiana CP001437 62088 308865 Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella spielmanii CP000406 29518 308865 Borreliella bavariensis CP028883 664662 308865 Borreliella bavariensis CP03052 80679 156885 Thioflavicoccus mobilis CP031083 147645 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Lactobacillus plantarum CP04122 36745 1485 Acinetobacter baumannii KY202456 470 <td>Clostridium perfringens</td> <td>MK275622</td> <td>1502</td> <td>1485</td>	Clostridium perfringens	MK275622	1502	1485
Borreliella spielmanii CP001466 88916 308865 Borreliella spielmanii CP001464 88916 308865 Borreliella afzelii CP000406 29518 308865 Borreliella bavariensis CP028883 664662 308865 Thioflavicoccus mobilis CP03052 80679 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP031084 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP004122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP034095 470 1485 Acinetobacter pittii CP018910 48296	Elizabethkingia anophelis	CP016375	1117645	308865
Borreliella spielmanii CP001464 88916 308865 Borreliella afzelii CP000406 29518 308865 Borreliella bavariensis CP028883 664662 308865 Thioflavicoccus mobilis CP003052 80679 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP020444 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP004122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter pittii CP034095	Borreliella valaisiana	CP001437	62088	308865
Borreliella afzelii CP000406 29518 308865 Borreliella bavariensis CP028883 664662 308865 Thioflavicoccus mobilis CP03052 80679 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP020444 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Lactobacillus plantarum CP03304 470 1485 Acinetobacter baumannii KY202456 470 <t< td=""><td>Borreliella spielmanii</td><td>CP001466</td><td>88916</td><td>308865</td></t<>	Borreliella spielmanii	CP001466	88916	308865
Borreliella bavariensis CP028883 64462 308865 Thioflavicoccus mobilis CP003052 80679 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP020444 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP04122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella anisa CP029564 28082	Borreliella spielmanii	CP001464	88916	308865
Thioflavicoccus mobilis CP003052 80679 156885 Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP020444 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP004122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP000791 680 445 </td <td>Borreliella afzelii</td> <td>CP000406</td> <td>29518</td> <td>308865</td>	Borreliella afzelii	CP000406	29518	308865
Paracoccus yeei CP031083 147645 156885 Paracoccus yeei CP020444 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus DQ116709 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP04122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella ongbeachae FN650141 450 445 Vibrio campbellii CP00791 680 445 </td <td>Borreliella bavariensis</td> <td>CP028883</td> <td>664662</td> <td>308865</td>	Borreliella bavariensis	CP028883	664662	308865
Paracoccus yeei CP020444 147645 156885 Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP004122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP03300 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella ongbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP000791 680 445 Vibrio campbellii CP000791 680 445 <td>Thioflavicoccus mobilis</td> <td>CP003052</td> <td>80679</td> <td>156885</td>	Thioflavicoccus mobilis	CP003052	80679	156885
Paracoccus yeei CP031084 147645 156885 Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus DQ116709 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP031162 1590 156885 Lactobacillus plantarum CP004122 36745 1485 Clostridium saccharoperbutylacetonicum CP004122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP019296 680 445 Vibrio campbellii CP000791 680 445 Vibrio campbellii CP000791 680 445	Paracoccus yeei	CP031083	147645	156885
Lactobacillus FN667595 1578 156885 Lactobacillus AB370335 1578 156885 Lactobacillus DQ116709 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP004122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter pittii CP034095 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP000791 680 445 Vibrio campbellii CP000791 680 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Paracoccus yeei	CP020444	147645	156885
Lactobacillus AB370335 1578 156885 Lactobacillus DQ116709 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP04122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter pittii CP034095 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445 <td>Paracoccus yeei</td> <td>CP031084</td> <td>147645</td> <td>156885</td>	Paracoccus yeei	CP031084	147645	156885
Lactobacillus DQ116709 1578 156885 Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP004122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter pittii CP034095 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP000791 680 445 Vibrio campbellii CP000791 680 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Lactobacillus	FN667595	1578	156885
Lactobacillus plantarum CP037439 1590 156885 Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP004122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter baumannii CP034095 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Lactobacillus	AB370335	1578	156885
Lactobacillus plantarum CP013162 1590 156885 Clostridium saccharoperbutylacetonicum CP004122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter baumannii CP034095 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Lactobacillus	DQ116709	1578	156885
Clostridium saccharoperbutylacetonicum CP004122 36745 1485 Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter baumannii CP034095 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Lactobacillus plantarum	CP037439	1590	156885
Acinetobacter baumannii KY202456 470 1485 Acinetobacter baumannii CP023300 470 1485 Acinetobacter baumannii CP034095 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Lactobacillus plantarum	CP013162	1590	156885
Acinetobacter baumannii CP023300 470 1485 Acinetobacter baumannii CP034095 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Clostridium saccharoperbutylacetonicum	CP004122	36745	1485
Acinetobacter baumannii CP034095 470 1485 Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Acinetobacter baumannii	KY202456	470	1485
Acinetobacter pittii CP018910 48296 1485 Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Acinetobacter baumannii	CP023300	470	1485
Legionella sainthelensi CP025493 28087 445 Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Acinetobacter baumannii	CP034095	470	1485
Legionella longbeachae FN650141 450 445 Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Acinetobacter pittii	CP018910	48296	1485
Legionella anisa CP029564 28082 445 Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Legionella sainthelensi	CP025493	28087	445
Vibrio campbellii CP019296 680 445 Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Legionella longbeachae	FN650141	450	445
Vibrio campbellii CP000791 680 445 Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445		CP029564	28082	445
Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Vibrio campbellii	CP019296	680	445
Bacteria JX023543 2 445 Streptococcus thermophilus MF807212 1308 445 Corynebacterium glutamicum AY172685 1718 445	Vibrio campbellii	CP000791	680	445
Corynebacterium glutamicum AY172685 1718 445		JX023543	2	445
Corynebacterium glutamicum AY172685 1718 445	Streptococcus thermophilus	MF807212	1308	445
	Corynebacterium glutamicum	AY172685	1718	445
		CP001105	39485	28050

scientificName	nuccoreAcc	taxid	parent
Moraxella bovis	AB169977	476	28050
Staphylococcus sciuri	CP041881	1296	28050
Staphylococcus sciuri	CP041887	1296	28050
Staphylococcus aureus	CP042010	1280	28050
Staphylococcus aureus	CP042051	1280	28050
Staphylococcus aureus	CP042059	1280	28050
Hafnia alvei	AY271828	569	568
Hafnia alvei	AY271829	569	568
Shinella sp. HZN7	CP015746	879274	568
Shinella sp. HZN7	CP015740	879274	568
Mycobacterium dioxanotrophicus	CP020812	482462	1763
Mycobacterium dioxanotrophicus	CP020813	482462	1763
Mycobacterium dioxanotrophicus	CP020811	482462	1763
Mycobacterium dioxanotrophicus	CP020810	482462	1763
Acinetobacter sp. NCu2D-2	CP015595	1608473	196816
Acinetobacter sp. LoGeW2-3	CP024012	1808001	196816
Epibacterium mobile	LR027555	379347	196816
Epibacterium mobile	CP015232	1265309	196816
Paracoccus pantotrophus	CP044424	82367	196816
Paracoccus jeotgali	CP025584	2065379	265
Aromatoleum aromaticum	CR555308	551760	551759
Aromatoleum aromaticum	CR555307	551760	551759
Dietzia psychralcaliphila	CP015454	139021	37914
Dietzia sp. oral taxon 368	CP027240	712270	2617939
Dietzia lutea	CP015450	546160	2617939
Calothrix sp. 336/3	CP011384	1337936	2619626
Nostoc sp. CENA543	CP023283	1869241	2619626
Proteobacteria	CP018473	1224	2619626
Proteobacteria	CP021651	1224	2619626
Proteobacteria	AM778842	1224	2619626
Proteobacteria	AP013064	1224	2619626
Proteobacteria	KX169264	1224	2619626
Achromobacter xylosoxidans	CP014066	85698	2619626
Oscillatoria nigro-viridis	CP003618	482564	1158
Calothrix sp. 336/3	CP011383	1337936	1158
Sulfuricurvum kujiense	CP002359	148813	1158
Halomonas sp. THAF12	CP045401	2587849	2609666
Halomonas sp. THAF12	CP045400	2587849	2609666
Salmonella enterica	CP030291	28901	2609666
Salmonella enterica	CP021466	28901	2609666
Salinicoccus sp.	KY018598	1871624	2628837
Salinicoccus sp.	KY018597	1871624	2628837
Lactococcus lactis	AY026767	1358	2628837
Lactococcus lactis Lactococcus lactis	AF380336	1358	2628837
Lactococcus factis	AF 300330	1990	2020001

Lactobacillus fermentum	scientificName	nuccoreAcc	taxid	parent
Rhodobacteraceae bacterium CP031588 1904441 2628837 Yangia pacifica CP022193 311180 2628837 Nibrio sp. 23023 CP000755 452803 2614977 Neorhizobium sp. NCHU2750 CP030832 1825976 2629175 Neorhizobium sp. NCHU2750 CP030832 1825976 2629175 Pseudomonas sp. GLE121 KC542382 1329969 2629175 Desulfovibrio carbinolicus CP026543 296842 2629175 Desulfovibrio carbinolicus CP025614 1612173 1543704 Niveispirillum cyanobacteriorum CP025615 1612173 1543704 Niveispirillum cyanobacteriorum CP002405 28151 613 Serratia proteamaculans CP002405 1264 1263 Serratia proteamaculans CP002405 1264 1263 Nodularia spumigena CP02405 1264 1263 Nodularia spumigena CP02601 2082193 159191 Clostridiaceae bacterium 14S0207 CP026601 2082193 159191	-			
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Niveispirillum cyanobacteriorum CP025614 1612173 1543704 Niveispirillum cyanobacteriorum CP025615 1612173 1543704 Serratia proteamaculans CP000827 28151 613 Ruminococcus albus CP002015 70799 159191 Nodularia spumigena CP020115 70799 159191 Fischerella sp. NIES-4106 AP018304 2005456 159191 Clostridiaceae bacterium 14S0207 CP026601 2082193 159191 Clostridiaceae bacterium 14S0207 CP026603 2082193 159191 Leisingera aquaemixtae CP010718 1580596 159191 Leisingera aquaemixtae CP041157 1396826 159191 Rivularia sp. PCC 7116 CP003550 373994 159191 Prosthecochloris aestuarii CP001109 1101 101 Pseudomonas sp. MPC6 CP034781 2498848 1101 Virgibacillus halodenitrificans CP033050 1482 84406 Photorhabdus asymbiotica FM162592 291112 84406				
Niveispirillum cyanobacteriorum CP025615 1612173 1543704 Serratia proteamaculans CP000827 28151 613 Ruminococcus albus CP020405 1264 1263 Nodularia spumigena CP020115 70799 159191 Fischerella sp. NIES-4106 AP018304 2005456 159191 Clostridiaceae bacterium 14S0207 CP026601 2082193 159191 Clostridiaceae bacterium 14S0207 CP026603 2082193 159191 Phaeobacter piscinae CP010718 1580596 159191 Leisingera aquaemixtae CP041157 1396826 159191 Rivularia sp. PCC 7116 CP003550 373994 159191 Prosthecochloris aestuarii CP001109 1102 1101 Pseudomonas sp. MPC6 CP034781 2498848 1101 Virgibacillus halodenitrificans CP03596 2136182 1101 Virgibacillus halodenitrificans CP033050 1482 84406 Photorhabdus asymbiotica FM162592 291112 84406				
Serratia proteamaculans CP000827 28151 613 Ruminococcus albus CP002405 1264 1263 Nodularia spumigena CP020115 70799 159191 Fischerella sp. NIES-4106 AP018304 2005456 159191 Clostridiaceae bacterium 14S0207 CP026601 2082193 159191 Clostridiaceae bacterium 14S0207 CP026603 2082193 159191 Phaeobacter piscinae CP010718 1580596 159191 Leisingera aquaemixtae CP041157 1396826 159191 Rivularia sp. PCC 7116 CP03550 373994 159191 Prosthecochloris aestuarii CP001109 1102 1101 Pseudomonas sp. MPC6 CP034781 2498848 1101 Virgibacillus halodenitrificans CP035956 2136182 1101 Virgibacillus halodenitrificans CP035950 1482 84406 Photorhabdus asymbiotica FM162592 291112 84406 Potatria ingresser CP040989 29494 662 Serratia plymu	- *			
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Virgibacillus halodenitrificans CP033050 1482 84406 Photorhabdus asymbiotica FM162592 291112 84406 Pectobacterium carotovorum KT351734 554 84406 Vibrio furnissii CP040989 29494 662 Serratia plymuthica CP018920 615 613 Serratia marcescens CP018918 615 613 Serratia marcescens CP018916 615 613 Serratia marcescens CP018916 615 613 Serratia marcescens AP013065 615 613 Serratia marcescens CP038895 614 613 Serratia marcescens LT575492 615 613 Serratia marcescens LT575492 615 613 Dinoroseobacter shibae CP000832 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613				
Photorhabdus asymbiotica FM162592 291112 84406 Pectobacterium carotovorum KT351734 554 84406 Vibrio furnissii CP040989 29494 662 Serratia plymuthica CP006251 82996 613 Serratia marcescens CP018920 615 613 Serratia marcescens CP018918 615 613 Serratia marcescens CP018916 615 613 Serratia marcescens AP013065 615 613 Serratia liquefaciens CP033895 614 613 Serratia marcescens LT575492 615 613 Serratia marcescens CP000832 215813 613 Dinoroseobacter shibae CP000832 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018251 1161 613 Leisingera </td <td>Virgibacillus halodenitrificans</td> <td></td> <td>1482</td> <td></td>	Virgibacillus halodenitrificans		1482	
Pectobacterium carotovorum KT351734 554 84406 Vibrio furnissii CP040989 29494 662 Serratia plymuthica CP006251 82996 613 Serratia marcescens CP018920 615 613 Serratia marcescens CP018918 615 613 Serratia marcescens CP018916 615 613 Serratia marcescens AP013065 615 613 Serratia liquefaciens CP033895 614 613 Serratia marcescens LT575492 615 613 Serratia marcescens LT575492 615 613 Dinoroseobacter shibae CP000832 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Leisingera CP038				
Serratia plymuthica CP006251 82996 613 Serratia marcescens CP018920 615 613 Serratia marcescens CP018918 615 613 Serratia marcescens CP018916 615 613 Serratia marcescens AP013065 615 613 Serratia liquefaciens CP038895 614 613 Serratia marcescens LT575492 615 613 Dinoroseobacter shibae CP000832 215813 613 Dinoroseobacter shibae CP000834 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	· ·	KT351734	554	84406
Serratia marcescens CP018920 615 613 Serratia marcescens CP018918 615 613 Serratia marcescens CP018916 615 613 Serratia marcescens AP013065 615 613 Serratia liquefaciens CP033895 614 613 Serratia marcescens LT575492 615 613 Dinoroseobacter shibae CP000832 215813 613 Dinoroseobacter shibae CP000834 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP035424 191028 2620435 Leisingera CP035424 191028 2620435	Vibrio furnissii	CP040989	29494	662
Serratia marcescens CP018920 615 613 Serratia marcescens CP018918 615 613 Serratia marcescens CP018916 615 613 Serratia marcescens AP013065 615 613 Serratia liquefaciens CP033895 614 613 Serratia marcescens LT575492 615 613 Dinoroseobacter shibae CP000832 215813 613 Dinoroseobacter shibae CP000834 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP035424 191028 2620435 Leisingera CP035424 191028 2620435	Serratia plymuthica		82996	
Serratia marcescens CP018916 615 613 Serratia marcescens AP013065 615 613 Serratia liquefaciens CP033895 614 613 Serratia marcescens LT575492 615 613 Dinoroseobacter shibae CP000832 215813 613 Dinoroseobacter shibae CP000834 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435		CP018920	615	613
Serratia marcescens AP013065 615 613 Serratia liquefaciens CP033895 614 613 Serratia marcescens LT575492 615 613 Dinoroseobacter shibae CP000832 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Serratia marcescens	CP018918	615	613
Serratia liquefaciens CP033895 614 613 Serratia marcescens LT575492 615 613 Dinoroseobacter shibae CP000832 215813 613 Dinoroseobacter shibae CP000834 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Serratia marcescens	CP018916	615	613
Serratia marcescens LT575492 615 613 Dinoroseobacter shibae CP000832 215813 613 Dinoroseobacter shibae CP000834 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Serratia marcescens	AP013065	615	613
Dinoroseobacter shibae CP000832 215813 613 Dinoroseobacter shibae CP000834 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Serratia liquefaciens	CP033895	614	613
Dinoroseobacter shibae CP000834 215813 613 Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Serratia marcescens	LT575492	615	613
Clostridium botulinum CP014146 1491 613 Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Dinoroseobacter shibae	CP000832	215813	613
Phaeobacter CP010700 302485 613 Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Dinoroseobacter shibae	CP000834	215813	613
Leisingera sp. NJS204 CP035423 2508307 613 Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Clostridium botulinum	CP014146	1491	613
Nostocales AP018253 1161 613 Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Phaeobacter	CP010700	302485	613
Nostocales AP018251 1161 613 Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Leisingera sp. NJS204	CP035423	2508307	613
Lactobacillus sp. MK858222 1591 2620435 Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Nostocales	AP018253	1161	613
Leisingera CP038236 191028 2620435 Leisingera CP035424 191028 2620435	Nostocales	AP018251	1161	613
Leisingera CP035424 191028 2620435	Lactobacillus sp.	$\rm MK858222$	1591	2620435
0	Leisingera	CP038236	191028	2620435
	<u> </u>	CP035424	191028	2620435
	Leisingera aquaemixtae	CP041161	1396826	2620435

Pseudomonas	scientificName	nuccoreAcc	taxid	parent
Gammaproteobacteria bacterium DM2 CP028898 2169539 33811 Yersinia pestis CP045261 632 33811 Streptomyces lavendulae NC 010097 1914 1847 Lactobacillus buchneri CP02655 1581 1847 Lactobacillus galinarum CP012895 52242 1847 Lactobacillus plantarum CP035158 1590 1847 Lactobacillus plantarum CP035158 1590 1847 Lactobacillus plantarum CP019351 1590 1847 Lactobacillus plantarum CP019351 1590 1847 Lactobacillus plantarum CP0140462 2582830 2608891 Enterococcus sp. M190262 CP040462 2582830 2608891 Enterococcus sp. CR-Ec1 CP025224 2057791 2608891 Enterococcus sp. CR-Ec1 CP040462 2582830 2608891 Enterococcus sp. CR-Ec1 CP014068 1353 1350 Runella sp. SP2 CP031031 2268026 2631755 Vibrio nigripulchritudo FP	Enterobacter soli	CP003028	885040	547
Versinia pestis CP045261 632 33811 Pseudonocardia autotrophica AB600171 2074 1847 Streptomyces lavendulae NC_010097 1914 1847 Lactobacillus buchneri CP002655 1581 1847 Lactobacillus gallinarum CP012895 52242 1847 Lactobacillus plantarum CP035158 1590 1847 Lactobacillus plantarum CP035158 1590 1847 Lactobacillus plantarum CP019351 1590 1847 Lactobacillus plantarum CP019351 1590 1847 Enterococcus sp. M190262 CP040462 2582830 2608891 Enterococcus gallinarum CP014068 1353 1350 Runella sp. SP2 CP014068 1353 1350 Runella sp. SP2 CP014068 28173 263175 Sinorhizobium fredii CP003572 380 263175 Sinorhizobium fredii CP003573 380 263175 Psychrobacter sp. P11G5 CP012535 1699624	Pseudomonas	MF344570	286	547
Pseudonocardia autotrophica AB600171 2074 1847 Streptomyces lavendulae NC 010097 1914 1847 Lactobacillus buchneri CP002655 1581 1847 Lactobacillus gallinarum CP012895 52242 1847 Lactobacillus plantarum CP035158 1590 1847 Lactobacillus plantarum CP019351 1590 1847 Enterococcus sp. M190262 CP040462 2582830 2608891 Enterococcus gallinarum CP014068 1353 1350 Runella sp. SP2 CP031031 2268026 2631755 Sinorhizobium fredii CP03572 380 2631755 Sinorhizobium fredii CP003572 380 2631755 Psychrobacter sp. P11G5 CP012535 1699624 2631755 Psychrobacter sp. G CP004536 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter baumannii KP89034 470 497 Acinetobacter baumannii KP890934	Gammaproteobacteria bacterium DM2	CP028898	2169539	33811
Streptomyces lavendulae NC_010097 1914 1847 Lactobacillus buchneri CP002655 1581 1847 Lactobacillus gallinarum CP012895 52242 1847 Lactobacillus curvatus AF200347 28038 1847 Lactobacillus plantarum CP035158 1590 1847 Lactobacillus plantarum CP019351 1590 1847 Lactobacillus plantarum CP014062 2528280 2608891 Enterococcus sp. M190262 CP040462 2582830 2608891 Enterococcus gallimarum CP014068 1353 1350 Runella sp. SP2 CP014068 1353 1350 Runella sp. SP2 CP014068 1353 2631755 Sinorhizobium fredii CP003572 380 2631755 Sinorhizobium fredii CP003574 380 2631755 Psychrobacter sp. P11G5 CP012535 1699624 2631755 Psychrobacter sp. G CP006266 571800 497 Acinetobacter sp. P11G5 CP012536 169	Yersinia pestis	CP045261	632	33811
Lactobacillus buchneri CP002655 1581 1847 Lactobacillus gallinarum CP012895 52242 1847 Lactobacillus curvatus AF200347 28038 1847 Lactobacillus plantarum CP035158 1590 1847 Lactobacillus plantarum CP019351 1590 1847 Enterococcus sp. M190262 CP040462 2582830 2608891 Enterococcus sp. CR-Ec1 CP025224 2057791 2608891 Enterococcus gallinarum CP014068 1353 1350 Runella sp. SP2 CP031031 2268026 2631758 Sinorhizobium fredii CP003572 380 2631758 Sinorhizobium fredii CP003572 380 2631758 Psychrobacter sp. P11G5 CP012535 1699624 2631758 Psychrobacter sp. P11G5 CP012535 1699624 2631758 Psychrobacter sp. G CP006266 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter baumannii KP89034 <td>Pseudonocardia autotrophica</td> <td>AB600171</td> <td>2074</td> <td>1847</td>	Pseudonocardia autotrophica	AB600171	2074	1847
Lactobacillus gallinarum CP012895 52242 1847 Lactobacillus curvatus AF200347 28038 1847 Lactobacillus plantarum CP035158 1590 1847 Lactobacillus plantarum CP049351 1590 1847 Enterococcus sp. M190262 CP040462 2582830 2688891 Enterococcus gallinarum CP014068 1353 1350 Runella sp. SP2 CP031031 226802 2631755 Vibrio nigripulchritudo FP893246 28173 2631755 Sinorhizobium fredii CP003572 380 2631755 Sinorhizobium fredii CP003574 380 2631755 Psychrobacter sp. P11G5 CP012535 1699624 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Psychrobacter sp. G CP006266 571800 497 Acinetobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP89034 470 497 Acinetobacter bumannii CP032119	Streptomyces lavendulae	NC_010097	1914	1847
Lactobacillus curvatus AF200347 28038 1847 Lactobacillus plantarum CP035158 1590 1847 Lactobacillus plantarum CP019351 1590 1847 Enterococcus sp. M190262 CP040462 2582830 2608891 Enterococcus gallinarum CP014068 1353 1350 Rumella sp. SP2 CP031031 2268026 2631758 Vibrio nigripulchritudo FP893246 28173 2631758 Sinorhizobium fredii CP003572 380 2631758 Sinorhizobacter sp. P11G5 CP012535 1699624 2631758 Psychrobacter sp. CP012536 1699624 2631758 Psychrobacter sp. P11G5	Lactobacillus buchneri	CP002655	1581	1847
Lactobacillus plantarum CP035158 1590 1847 Lactobacillus plantarum CP019351 1590 1847 Enterococcus sp. M190262 CP040462 2582830 2608891 Enterococcus sp. CR-Ec1 CP025224 2057791 2608891 Enterococcus gallinarum CP014068 1353 1350 Runella sp. SP2 CP031031 2268026 2631755 Vibrio nigripulchritudo FP893246 28173 2631755 Sinorhizobium fredii CP003574 380 2631755 Sinorhizobium fredii CP003574 380 2631755 Psychrobacter sp. P11G5 CP012535 1699624 2631755 Psychrobacter sp. G CP006266 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter lwoffii CP032119	Lactobacillus gallinarum	CP012895	52242	1847
Lactobacillus plantarum CP019351 1590 1847 Enterococcus sp. M190262 CP040462 2582830 2608891 Enterococcus sp. CR-Ec1 CP025224 2057791 2608891 Enterococcus gallinarum CP014068 1353 1350 Runella sp. SP2 CP031031 2268026 2631758 Vibrio nigripulchritudo FP893246 28173 2631758 Sinorhizobium fredii CP003572 380 2631758 Sinorhizobium fredii CP003574 380 2631758 Sinorhizobium fredii CP003574 380 2631758 Sinorhizobium fredii CP003574 380 2631758 Sinorhizobium fredii CP03574 380 2631758 Sinorhizobium fredii CP012535 1699624 2631758 Sinorhizobium fredii CP012535 1699624 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934	Lactobacillus curvatus	AF200347	28038	1847
Enterococus sp. M190262 CP040462 2582830 2608891 Enterococus sp. CR-Ec1 CP025224 2057791 2608891 Enterococus gallinarum CP014068 1353 1350 Runella sp. SP2 CP031031 2268026 2631758 Vibrio nigripulchritudo FP893246 28173 2631758 Sinorhizobium fredii CP003572 380 2631758 Sinorhizobium fredii CP003574 380 2631758 Psychrobacter sp. P11G5 CP012535 1699624 2631758 Psychrobacter sp. G CP006266 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter sp. P11G5 CP012536 1699624 497 Acinetobacter sp. P11G5 CP012536 1699624 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter whoffii CP032119 28090 497 Acinetobacter whouensis CP031710	Lactobacillus plantarum	CP035158	1590	1847
Enterococcus sp. CR-Ec1 CP025224 2057791 2608891 Enterococcus gallinarum CP014068 1353 1350 Runella sp. SP2 CP031031 2268026 2631755 Vibrio nigripulchritudo FP893246 28173 2631755 Simorhizobium fredii CP003574 380 2631755 Simorhizobium fredii CP003574 380 2631755 Psychrobacter sp. P11G5 CP012535 1699624 2631755 Psychrobacter alimentarius CP014946 261164 497 Psychrobacter sp. G CP006266 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter sp. CP016266 571800 497 497 Acinetobacter sp. P11G5 CP012536 1699624 497 Acinetobacter weetianus DQ278486 52133 497 Acinetobacter weetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter lwoffii CP032171	Lactobacillus plantarum	CP019351	1590	1847
Enterococcus gallinarum CP014068 1353 1350 Runella sp. SP2 CP031031 2268026 2631755 Vibrio nigripulchritudo FP893246 28173 2631755 Sinorhizobium fredii CP003572 380 2631755 Sinorhizobium fredii CP003574 380 2631755 Psychrobacter sp. P11G5 CP012535 1699624 2631755 Psychrobacter sp. G CP006266 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter sp. P11G5 CP012536 1699624 497 Acinetobacter burmannii KP890934 470 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter venetianus AP019744 40216 497 Acinetobacter baumannii CP032119 28090 497 Acinetobacter venetianus AP019744 40216 497 Acinetobacter wihouensis CP032170 18	Enterococcus sp. M190262	CP040462	2582830	2608891
Runella sp. SP2 CP031031 2268026 2631758 Vibrio nigripulchritudo FP893246 28173 2631758 Sinorhizobium fredii CP003572 380 2631758 Sinorhizobium fredii CP003574 380 2631758 Psychrobacter sp. P11G5 CP012535 1699624 2631758 Psychrobacter alimentarius CP014946 261164 497 Psychrobacter sp. G CP006266 571800 497 Psychrobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter wuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 <td>Enterococcus sp. CR-Ec1</td> <td>CP025224</td> <td>2057791</td> <td>2608891</td>	Enterococcus sp. CR-Ec1	CP025224	2057791	2608891
Vibrio nigripulchritudo FP893246 28173 2631758 Sinorhizobium fredii CP003572 380 2631758 Sinorhizobium fredii CP003574 380 2631758 Psychrobacter sp. P11G5 CP012535 1699624 2631758 Psychrobacter alimentarius CP014946 261164 497 Psychrobacter sp. G CP006266 571800 497 Psychrobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter woffii CP032119 28090 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter sp. WCHAc010034 CP032274 1879049 497 Acinetobacter johnsonii CP0321710 1879050 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589	Enterococcus gallinarum	CP014068	1353	1350
Sinorhizobium fredii CP003572 380 2631758 Sinorhizobium fredii CP003574 380 2631758 Psychrobacter sp. P11G5 CP012535 1699624 2631758 Psychrobacter alimentarius CP014946 261164 497 Psychrobacter sp. G CP006266 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter radioresistens AP019744 40216 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter wuhouensis CP031710 1879049 497 Acinetobacter pitnii CP032274 1879049 497 Acinetobacter pitnii CP031710 1879050 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococus aetherivorans DQ629589	Runella sp. SP2	CP031031	2268026	2631759
Sinorhizobium fredii CP003574 380 2631759 Psychrobacter sp. P11G5 CP012535 1699624 2631759 Psychrobacter alimentarius CP014946 261164 497 Psychrobacter sp. G CP006266 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter loseiii CP032119 28090 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter wihouensis CP032119 28090 497 Acinetobacter johnsonii CP03271 1879049 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ227327 486 </td <td>Vibrio nigripulchritudo</td> <td>FP893246</td> <td>28173</td> <td>2631759</td>	Vibrio nigripulchritudo	FP893246	28173	2631759
Psychrobacter sp. P11G5 CP012535 1699624 2631758 Psychrobacter alimentarius CP014946 261164 497 Psychrobacter sp. G CP006266 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter radioresistens AP019744 40216 497 Acinetobacter lwoffli CP032119 28090 497 Acinetobacter lwoffli CP032119 28090 497 Acinetobacter wuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP02301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ229163 486 1827 Neisseria lactamica DQ227327 48	Sinorhizobium fredii	CP003572	380	2631759
Psychrobacter alimentarius CP014946 261164 497 Psychrobacter sp. G CP006266 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter radioresistens AP019744 40216 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter sp. WCHAc010034 CP032274 1879049 497 Acinetobacter yohnsonii CP031710 1879050 497 Acinetobacter pittii CP02301 40214 497 Acinetobacter pittii CP03527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ227327 486 1827 Neisseria meningitidis NC_004758 4	Sinorhizobium fredii	CP003574	380	2631759
Psychrobacter sp. G CP006266 571800 497 Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter radioresistens AP019744 40216 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter sp. WCHAc010034 CP032274 1879049 497 Acinetobacter vuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ227163 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP035146 1	Psychrobacter sp. P11G5	CP012535	1699624	2631759
Psychrobacter sp. P11G5 CP012536 1699624 497 Acinetobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter radioresistens AP019744 40216 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter sp. WCHAc010034 CP032274 1879049 497 Acinetobacter wuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035159 <td< td=""><td>Psychrobacter alimentarius</td><td>CP014946</td><td>261164</td><td>497</td></td<>	Psychrobacter alimentarius	CP014946	261164	497
Acinetobacter venetianus DQ278486 52133 497 Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter radioresistens AP019744 40216 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter sp. WCHAc010034 CP032274 1879049 497 Acinetobacter wuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae <td< td=""><td>Psychrobacter sp. G</td><td>CP006266</td><td>571800</td><td>497</td></td<>	Psychrobacter sp. G	CP006266	571800	497
Acinetobacter baumannii KP890934 470 497 Acinetobacter baumannii CP042559 470 497 Acinetobacter radioresistens AP019744 40216 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter sp. WCHAc010034 CP032274 1879049 497 Acinetobacter wuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660	Psychrobacter sp. P11G5	CP012536	1699624	497
Acinetobacter baumannii CP042559 470 497 Acinetobacter radioresistens AP019744 40216 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter sp. WCHAc010034 CP032274 1879049 497 Acinetobacter wuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP037914 </td <td>Acinetobacter venetianus</td> <td>DQ278486</td> <td>52133</td> <td>497</td>	Acinetobacter venetianus	DQ278486	52133	497
Acinetobacter radioresistens AP019744 40216 497 Acinetobacter lwoffii CP032119 28090 497 Acinetobacter sp. WCHAc010034 CP032274 1879049 497 Acinetobacter wuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria lactamica DQ227327 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP037914 1523415 482	Acinetobacter baumannii	KP890934	470	497
Acinetobacter lwoffii CP032119 28090 497 Acinetobacter sp. WCHAc010034 CP032274 1879049 497 Acinetobacter wuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria lactamica DQ227327 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP037914 1523415 482	Acinetobacter baumannii	CP042559	470	497
Acinetobacter sp. WCHAc010034 CP032274 1879049 497 Acinetobacter wuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria lactamica DQ227327 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP037914 1523415 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Acinetobacter radioresistens	AP019744	40216	497
Acinetobacter wuhouensis CP031710 1879050 497 Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria lactamica DQ227327 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP037914 1523415 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Acinetobacter lwoffii	CP032119	28090	497
Acinetobacter johnsonii CP022301 40214 497 Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP037914 1523415 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Acinetobacter sp. WCHAc010034	CP032274	1879049	497
Acinetobacter pittii CP033527 48296 497 Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria lactamica DQ227327 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP037914 1523415 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Acinetobacter wuhouensis	CP031710	1879050	497
Nocardia sp. C-14-1 DQ140180 312532 2637762 Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria lactamica DQ227327 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP037914 1523415 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Acinetobacter johnsonii	CP022301	40214	497
Rhodococcus aetherivorans DQ629589 191292 1827 Neisseria lactamica DQ229163 486 1827 Neisseria lactamica DQ227327 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP023175 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP037914 1523415 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Acinetobacter pittii	CP033527	48296	497
Neisseria lactamica DQ229163 486 1827 Neisseria lactamica DQ227327 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP023175 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP013266 1332080 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Nocardia sp. C-14-1	DQ140180	312532	2637762
Neisseria lactamica DQ227327 486 1827 Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP023175 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP013266 1332080 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Rhodococcus aetherivorans	DQ629589	191292	1827
Neisseria meningitidis NC_004758 487 482 Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP023175 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP013266 1332080 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Neisseria lactamica	DQ229163	486	1827
Lactobacillus plantarum CP032360 1590 482 Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP023175 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP013266 1332080 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Neisseria lactamica	DQ227327	486	1827
Lactobacillus plantarum CP035146 1590 482 Lactobacillus plantarum CP023175 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP013266 1332080 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Neisseria meningitidis	NC_004758	487	482
Lactobacillus plantarum CP023175 1590 482 Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP013266 1332080 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Lactobacillus plantarum	CP032360	1590	482
Lactobacillus plantarum CP035159 1590 482 Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP013266 1332080 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Lactobacillus plantarum	CP035146	1590	482
Candidatus Azobacteroides pseudotrichonymphae AP010660 511435 482 Sphingobium baderi CP013266 1332080 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Lactobacillus plantarum	CP023175	1590	482
Sphingobium baderi CP013266 1332080 482 Sphingomonas sp. AAP5 CP037914 1523415 482	Lactobacillus plantarum	CP035159	1590	482
Sphingomonas sp. AAP5 CP037914 1523415 482	Candidatus Azobacteroides pseudotrichonymphae	AP010660	511435	482
Sphingomonas sp. AAP5 CP037914 1523415 482	Sphingobium baderi	CP013266	1332080	482
Geobacter metallireducens CP000149 28232 28231	Sphingomonas sp. AAP5	CP037914	1523415	482
	Geobacter metallireducens	CP000149	28232	28231

scientificName	nuccoreAcc	taxid	parent
Pseudoalteromonas sp. 643A	EU636993	336179	194690
Psychrobacter sp. DAB_AL60	JQ245703	1028419	194690
Psychrobacter sp. DAB_AL43B	JQ348844	1028416	194690
Methylobacterium sp. AMS5	CP006994	925818	194690
Methylorubrum populi	AP014814	223967	194690
Campylobacter cuniculorum	CP020868	374106	194
Campylobacter sp. RM12175	CP018795	1660076	2593542
Nonomuraea gerenzanensis	LT559121	93944	2593542
Tsukamurella tyrosinosolvens	LR134468	57704	2593542
Xanthomonas phaseoli	CP020970	1985254	338
Xanthomonas citri	CP023158	346	338
Lactobacillus brevis	CP019741	1580	338
Lactobacillus brevis	AP012176	1580	338
Lactobacillus brevis	AP012173	1580	338
Bacillus megaterium	CP009917	1404	338
Pseudodesulfovibrio profundus	LT907977	57320	338
Sedimentitalea sp. W43	CP033220	2483033	2617708
Celeribacter manganoxidans	CP021408	1411902	2617708
Litoreibacter sp. LN3S51	CP042263	2599296	2620315
Sedimentitalea sp. W43	CP033223	2483033	2620315
Acinetobacter lwoffii	CP032113	28090	2620315
Acinetobacter schindleri	CP030756	108981	2620315
Acinetobacter lwoffii	KX426230	28090	2620315
Acinetobacter schindleri	CP015619	108981	2620315
Acinetobacter sp. FDAARGOS_493	CP033859	2420300	196816
Acinetobacter wuhouensis	CP033123	1879050	196816
Pseudomonas aeruginosa	AY257538	287	196816
Pseudomonas aeruginosa	CP030914	287	196816
Pseudomonas aeruginosa	HM560971	287	196816
Lactobacillus reuteri	CP030091	1598	196816
Lactobacillus curvatus	CP031008	28038	196816
Clostridium botulinum	CP013295	1491	196816
Clostridium botulinum	CP013844	1491	196816
Bacteroides fragilis	KJ830769	817	196816
Bacteroides uniformis	AP019727	820	196816
Yersinia pestis	AF152923	632	196816
Caldicellulosiruptor bescii	CP001394	31899	196816
Desulfocapsa sulfexigens	CP003986	65555	53318
Pasteurella multocida	CP020349	747	53318
Pasteurella multocida	CP020348	747	53318
Pasteurella multocida	CP020346	747	53318
Enterobacter ludwigii	CP017280	299767	53318
Kosakonia cowanii	CP019447	208223	1330547
Natranaerobius thermophilus	CP001035	375929	1330547

scientificName	nuccoreAcc	taxid	parent
Psychrobacter sp. P2G3	CP012530	1699622	1330547
Psychrobacter sp. P11G5	CP012534	1699624	1330547
Psychrobacter sp. YP14	CP029792	2203895	1330547
Psychrobacter cryohalolentis	CP000324	330922	497
Psychrobacter sp. YP14	CP029790	2203895	497
Paracoccus yeei	CP031081	147645	497
Paracoccus yeei	CP024425	147645	497
Paracoccus yeei	CP020447	147645	497
Arthrobacter sp.	MH067972	1667	497
Arthrobacter dokdonellae	CP029643	2211210	1663
Paracoccus yeei	CP044082	147645	1663
Paracoccus contaminans	CP020613	1945662	265
Yersinia ruckeri	LN681229	29486	629
Pectobacterium atrosepticum	CP009126	29471	629
Pandoraea faecigallinarum	CP011809	656179	93217
Pandoraea faecigallinarum	CP011808	656179	93217
Pandoraea oxalativorans	CP011519	573737	93217
Pandoraea vervacti	CP010898	656178	93217
Pandoraea oxalativorans	CP011520	573737	93217
Streptobacillus moniliformis	CP001780	34105	34104
Nitrosospira multiformis	CP000106	1231	34104
Pseudomonas mendocina	MK671726	300	136841
Pseudomonas aeruginosa	LN809998	287	136841
Pseudomonas sp.	MK376351	306	136841
Sebaldella termitidis	CP001740	826	136841
Myroides odoratimimus	CP037428	76832	136841
Vibrio sp. THAF100	CP045352	2587862	136841
Leptospira interrogans	CP020413	173	136841
Arthrobacter sp. Rue61a	CP003205	1118963	136841
Pseudonocardia dioxanivorans	CP002598	240495	136841
Planktothrix agardhii	AP017995	1160	136841
Planktothrix agardhii	AP017994	1160	136841
Rhodococcus	CP040721	1661425	30189
Rhodococcus	CP018064	1661425	30189
Rhodococcus pyridinivorans	CP040720	103816	30189
Borrelia miyamotoi	CP044672	47466	30189
Borrelia crocidurae	CP003465	29520	30189
Streptomyces sp. Y27	GU226194	701045	2593676
Streptomyces sp. SM17	CP029340	565560	2593676
Ralstonia solanacearum	FP885890	305	2593676
Borrelia crocidurae	CP003432	29520	2593676
Borrelia crocidurae	CP003440	29520	2593676
Methylocystis rosea	CP034088	173366	133
Methylocystis rosea	CP034087	173366	133

scientificName	nuccoreAcc	taxid	parent
Rhodococcus opacus	CP003956	37919	133
Rhodococcus opacus	CP003954	37919	133
Paenibacillus xylanexedens	CP018621	528191	44249
Paenibacillus crassostreae	CP017773	1763538	44249
Paracoccus kondratievae	KP294352	135740	265
Rhodovulum sp. P5	CP015041	1564506	265
Calothrix parasitica	AP018231	1973486	1186
Calothrix parasitica	AP018230	1973486	1186
Calothrix parasitica	AP018229	1973486	1186
Calothrix parasitica	AP018228	1973486	1186
Yersinia ruckeri	CP025802	29486	1186
Yersinia hibernica	CP032488	2339259	629
Borrelia crocidurae	CP003456	29520	629
Bacillus velezensis	CP037420	492670	629
Paracoccus yeei	CP024423	147645	629
Paracoccus yeei	CP044080	147645	629
Paracoccus yeei	CP031082	147645	629
Rhodobacteraceae bacterium	CP031593	1904441	629
Streptomyces sp. EN27	AF533985	211464	2593676
Paracoccus sp. Arc7-R13	CP034811	2500532	2593676
Paracoccus sp. 2251	CP040764	2560053	2593676
Paracoccus sp. 2251	CP040758	2560053	2593676
Fusobacterium hwasookii	CP013335	1583098	2593676
Fusobacterium nucleatum	CP007066	851	2593676
Komagataeibacter saccharivorans	CP036405	265959	2593676
Anoxybacillus amylolyticus	CP015440	294699	150247
Anoxybacillus amylolyticus	CP015439	294699	150247
Flavobacterium sp. KP1	AB007196	932218	196869
Stenotrophomonas rhizophila	CP031731	216778	196869
Pseudomonas syringae	CP045800	317	196869
Clostridium tyrobutyricum	CP014171	1519	1485
Candidatus Hoaglandella endobia	LN999837	1778263	1906659
Candidatus Doolittlea endobia	LN999834	1778262	1906657
Acinetobacter nosocomialis	CP033552	106654	1906657
Acinetobacter baumannii	CP040044	470	1906657
Acinetobacter baumannii	CP038503	470	1906657
Nitrosomonas sp. AL212	CP002554	153948	2609265
Nitrosomonas sp. AL212	CP002553	153948	2609265
Synechocystis sp. PCC 6803	CP003272	1148	2640012
Runella sp. HYN0085	CP030855	2259595	2640012
Runella sp. HYN0085	CP030854	2259595	2640012
Runella sp. HYN0085	CP030851	2259595	2640012
Paracoccus aestuarii	JQ796370	453842	2640012
Paracoccus aestuarii	JQ066766	453842	2640012

scientificName	nuccoreAcc	taxid	parent
Desulfobacterium autotrophicum	CP001088	2296	2295
Bacillus thuringiensis	CP015359	1428	2295
Bacillus thuringiensis	CP015358	1428	2295
Bacillus thuringiensis	CP005936	1428	2295
Bacillus thuringiensis	CP032613	1428	2295
Bacillus mycoides	CP031074	1405	2295
Carnobacterium maltaromaticum	LN846932	2751	2295
Carnobacterium maltaromaticum	CP016845	2751	2295
Aeromonas hydrophila	KC525245	644	2295
[Haemophilus] ducreyi	AY434675	730	724
Acinetobacter lwoffii	KX426231	28090	724
Acinetobacter schindleri	CP015620	108981	724
Acinetobacter lwoffii	KX426228	28090	724
Streptomyces sp. F2	KF652071	317660	2593676
Streptomyces sp. FR1	JQ606827	349971	2593676
Rhizobium sp. NXC24	CP024312	2048897	2613769
Rhizobium gallicum	CP017102	56730	2613769
Rhodococcus hoagii	CP027794	43767	2613769
Tsukamurella tyrosinosolvens	LR134454	57704	2613769
Bacillus thuringiensis	DQ364061	1428	2613769
Acetobacter pasteurianus	NC_010177	438	2613769
Enterococcus faecium	CP034950	1352	2613769
Leuconostoc mesenteroides	CP012010	1245	2613769
Clostridium botulinum	CP001082	1491	2613769
Parageobacillus thermoglucosidasius	CP002837	634956	1426
Anoxybacillus flavithermus	CP021839	33934	150247
Streptomyces sp. 14R-10	KF501372	1442159	2593676
Hymenobacter swuensis	CP007144	1446467	89966
Vibrio parahaemolyticus	CP011408	670	89966
Vibrio coralliilyticus	CP016558	190893	89966
Paracoccus marcusii	JQ796371	59779	89966
Escherichia coli	CP022159	562	89966
Escherichia coli	KM107845	562	89966
Enterobacter roggenkampii	CP033801	1812935	89966
Escherichia coli	CP033380	562	89966
Tomato big bud phytoplasma	DQ119297	35770	85620
Candidatus Phytoplasma	AY270152	33926	85620
Rhodothermus marinus	NC_001755	29549	85620
Candidatus Hamiltonella defensa	CP021668	138072	85620
Bacillus sp. S3	CP039728	486398	185979
Pseudomonas aeruginosa	CP018048	287	185979
Pseudomonas fluorescens	LN713926	294	185979
Acidiphilium cryptum	CP000692	524	185979
Acidiphilium cryptum	CP000693	524	185979

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scientificName	nuccoreAcc	taxid	parent
Leisingera	CP035419	191028	185979
Leisingera aquaemixtae	CP041164	1396826	185979
Leisingera methylohalidivorans	CP006775	133924	185979
Roseovarius sp. THAF8	CP045412	2587846	2614913
Roseovarius sp. THAF9	CP045406	2587847	2614913
Pelagibaca abyssi	CP015091	1250539	2614913
Rhodococcus opacus	CP003951	37919	2614913
Deinococcus sp. NW-56	CP026519	2080419	2614913
Acidipropionibacterium	AB007909	1912215	31957
Rhodococcus ruber	CP038032	1830	31957
Pseudomonas putida	CP003589	303	31957
Pseudomonas aeruginosa	CP011370	287	31957
Pseudomonas aeruginosa	LT969521	287	31957
Acaryochloris marina	CP000846	155978	31957
Enterococcus wangshanyuanii	CP021877	2005703	1350
Enterococcus wangshanyuanii	CP021875	2005703	1350
Enterococcus wangshanyuanii	CP021876	2005703	1350
Enterococcus wangshanyuanii	CP021878	2005703	1350
Nostoc linckia	AP018226	92942	1350
Nostoc sp. 'Peltigera membranacea cyanobiont' N6	CP026683	1261031	1350
Nostoc sp. 'Peltigera membranacea cyanobiont' N6	CP026691	1261031	1350
Borrelia crocidurae	CP003460	29520	1350
Borrelia crocidurae	CP003459	29520	1350
Borrelia crocidurae	CP003455	29520	1350
Yersinia pestis	CP045162	632	1350
Acinetobacter sp. M131	JX101639	1280052	1350
Acinetobacter johnsonii	CP022302	40214	1350
Deinococcus proteolyticus	CP002537	55148	1350
Deinococcus ficus	CP021083	317577	1298
Paenibacillus	CP020864	44249	186822
Candidatus Enterovibrio luxaltus	CP020662	1927128	188143
Candidatus Enterovibrio luxaltus	CP020661	1927128	188143
Rahnella sp. WMR121	FN429028	657338	2635087
Enterobacter asburiae	CP011866	61645	2635087
Geminocystis sp. NIES-3709	AP014823	1617448	2635087
Geminocystis sp. NIES-3709	AP014822	1617448	
Rhodothermus marinus	CP003031	29549	2635087
Tessaracoccus flavescens	CP019608	399497	72763
Streptomyces rimosus	CP025552	1927	1883
Agrobacterium tumefaciens	CP042276	358	1883
Aquitalea sp. USM4	CP029540	1590041	2628611
Lawsonia intracellularis	AM180255	29546	2628611
Mycoplasma	JX294731	2093	2092
Mycoplasma	JX294735	2093	2092
111 Copiasina	071204100	2000	2002

scientificName	nuccoreAcc	taxid	parent
Mycoplasma cottewii	JX294733	51364	2093
Mycoplasma capricolum	JX294736	2095	2093
Aliivibrio wodanis	LR721752	80852	2093
Aliivibrio wodanis	LR721753	80852	2093
Glutamicibacter arilaitensis	FQ311476	256701	2093
Glutamicibacter halophytocola	CP012751	1933880	1742989
Arthrobacter sp.	MH067968	1667	1742989
Ochrobactrum anthropi	CP000763	529	1742989
Leptolyngbya sp. NIES-3755	AP017311	1752064	2650499
Leptolyngbya sp. NIES-3755	AP017309	1752064	2650499
Octadecabacter sp. SW4	CP042821	2602067	2650499
Sulfitobacter sp. SK012	CP025807	1389005	2650499
Sinorhizobium fredii	CP003564	380	2650499
Sinorhizobium fredii	CP003566	380	2650499
Mycobacterium	JF699753	1763	2650499
Tsukamurella tyrosinosolvens	LR134469	57704	2650499
Cryobacterium arcticum	CP016284	670052	69578
Pseudonocardia autotrophica	AP018921	2074	69578
Bifidobacterium choerinum	CP018045	35760	1678
Glutamicibacter sp. ZJUTW	CP043625	1155384	2627139
Synechocystis	AP004312	1142	2627139
Pasteurella multocida	CP020404	747	2627139
Acinetobacter johnsonii	CP022300	40214	2627139
Lactobacillus reuteri	CP006015	1598	2627139
Lactobacillus reuteri	CP002845	1598	2627139
Cutibacterium acnes	LC473083	1747	1912216
Rhodobacteraceae bacterium SH-1	CP043623	2605946	1912216
Tabrizicola sp. K13M18	CP034332	2494374	1912216
Lactobacillus delbrueckii	CP018612	1584	1912216
Lactobacillus delbrueckii	CP018613	1584	1912216
Vibrio cincinnatiensis	HQ324782	675	662
Vibrio parahaemolyticus	AP000581	670	662
Tsukamurella tyrosinosolvens	LR134458	57704	662
Tsukamurella tyrosinosolvens	LR134470	57704	662
Pseudoalteromonas sp. PS1M3	AB022096	87791	194690
Acidovorax carolinensis	CP021368	553814	194690
Acidovorax sp. T1	CP021649	1858609	2684926
Ralstonia pickettii	JQ436722	329	2684926
Thauera sp. K11	CP023440	2005884	2609274
Thermovirga lienii	CP003097	336261	336260
Tistrella mobilis	CP003240	171437	171436
Rhodobacter sphaeroides	CP031752	1063	171436
Rhodobacter sp. CZR27	CP023550	2033869	171436
Litoreibacter sp. LN3S51	CP042264	2599296	171436

scientificName	nuccoreAcc	taxid	norent
			parent
Geminocystis sp. NIES-3708	AP014817	1615909	2625037
Geminocystis sp. NIES-3708	AP014816	1615909	2625037
Geminocystis sp. NIES-3709	AP014828	1617448	2625037
Synechococcus	KT751091	1129	2625037
Methylomonas sp. DH-1	CP014361	1727196	2608980
Methylomonas koyamae	CP023670	702114	416
Planctomyces sp. SH-PL62	CP011274	1636152	2648843
Paludisphaera borealis	CP019083	1387353	1763521
Gallibacterium anatis	CP002668	750	155493
Nissabacter sp. SGAir0207	CP028042	2126321	155493
Pantoea stewartii	CP017592	66269	155493
Thermus thermophilus	AB677526	274	155493
Thermus thermophilus	CP003254	274	155493
Thermus thermophilus	LR027519	274	155493
Thermus aquaticus	CP010825	271	155493
Thermus aquaticus	CP020572	271	155493
Thermus aquaticus	CP010826	271	155493
Staphylococcus aureus	GQ900400	1280	155493
Pseudanabaena sp. ABRG5-3	AP017561	685565	2593292
Pseudanabaena sp. ABRG5-3	AP017565	685565	2593292
Pseudanabaena sp. ABRG5-3	AP017562	685565	2593292
Psychrobacter sp. DAB_AL32B	JQ245699	1028414	2593292
Enterobacterales	AY543072	91347	2593292
Enterobacterales	DQ659147	91347	2593292
Streptomyces reticuli	LN997845	1926	1883
Streptomyces sp. RLB3-6	CP041601	2594457	2593676
Cutibacterium acnes	CP003294	1747	2593676
Propionibacterium sp. oral taxon 193	CP017041	671223	2608905
Bacillus thuringiensis	CP019231	1428	2608905
Bacillus cereus	CP012486	1396	2608905
Bacillus cereus	CP001749	1396	2608905
Bacillus	CP024778	1386	2608905
Bacillus thuringiensis	CP017575	1428	2608905
Methylobacterium radiotolerans	CP001006	31998	2608905
Methylobacterium phyllosphaerae	CP015370	418223	407
Methylobacterium oryzae	JX627581	334852	407
Amycolatopsis sp. AA4	CP024895	1896961	2618356
Amycolatopsis sp. AA4	CP024896	1896961	2618356
Gordonia sp. KTR9	CP002909	337191	2618356
Gordonia sp. YC-JH1	CP025436	2059875	2657482
Pseudarthrobacter sp. NIBRBAC000502770	CP041197	2590785	2647000
Arthrobacter sp. 68b	KJ410765	311808	235627
Arthrobacter sp. U41	CP015734	1849032	235627
Arthrobacter sp. U41	CP015733	1849032	235627

scientificName	nuccoreAcc	taxid	parent
Arthrobacter sp. Hiyo8	AP014720	1588023	235627
Ruminococcus albus	CP002406	1264	235627
Caulobacter sp. K31	CP000929	366602	235627
Caulobacter sp. FWC26	CP033873	69665	2648921
Caulobacter henricii	CP013003	69395	75
Bifidobacterium breve	DQ497626	1685	75
Clostridioides difficile	AY350745	1496	75
Arcobacter butzleri	EU707943	28197	75
Kocuria palustris	LC201957	71999	57493
Kocuria palustris	LC201956	71999	57493
Azospirillum brasilense	CP032328	192	57493
Azospirillum brasilense	CP032336	192	57493
Enterobacter hormaechei	CP043854	158836	57493
Enterobacter sp. E76	CP042502	2596949	57493
Klebsiella oxytoca	CP026273	571	57493
Deinococcus actinosclerus	CP029775	1768108	57493
Deinococcus actinosclerus	CP029778	1768108	57493
Staphylococcus aureus	CP042159	1280	57493
Staphylococcus aureus	CP042109	1280	57493
Lawsonia intracellularis	AM180254	29546	57493
Legionella adelaidensis	LR134429	45056	57493
Pseudomonas sp. S-47	AY951984	115714	2583993
Pseudomonas stutzeri	CP003074	316	2583993
Pseudomonas oleovorans	LR130780	301	1232139
Bifidobacterium pseudolongum	DQ103758	1694	1678
Staphylococcus aureus	CP042012	1280	1678
Staphylococcus aureus	CP042130	1280	1678
Candidatus Azobacteroides pseudotrichonymphae	AP017917	511435	1678
Candidatus Azobacteroides pseudotrichonymphae	AP017916	511435	1678
Enterococcus faecium	CP042835	1352	1678
Streptomyces collinus	CP006260	42684	1678
Bifidobacterium pseudocatenulatum	AF359574	28026	1678
Oscillatoria nigro-viridis	CP003617	482564	1678
Oscillatoria nigro-viridis	CP003615	482564	1678
Oscillatoria nigro-viridis	CP003616	482564	1678
Rhodococcus jostii	CP000434	132919	1827
Rhodococcus opacus	CP003957	37919	1827
Rhodococcus sp. S2-17	CP021356	1990687	1827
Rhodococcus opacus	AP011120	37919	1827
Rhodococcus sp. YL-1	CP017302	1045808	1827
Runella slithyformis	CP002862	106	1827
Oceanimonas sp. GK1	CP003172	511062	1827
Salmonella enterica	CP030229	28901	1827
Salmonella enterica	LN890526	28901	1827

scientificName	nuccoreAcc	taxid	parent
Acinetobacter pittii	CP033522	48296	1827
Acinetobacter radioresistens	AP019748	40216	1827
Nitrosospira multiformis	CP000104	1231	1827
Gottschalkia acidurici	CP003327	1556	1505664
Corynebacterium glutamicum	AB525231	1718	1505664
Corynebacterium glutamicum	AY172687	1718	1505664
Corynebacterium glutamicum	CP010452	1718	1505664
Corynebacterium marinum	CP007791	349751	1505664
Borrelia hermsii	CP015334	140	1505664
Borrelia hermsii	CP014829	140	1505664
Pseudoalteromonas arctica	CP011027	394751	53246
Pseudoalteromonas agarivorans	CP033067	176102	53246
Pseudoalteromonas nigrifaciens	CP011038	28109	53246
Leptospirillum ferrooxidans	AY941099	180	655606
Leptospirillum ferrooxidans	AY941098	180	655606
Pseudomonas sp. TMW 2.1634	CP016850	1886807	655606
Pseudomonas fragi	CP021133	296	655606
Ochrobactrum anthropi	DQ979387	529	655606
Acinetobacter baumannii	CP039342	470	655606
Streptomyces autolyticus	CP019460	75293	655606
Mycobacterium avium	CP009405	1764	655606
Lactobacillus brevis	CP015341	1580	655606
Lactobacillus plantarum	CP012653	1590	655606
Lactobacillus plantarum	CP025589	1590	655606
Novosphingobium pentaromativorans	CP009293	205844	655606
Sphingobium sp. YG1	AP018521	2082188	655606
Kocuria turfanensis	CP014483	388357	57493
Kocuria turfanensis	CP014484	388357	57493
Arthrobacter sp. MN05-02	AP018698	1571833	235627
Variovorax	KT900037	34072	80864
Variovorax	KT900040	34072	80864
Calothrix sp. NIES-4101	AP018275	2005461	80864
Calothrix sp. NIES-4101	AP018278	2005461	80864
Cnuibacter physcomitrellae	CP020717	1619308	1759331
Humibacter sp. BT305	CP031193	2282656	2635918
Cnuibacter physcomitrellae	CP020716	1619308	2635918
Synechococcus sp. PCC 7002	CP000954	32049	2635918
Azospirillum brasilense	CP032337	192	2635918
Hydrogenophilus thermoluteolus	AP018559	297	70774
Staphylococcus pasteuri	CP017464	45972	1279
Staphylococcus pasteuri	CP031281	45972	1279
Staphylococcus warneri	CP031267	1292	1279
Staphylococcus warneri	CP031270	1292	1279
Zymomonas mobilis	CP002856	542	1279

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scientificName	nuccoreAcc	taxid	parent
Plautia stali symbiont	AP012553	891974	1279
Cronobacter sakazakii	CP045780	28141	1279
Chondrocystis sp. NIES-4102	AP018287	2005460	1279
Chondrocystis sp. NIES-4102	AP018285	2005460	1279
Clostridium botulinum	CP014147	1491	1279
Clostridium botulinum	CP014173	1491	1279
Clostridium botulinum	CP014218	1491	1279
Clostridium botulinum	CP013848	1491	1279
Desulfosarcina ovata	AP021877	83564	2299
Desulfobacter hydrogenophilus	CP036315	2291	2289
Polaromonas sp. W9N	MG869627	1840323	2638319
Polaromonas sp. H8N	MG869621	1840297	2638319
Microcoleus sp. PCC 7113	CP003633	1173027	2638319
Staphylococcus haemolyticus	AP006719	1283	2638319
Staphylococcus epidermidis	CP009047	1282	2638319
Staphylococcus simulans	CP023496	1286	2638319
Stanieria cyanosphaera	CP003654	102116	2638319
Stanieria sp. NIES-3757	AP017376	1807358	2642663
Streptomyces sp. S1D4-20	CP041608	2594462	2593676
Azospirillum sp. M2T2B2	CP029836	682998	2593676
Moraxella ovis	CP011159	29433	475
Moraxella catarrhalis	CP018060	480	475
Roseobacter litoralis	CP002624	42443	475
Tateyamaria omphalii	CP019315	299262	475
Thalassococcus sp. S3	CP022304	2017482	475
Vibrio parahaemolyticus	GQ131302	670	475
Pontibacter sp. SGAir0037	CP028093	2571030	2648980
Pontibacter actiniarum	CP021236	323450	323449
Deinococcus gobiensis	CP002195	502394	1298
Mycoplasma yeatsii	EU429323	51365	1298
Microbacterium chocolatum	CP015811	84292	33882
Microbacterium chocolatum	CP015813	84292	33882
Escherichia coli	K00826	562	33882
Enterobacter soli	CP003027	885040	33882
Kosakonia cowanii	CP019446	208223	33882
Vibrio alginolyticus	GQ395338	663	33882
Vibrio sp. 41	AF149757	65384	2614977
Clostridium sp. MCF-1	NC 001772	48257	2614128
Thiolapillus brandeum	$AP\overline{012274}$	1076588	1608298
Thiolapillus brandeum	AP012275	1076588	1608298
Chroococcidiopsis thermalis	CP003599	54299	1608298
Rhodobacteraceae bacterium QY30	CP023455	2033435	58840
Paraoceanicella profunda	CP040820	2579971	58840
Sagittula sp. P11	CP021914	2009329	58840
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Leptospira biflexa CP000779 172 171 Vibrio scophthalmi CP016309 45658 171 Vibrio scophthalmi CP016416 45658 171 Vibrio scophthalmi CP016416 45658 171 Vibrio sp. 04Ya108 LC081338 864336 2614977 Escherichia coli CP018299 38293 2614977 Escherichia coli CP019906 562 2614977 Plesiomonas shigelloides CP027853 703 702 Pantoea sp. At-9b CP002436 592316 702 Acinetobacter CP033863 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus surus KF577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. NIES-3754 AP017307 1752063 494603 Deinococcus wulumuqiensis CP031161 980427 494603 <	scientificName	nuccoreAcc	taxid	parent
Bacillaceae bacterium JMAK1 JX406743 1028381 197483 Ralstonia solanacearum AB015669 305 197483 Magnetospirillum sp. XM-1 LN997849 1663591 2617991 Sagittula sp. P11 CP021918 2009329 2617991 Leptospira biflexa CP000779 172 171 Vibrio scophthalmi CP016309 45658 171 Vibrio scophthalmi CP016416 45658 171 Vibrio sp. 04Ya108 LC081338 864336 2614977 Photobacterium damselae CP018299 38293 2614977 Pesiomonas shigelloides CP027853 703 702 Patroca sp. At-9b CP002436 592316 702 Acinetobacter CP033863 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus writh sp. NIES-3709 AP014832 616748 2620948 Geminocystis sp. NIES-3764 AP017307 1752063 </td <td>Marinovum algicola</td> <td>CP010859</td> <td>42444</td> <td>58840</td>	Marinovum algicola	CP010859	42444	58840
Ralstonia solanacearum AB015669 305 197483 Magnetospirillum sp. XM-1 LN997849 1663591 2617991 Sagittula sp. P11 CP021918 2009329 2617991 Leptospira biflexa CP000779 172 171 Vibrio scophthalmi CP016416 45658 171 Vibrio scophthalmi CP018299 38293 2614977 Photobacterium damselae CP018299 38293 2614977 Photobacterium damselae CP018299 38293 2614977 Pesiomonas shigelloides CP018299 38293 2614977 Pesiomonas shigelloides CP027853 703 702 Pantoea sp. At-9b CP02436 592316 702 Acinetobacter CP03863 469 702 Staphylococcus aureus FN806792 1280 702 Staphylococcus aureus CP019571 1502 702 Micrococcus sp. V7 KP577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 <t< td=""><td>ě</td><td></td><td>1028381</td><td></td></t<>	ě		1028381	
Magnetospirillum sp. XM-1 LN997849 1663591 2617991 Sagittula sp. P11 CP021918 2009329 2617991 Leptospira biflexa CP000779 172 171 Vibrio scophthalmi CP016309 45658 171 Vibrio sp. 04Ya108 LC081338 864336 2614977 Photobacterium damselae CP018299 38293 2614977 Escherichia coli CP019906 562 2614977 Plesiomonas shigelloides CP027853 703 702 Pantoea sp. At-9b CP002436 592316 702 Acinetobacter CP033863 469 702 Staphylococcus aureus FN806792 1280 702 Microococus sp. V7 KF577591 1502 702 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. NIES-3754 AP017307 1752063 494603 Deinococcus wulumuqiensis CP031160 980427 494603 Shewanella sp. MR-7 CP000445 60481 <				
Sagittula sp. P11 CP021918 2009329 2617991 Leptospira biflexa CP000779 172 171 Vibrio scophthalmi CP016309 45658 171 Vibrio scophthalmi CP016416 45658 171 Vibrio sp. 04Ya108 LC081338 864336 2614977 Photobacterium damselae CP018299 38293 2614977 Escherichia coli CP019906 562 2614977 Plesiomonas shigelloides CP027853 703 702 Pantoea sp. At-9b CP002436 592316 702 Acinetobacter CP033863 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus sp. V7 KF577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. MR-7 CP031161 980427 494603 Deinococcus wulumuqiensis CP031161 980427 494603 <td></td> <td></td> <td></td> <td></td>				
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Vibrio scophthalmi CP016416 45658 171 Vibrio sp. 04Ya108 LC081338 864336 2614977 Photobacterium damselae CP018299 38293 2614977 Escherichia coli CP019906 562 2614977 Escherichia coli CP027853 703 702 Pantoea sp. At-9b CP002436 592316 702 Acinetobacter CP033863 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus sp. V7 KF577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. NIES-3754 AP017307 1752063 494603 Deinococcus wulumuqiensis CP031160 980427 494603 Shewanella sp. MR-7 CP000445 60481 196818 Shewanella bicestrii CP022360 2018305 22 Cylindrospermum sp. A1345 EF221636 380087 <			172	171
Vibrio scophthalmi CP016416 45658 171 Vibrio sp. 04Ya108 LC081338 864336 2614977 Photobacterium damselae CP018299 38293 2614977 Escherichia coli CP019906 562 2614977 Plesiomonas shigelloides CP027853 703 702 Patoea sp. At-9b CP002436 592316 702 Acinetobacter CP033863 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus sp. V7 KF577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. NIES-3754 AP017307 1752063 494603 Deinococcus wulumuqiensis CP031160 980427 494603 Deinococcus wulumuqiensis CP031160 980427 494603 Shewanella sp. MR-7 CP000445 60481 196818 Shewanella bicestrii CP02360 2018305			45658	171
Vibrio sp. 04Ya108 LC081338 864336 2614977 Photobacterium damselae CP018299 38293 2614977 Escherichia coli CP019906 562 2614977 Plesiomonas shigelloides CP027853 703 702 Pantoea sp. At-9b CP002436 592316 702 Acinetobacter CP03863 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus sp. V7 KF577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. NIES-3754 AP017307 1752063 494603 Deinococcus wulumuqiensis CP031161 980427 494603 Shewanella sp. MR-7 CP000445 60481 196818 Shewanella xiamenensis KT389472 332186 196818 Shewanella bicestrii CP022360 2018305 22 Cylindrospermum sp. A1345 EF221636 380087	-		45658	171
Photobacterium damselae CP018299 38293 2614977 Escherichia coli CP019906 562 2614977 Plesiomonas shigelloides CP027853 703 702 Pantoea sp. At-9b CP002436 592316 702 Acinetobacter CP033863 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus sp. V7 KF577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. NIES-3754 AP017307 1752063 494603 Deinococcus wulumuqiensis CP031161 980427 494603 Deinococcus wulumuqiensis CP031160 980427 494603 Shewanella sp. MR-7 CP000445 60481 196818 Shewanella bicestrii CP022360 2018305 22 Cylindrospermum sp. A1345 EF221636 380087 22 Aliivibrio fischeri JQ031550 668 <td></td> <td></td> <td>864336</td> <td>2614977</td>			864336	2614977
Escherichia coli CP019906 562 2614977 Plesiomonas shigelloides CP027853 703 702 Pantoea sp. At-9b CP002436 592316 702 Acinetobacter CP03863 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus sp. V7 KF577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. NIES-3754 AP017307 1752063 494603 Deinococcus wulumuqiensis CP031161 980427 494603 Deinococcus wulumuqiensis CP031160 980427 494603 Shewanella sp. MR-7 CP000445 60481 196818 Shewanella bicestrii CP02360 2018305 22 Cylindrospermum sp. A1345 EF221636 380087 22 Aliivibrio fischeri JQ031550 668 22 Versinia ruckeri CP032236 29486 <td< td=""><td></td><td></td><td>38293</td><td></td></td<>			38293	
Plesiomonas shigelloides CP027853 703 702 Pantoea sp. At-9b CP002436 592316 702 Acinetobacter CP03886 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus sp. V7 KF577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. NIES-3754 AP017307 1752063 494603 Deinococcus wulumuqiensis CP031161 980427 494603 Deinococcus wulumuqiensis CP031160 980427 494603 Shewanella sp. MR-7 CP000445 60481 196818 Shewanella bicestrii CP022360 2018305 22 Cylindrospermum sp. A1345 EF521636 380087 22 Aliivibrio fischeri JQ031550 668 22 Yersinia ruckeri CP032236 29486 22 Yersinia ruckeri LN681230 29486 2	Escherichia coli		562	2614977
Pantoea sp. At-9b CP002436 592316 702 Acinetobacter CP033863 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus sp. V7 KF577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. NIES-3754 AP017307 1752063 494603 Deinococcus wulumuqiensis CP031161 980427 494603 Deinococcus wulumuqiensis CP031160 980427 494603 Shewanella sp. MR-7 CP001160 980427 494603 Shewanella xiamenensis KT389472 332186 196818 Shewanella bicestrii CP022360 2018305 22 Cylindrospermum sp. A1345 EF221636 380087 22 Cylindrospermum sp. A1345 EF221636 380087 22 Versinia ruckeri LN681230 29486 22 Versinia ruckeri LN681230 29486 <td>Plesiomonas shigelloides</td> <td></td> <td>703</td> <td>702</td>	Plesiomonas shigelloides		703	702
Acinetobacter CP033863 469 702 Staphylococcus aureus FN806792 1280 702 Clostridium perfringens CP019571 1502 702 Micrococcus sp. V7 KF577591 404582 2620948 Geminocystis sp. NIES-3709 AP014832 1617448 2620948 Fischerella sp. NIES-3754 AP017307 1752063 494603 Deinococcus wulumuqiensis CP031161 980427 494603 Deinococcus wulumuqiensis CP031160 980427 494603 Shewanella sp. MR-7 CP000445 60481 196818 Shewanella bicestrii CP022360 2018305 22 Cylindrospermum sp. A1345 EF221636 380087 22 Cylindrospermum sp. A1345 EF221636 380087 22 Versinia ruckeri LN681230 29486 22 Yersinia ruckeri LN681230 29486 22 Yersinia ruckeri LN681230 29486 22 Yersinia similis CP007231 367190				
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Shewanella bicestrii CP022360 2018305 22 Cylindrospermum sp. A1345 EF221636 380087 22 Aliivibrio fischeri JQ031550 668 22 Aliivibrio salmonicida FM178381 40269 22 Yersinia ruckeri CP032236 29486 22 Yersinia ruckeri LN681230 29486 22 Yersinia similis CP007231 367190 1649845 Sinorhizobium fredii CP003569 380 1649845 Sinorhizobium fredii CP003565 380 1649845 Burkholderia sp. YI23 CP003992 1097668 2613784 Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum CP033373 1613 84593 <td< td=""><td></td><td>KT389472</td><td>332186</td><td></td></td<>		KT389472	332186	
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Aliivibrio fischeri JQ031550 668 22 Aliivibrio salmonicida FM178381 40269 22 Yersinia ruckeri CP032236 29486 22 Yersinia ruckeri LN681230 29486 22 Yersinia similis CP007231 367190 1649845 Sinorhizobium fredii CP003569 380 1649845 Sinorhizobium fredii CP003565 380 1649845 Burkholderia sp. YI23 CP003092 1097668 2613784 Burkholderia sp. KK1 CP016003 1855726 2613784 Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Cylindrospermum sp. A1345	EF221636	380087	22
Allivibrio salmonicida FM178381 40269 22 Yersinia ruckeri CP032236 29486 22 Yersinia ruckeri LN681230 29486 22 Yersinia similis CP007231 367190 1649845 Sinorhizobium fredii CP003569 380 1649845 Sinorhizobium fredii CP003565 380 1649845 Burkholderia sp. YI23 CP003092 1097668 2613784 Burkholderia sp. KK1 CP016003 1855726 2613784 Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Aliivibrio fischeri	JQ031550	668	22
Yersinia ruckeri LN681230 29486 22 Yersinia similis CP007231 367190 1649845 Sinorhizobium fredii CP003569 380 1649845 Sinorhizobium fredii CP003565 380 1649845 Burkholderia sp. YI23 CP003092 1097668 2613784 Burkholderia sp. KK1 CP016003 1855726 2613784 Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Aliivibrio salmonicida		40269	22
Yersinia similis CP007231 367190 1649845 Sinorhizobium fredii CP003569 380 1649845 Sinorhizobium fredii CP003565 380 1649845 Burkholderia sp. YI23 CP003092 1097668 2613784 Burkholderia sp. KK1 CP016003 1855726 2613784 Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Yersinia ruckeri	CP032236	29486	22
Sinorhizobium fredii CP003569 380 1649845 Sinorhizobium fredii CP003565 380 1649845 Burkholderia sp. YI23 CP003092 1097668 2613784 Burkholderia sp. KK1 CP016003 1855726 2613784 Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Yersinia ruckeri	LN681230	29486	22
Sinorhizobium fredii CP003565 380 1649845 Burkholderia sp. YI23 CP003092 1097668 2613784 Burkholderia sp. KK1 CP016003 1855726 2613784 Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Yersinia similis	CP007231	367190	1649845
Burkholderia sp. YI23 CP003092 1097668 2613784 Burkholderia sp. KK1 CP016003 1855726 2613784 Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Sinorhizobium fredii	CP003569	380	1649845
Burkholderia sp. KK1 CP016003 1855726 2613784 Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Sinorhizobium fredii	CP003565	380	1649845
Burkholderia sp. KK1 CP016003 1855726 2613784 Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Burkholderia sp. YI23	CP003092	1097668	2613784
Citrobacter freundii JQ996148 546 2613784 Verrucosispora maris CP002639 1003110 84593 Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626		CP016003	1855726	2613784
Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626		JQ996148	546	2613784
Bacteria AF144733 2 84593 Bacteria NC_003526 2 84593 Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Verrucosispora maris	CP002639	1003110	84593
Lactobacillus fermentum CP034100 1613 84593 Lactobacillus fermentum AP017974 1613 84593 Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626			2	84593
Lactobacillus fermentum AP017974 1613 84593 Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Bacteria	NC_003526	2	84593
Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Lactobacillus fermentum	CP034100	1613	84593
Lactobacillus fermentum CP033373 1613 84593 Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Lactobacillus fermentum	AP017974	1613	84593
Calothrix sp. NIES-2100 AP018179 1954172 2619626 Calothrix brevissima AP018215 938406 2619626	Lactobacillus fermentum			
Calothrix brevissima AP018215 938406 2619626	Calothrix sp. NIES-2100			2619626
	<u>*</u>			2619626
	Fusobacterium varium	AP017970	856	848

scientificName	nuccoreAcc	taxid	parent
Fusobacterium varium	AP017969	856	848
Klebsiella pneumoniae	CP031371	573	848
Klebsiella pneumoniae	CP033626	573	848
Klebsiella pneumoniae	CP031370	573	848
Glaciecola sp. 4H-3-7+YE-5	CP002527	983545	2618684
Salinimonas sp. KX18D6	CP039853	2572577	2645119
Francisella sp. MA067296	CP016929	475375	2610885
Clostridium saccharoperbutylacetonicum	CP016088	36745	2610885
Silvanigrella aquatica	CP017836	1915309	2024975
Silvanigrella aquatica	CP017835	1915309	2024975
Rhodobacteraceae bacterium SH-1	CP043621	2605946	2024975
Rhodobacteraceae bacterium	CP031596	1904441	2024975
Erwinia amylovora	AY422215	552	2024975
Erwinia amylovora	FN666577	552	2024975
Aliivibrio fischeri	CP000022	668	2024975
Enterobacteriaceae	AY543071	543	2024975
Enterobacteriaceae	KM107844	543	2024975
Psychrobacter sp. G	CP006268	571800	2024975
Lactobacillus agilis	CP034228	1601	1578
Lactobacillus agilis	CP034229	1601	1578
Lactobacillus agilis	CP034227	1601	1578
Leptotrichia wadei	AP019838	157687	1578
Leptotrichia wadei	AP019844	157687	1578
Leptotrichia hofstadii	AP019826	157688	1578
Gloeothece verrucosa	CP002201	497965	1578
Spirosoma linguale	CP001777	108	1578
Spirosoma linguale	CP001774	108	1578
Streptomyces sp. F11	KF652072	319318	1578
Streptomyces incarnatus	CP011499	665007	1578
Corynebacterium diphtheriae	CP025210	1717	1716
Moraxella sp. TA144	AJ224743	77152	2685852
Oscillatoria nigro-viridis	CP003619	482564	2685852
Spiroplasma citri	CP013198	2133	2685852
Corynebacterium deserti	CP009221	1408191	2685852
Corynebacterium glutamicum	KU306397	1718	2685852
Erwinia amylovora	HG793099	552	2685852
Erwinia amylovora	HG813238	552	2685852
Pantoea ananatis	CP035035	553	2685852
Burkholderia sp. PAMC 26561	CP014311	1795043	2685852
Burkholderia sp. PAMC 28687	CP014510	1795874	2613784
Fischerella sp. NIES-4106	AP018303	2005456	2613784
Hymenobacter sp. PAMC 26554	CP014769	1484116	2615202
Hymenobacter sp. PAMC 26554	CP014770	1484116	2615202
Staphylococcus aureus	CP012595	1280	2615202
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scientificName	nuccoreAcc	taxid	parent
Staphylococcus aureus	CP042118	1280	2615202
Streptomyces sp. Sge12	CP020556	1972846	2593676
Streptomyces sp. 3211	CP020041	1964449	2593676
Phyllobacterium zundukense	CP017944	1867719	28100
Phyllobacterium zundukense	CP017945	1867719	28100
Fibrisoma limi	HE805916	663275	28100
Pontibacter akesuensis	CP014767	388950	323449
Lactobacillus amylovorus	CP002610	1604	323449
Lactobacillus amylovorus	CP002611	1604	323449
Lactobacillus amylovorus	CP029755	1604	323449
Planctomycetes	CP036288	203682	1783257
Gloeocapsa sp. PCC 7428	CP003650	1173026	1783257
Cutibacterium granulosum	AY150274	33011	1912216
Shinella sp. HZN7	CP015741	879274	1912216
Agrobacterium sp. MA01	CP045855	2664893	2632611
Agrobacterium larrymoorei	CP039693	160699	357
Pseudomonas syringae group genomosp. 3	AY603982	251701	357
Pseudomonas syringae group genomosp. 3	AY603981	251701	357
Azotobacter chroococcum	CP010420	353	357
Azotobacter chroococcum	CP010421	353	357
Azotobacter salinestris	CP045303	69964	357
Azotobacter chroococcum	CP010419	353	357
Staphylococcus aureus	CP042063	1280	357
Staphylococcus aureus	CP042064	1280	357
Gloeocapsa sp. PCC 7428	CP003649	1173026	357
Xanthomonas citri	CP020890	346	357
Xanthomonas citri	CP021016	346	357
Aeromonas veronii	CP032840	654	357
Deinococcus gobiensis	CP002194	502394	357
Deinococcus gobiensis	CP002196	502394	357
Deinococcus gobiensis	CP002197	502394	357
Escherichia coli	CP014079	562	357
Escherichia coli	CP014087	562	357
Calothrix	AP018261	1186	357
Polaromonas sp. JS666	CP000318	296591	2638319
Polaromonas sp. JS666	CP000317	296591	2638319
Mycobacterium sp.	KY349138	1785	2642494
Sphaerotilus natans	CP035707	34103	2642494
Campylobacter cuniculorum	CP020869	374106	2642494
Campylobacter fetus	CP007002	196	2642494
Planctomyces sp. SH-PL62	CP011276	1636152	2642494
Staphylospora marina	CP034119	2490858	2689589
Staphylococcus aureus	CP042053	1280	2689589
Staphylococcus aureus	CP042018	1280	2689589

scientificName	nuccoreAcc	taxid	parent
Staphylococcus aureus	CP042013	1280	2689589
Staphylococcus aureus	CP042062	1280	2689589
Synechococcus sp. PCC 7002	CP000956	32049	2689589
Synechococcus sp. PCC 7003	CP016476	374981	2689589
Synechococcus sp. NIES-970	AP017962	1827144	2689589
Microbacterium sp. No. 7	CP012698	1714373	2609290
Microbacterium sp. No. 7	CP012699	1714373	2609290
Pseudomonas sp.	MK376347	306	2609290
Pseudomonas sp. LM12	KM659089	1449783	2583993
Persephonella marina	CP001231	309805	182899
Geobacter lovleyi	CP001090	313985	28231
Salinibacter ruber	CP000160	146919	28231
Salinibacter ruber	FP565812	146919	28231
Candidatus Pantoea carbekii	CP010908	1235990	53335
Candidatus Pantoea carbekii	CP010910	1235990	53335
Bacillus cereus	AE016878	1396	53335
Streptomyces globisporus	CP013739	1908	53335
Streptomyces globisporus	CP029362	1908	53335
Streptomyces sp. S8	CP015446	1837283	2593676
Streptomyces sp. CFMR 7	CP011523	1649184	2593676
Streptomyces sp. FR1	KF602047	349971	2593676
Streptomyces rochei	AB088224	1928	1883
Streptomyces rochei	AB597522	1928	1883
Curtobacterium flaccumfaciens	CP045289	2035	1883
Pseudanabaena sp. ABRG5-3	AP017564	685565	1883
Tateyamaria omphalii	CP019314	299262	1883
Tsukamurella tyrosinosolvens	LR134459	57704	1883
Microbacterium sediminis	CP038257	904291	33882
Clostridium acetobutylicum	CP002662	1488	33882
Miniimonas sp. S16	CP029051	2171623	2626367
Xylanibacterium sp. 2JSPR-7	CP035496	2509459	186188
Rhodococcus erythropolis	CP011298	1833	186188
Rhodococcus erythropolis	CP011296	1833	186188
Ralstonia solanacearum	CP022767	305	186188
Ralstonia solanacearum	CP022483	305	186188
Ralstonia solanacearum	CP012941	305	186188
Ralstonia solanacearum	CP012942	305	186188
Streptomyces sp. NEAU-S7GS2	CP029542	2202000	2593676
Muribaculum sp. H5	CP039399	2530393	2593676
Helicobacter pylori	CP003420	210	2593676
Helicobacter pylori	CP032021	210	2593676
Komagataeibacter medellinensis	AP012163	1177712	2593676
Candidatus Endohaliclona renieramycinifaciens	MK748463	2565582	2565576
Bacteroides fragilis	AP006842	817	2565576

•	scientificName	nuccoreAcc	taxid	parent
Klebsiella pneumoniae KX434885 573 816 Acinetobacter baumannii CP032219 470 816 Runella slithyformis CP002863 106 816 Burkholderia sp. PAMC 28687 CP014511 1795874 816 Burkholderia sp. PAMC 28687 CP014508 1795874 816 Candidatus Nitrotoga fabula LS423453 34004 816 Candidatus Nitrotoga fabula LS423453 2182327 453161 Polaromonas sp. W11N MG869620 1840293 2638319 Polaromonas sp. H6N MG869620 1840293 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Microcoleus sp. PCC 7113 CP021415 160808 119977 Escherichia coli HQ848325 562 119977 Ecclercia adecarboxylata <td>Bacteroides ovatus</td> <td>CP041396</td> <td>28116</td> <td>816</td>	Bacteroides ovatus	CP041396	28116	816
Acinetobacter baumannii CP032219 470 816 Rumella slithyformis CP002863 106 816 Burkholderia sp. PAMC 28687 CP014511 1795874 816 Burkholderia sp. PAMC 28687 CP014509 1795874 816 Burkholderia sp. PAMC 28687 CP014508 1795874 816 Candidatus Nitrotoga fabula LS423453 2182327 453161 Komagataeibacter europaeus AB972539 33995 453161 Polaromonas naphthalenivorans CP000531 216465 453161 Polaromonas sp. H6N MG869625 1840203 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Acidithiobacillus ferrivorans CP001451 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Acidithiobacillus ferrivorans CP00334 1173027 119977 </td <td>Klebsiella pneumoniae</td> <td>CP028820</td> <td>573</td> <td>816</td>	Klebsiella pneumoniae	CP028820	573	816
Runella slithyformis CP002863 106 816 Burkholderia sp. PAMC 28687 CP014511 1795874 816 Burkholderia sp. PAMC 28687 CP014509 1795874 816 Burkholderia sp. PAMC 28687 CP014508 1795874 816 Paracoccus aminovorans LN832561 34004 816 Candidatus Nitrotoga fabula LS423453 2182327 453161 Komagataeibacter europaeus AB972539 33995 453161 Polaromonas naphthalenivorans CP000531 216465 453161 Polaromonas sp. W11N MG869620 1840293 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Scherichia coli HQ848325 562 119977	Klebsiella pneumoniae	KX434885	573	816
Burkholderia sp. PAMC 28687 CP014511 1795874 816 Burkholderia sp. PAMC 28687 CP014509 1795874 816 Burkholderia sp. PAMC 28687 CP014508 1795874 816 Paracoccus aminovorans LN832561 34004 816 Candidatus Nitrotoga fabula LS423453 2182327 453161 Komagataeibacter europaeus AB972539 33995 453161 Polaromonas naphthalenivorans CP000531 216465 453161 Polaromonas sp. W1N MG869625 1840303 2638319 Acidithiobacillus ferrivorans LT841306 166808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Microcoleus sp. PCC 7113 CP003634 1173027 119977 Escherichia coli HQ848325 562 119977 Eccherichia coli KM107842 562 119977 Acinetobacter pittii CP042508 83655 119977 Acinetobacter sp. WCHA45 CP025856 2004644 909768 Polaromon	Acinetobacter baumannii	CP032219	470	816
Burkholderia sp. PAMC 28687 CP014508 1795874 816 Burkholderia sp. PAMC 28687 CP014508 1795874 816 Paracoccus aminovorans LN832561 34004 816 Candidatus Nitrotoga fabula LS423453 2182327 453161 Komagataeibacter europaeus AB972539 33995 453161 Polaromonas naphthalenivorans CP000531 216465 453161 Polaromonas sp. W11N MG869620 1840293 2638319 Polaromonas sp. H6N MG869620 1840293 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Microcoleus sp. PCC 7113 CP003634 1173027 119977 Escherichia coli KM107842 562 119977 Escherichia coli KM107842 562 119977 Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter	Runella slithyformis	CP002863	106	816
Burkholderia sp. PAMC 28687 CP014508 1795874 816 Paracoccus aminovorans LN832561 34004 816 Candidatus Nitrotoga fabula LS423453 2182327 453161 Komagataeibacter europaeus AB972539 33995 453161 Polaromonas naphthalenivorans CP000531 216465 453161 Polaromonas sp. W11N MG869625 1840303 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Acidithiobacillus ferrivorans CP003634 1173027 119977 Microcoleus sp. PCC 7113 CP003634 1173027 119977 Scherichia coli HQ848325 562 119977 Scherichia coli KM107842 562 119977 Acinetobacter sp. WCHA45 CP042508 83655 119977 Acinetobacter pittii CP028556 2004644 8909768 Polaromonas naphthalenivorans CP000537 216465 909768	Burkholderia sp. PAMC 28687	CP014511	1795874	816
Paracoccus aminovorans LN832561 34004 816 Candidatus Nitrotoga fabula LS423453 2182327 453161 Komagataeibacter europaeus AB972539 33995 453161 Polaromonas naphthalenivorans CP000531 216465 453161 Polaromonas sp. W11N MG869625 1840303 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Microcoleus sp. PCC 7113 CP003634 1173027 119977 Escherichia coli HQ848325 562 119977 Escherichia coli KM107842 562 119977 Ecclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Po	Burkholderia sp. PAMC 28687	CP014509	1795874	816
Candidatus Nitrotoga fabula LS423453 2182327 453161 Komagataeibacter europaeus AB972539 33995 453161 Polaromonas naphthalenivorans CP000531 216465 453161 Polaromonas sp. W11N MG869625 1840303 2638319 Polaromonas sp. H6N MG869620 1840293 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Microcoleus sp. PCC 7113 CP003634 1173027 119977 Escherichia coli HQ848325 562 119977 Escherichia coli KM107842 562 119977 Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter pittii CP02508 83655 119977 Acinetobacter spittii CP02856 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas na	Burkholderia sp. PAMC 28687		1795874	816
Komagataeibacter europaeus AB972539 33995 453161 Polaromonas naphthalenivorans CP000531 216465 453161 Polaromonas sp. W11N MG869620 1840203 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Acidithiobacillus ferrivorans CP03634 1173027 119977 Microcoleus sp. PCC 7113 CP03634 1173027 119977 Escherichia coli HQ848325 562 119977 Escherichia coli KM107842 562 119977 Eccherichia coli KM107842 562 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Amycolatops	Paracoccus aminovorans	LN832561	34004	816
Polaromonas naphthalenivorans CP000531 216465 453161 Polaromonas sp. W11N MG869625 1840303 2638319 Polaromonas sp. H6N MG869625 1840293 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Microcoleus sp. PCC 7113 CP003634 1173027 119977 Escherichia coli HQ848325 562 119977 Escherichia coli KM107842 562 119977 Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter sp. WCHA45 CP020001 471 909768 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetob	Candidatus Nitrotoga fabula	LS423453	2182327	453161
Polaromonas sp. W11N MG869625 1840303 2638319 Polaromonas sp. H6N MG869620 1840293 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Acidithiobacillus ferrivorans CP003634 1173027 119977 Escherichia coli HQ848325 562 119977 Escherichia coli KM107842 562 119977 Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter sp. WCHA45 CP020001 471 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 <td< td=""><td>Komagataeibacter europaeus</td><td>AB972539</td><td>33995</td><td>453161</td></td<>	Komagataeibacter europaeus	AB972539	33995	453161
Polaromonas sp. H6N MG869620 1840293 2638319 Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Microcoleus sp. PCC 7113 CP003634 1173027 119977 Escherichia coli HQ848325 562 119977 Escherichia coli KM107842 562 119977 Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter sp. WCHA45 CP020001 471 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Adinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP02541 28090 1813 Acinetobacter sp. K025 CP02581 1358 909768 Lactococcus lactis<	Polaromonas naphthalenivorans	CP000531	216465	453161
Acidithiobacillus ferrivorans LT841306 160808 119977 Acidithiobacillus ferrivorans CP021415 160808 119977 Microcoleus sp. PCC 7113 CP003634 1173027 119977 Escherichia coli HQ848325 562 119977 Escherichia coli KM107842 562 119977 Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter calcoaceticus CP020001 471 909768 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acineto	Polaromonas sp. W11N	MG869625	1840303	2638319
Acidithiobacillus ferrivorans CP021415 160808 119977 Microcoleus sp. PCC 7113 CP003634 1173027 119977 Escherichia coli HQ848325 562 119977 Escherichia coli KM107842 562 119977 Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter calcoaceticus CP020001 471 909768 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter lwoffii CP03211 28090 1813 Ac	Polaromonas sp. H6N	MG869620	1840293	2638319
Microcoleus sp. PCC 7113 CP003634 1173027 119977 Escherichia coli HQ848325 562 119977 Escherichia coli KM107842 562 119977 Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter calcoaceticus CP020001 48296 119977 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffli CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Carnobacterium maltarom	Acidithiobacillus ferrivorans	LT841306	160808	119977
Escherichia coli HQ848325 562 119977 Escherichia coli KM107842 562 119977 Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter calcoaceticus CP020001 471 909768 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP024627 1636603 1813 Acinetobacter lwoffli CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococ	Acidithiobacillus ferrivorans	CP021415	160808	119977
Escherichia coli KM107842 562 119977 Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter calcoaceticus CP020001 471 909768 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitoba	Microcoleus sp. PCC 7113	CP003634	1173027	119977
Leclercia adecarboxylata CP042508 83655 119977 Acinetobacter pittii CP015148 48296 119977 Acinetobacter calcoaceticus CP020001 471 909768 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter seifertii CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis CP016848 2751 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Sulfi	Escherichia coli	HQ848325	562	119977
Acinetobacter pittii CP015148 48296 119977 Acinetobacter calcoaceticus CP020001 471 909768 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis CP002366 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Staph	Escherichia coli	KM107842	562	119977
Acinetobacter calcoaceticus CP020001 471 909768 Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Staphylococcus aureus CP042060 1280 909768 Staphylo	Leclercia adecarboxylata	CP042508	83655	119977
Acinetobacter sp. WCHA45 CP028556 2004644 909768 Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042054 1280 909768 Staphylococcu	Acinetobacter pittii	CP015148	48296	119977
Polaromonas naphthalenivorans CP000537 216465 909768 Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042054 1280 909768 Staphylococcus aureus CP042054 1280 909768 Staphylococcus aure	Acinetobacter calcoaceticus	CP020001	471	909768
Polaromonas naphthalenivorans CP000532 216465 909768 Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Staphylococcus aureus CP001295 65393 909768 Pseudomonas sp. GLE121	Acinetobacter sp. WCHA45	CP028556	2004644	909768
Polaromonas naphthalenivorans CP000533 216465 909768 Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042061 1280 909768 Staphylococcus aureus CP042054 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis	Polaromonas naphthalenivorans	CP000537	216465	909768
Amycolatopsis mediterranei EU149765 33910 1813 Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Staphylococcus aureus CP001295 65393 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas syringae JQ418534 317 909768	Polaromonas naphthalenivorans	CP000532	216465	909768
Acinetobacter sp. ACNIH1 CP026427 1636603 1813 Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Pantoea sp. At-9b CP002437 592316 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Polaromonas naphthalenivorans	CP000533	216465	909768
Acinetobacter lwoffii CP032118 28090 1813 Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Pantoea sp. At-9b CP002437 592316 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Amycolatopsis mediterranei	EU149765	33910	1813
Acinetobacter seifertii MK323041 1530123 909768 Lactococcus lactis CP002366 1358 909768 Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Pantoea sp. At-9b CP002437 592316 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Acinetobacter sp. ACNIH1	CP026427	1636603	1813
Lactococcus lactis CP002366 1358 909768 Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Pantoea sp. At-9b CP002437 592316 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Acinetobacter lwoffii	CP032118	28090	1813
Lactococcus lactis HM021331 1358 909768 Carnobacterium maltaromaticum CP016848 2751 909768 Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Pantoea sp. At-9b CP002437 592316 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Acinetobacter seifertii	MK323041	1530123	909768
Carnobacterium maltaromaticum CP016848 2751 909768 Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Pantoea sp. At-9b CP002437 592316 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Lactococcus lactis	CP002366	1358	909768
Carnobacterium maltaromaticum LN846933 2751 909768 Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Pantoea sp. At-9b CP002437 592316 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Lactococcus lactis	HM021331	1358	909768
Sulfitobacter sp. SK025 CP025812 1389011 909768 Sulfitobacter sp. SK025 CP025813 1389011 909768 Pantoea sp. At-9b CP002437 592316 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Carnobacterium maltaromaticum	CP016848	2751	909768
Sulfitobacter sp. SK025 CP025813 1389011 909768 Pantoea sp. At-9b CP002437 592316 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Carnobacterium maltaromaticum	LN846933	2751	909768
Pantoea sp. At-9b CP002437 592316 909768 Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Sulfitobacter sp. SK025	CP025812	1389011	909768
Staphylococcus aureus CP042060 1280 909768 Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Sulfitobacter sp. SK025	CP025813	1389011	909768
Staphylococcus aureus CP042017 1280 909768 Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Pantoea sp. At-9b	CP002437	592316	909768
Staphylococcus aureus CP042054 1280 909768 Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Staphylococcus aureus	CP042060	1280	909768
Gloeothece citriformis CP001295 65393 909768 Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Staphylococcus aureus	CP042017	1280	909768
Pseudomonas sp. GLE121 KC542383 1329969 909768 Pseudomonas syringae JQ418534 317 909768	Staphylococcus aureus	CP042054	1280	909768
Pseudomonas syringae JQ418534 317 909768	Gloeothece citriformis	CP001295	65393	909768
Pseudomonas syringae JQ418534 317 909768	Pseudomonas sp. GLE121	KC542383	1329969	909768
Pseudomonas syringae KX009064 317 909768		JQ418534	317	909768
	Pseudomonas syringae	KX009064	317	909768

scientificName	nuccoreAcc	taxid	parent
Campylobacter helveticus	CP020479	28898	909768
Campylobacter helveticus	CP037748	28898	909768
Aminobacter aminovorans	CP015008	83263	31988
Aminobacter sp. MSH1	CP028971	374606	31988
Hartmannibacter diazotrophicus	LT960615	1482074	1572860
Rhodovulum sp. P5	CP015042	1564506	1572860
Rhodovulum sp. P5	CP015040	1564506	1572860
Staphylococcus epidermidis	CP034112	1282	1572860
Staphylococcus xylosus	CP031276	1288	1572860
Lactobacillus plantarum	CP020099	1590	1572860
Lactobacillus plantarum	CP017360	1590	1572860
Lactobacillus plantarum	CP025693	1590	1572860
Geminocystis sp. NIES-3709	AP014830	1617448	1572860
Geminocystis sp. NIES-3709	AP014831	1617448	1572860
Paenibacillus larvae	CP003356	1464	1572860
Burkholderia sp. MSMB0852	CP013423	1637841	111527
Burkholderia pseudomallei	CP018396	28450	111527
Planctopirus limnophila	CP001745	120	1649480
Staphylococcus sp. 693-2	GQ900376	373067	1649480
Staphylococcus kloosii	CP027847	29384	1279
Rhodococcus erythropolis	CP003762	1833	1279
Rhodococcus	CP025960	1661425	1279
Rhodococcus erythropolis	CP007256	1833	1279
Rhodococcus sp. NJ-530	CP034153	2490853	1279
Ralstonia pickettii	CP001646	329	1279
Mycobacterium sp. JS623	CP003080	212767	1279
Deinococcus sp. S14-83	CP034188	2489213	1279
Acinetobacter	CP041225	469	1279
Asticcacaulis excentricus	CP002398	78587	1279
Cryobacterium sp. LW097	CP021994	1978566	2649013
Cryobacterium arcticum	CP016283	670052	2649013
Corynebacterium diphtheriae	AY061891	1717	2649013
Corynebacterium diphtheriae	AF492560	1717	2649013
Corynebacterium striatum	CP021254	43770	1716
Corynebacterium diphtheriae	MN462701	1717	1716
Acinetobacter radioresistens	AP019743	40216	1716
Acinetobacter sp. EB104	AJ311718	156739	196816
Fusobacterium nucleatum	AF295336	851	196816
Fusobacterium nucleatum	CP013330	851	196816
Rahnella inusitata	FN429030	58169	34037
Helicobacter pylori	CP003485	210	34037
Helicobacter pylori	CP003478	210	34037
Novosphingobium sp. PP1Y	FR856860	702113	34037
Sphingomonas sp. YZ-8	CP032827	2319844	196159

scientificName	nuccoreAcc	taxid	parent
Sphingomonadaceae	CP005091	41297	196159
Oenococcus	AB208028	46254	81850
Oenococcus	CP030869	46254	81850
Acinetobacter pittii	CP015147	48296	81850
Acinetobacter baumannii	CP040262	470	81850
Acinetobacter wuhouensis	CP033118	1879050	81850
Bacillus thuringiensis	CP014850	1428	81850
Bacillus thuringiensis	CP014849	1428	81850
Methylobacterium currus	CP028847	2051553	81850
Methylobacterium sp. WL1	CP042822	2603276	2615210
Marivirga tractuosa	CP002350	1006	869806
Fibrisoma limi	HE805918	663275	869806
Pasteurella multocida	AY232671	747	869806
Glaesserella sp. 15-184	CP023059	2030797	869806
Borrelia miyamotoi	CP044817	47466	869806
Borrelia miyamotoi	CP044673	47466	869806
Clostridioides difficile	MF547664	1496	869806
Clostridioides difficile	MG973074	1496	869806
Bacillus cereus	CP001187	1396	869806
Bacillus thuringiensis	CP013001	1428	869806
Staphylococcus epidermidis	CP016969	1282	869806
Staphylococcus saprophyticus	CP031197	29385	869806
Eikenella corrodens	AB193120	539	538
Pseudomonas putida	AF273219	303	538
Staphylococcus epidermidis	CP022249	1282	538
Staphylococcus warneri	CP033099	1292	538
Streptomyces coelicolor	AL645771	1902	538
Paracoccus yeei	CP020446	147645	538
Paracoccus yeei	CP024428	147645	538
Paracoccus yeei	KM659096	147645	538
Nostoc sp. PCC 7524	AF516141	28072	538
Erwinia tracheiphila	CP013973	65700	538
Erwinia tracheiphila	CP013972	65700	538
Citrobacter koseri	CP026699	545	544
Anabaena sp. 90	CP003287	46234	544
Anabaena sp. 90	CP003286	46234	544
Anabaena sp. WA102	CP011457	1647413	2619674
Komagataeibacter saccharivorans	CP036411	265959	2619674
Acetobacter pasteurianus	AP014884	438	2619674
Sulfitobacter sp. AM1-D1	CP018077	1917485	2619674
Sulfitobacter sp. THAF37	CP045377	2587855	2619674
Amycolatopsis keratiniphila	CP003411	129921	1813
C	CD042061	1020	1000
Streptomyces tendae	CP043961	1932	1883

scientificName	nuccoreAcc	taxid	parent
Celeribacter backdonensis	CP028473	875171	875170
Celeribacter backdonensis	CP028476	875171	875170
Candidatus Borrelia tachyglossi	CP025787	1964448	875170
Zymomonas mobilis	CP002855	542	875170
Pelagibaca abyssi	CP015095	1250539	875170
Celeribacter indicus	CP004394	1208324	875170
Chlamydia pneumoniae	CP001714	83558	810
Chlamydia sp. H15-1957-10C	LT993739	1967782	2641215
Chlamydia sp. 2742-308	CP014640	1806891	2641215
Enterobacteriaceae	CP034732	543	2641215
Arthrobacter sp. YC-RL1	CP013298	1652545	2641215
Serpentinomonas mccroryi	AP014570	1458426	2490452
Lactobacillus delbrueckii	NC_001670	1584	2490452
Pseudomonas frederiksbergensis	CP017887	104087	286
Paraburkholderia rhizoxinica	FR687361	412963	2571159
Gluconacetobacter diazotrophicus	AM889287	33996	2571159
Sedimentitalea sp. W43	CP033222	2483033	2571159
Sedimentitalea sp. W43	CP033221	2483033	2571159
Arthrobacter rhombi	HQ624979	71253	1663
Enterobacteriaceae	CP035343	543	1663
Pseudomonas aeruginosa	KY296096	287	1663
Corynebacterium tuberculostearicum	HM622074	38304	1716
Rhizobiales bacterium PAMC 29148	CP036517	2528642	2723776
Rhizobiales bacterium PAMC 29148	CP036516	2528642	2723776
Selenomonas ruminantium	AP012296	971	2723776
Selenomonas ruminantium	AP012295	971	2723776
Gloeocapsa sp. PCC 7428	CP003647	1173026	2723776
Microchaete diplosiphon	AP018236	1197	2723776
Spiroplasma taiwanense	CP005075	2145	2132
Paraphotobacterium marinum	CP022357	1755811	2042066
Lactobacillus pentosus	KJ868091	1589	2042066
Calothrix	AP018260	1186	2042066
Nocardioides sp. JS614	CP000508	196162	2615069
Trichormus variabilis	KC733807	264691	2615069
Paraoceanicella profunda	CP040824	2579971	2615069
Deinococcus ficus	CP021084	317577	2615069
Pseudonocardia sp. HH130629-09	CP011869	1641402	2619320
Pseudonocardia sp. HH130630-07	CP013855	1690815	2619320
Pseudonocardia sp. HH130630-07	CP013856	1690815	2619320
Streptomyces cyaneus	AB010724	1904	1883
Tsukamurella tyrosinosolvens	LR134460	57704	1883
Tsukamurella tyrosinosolvens	LR134467	57704	1883
Microcoleus sp. PCC 7113	CP003638	1173027	1883
Sphingomonas sp. IC081	CP029765	304378	1883

Sphingomonas sp. IC081 CP029766 304378 1883 Sphingopyxis fribergensis CP009123 1515612 165697 Stanieria cyanosphaera CP003657 102116 165697 Bacillus methanolicus CP007740 1471 165697 Bacillus clausii CP012476 79880 1386 Mycobacterium paragordonae CP023148 701042 120793 Mycobacterium paragordonae CP025550 1389713 120793 Mycobacterium inhibens CP06817 147709 2614124 Carnobacterium inhibens CP06817 147709 2614124 Carnobacterium inhibens CP06814 147709 2614124 Staphylococcus aureus CP06817 147709 2614124 Pelagibacterium halotolerans CP003676 531813 1082930 Vibrio CP013486 662 1082930 Vibrio sp. THAF64 CP014535 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Gammaproteobacteria KU295136 <th>scientificName</th> <th>nuccoreAcc</th> <th>taxid</th> <th>parent</th>	scientificName	nuccoreAcc	taxid	parent
Sphingopyxis fribergensis CP009123 1515612 165697 Stanieria cyanosphaera CP003657 102116 165697 Bacillus methanolicus CP00740 1471 165697 Bacillus clausii CP012476 79880 1386 Mycobacterium marseillense CP023148 701042 120793 Mycobacterium paragordonae CP025550 1389713 120793 Brevibacterium sp. Ap13 KF577590 1406197 2614124 Carnobacterium inhibens CP006817 147709 2614124 Carnobacterium inhibens CP006814 147709 2614124 Staphylococcus aureus CP007493 1280 2614124 Pelagibacterium halotolerans CP003076 531813 1082930 Vibrio CP013486 662 1082930 Vibrio sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Bacillus pumilus LR026976 1408 2614977 Neisseria lactamica DQ223898	Sphingomonas sp. IC081	CP029766	304378	1883
Stanteria cyanosphaera CP003657 102116 165697 Bacillus methanolicus CP007740 1471 165697 Bacillus clausii CP012476 79880 1386 Mycobacterium marseillense CP023148 701042 120793 Mycobacterium paragordonae CP025550 1389713 120793 Brevibacterium paragordonae CP006817 147709 2614124 Carnobacterium inhibens CP006817 147709 2614124 Carnobacterium inhibens CP0036814 147709 2614124 Staphylococcus aureus CP003767 531813 1082930 Vibrio CP013486 662 1082930 Vibrio CP014993 662 1082930 Vibrio sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP01366 158836 2614977 Roisseria lactamica DQ223898 486 2614977 Neisseria lactamica DQ223898 486 <td>1 0 1</td> <td>CP009123</td> <td></td> <td>165697</td>	1 0 1	CP009123		165697
Bacillus methanolicus CP007740 1471 165697 Bacillus clausii CP012476 79880 1386 Mycobacterium marseillense CP023148 701042 120793 Mycobacterium paragordonae CP025550 1389713 120793 Brevibacterium sp. Ap13 KF577590 1406197 2614124 Carnobacterium inhibens CP006817 147709 2614124 Carnobacterium inhibens CP006814 147709 2614124 Staphylococcus aureus CP027493 1280 2614124 Pelagibacterium halotolerans CP003076 531813 1082930 Vibrio CP013466 662 1082930 Vibrio CP014938 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP010366 158836 2614977 Risseria lactamica DQ232898 486 2614977 Steptomyces sp. 44414 DQ322650 364103 2593676 Legionella acelaidensis LR134435				
Bacillus clausii CP012476 79880 1386 Mycobacterium marseillense CP023148 701042 120793 Mycobacterium paragordonae CP025550 1389713 120793 Brevibacterium sp. Ap13 KF577590 1406197 2614124 Carnobacterium inhibens CP006817 147709 2614124 Staphylococcus aureus CP027493 1280 2614124 Pelagibacterium halotolerans CP003076 531813 1082930 Vibrio CP013486 662 1082930 Vibrio sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hornaechei CP01366 158836 2614977 Keisseria lactamica DQ223898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 Legionella archamica CP003655 102116 84086 Lactococcus lactis CP0031667	· -		1471	
Mycobacterium paragordonae CP025550 1389713 120793 Brevibacterium sp. Ap13 KF577590 1406197 2614124 Carnobacterium inhibens CP006817 147709 2614124 Carnobacterium inhibens CP006814 147709 2614124 Staphylococcus aureus CP00376 531813 1082930 Vibrio CP013486 662 1082930 Vibrio CP01493 662 1082930 Vibrio sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Resteria lactamica DQ223898 486 2614977 Neisseria lactamica DQ223898 486 2614977 Sterptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR1344345 45056 2593	Bacillus clausii		79880	1386
Brevibacterium sp. Ap13 KF577590 1406197 2614124 Carnobacterium inhibens CP006817 147709 2614124 Carnobacterium inhibens CP006814 147709 2614124 Staphylococcus aureus CP003076 531813 1082930 Vibrio CP013486 662 1082930 Vibrio sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP010366 158836 2614977 Enterobacter hormaechei CP010366 158836 2614977 Enterobacteria KU295136 1236 2614977 Reisseria lactamica DQ223898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003655 102116 84086 Iactococcus lactis CP00	Mycobacterium marseillense	CP023148	701042	120793
Brevibacterium sp. Ap13 KF577590 1406197 2614124 Carnobacterium inhibens CP006817 147709 2614124 Carnobacterium inhibens CP006814 147709 2614124 Staphylococcus aureus CP027493 1280 2614124 Pelagibacterium halotolerans CP003076 531813 1082930 Vibrio CP014093 662 1082930 Vibrio sp. THAF64 CP045358 2587860 261497 Bacillus pumilus LR026976 1408 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP010366 158836 2614977 Gammaproteobacteria KU295136 1236 2614977 Krisseria lactamica DQ223898 486 2614977 Sterptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TCI' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera <td< td=""><td>Mycobacterium paragordonae</td><td>CP025550</td><td>1389713</td><td>120793</td></td<>	Mycobacterium paragordonae	CP025550	1389713	120793
Carnobacterium inhibens CP006817 147709 2614124 Carnobacterium inhibens CP006814 147709 2614124 Staphylococcus aureus CP027493 1280 2614124 Pelagibacterium halotolerans CP003076 531813 1082930 Vibrio CP013486 662 1082930 Vibrio sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP010366 158836 2614977 Enterobacter hormaechei CP010366 158836 2614977 Starieria lactamica DQ232898 486 2614977 Kreptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003156 1358 84086 Kitroscoccus watsonii CP003136 1358 84086 Starieria lermsii C		KF577590	1406197	2614124
Staphylococcus aureus CP027493 1280 2614124 Pelagibacterium halotolerans CP003076 531813 1082930 Vibrio CP013486 662 1082930 Vibrio Sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP010366 158836 2614977 Gammaproteobacteria KU295136 1236 2614977 Keisseria lactamica DQ223898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003136 1358 84086 Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida FM178384 40269 </td <td></td> <td>CP006817</td> <td>147709</td> <td>2614124</td>		CP006817	147709	2614124
Pelagibacterium halotolerans CP003076 531813 1082930 Vibrio CP013486 662 1082930 Vibrio CP01493 662 1082930 Vibrio sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP010366 158836 2614977 Gammaproteobacteria KU295136 1236 2614977 Neisseria lactamica DQ223898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003136 1358 84086 Lactococcus lactis CP003136 1358 84086 Lactococcus watsonii CP003136 1358 84086 Lactococcus watsonii CP004792 140 1227 Borrelia hermsii CP014792 140	Carnobacterium inhibens	CP006814	147709	2614124
Vibrio CP013486 662 1082930 Vibrio CP014093 662 1082930 Vibrio sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP010366 158836 2614977 Gammaproteobacteria KU295136 1236 2614977 Neisseria lactamica DQ223898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TCI' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003136 1358 84086 Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP0014792 140 1227 Borrelia hermsii CP004729 140 1227 Borrelia hermsii CP034239 40269 1227	Staphylococcus aureus	CP027493	1280	2614124
Vibrio CP014093 662 1082930 Vibrio sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP010366 158836 2614977 Cammaproteobacteria KU295136 1236 2614977 Neisseria lactamica DQ223898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003155 102116 84086 Nitrosococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP0014792 140 1227 Borrelia hermsii CP004278 140 1227 Allivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP031755 1063 <td>Pelagibacterium halotolerans</td> <td>CP003076</td> <td>531813</td> <td>1082930</td>	Pelagibacterium halotolerans	CP003076	531813	1082930
Vibrio sp. THAF64 CP045358 2587860 2614977 Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP010366 158836 2614977 Gammaproteobacteria KU295136 1236 2614977 Neisseria lactamica DQ223898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003136 1358 84086 Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP000278 140 1227 Aliivibrio salmonicida FM178384 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP002727 <t< td=""><td>Vibrio</td><td>CP013486</td><td>662</td><td>1082930</td></t<>	Vibrio	CP013486	662	1082930
Bacillus pumilus LR026976 1408 2614977 Enterobacter hormaechei CP010366 158836 2614977 Gammaproteobacteria KU295136 1236 2614977 Neisseria lactamica DQ223898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003136 1358 84086 Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP004792 140 1227 Borrelia hermsii CP000278 140 1227 Aliivibrio salmonicida CP014822 140 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Erwinia persicina CP022727 55211<	Vibrio	CP014093	662	1082930
Enterobacter hormaechei CP010366 158836 2614977 Gammaproteobacteria KU295136 1236 2614977 Neisseria lactamica DQ223898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP03655 102116 84086 Lactococcus lactis CP033136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP014822 140 1227 Borrelia hermsii CP014822 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP034239 40269 1227 Rhodobacter sphaeroides CP031755 1063 <td>Vibrio sp. THAF64</td> <td>CP045358</td> <td>2587860</td> <td>2614977</td>	Vibrio sp. THAF64	CP045358	2587860	2614977
Gammaproteobacteria KU295136 1236 2614977 Neisseria lactamica DQ223898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003365 102116 84086 Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP014822 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP031755 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Klebsiella aerogenes CP042531 548	Bacillus pumilus	LR026976	1408	2614977
Neisseria lactamica DQ233898 486 2614977 Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003655 102116 84086 Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP0014792 140 1227 Borrelia hermsii CP000278 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida FM178384 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP034239 40269 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548	Enterobacter hormaechei	CP010366	158836	2614977
Streptomyces sp. 44414 DQ322650 364103 2593676 Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003655 102116 84086 Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP000278 140 1227 Borrelia hermsii CP014822 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida CP034239 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Klebsiella aerogenes CP042727 55211 1227 Klebsiella geestiana CP042531 548	Gammaproteobacteria	KU295136	1236	2614977
Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003655 102116 84086 Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP000278 140 1227 Borrelia hermsii CP014822 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida CP034239 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP041714 45065 445	Neisseria lactamica	DQ223898	486	2614977
Legionella adelaidensis LR134435 45056 2593676 endosymbiont 'TC1' of Trimyema compressum CP014607 243899 84086 Stanieria cyanosphaera CP003655 102116 84086 Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP000278 140 1227 Borrelia hermsii CP014822 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida CP034239 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP041714 45065 445	Streptomyces sp. 44414	DQ322650	364103	2593676
Stanieria cyanosphaera CP003655 102116 84086 Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP000278 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida CP034239 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP042531 548 1227 Legionella geestiana CP041714 45065 445 Kklebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445		LR134435	45056	2593676
Lactococcus lactis CP003136 1358 84086 Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP000278 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida CP034239 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Legionella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Entero	endosymbiont 'TC1' of Trimyema compressum	CP014607	243899	84086
Nitrosococcus watsonii CP002088 473531 1227 Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP000278 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida CP034239 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Legionella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamu	Stanieria cyanosphaera	CP003655	102116	84086
Borrelia hermsii CP014792 140 1227 Borrelia hermsii CP000278 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida CP034239 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Legionella geestiana CP041714 45065 445 Kklebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurel	Lactococcus lactis	CP003136	1358	84086
Borrelia hermsii CP000278 140 1227 Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida CP034239 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Legionella geestiana CP041714 45065 445 Kklebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445 <td>Nitrosococcus watsonii</td> <td>CP002088</td> <td>473531</td> <td>1227</td>	Nitrosococcus watsonii	CP002088	473531	1227
Borrelia hermsii CP014822 140 1227 Aliivibrio salmonicida CP034239 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Legionella geestiana CP041714 45065 445 Kklebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445 <td>Borrelia hermsii</td> <td>CP014792</td> <td>140</td> <td>1227</td>	Borrelia hermsii	CP014792	140	1227
Aliivibrio salmonicida CP034239 40269 1227 Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Klebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Borrelia hermsii	CP000278	140	1227
Aliivibrio salmonicida FM178384 40269 1227 Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Legionella geestiana CP041714 45065 445 Klebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Borrelia hermsii	CP014822	140	1227
Rhodobacter sphaeroides CP000665 1063 1227 Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Legionella geestiana CP041714 45065 445 Klebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Aliivibrio salmonicida	CP034239	40269	1227
Rhodobacter sphaeroides CP031755 1063 1227 Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Legionella geestiana CP041714 45065 445 Klebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Aliivibrio salmonicida	FM178384	40269	1227
Erwinia persicina CP022727 55211 1227 Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Legionella geestiana CP041714 45065 445 Klebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Rhodobacter sphaeroides	CP000665	1063	1227
Klebsiella aerogenes CP042531 548 1227 Legionella geestiana CP038272 45065 445 Legionella geestiana CP041714 45065 445 Klebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Rhodobacter sphaeroides	CP031755	1063	1227
Legionella geestiana CP038272 45065 445 Legionella geestiana CP041714 45065 445 Klebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Erwinia persicina	CP022727	55211	1227
Legionella geestiana CP041714 45065 445 Klebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Klebsiella aerogenes	CP042531	548	1227
Klebsiella pneumoniae KX434884 573 445 Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Legionella geestiana	CP038272	45065	445
Escherichia coli CP035344 562 445 Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Legionella geestiana	CP041714	45065	445
Escherichia coli CP024095 562 445 Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Klebsiella pneumoniae	KX434884	573	445
Planococcus sp. ZOYM DQ438984 378212 445 Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Escherichia coli	CP035344	562	445
Enterobacter cloacae CP039306 550 445 Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Escherichia coli	CP024095	562	445
Tsukamurella tyrosinosolvens LR134462 57704 445 Tsukamurella tyrosinosolvens LR134449 57704 445	Planococcus sp. ZOYM	DQ438984	378212	445
Tsukamurella tyrosinosolvens LR134449 57704 445	Enterobacter cloacae	CP039306	550	445
· ·	Tsukamurella tyrosinosolvens	LR134462	57704	445
Pseudomonas koreensis CP027480 198620 286	Tsukamurella tyrosinosolvens	LR134449	57704	445
	Pseudomonas koreensis	CP027480	198620	286

scientificName	nuccoreAcc	taxid	parent
Pseudomonas koreensis	CP027479	198620	286
Borrelia crocidurae	CP003428	29520	286
Borrelia crocidurae	CP003436	29520	286
Pseudonocardia dioxanivorans	NC_017772	240495	286
Sinomonas atrocyanea	CP014519	37927	596707
Desulfosporosinus acidiphilus	CP003640	885581	596707
Pusillimonas sp. T7-7	CP002664	1007105	2640016
Rhodococcus erythropolis	AF015088	1833	2640016
Marinitoga piezophila	CP003258	149715	160798
Fusobacterium hwasookii	CP013332	1583098	160798
Acidiphilium multivorum	AP012040	62140	160798
Mycobacteroides abscessus	CP022232	1962118	36809
Mycobacteroides abscessus	CP022235	1962118	36809
Leuconostoc citreum	AY790924	33964	36809
Leuconostoc citreum	AY737645	33964	36809
Trichormus azollae	CP002061	1164	36809
Singulisphaera acidiphila	CP003366	466153	36809
Brevibacillus sp. SCSIO 07484	CP034542	2496837	2684853
Paenibacillus sp. IHBB 10380	CP010977	1566358	185978
Pseudoalteromonas carrageenovora	CP027525	227	53246
Vibrio rumoiensis	AP018688	76258	662
Vibrio casei	AP018682	673372	662
Emticicia oligotrophica	CP002965	312279	662
Campylobacter hyointestinalis	CP040465	198	194
Streptomyces sp. Z022	CP033072	1442032	2593676
Streptomyces sp. CLI2509	CP021119	1984801	2593676
Weissella cibaria	KF879106	137591	2593676
Weissella cibaria	CP012880	137591	2593676
Bacillus	CP018198	1386	2593676
Nostoc sp. 'Lobaria pulmonaria (5183) cyanobiont'	CP026695	1618022	2593676
Calothrix brevissima	AP018210	938406	2593676
Dermacoccus abyssi	CP043032	322596	57495
Dermacoccus nishinomiyaensis	CP008890	1274	57495
Yangia pacifica	CP022194	311180	57495
Sulfitobacter sp. SK025	CP025810	1389011	57495
Paracoccus sp. 2251	CP040756	2560053	57495
Paracoccus sp. 2251	CP040757	2560053	57495
Mycobacteroides abscessus	CP004375	1303024	57495
Mycobacterium sp. MS1601	CP019423	1936029	57495
Arcobacter cryaerophilus	CP032824	28198	57495
Arcobacter cryaerophilus	MK715471	28198	57495
Nostoc sp. PCC 7120	AP003606	103690	57495
Staphylococcus aureus	CP042134	1280	57495

scientificName	nuccoreAcc	taxid	parent
	D85144	670	57495
Vibrio parahaemolyticus Marinobacter hydrocarbonoclasticus	CP000515	2743	
	CP000313 CP028919	2169400	57495 57495
Gemmobacter sp. HYN0069 Micromonospora rosaria		47874	
-	AY860110 CP001812	43305	$1873 \\ 1873$
Butyrivibrio proteoclasticus	CP01812 CP019637	1940762	1873
Nostocales cyanobacterium HT-58-2	AP018197	1137095	1873
Scytonema sp. HK-05 Lactococcus lactis	AF018197 AF242367	1358	1873
		1358	1873
Lactococcus lactis	LT599050		
Scytonema sp. HK-05	AP018196	1137095	1873
Scytonema sp. HK-05	AP018199	1137095	1873
Helicobacter cinaedi	AP012345	213	209
Lactobacillus reuteri	KY930475	1598	209
Lactobacillus reuteri	HF570055	1598	209
Ruminococcus albus	CP002407	1264	209
Bacillus licheniformis	CP035189	1402	209
Burkholderia pseudomallei	CP018385	28450	209
Burkholderia vietnamiensis	CP000619	60552	209
Burkholderia vietnamiensis	CP000618	60552	209
Mesorhizobium amorphae	CP015319	71433	68287
Bosea vaviloviae	CP017148	1526658	85413
Altererythrobacter atlanticus	CP011453	1267766	361177
Azospirillum humicireducens	CP028904	1226968	361177
Maribius sp. THAF1	CP045421	2587842	2639808
Yangia sp. CCB-MM3	CP014600	1792508	2639808
Clostridium	CP029460	1485	2639808
Clostridium beijerinckii	CP029330	1520	1485
Paraclostridium bifermentans	CP032454	1490	1485
Nostoc sp. HK-01	AP018320	196308	1485
Anabaenopsis circularis	AP018176	109266	1485
Staphylococcus aureus	CP026954	1280	1485
Staphylococcus aureus	CP026971	1280	1485
Gordonia sp. KTR9	CP002112	337191	1485
Aminobacter aminovorans	CP015009	83263	1485
Ochrobactrum pituitosum	CP018781	571256	528
Agrobacterium tumefaciens	CP029046	358	528
Paracoccus jeotgali	CP025585	2065379	528
Sagittula sp. P11	CP021919	2009329	528
Leisingera aquaemixtae	CP041162	1396826	528
Acinetobacter baumannii	JN872565	470	528
Acinetobacter baumannii	CP042565	470	528
Edwardsiella tarda	CP002155	636	528
Parageobacillus thermoglucosidasius	AP019364	1426	528
Geobacillus sp. 1121	KC255224	1273699	2642459
Goodaciiian pp. 1121	110200224	1210000	2012100

scientificName	nuccoreAcc	taxid	parent
Butyrivibrio fibrisolvens	L31578	831	830
Butyrivibrio fibrisolvens	NC_011377	831	830
Rufibacter tibetensis	CP012644	512763	830
Celeribacter manganoxidans	CP021405	1411902	830
Pantoea sp. CCBC3-3-1	CP034364	2490851	830
Pantoea dispersa	CP032706	59814	830
Serratia symbiotica	LR025084	138074	830
Arthrobacter alpinus	CP013201	656366	1663
Planococcus sp. MB-3u-03	CP025123	2058136	1663
Sinorhizobium fredii	CP003577	380	1663
Acinetobacter soli	CP016898	487316	1663
Microbulbifer sp. THAF38	CP045370	2587856	2619833
Staphylococcus pseudintermedius	CP015628	283734	2619833
Brevibacillus laterosporus	CP007807	1465	2619833
Moritella viscosa	LN554853	80854	58050
Lactobacillus oris	CP014788	1632	58050
Selenomonas ruminantium	AP012301	971	58050
Thalassospira xiamenensis	CP004389	220697	168934
Corynebacterium glyciniphilum	CP006843	1404244	1716
Clostridium taeniosporum	CP017254	394958	1716
Staphylococcus aureus	CP013227	1280	1716
Methylorubrum populi	AP014813	223967	1716
Enterobacter asburiae	CP011867	61645	1716
Fusobacterium nucleatum	CP013329	851	1716
Bacillus megaterium	CP026741	1404	1716
Helicobacter heilmannii	HE984299	35817	209
Trichormus variabilis	AP018221	264691	209
Butyrivibrio fibrisolvens	L31579	831	209
Desulfovibrio ferrophilus	AP017379	241368	872
Phaeobacter inhibens	CP010766	221822	872
Geminocystis sp. NIES-3709	AP014829	1617448	872
Pseudanabaena sp. ABRG5-3	AP017566	685565	872
Klebsiella aerogenes	LR134128	548	872
Planctomycetes bacterium I41	CP036340	2528024	2691521
Sinorhizobium sp. CCBAU 05631	CP023066	794846	2613772
Vibrio scophthalmi	CP016417	45658	2613772
Carboxydocella thermautotrophica	CP028515	178899	178898
Acinetobacter sp. DUT-2	CP014656	1809055	178898
Tsukamurella tyrosinosolvens	LR134453	57704	178898
Exiguobacterium sp. N4-1P	CP022240	2051906	178898
Escherichia coli	AY230888	562	178898
Burkholderia insecticola	AP013062	758793	32008
Helicobacter suis	AP019775	104628	209
Magnetospirillum sp. ME-1	CP020963	1639348	2617991

scientificName	nuccoreAcc	taxid	naront
			parent
Rothia mucilaginosa	CP023509	43675	32207
Candidatus Promineofilum breve	LN890657	1806508	1988031
Chryseobacterium sp.	CP044508	1871047	2593645
Mycobacteroides abscessus	CP022234	1962118	2593645
Rhodococcus erythropolis	LC331663	1833	2593645
Burkholderia sp. OLGA172	CP014581	1804984	2593645
Planococcus versutus	CP016541	1302659	2593645
Moritella viscosa	LN554854	80854	2593645
Erwinia tasmaniensis	CU468132	338565	2593645
Campylobacter jejuni	CP028934	197	2593645
Escherichia coli	CP014089	562	2593645
Mycobacteroides abscessus	CP022231	1962118	2593645
Phaeobacter piscinae	CP010724	1580596	2593645
Sporosarcina sp. P37	CP018869	1930546	2647733
Sporomusa termitida	CP036260	2377	2375
Chromobacterium sp. IIBBL 112-1	CP029496	2202141	2641838
Polaromonas sp. W11N	MG869624	1840303	2641838
Lactobacillus reuteri	LN906635	1598	2641838
Agarilytica rhodophyticola	CP021746	1737490	2641838
Trueperella pyogenes	U83788	1661	1069494
Leptolyngbya boryana	AF176225	1184	1069494
Lactobacillus buchneri	CP043616	1581	1069494
Neorhizobium sp. NCHU2750	CP030833	1825976	1069494
Rhodobacter sphaeroides	CP015216	1063	1069494
Providencia stuartii	CP031511	588	1069494
endosymbiont DhMRE of Dentiscutata heterogama	LN828719	1609546	1665628
Bifidobacterium breve	KM406416	1685	1665628
Salmonella enterica	CP022018	28901	1665628
Bacteroides fragilis	CP018938	817	1665628
Brevibacillus borstelensis	D43692	45462	55080
Lactobacillus sp. wkB8	CP009532	1545702	2620435
Streptomyces alboflavus	CP023977	67267	2620435
Acidithiobacillus ferrivorans	CP021414	160808	2620435
Hymenobacter sp. APR13	CP006590	1356852	2615202
Microcystis aeruginosa	CP025929	1126	2615202
Miniimonas sp. S16	CP029050	2171623	2615202
Lactobacillus plantarum	CP025732	1590	2615202
Sinorhizobium fredii	CP003579	380	2615202
Paraoceanicella profunda	CP040822	2579971	2615202
Virgibacillus sp. SK37	CP007162	403957	2615202
Rhodococcus opacus	CP003955	37919	2615202
Geminocystis sp. NIES-3709	AP014827	1617448	2615202
Bacillus velezensis	CP037419	492670	2615202
Chryseobacterium sp. IHB B 17019	CP013294	1721091	2593645

Capnocytophaga sp. oral taxon 864	scientificName	nuccoreAcc	taxid	parent
Pelobacter acetylenicus CP015456 29542 18 Massilia putida CP019036 1141883 149698 Sinorhizobium fredii CP0193581 380 149698 Thermaerobacter sp. FW80 CP037896 2546351 2619059 Pseudanabaena sp. ABRG5-3 AP017567 685565 2619059 Actinomyces sp. oral taxon 897 CP027237 2081702 2609248 Actinomyces sp. oral taxon 897 CP027237 2081702 2609248 Vibrio cholerae KY486775 666 2609248 Pseudoalteromonas rubra CP013613 43658 53246 Xanthomonas citri CP020996 346 53246 Shewanella sp. TH2012 CP020374 1965282 196818 Arachidicoccus sp. B3-10 CP044017 2545455 2636138 Stenotrophomonas maltophilia EF535851 40324 995085 Virgibacillus sp. SK37 CP007164 403957 995085 Sedimenticola thiotaurin CP011413 1543721 349742 Xanthomonadaceae bact				
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Sinorhizobium fredii CP003581 380 149698 Thermacrobacter sp. FW80 CP037896 2546351 2619059 Pseudanabaena sp. ABRG5-3 AP017567 685565 2619059 Legionella fallonii LN614829 96230 2619059 Actinomyces sp. oral taxon 897 CP027237 2081702 2609248 Vibrio cholerae KY486775 666 2609248 Desulfosarcina ovata AP021878 83564 2609248 Pseudoalteromonas rubra CP013613 43658 53246 Xanthomonas citri CP020374 1965282 196818 Arachidicoccus sp. B3-10 CP044017 2545455 2636138 Stentorophomonas maltophilia EF535851 40324 995085 Stedimenticola thiotaurini CP011413 1543721 349742 Xanthomonadaceae bacterium AQ6-296 CP035703 2511995 2709666 Synechococcus sp. PCC 8807 CP016487 195248 2709666 Synechococcus peritii CP041715 45065 2709666 Sc	· ·			-
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Escherichia coli CP034391 562 2709666 Paraburkholderia sprentiae CP017564 948107 1822464 Corynebacterium mustelae CP011544 571915 1716 Campylobacter jejuni CP023447 197 1716 Lactobacillus mucosae CP011014 97478 1578 Geobacillus stearothermophilus D29989 1422 1578 Escherichia coli CP014080 562 1578 Alteromonas sp. RKMC-009 CP032914 2267264 2614992 Arcobacter sp. L AP012049 944547 2321207 Pseudobutyrivibrio xylanivorans CP043029 185007 46205 Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC31709			1598	
Paraburkholderia sprentiae CP017564 948107 1822464 Corynebacterium mustelae CP011544 571915 1716 Campylobacter jejuni CP023447 197 1716 Lactobacillus mucosae CP011014 97478 1578 Geobacillus stearothermophilus D29989 1422 1578 Escherichia coli CP014080 562 1578 Alteromonas sp. RKMC-009 CP032914 2267264 2614992 Arcobacter sp. L AP012049 944547 2321207 Pseudobutyrivibrio xylanivorans CP043029 185007 46205 Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris <td< td=""><td>Escherichia coli</td><td></td><td>562</td><td></td></td<>	Escherichia coli		562	
Corynebacterium mustelae CP011544 571915 1716 Campylobacter jejuni CP023447 197 1716 Lactobacillus mucosae CP011014 97478 1578 Geobacillus stearothermophilus D29989 1422 1578 Escherichia coli CP014080 562 1578 Alteromonas sp. RKMC-009 CP032914 2267264 2614992 Arcobacter sp. L AP012049 944547 2321207 Pseudobutyrivibrio xylanivorans CP043029 185007 46205 Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 <td>Paraburkholderia sprentiae</td> <td></td> <td>948107</td> <td></td>	Paraburkholderia sprentiae		948107	
Campylobacter jejuni CP023447 197 1716 Lactobacillus mucosae CP011014 97478 1578 Geobacillus stearothermophilus D29989 1422 1578 Escherichia coli CP014080 562 1578 Alteromonas sp. RKMC-009 CP032914 2267264 2614992 Arcobacter sp. L AP012049 944547 2321207 Pseudobutyrivibrio xylanivorans CP043029 185007 46205 Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 <td></td> <td>CP011544</td> <td>571915</td> <td>1716</td>		CP011544	571915	1716
Lactobacillus mucosae CP011014 97478 1578 Geobacillus stearothermophilus D29989 1422 1578 Escherichia coli CP014080 562 1578 Alteromonas sp. RKMC-009 CP032914 2267264 2614992 Arcobacter sp. L AP012049 944547 2321207 Pseudobutyrivibrio xylanivorans CP043029 185007 46205 Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977	· ·		197	1716
Geobacillus stearothermophilus D29989 1422 1578 Escherichia coli CP014080 562 1578 Alteromonas sp. RKMC-009 CP032914 2267264 2614992 Arcobacter sp. L AP012049 944547 2321207 Pseudobutyrivibrio xylanivorans CP043029 185007 46205 Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977			97478	1578
Escherichia coli CP014080 562 1578 Alteromonas sp. RKMC-009 CP032914 2267264 2614992 Arcobacter sp. L AP012049 944547 2321207 Pseudobutyrivibrio xylanivorans CP043029 185007 46205 Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977	Geobacillus stearothermophilus	D29989	1422	
Arcobacter sp. L AP012049 944547 2321207 Pseudobutyrivibrio xylanivorans CP043029 185007 46205 Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977		CP014080	562	1578
Arcobacter sp. L AP012049 944547 2321207 Pseudobutyrivibrio xylanivorans CP043029 185007 46205 Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977	Alteromonas sp. RKMC-009	CP032914	2267264	2614992
Pseudobutyrivibrio xylanivorans CP043029 185007 46205 Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977		AP012049	944547	2321207
Geminocystis sp. NIES-3708 AP014820 1615909 46205 Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977		CP043029	185007	46205
Vibrio sp. VP5(2010) GU272158 749334 2614977 Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977		AP014820	1615909	46205
Pseudomonas sp. MK376343 306 2614977 Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977		GU272158	749334	2614977
Pediococcus pentosaceus LC075345 1255 2614977 Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977	_ , ,	MK376343	306	
Mycobacterium sp. THAF192 CP045326 2587868 2614977 Calothrix sp. NIES-4101 AP018279 2005461 2614977 Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977		LC075345	1255	
Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977	Mycobacterium sp. THAF192	CP045326	2587868	
Kocuria palustris LC317093 71999 2614977 Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977	-	AP018279	2005461	2614977
Runella sp. SP2 CP031032 2268026 2614977 Aureimonas sp. AU20 CP006373 1349819 2614977		LC317093	71999	2614977
Aureimonas sp. AU20 CP006373 1349819 2614977				
	<u> -</u>			2614977
	Lactobacillus crispatus	KP984530	47770	2614977

scientificName	nuccoreAcc	taxid	parent
Psychrobacter urativorans	CP012710	45610	2614977
Vibrio anguillarum	NC_009351	55601	2614977
Flavobacterium branchiophilum	FQ859182	55197	237
Lactobacillus brevis	CP032935	1580	237
Klebsiella aerogenes	LR134129	548	237
Anoxybacillus sp. B7M1	CP015437	1490057	2639704
Brachybacterium sp. VR2415	CP022318	2017485	2639704
Bacillus velezensis	CP025940	492670	2639704
Staphylococcus aureus	CP026966	1280	2639704
Bacillus subtilis	CP035409	1423	2639704
Chromobacterium violaceum	MG651603	536	535
Acidihalobacter prosperus	CP017449	160660	1765964
Streptomonospora sp. M2	CP036456	2498135	2635841
Methylobacterium sp. AMS5	CP006993	925818	2635841
Eikenella exigua	CP038019	2528037	538
Maritalea myrionectae	CP021331	454601	538
Synechococcus elongatus	CP033063	32046	538
Geminocystis sp. NIES-3708	AP014818	1615909	538
Desulfobacter hydrogenophilus	CP036314	2291	538
Tateyamaria omphalii	CP019317	299262	538
Halobacillus litoralis	CP026119	45668	45667
Tenericutes bacterium MO-XQ	CP017949	1911684	713063
Staphylococcus sciuri	CP041882	1296	713063
Planctomycetes bacterium K2D	CP036351	2527962	473814
Klebsiella pneumoniae	CP024505	573	473814
Pseudomonas fragi	KX353852	296	473814
Frankia torreyi	AY027524	1856	1854
Enterococcus faecium	CP041278	1352	1854
Pectobacterium carotovorum	KT351736	554	1854
Listeria monocytogenes	LR134399	1639	1854
Vagococcus sp. CF-49	CP038867	2562451	2648499
Chryseobacterium sp. G0186	CP033919	2487064	2593645
Alteromonas sp. 76-1	LR136959	2358187	2614992
Dietzia sp. oral taxon 368	CP027239	712270	2614992
Paraburkholderia megapolitana	CP041744	420953	1822464
Lactobacillus plantarum	CP025414	1590	1822464
Vibrio azureus	CP018619	512649	1822464
Borrelia miyamotoi	CP036949	47466	1822464
Hafnia alvei	CP015380	569	1822464
Gryllotalpicola sp. 2DFW10M-5	CP032625	2419771	2640006
Psychrobacillus sp. PB01	CP031224	2283160	1221880
Corynebacterium ureicelerivorans	CP009216	401472	1716
Sphingosinicella sp. BN140058	CP035502	1892855	2644549
Xanthomonas citri	CP021000	346	2644549

scientificName	nuccoreAcc	taxid	parent
Bacillus velezensis	CP037418	492670	2644549
Salmonella enterica	CP030290	28901	2644549
Acinetobacter baumannii	CP013925	470	2644549
Commensalibacter sp. AMU001	CP033088	2478912	2630218
Azospirillum sp. TSH58	CP022368	664962	2630218
Desulfovibrio carbinolicus	CP026541	296842	2630218
Leptotrichia trevisanii	AP019833	109328	2630218
Nissabacter sp. SGAir0207	CP028037	2126321	2630218
Simkania negevensis	FR872581	83561	34093
Hymenobacter swuensis	CP007146	1446467	34093
Celeribacter manganoxidans	CP021409	1411902	34093
Enterococcus faecalis	AF164559	1351	34093
Halomonas sp. THAF12	CP045402	2587849	34093
Lactobacillus paracasei	CP007126	1597	34093
Pseudanabaena sp. ABRG5-3	AP017563	685565	34093
Ornithinimicrobium sp. HY006	CP041768	2508882	2615080
Thiomicrorhabdus aquaedulcis	AP018723	2211106	2039723
Pseudomonas aeruginosa	KR106191	287	2039723
Methylomicrobium alcaliphilum	FO082061	271065	39773
Massilia violaceinigra	CP024609	2045208	149698
Phaeobacter inhibens	CP010734	221822	149698
Streptomyces clavuligerus	NC_001738	1901	149698
Magnetospira sp. QH-2	FO538766	1288970	2685734
Tsukamurella tyrosinosolvens	LR134444	57704	2685734
Corynebacterium pseudopelargi	CP033899	2080757	1716
Halioglobus japonicus	CP019452	930805	1217416
Streptococcus marmotae	CP015197	1825069	1301
Legionella israelensis	CP041669	454	1301
Lactobacillus salivarius	CP024069	1624	1301
Nocardiopsis sp. 25L-1-1c	HM102370	1009683	2649073
Staphylococcus aureus	CP042155	1280	2649073
Spirochaeta perfilievii	CP035808	252967	146
Bosea sp. PAMC 26642	CP014302	1792307	2653178
Campylobacter iguaniorum	CP009044	1244531	194
Lactobacillus agilis	CP034226	1601	194
Candidatus Nitrosoglobus terrae	AP014837	1630141	1980513
Klebsiella pneumoniae	CP022925	573	1980513
Escherichia coli	CP020521	562	1980513
Staphylococcus epidermidis	MH090918	1282	1980513
Klebsiella pneumoniae	CP018667	573	1980513
Marinovum algicola	CP010866	42444	1980513
Lactobacillus fermentum	CP033374	1613	1980513
Clostridium perfringens	MK275623	1502	1980513
Staphylococcus warneri	CP003672	1292	1980513

Pleomorphomonas sp. SM30 AP017628 1885025 1521255 Thermaerobacter sp. FW80 CP037897 2546351 1521255 Enterococcus faecium CP034946 1352 1521255 Opitutaceae bacterium TAV5 CP007054 794903 278955 Vibrio scophthalmi CP016310 45658 278955 Thermoanaerobacterium thermosaccharolyticum L38403 1517 28895 Acidithiobacillus ferrooxidans X96982 920 119977 Emticicia oligotrophica CP002966 312279 119977 Arsenophonus nasoniae CP036827 638 119977 Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Rectobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Vibrio gazogenes <th>scientificName</th> <th>nuccoreAcc</th> <th>taxid</th> <th>parent</th>	scientificName	nuccoreAcc	taxid	parent
Thermaerobacter sp. FW80 CP037897 2546351 1521255 Enterococcus faecium CP034946 1352 1521255 Opitutaceae bacterium TAV5 CP007054 794903 278955 Vibrio scophthalmi CP016310 45658 278955 Thermoanaerobacterium thermosaccharolyticum L38403 1517 28895 Bacillus wiedmannii CP032366 1890302 28895 Acidithiobacillus ferrooxidans X96982 920 119977 Emticicia oligotrophica CP002966 312279 119977 Arsenophonus nasoniae CP038627 638 119977 Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134112 45056 1279 Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococus opacus CP0018952 37919 1279 Phycisphaera mikurensis	Candidatus Paracaedibacter acanthamoebae	CP008942	91604	1521255
Enterococcus faecium CP034946 1352 1521255 Opitutaceae bacterium TAV5 CP007054 794903 278955 Vibrio scophthalmi CP016310 45658 278955 Thermoanaerobacterium thermosaccharolyticum L38403 1517 28895 Bacillus wiedmannii CP032366 1890302 28895 Acidithiobacillus ferrooxidans X96982 920 119977 Arsenophonus nasoniae CP002966 312279 119977 Arsenophonus nasoniae CP038627 638 119977 Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001869 1396 666508 Bacillus cereus CP01	Pleomorphomonas sp. SM30	AP017628	1885025	1521255
Opitutaceae bacterium TAV5 CP007054 794903 278955 Vibrio scophthalmi CP016310 45688 278955 Thermoanaerobacterium thermosaccharolyticum L38403 1517 28895 Bacillus wiedmannii CP032366 1890302 28895 Acidithiobacillus ferrooxidans X96982 920 119977 Emticicia oligotrophica CP002966 312279 119977 Arsenophonus nasoniae CP038627 638 119977 Arsenophonus nasoniae CP038627 638 119977 Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteuriamus CP013473 438 1279 Clostridiodes difficile CP045225 1496 1279 Rhodococcus opacus CP0045225 1496 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP	Thermaerobacter sp. FW80	CP037897	2546351	1521255
Vibrio scophthalmi CP016310 45658 278955 Thermoanaerobacterium thermosaccharolyticum L38403 1517 28895 Bacillus wiedmannii CP032366 1890302 28895 Acidithiobacillus ferrooxidans X96982 920 119977 Emticicia oligotrophica CP002966 312279 119977 Arsenophonus nasoniae CP038627 638 119977 Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018877 687 62 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306	Enterococcus faecium	CP034946	1352	1521255
Thermoanaerobacterium thermosaccharolyticum L38403 1517 28895 Bacillus wiedmannii CP032366 1890302 28895 Acidithiobacillus ferrooxidans X96982 920 119977 Emticicia oligotrophica CP0038627 638 119977 Arsenophomus nasoniae CP038627 638 119977 Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus ps. S3 CP024581 <td>Opitutaceae bacterium TAV5</td> <td>CP007054</td> <td>794903</td> <td>278955</td>	Opitutaceae bacterium TAV5	CP007054	794903	278955
Bacillus wiedmannii CP032366 1890302 28895 Acidithiobacillus ferrooxidans X96982 920 119977 Emticicia oligotrophica CP002966 312279 119977 Arsenophonus nasoniae CP038627 638 119977 Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 260	Vibrio scophthalmi	CP016310	45658	278955
Bacillus wiedmannii CP032366 1890302 28895 Acidithiobacillus ferrooxidans X96982 920 119977 Emticicia oligotrophica CP002966 312279 119977 Arsenophonus nasoniae CP038627 638 119977 Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 260	Thermoanaerobacterium thermosaccharolyticum	L38403	1517	28895
Emticicia oligotrophica CP002966 312279 119977 Arsenophonus nasoniae CP038627 638 119977 Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteuriamus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococus opacus CP008952 37919 1279 Rhodococus opacus CP001169 1396 666508 Bacillus cereus CP01169 1396 666508 Vibrio gazogenes CP0118837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747		CP032366	1890302	28895
Arsenophonus nasoniae CP038627 638 119977 Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP01169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Koila baliensis CP013273 1428 </td <td>Acidithiobacillus ferrooxidans</td> <td>X96982</td> <td>920</td> <td>119977</td>	Acidithiobacillus ferrooxidans	X96982	920	119977
Staphylococcus argenteus AP018564 985002 1279 Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP01169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 10846 1716 Acinetobacter radioresistens AP019747 40216 1716 Sacillus thuringiensis CP013273	Emticicia oligotrophica	CP002966	312279	119977
Pectobacterium carotovorum KP942676 554 1279 Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP0457481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Kozakia baliensis CP013273 1428 1716 Kozakia baliensis CP013655 1469	Arsenophonus nasoniae	CP038627	638	119977
Legionella adelaidensis LR134412 45056 1279 Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Moorea producens CP014685 153496<	Staphylococcus argenteus	AP018564	985002	1279
Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP04581 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Kozakia baliensis CP014685 153496 1716 Moorea producens CP017600 1155739	Pectobacterium carotovorum	KP942676	554	1279
Acetobacter pasteurianus CP013473 438 1279 Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP04581 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Kozakia baliensis CP014685 153496 1716 Moorea producens CP017600 1155739	Legionella adelaidensis	LR134412	45056	1279
Clostridioides difficile CP045225 1496 1279 Rhodococcus opacus CP008952 37919 1279 Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP03365 146919 1716 Moorea producens CP017600 1157739 1716 Lactobacillus helsingborgensis CP029545 12		CP013473	438	1279
Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP03		CP045225	1496	1279
Phycisphaera mikurensis AP012339 547188 666508 Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP03	Rhodococcus opacus	CP008952	37919	1279
Bacillus cereus CP001169 1396 666508 Vibrio gazogenes CP018837 687 662 Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP013273 1428 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP009688 8402		AP012339	547188	666508
Aeromicrobium sp. MF47 CP045736 2662028 2633570 Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP030368 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae		CP001169	1396	666508
Thalassococcus sp. S3 CP022306 2017482 2633570 Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP09688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP0411	Vibrio gazogenes	CP018837	687	662
Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP009688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP0	Aeromicrobium sp. MF47	CP045736	2662028	2633570
Ruania sp. HY168 CP042827 2603206 2648503 Amycolatopsis sp. YIM 10 CP045481 2653857 2618356 Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP009688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP0	Thalassococcus sp. S3	CP022306	2017482	2633570
Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP030368 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP013257		CP042827	2603206	2648503
Corynebacterium falsenii CP007157 108486 1716 Acinetobacter radioresistens AP019747 40216 1716 Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP030368 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP013257		CP045481	2653857	2618356
Bacillus thuringiensis CP013273 1428 1716 Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP090688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 193602		CP007157	108486	1716
Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP090688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217	Acinetobacter radioresistens	AP019747	40216	1716
Kozakia baliensis CP014685 153496 1716 Salinibacter ruber CP030365 146919 1716 Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP090688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217	Bacillus thuringiensis	CP013273	1428	1716
Moorea producens CP017600 1155739 1716 Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP099688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217		CP014685	153496	1716
Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP009688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217	Salinibacter ruber	CP030365	146919	1716
Lactobacillus helsingborgensis CP029545 1218494 1578 Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP009688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217	Moorea producens	CP017600	1155739	1716
Methylophaga nitratireducenticrescens CP021974 754476 40222 Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP009688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217		CP029545	1218494	1578
Vibrio parahaemolyticus CP020037 670 40222 Clostridium aceticum CP009688 84022 1485 Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217		CP021974	754476	40222
Salinibacter ruber CP030368 146919 1485 Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217		CP020037	670	40222
Enterobacter asburiae CP011865 61645 1485 Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217	Clostridium aceticum	CP009688	84022	1485
Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217	Salinibacter ruber	CP030368	146919	1485
Leisingera aquaemixtae CP041160 1396826 1485 Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217	Enterobacter asburiae	CP011865	61645	1485
Pantoea agglomerans HQ693810 549 1485 Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217	Leisingera aquaemixtae	CP041160	1396826	1485
Rhizobium leguminosarum CP022671 384 1485 Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217		HQ693810		
Brochothrix thermosphacta CP016842 2756 1485 Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217		CP022671	384	
Kocuria flava CP013257 446860 1485 Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217		CP016842	2756	1485
Pandoraea apista CP013482 93218 93217 Mycobacterium sp. MS1601 CP019425 1936029 93217				
Mycobacterium sp. MS1601 CP019425 1936029 93217	Pandoraea apista			
±	Arthrobacter alpinus		656366	93217

Tsukamurella tyrosinosolvens	scientificName	nuccoreAcc	taxid	parent
Francisella sp. CA97-1460 CP009655 1542390 262 Novosphingobium sp. P6W CP030355 1609758 2644732 Arenibacter algicola CP02516 616991 178469 Terribacillus goriensis CP008877 386490 459532 Bacillus thuringiensis CP010582 1428 459532 Pediococcus pentosaceus CP015920 1255 459532 Bacillus subtilis CP035227 1423 459532 Klebsiella pneumoniae KX434881 573 459532 Acidiphilium multivorum AP012043 62140 459532 Methylobacterium aquaticum AP014707 270351 459532 Microbacterium sp. SGAir0570 CP03812 1283 2633649 Staphylococcus haemolyticus CP015360 1428 2609290 Hacillus thuringiensis CP01688 1580596 2609290 Chysobacterium sp. SGAir0570 CP027930 270344 2609290 Chysobacterium taklimakanense CP015360 1428 2609290 Chysobacterium	Tsukamurella tyrosinosolvens	LR134448	57704	93217
Arenibacter algicola CP022516 616991 178469 Terribacillus goriensis CP008877 386490 459532 Bacillus thuringiensis CP0105820 1428 459532 Pediococcus pentosaceus CP015920 1255 459532 Bacillus subtilis CP035227 1423 459532 Klebsiella pneumoniae KX434881 573 459532 Actidiphilium multivorum AP012043 62140 459532 Methylobacterium aquaticum AP014707 270351 459532 Methylobacterium aquaticum AP014707 270351 459532 Microbacterium sp. SGAir0570 CP033812 1283 2633649 Microbacterium sp. SGAir0570 CP015360 1428 2609290 Bacillus thuringiensis CP011580 1428 2609290 Chryseobacter piscinae CP015360 1428 2609290 Chryseobacter piscinae CP015360 1428 2609290 Chryseobacter piscinae CP015360 1428 2609290 Chryseobacter piscinae	· · · · · · · · · · · · · · · · · · ·	CP009655	1542390	262
Terribacillus goriensis CP008877 386490 459532 Bacillus thuringiensis CP010582 1428 459532 Pediococcus pentosaceus CP015920 1255 459532 Bacillus subtilis CP035227 1423 459532 Klebsiella pneumoniae KX434881 573 459532 Acidiphilium multivorum AP012043 62140 459532 Methylobacterium aquaticum AP014707 270351 459532 Butyricicoccus sp. GAM44 AP018531 2109686 2633649 Staphylococcus haemolyticus CP033812 1283 2633649 Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phaeobacter piscinae CP011688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Cupriavidus oxalaticus CP015360 1428 2609290 Chryscobacterium taklimakanense CP015360 1428 2609290 Chryscobacterium taklimakanense CP045297 128574 44249 Buchner		CP030355	1609758	2644732
Bacillus thuringiensis CP010582 1428 459532 Pediococcus pentosaceus CP015920 1255 459532 Rediococcus pentosaceus CP015920 1255 459532 Klebsiella pneumoniae KX343881 573 459532 Acidiphilium multivorum AP012043 62140 459532 Methylobacterium aquaticum AP014707 270351 459532 Butyricicoccus pacemolyticus CP033812 12086 2633649 Staphylococcus haemolyticus CP033812 1283 2633649 Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phaeobacter piscinae CP016360 1428 2609290 Bacillus thuringiensis CP016363 1580596 2609290 Cupriavidus oxalaticus CP016363 1428 2609290 Chryscobacterium taklimakanense CP015360 1428 2609290 Chryscobacterium taklimakanense CP045297 128574 4249 Butyrivibrio hungatei CP045297 128574 4249 Buty	Arenibacter algicola	CP022516	616991	178469
Pediococcus pentosaceus CP015920 1255 459532 Bacillus subtilis CP035227 1423 459532 Klebsiella pneumoniae KX434881 573 459532 Acidiphilium multivorum AP012043 62140 459532 Methylobacterium aquaticum AP014707 270351 459532 Butyricicoccus sp. GAM44 AP018531 2109686 2633649 Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phaeobacter piscinae CP01688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Bacillus thuringiensis CP015360 1428 2609290 Chyseobacterium taklimakanense CP015360 1428 2609290 Chyseobacterium taklimakanense CP015360 1428 2609290 Chyseobacterium taklimakanense CP014360 1428 2609290 Chyseobacterium taklimakanense CP045297 128574 44249 Butyrivibrio hungatei CP045297 128574 44249 B	e e e e e e e e e e e e e e e e e e e	CP008877	386490	459532
Pediococcus pentosaceus CP015920 1255 459532 Bacillus subtilis CP035227 1423 459532 Klebsiella pneumoniae KX434881 573 459532 Acidiphilium multivorum AP012043 62140 459532 Methylobacterium aquaticum AP014707 270351 459532 Butyricicoccus sp. GAM44 AP018531 2109686 2633649 Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phaeobacter piscinae CP01688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Bacillus thuringiensis CP015360 1428 2609290 Chyseobacterium taklimakanense CP015360 1428 2609290 Chyseobacterium taklimakanense CP015360 1428 2609290 Chyseobacterium taklimakanense CP014360 1428 2609290 Chyseobacterium taklimakanense CP045297 128574 44249 Butyrivibrio hungatei CP045297 128574 44249 B	Bacillus thuringiensis	CP010582	1428	459532
Klebsiella pneumoniae KX434881 573 459532 Acidiphilium multivorum AP012043 62140 459532 Methylobacterium aquaticum AP014707 270351 459532 Butyricicoccus sp. GAM44 AP018531 2109686 2633649 Staphylococcus haemolyticus CP033812 1283 2633649 Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phacobacter piscinae CP01688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Cupriavidus oxalaticus CP038638 96344 106589 Chryseobacterium taklimakanense CP034172 536441 106589 Chryseobacterium taklimakanense CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Butyrivibrio hungatei CP017832 185008 44249 Dehalococcides mccartyi CP011128 61435 61434 Legionella adelaidensis LR134416 45056 61434 Legionella		CP015920	1255	459532
Acidiphilium multivorum AP012043 62140 459532 Methylobacterium aquaticum AP014707 270351 459532 Butyricicoccus sp. GAM44 AP018531 210368 2633649 Staphylococcus haemolyticus CP033812 1283 2633649 Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phaeobacter piscinae CP01688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Cupriavidus oxalaticus CP038638 96344 106589 Chryseobacterium taklimakanense CP034172 536441 59732 Paenibacillus brasilensis CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Buchnera aphidicola NC_00	Bacillus subtilis	CP035227	1423	459532
Methylobacterium aquaticum AP014707 270351 459532 Butyricicoccus sp. GAM44 AP018531 2109686 2633649 Staphylococcus haemolyticus CP033812 1283 2633649 Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phaeobacter piscinae CP010688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Cupriavidus oxalaticus CP038638 96344 106589 Chryseobacterium taklimakanense CP034172 536441 59732 Paenibacillus brasilensis CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Butyrivibrio hungatei CP0117832 185008 44249 Dehalococcides mccartyi CP011128 61435 61434 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Legionella specifica portion CP032030 210 28065 Paenib	Klebsiella pneumoniae	KX434881	573	459532
Methylobacterium aquaticum AP014707 270351 459532 Butyricicoccus sp. GAM44 AP018531 2109686 2633649 Staphylococcus haemolyticus CP033812 1283 2633649 Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phaeobacter piscinae CP01688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Cupriavidus oxalaticus CP038638 96344 106589 Chryseobacterium taklimakanense CP034172 536441 59732 Paenibacillus brasilensis CP045297 128574 59732 Puchnera aphidicola NC_004843 9 44249 Buttyrivibrio hungatei CP017832 185008 44249 Buttyrivibrio hungatei CP01128 61435 61434 Paraclostridium bifermentans CP011282 185008 44249 Dehalococcoides mccartyi CP01128 61435 61434 Legionella adelaidensis LR134416 45056 61434 Legionella	Acidiphilium multivorum	AP012043	62140	459532
Butyricicoccus sp. GAM44 AP018531 2109686 2633649 Staphylococcus haemolyticus CP033812 1283 2633649 Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phaeobacter piscinae CP01688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Cupriavidus oxalaticus CP038638 96344 106589 Chryseobacterium taklimakanense CP034172 536441 59732 Paenibacillus brasilensis CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Butyrivibrio hungatei CP017832 185008 44249 Dehalococcides mccartyi CP017832 185008 44249 Dehalococcides mccartyi CP011128 61435 61434 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP032030 210 28065 Paenibacillus sp.		AP014707	270351	459532
Staphylococcus haemolyticus CP033812 1283 2633649 Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phaeobacter piscinae CP0116688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Cupriavidus oxalaticus CP038638 96344 106589 Chryseobacterium taklimakanense CP034172 536441 59732 Paenibacillus brasilensis CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Buchnera CP013782 185978		AP018531	2109686	2633649
Microbacterium sp. SGAir0570 CP027930 2070348 2609290 Phaeobacter piscinae CP010688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Cupriavidus oxalaticus CP038638 96344 106589 Chryseobacterium taklimakanense CP034172 536441 59732 Paenibacillus brasilensis CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Butyrivibrio hungatei CP017832 185008 44249 Dehalococcoides mccartyi CP0117832 185008 44249 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP012865 1980674 185978 Staphylococcus pseudintermedius CP014047 263 185978 Kracetobacter past	-	CP033812	1283	2633649
Phaeobacter piscinae CP010688 1580596 2609290 Bacillus thuringiensis CP015360 1428 2609290 Cupriavidus oxalaticus CP038638 96344 106589 Chryseobacterium taklimakanense CP034172 536441 59732 Paenibacillus brasilensis CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Butyrivibrio hungatei CP017832 185008 44249 Dehalococcoides mccartyi CP011128 61435 61434 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Klebsiella pneumoniae		CP027930	2070348	2609290
Cupriavidus oxalaticus CP038638 96344 106589 Chryseobacterium taklimakanense CP034172 536441 59732 Paenibacillus brasilensis CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Butyrivibrio hungatei CP017832 185008 44249 Dehalococcoides mccartyi CP011128 61435 61434 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Koetobacter pasteurianus CP01947 263 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii		CP010688	1580596	2609290
Cupriavidus oxalaticus CP038638 96344 106589 Chryseobacterium taklimakanense CP034172 536441 59732 Paenibacillus brasilensis CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Butyrivibrio hungatei CP017832 185008 44249 Dehalococcoides mccartyi CP011128 61435 61434 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Komagataeibacter nataicola CP01947 263 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii	Bacillus thuringiensis	CP015360	1428	2609290
Chryseobacterium taklimakanense CP034172 536441 59732 Paenibacillus brasilensis CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Butyrivibrio hungatei CP017832 185008 44249 Dehalococcides mccartyi CP011128 61435 61434 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP011490 283734 185978 Komagataeibacter nataicola CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Klebsiella pneumoniae CP018459 573 185978 Legionella adelaidensis		CP038638	96344	106589
Paenibacillus brasilensis CP045297 128574 44249 Buchnera aphidicola NC_004843 9 44249 Butyrivibrio hungatei CP017832 185008 44249 Dehalococcoides mccartyi CP011128 61435 61434 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Acetobacter pasteurianus CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Klebsiella pneumoniae CP018459 573 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033<		CP034172	536441	59732
Butyrivibrio hungatei CP017832 185008 44249 Dehalococcoides mccartyi CP011128 61435 61434 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Francisella tularensis CP010447 263 185978 Komagataeibacter pasteurianus CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Klebsiella pneumoniae CP018459 573 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 C		CP045297	128574	44249
Butyrivibrio hungatei CP017832 185008 44249 Dehalococcoides mccartyi CP011128 61435 61434 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Francisella tularensis CP010447 263 185978 Komagataeibacter pasteurianus CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Klebsiella pneumoniae CP018459 573 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 C	Buchnera aphidicola	NC 004843	9	44249
Dehalococcoides mccartyi CP011128 61435 61434 Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Acetobacter pasteurianus CP019876 265960 185978 Klebsiella pneumoniae CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Streptomyces tsukubensis	-	CP017832	185008	44249
Paraclostridium bifermentans CP032455 1490 61434 Legionella adelaidensis LR134416 45056 61434 Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Acetobacter pasteurianus CP019876 263 185978 Komagataeibacter nataicola CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP0			61435	61434
Rhodoferax antarcticus CP019242 81479 28065 Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Acetobacter pasteurianus CP021514 438 185978 Komagataeibacter nataicola CP018459 573 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Staphylococcus warneri CP003		CP032455	1490	61434
Helicobacter pylori CP032030 210 28065 Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Acetobacter pasteurianus CP021514 438 185978 Komagataeibacter nataicola CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Streptomyces tsukubensis CP042999 406548 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Staphylococcus warneri CP017371 1590 2614992 Staphylococcus warneri CP016441 1331258 517 Arsenophonus nasoniae CP03	Legionella adelaidensis	LR134416	45056	61434
Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Acetobacter pasteurianus CP021514 438 185978 Komagataeibacter nataicola CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii	Rhodoferax antarcticus	CP019242	81479	28065
Paenibacillus sp. Cedars CP020865 1980674 185978 Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Acetobacter pasteurianus CP021514 438 185978 Komagataeibacter nataicola CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii	Helicobacter pylori	CP032030	210	28065
Staphylococcus pseudintermedius CP011490 283734 185978 Francisella tularensis CP010447 263 185978 Acetobacter pasteurianus CP021514 438 185978 Komagataeibacter nataicola CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517		CP020865	1980674	185978
Acetobacter pasteurianus CP021514 438 185978 Komagataeibacter nataicola CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517		CP011490	283734	185978
Komagataeibacter nataicola CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517	Francisella tularensis	CP010447	263	185978
Komagataeibacter nataicola CP019876 265960 185978 Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517	Acetobacter pasteurianus	CP021514	438	185978
Klebsiella pneumoniae CP018459 573 185978 Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517		CP019876	265960	185978
Sinorhizobium fredii CP003571 380 185978 Legionella adelaidensis LR134434 45056 185978 Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517		CP018459	573	185978
Scytonema sp. HK-05 AP018201 1137095 185978 Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517		CP003571	380	185978
Runella sp. SP2 CP031033 2268026 185978 Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517	Legionella adelaidensis	LR134434	45056	185978
Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517	Scytonema sp. HK-05	AP018201	1137095	185978
Aquisphaera giovannonii CP042999 406548 185978 Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517	Runella sp. SP2	CP031033	2268026	185978
Streptomyces tsukubensis CP045177 83656 185978 Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517				
Alteromonas sp. I4 AP021860 2652380 2614992 Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517		CP045177	83656	
Lactobacillus plantarum CP017371 1590 2614992 Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517		AP021860	2652380	
Staphylococcus warneri CP003676 1292 2614992 Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517	Lactobacillus plantarum	CP017371	1590	2614992
Bordetella pseudohinzii CP016441 1331258 517 Arsenophonus nasoniae CP038625 638 517				
Arsenophonus nasoniae CP038625 638 517				
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scientificName	nuccoreAcc	taxid	parent
Bacillus cereus	CP016362	1396	517
Deinococcus sp. AJ005	CP044988	2652443	517
Kozakia baliensis	CP014686	153496	517
Buchnera aphidicola	CP034854	9	517
Candidatus Tenderia electrophaga	CP013100	1748243	1813600
Burkholderia sp. PAMC 28687	CP014512	1795874	1813600
Hymenobacter sp. APR13	CP006589	1356852	1813600
Desulfurella acetivorans	CP007052	33002	33001
Lactobacillus sakei	LT960783	1599	33001
Pseudomonas sp.	MK376344	306	33001
Selenomonas ruminantium	AP012300	971	33001
Streptococcus sp. oral taxon 064	CP016209	712624	2608887
Lactobacillus curvatus	CP031005	28038	2608887
Legionella pneumophila	KT271770	446	2608887
Sinorhizobium fredii	CP003575	380	2608887
Komagataeibacter europaeus	AB972537	33995	2608887
Pseudomonas koreensis	CP027481	198620	2608887
Spirosoma linguale	CP001771	108	2608887
Pseudomonas syringae	CP034081	317	2608887
Vibrio parahaemolyticus	CP010887	670	2608887
Staphylococcus epidermidis	CP040865	1282	2608887
Salinibacter ruber	CP030362	146919	2608887
Candidatus Pantoea carbekii	CP010911	1235990	2608887
Nonomuraea gerenzanensis	LT559120	93944	2608887
Burkholderia contaminans	CP042168	488447	2608887
Marinobacter sp. JH2	CP037935	2547598	83889
Legionella adelaidensis	LR134414	45056	83889
Staphylococcus nepalensis	CP017468	214473	83889
Desulfovibrio carbinolicus	CP026540	296842	83889
Acinetobacter sp. M131	JX101642	1280052	83889
Photobacterium gaetbulicola	KC687076	1295392	657
Aeromonas hydrophila	KR677378	644	657
Streptococcus sp. oral taxon 064	CP016208	712624	657
Streptomyces globisporus	CP029363	1908	657
Paraburkholderia sp. SOS3	CP018813	1926494	2615204
Mesorhizobium japonicum	AP003017	266835	2066070
Salmonella enterica	CP030201	28901	2066070
Klebsiella pneumoniae	CP041107	573	2066070
Nonlabens spongiae	CP019345	331648	363408
Methylobacterium currus	CP028846	2051553	363408
Bacillus thuringiensis	CP014848	1428	363408
Candidatus Sneabacter namystus	CP043313	2601646	2601645
Paenibacillus sp. IHB B 3084	CP013207	867076	2601645
Arthrobacter sp.	MH067974	1667	2601645

Moraxella bovoculi CP011375 386891 473 Deinococcus ficus CP021085 317577 473 Bacillus velezensis CP022342 492670 473 Synechococcus sp. PCC 11901 CP040359 2579791 473 Acinetobacter baumannii CP039027 470 473 Mesorhizobium amorphae CP015320 71433 473 Mycobacterium sp. CBMA 213 MF600313 1968788 263 Sphingomonas taxi CP009572 1549858 263 Bacillus horikoshii CP020881 79883 138 Klebsiella aerogenes LR134133 548 138 Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	ent
Moraxella bovoculi CP011375 386891 473 Deinococcus ficus CP021085 317577 473 Bacillus velezensis CP022342 492670 473 Synechococcus sp. PCC 11901 CP040359 2579791 473 Acinetobacter baumannii CP039027 470 473 Mesorhizobium amorphae CP015320 71433 473 Mycobacterium sp. CBMA 213 MF600313 1968788 263 Sphingomonas taxi CP009572 1549858 263 Bacillus horikoshii CP020881 79883 133 Klebsiella aerogenes LR134133 548 133 Lactobacillus salivarius CP007648 1624 133 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	13326
Bacillus velezensis CP022342 492670 473 Synechococcus sp. PCC 11901 CP040359 2579791 473 Acinetobacter baumannii CP039027 470 473 Mesorhizobium amorphae CP015320 71433 473 Mycobacterium sp. CBMA 213 MF600313 1968788 263 Sphingomonas taxi CP009572 1549858 263 Bacillus horikoshii CP020881 79883 138 Klebsiella aerogenes LR134133 548 138 Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	5
Synechococcus sp. PCC 11901 CP040359 2579791 473 Acinetobacter baumannii CP039027 470 473 Mesorhizobium amorphae CP015320 71433 473 Mycobacterium sp. CBMA 213 MF600313 1968788 263 Sphingomonas taxi CP009572 1549858 263 Bacillus horikoshii CP020881 79883 138 Klebsiella aerogenes LR134133 548 138 Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	ó
Synechococcus sp. PCC 11901 CP040359 2579791 473 Acinetobacter baumannii CP039027 470 473 Mesorhizobium amorphae CP015320 71433 473 Mycobacterium sp. CBMA 213 MF600313 1968788 263 Sphingomonas taxi CP009572 1549858 263 Bacillus horikoshii CP020881 79883 138 Klebsiella aerogenes LR134133 548 138 Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	ó
Acinetobacter baumannii CP039027 470 473 Mesorhizobium amorphae CP015320 71433 473 Mycobacterium sp. CBMA 213 MF600313 1968788 263 Sphingomonas taxi CP009572 1549858 263 Bacillus horikoshii CP020881 79883 138 Klebsiella aerogenes LR134133 548 138 Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	5
Mesorhizobium amorphae CP015320 71433 473 Mycobacterium sp. CBMA 213 MF600313 1968788 263 Sphingomonas taxi CP009572 1549858 263 Bacillus horikoshii CP020881 79883 138 Klebsiella aerogenes LR134133 548 138 Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	5
Mycobacterium sp. CBMA 213 MF600313 1968788 263 Sphingomonas taxi CP009572 1549858 263 Bacillus horikoshii CP020881 79883 138 Klebsiella aerogenes LR134133 548 138 Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	5
Sphingomonas taxi CP009572 1549858 263 Bacillus horikoshii CP020881 79883 138 Klebsiella aerogenes LR134133 548 138 Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	36767
Bacillus horikoshii CP020881 79883 138 Klebsiella aerogenes LR134133 548 138 Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	36767
Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	36
Lactobacillus salivarius CP007648 1624 138 Geosporobacter ferrireducens CP017270 1424294 390 Planctomyces sp. SH-PL62 CP011277 1636152 390	36
Planctomyces sp. SH-PL62 CP011277 1636152 390	36
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Caulobacter 5p. 1 W C20 C1 000014 00000	0805
	0805
Acinetobacter nosocomialis CP033548 106654 390	0805
Borrelia hermsii CP014828 140 390	0805
Arcobacter butzleri MF136769 28197 390	0805
Deferribacter desulfuricans AP011530 197162 538	572
Caedibacter taeniospiralis AY422720 28907 289	905
Enterococcus faecium CP012450 1352 289	905
Rhizobium leguminosarum CP022570 384 289	905
Legionella adelaidensis LR134415 45056 289	905
Arthrobacter sp. MH067967 1667 289	905
Pseudomonas sp. S-47 AY951985 115714 289	905
Streptomyces lunaelactis CP026305 1535768 289	905
Aliivibrio wodanis LN554851 80852 289	905
Leisingera aquaemixtae CP041163 1396826 289	905
Calothrix parasitica AP018232 1973486 289	905
Legionella adelaidensis LR134438 45056 289	905
Candidatus Ishikawaella capsulata AP010873 168169 409	9304
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Muribaculum sp. TLL-A4 CP039394 2530390 409	9304
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Bacillus velezensis CP026535 492670 409	9304
	0070
	0070
Deinococcus sp. S14-83 CP034189 2489213 340	0070
	0070
	0070
Escherichia coli CP035326 562 340	
	JU (U
Mesotoga prima CP003533 1184387 118	070

scientificName	nuccoreAcc	taxid	parent
Moraxella osloensis	CP014237	34062	1184396
Octadecabacter temperatus	CP012161	1458307	53945
Ketogulonicigenium robustum	CP019942	92947	53945
Calothrix sp. NIES-4071	AP018263	2005469	2619626
Swingsia sp. F3b2	CP042424	2558361	2619626
Corynebacterium atypicum	CP008945	191610	1716
Geminocystis sp. NIES-3708	AP014819	1615909	1716
Lactobacillus brevis	CP031206	1580	1716
Planctomyces sp. SH-PL62	CP011275	1636152	1716
Bacillus subtilis	CP035192	1423	1716
Sinorhizobium fredii	CP003580	380	1716
Actinoalloteichus sp. GBA129-24	CP016078	1612551	2644606
Aeromonas sp. Ne-1	KP738729	1675689	257493
Leptolyngbya sp. NIES-3755	AP017310	1752064	257493
Planococcus sp. MB-3u-03	CP025131	2058136	257493
Bacillus weihaiensis	CP016021	1547283	1386
Pelagibaca abyssi	CP015096	1250539	1386
Lactobacillus reuteri	CP041677	1598	1386
Virgibacillus sp. Bac332	CP033047	2419842	2620237
Scytonema sp. HK-05	AP018200	1137095	2620237
Lactobacillus plantarum	NC_010098	1590	2620237
Arcobacter butzleri	KF740630	28197	2620237
Planococcus sp. MB-3u-03	CP025129	2058136	2620237
Escherichia coli	X01009	562	2620237
Staphylococcus aureus	CP042136	1280	2620237
Yersinia pseudotuberculosis	CP000719	633	2620237
Bacillus cereus	CP026679	1396	2620237
Streptococcus suis	KX785324	1307	2620237
Selenomonas sp. oral taxon 920	CP017043	1884263	2637378
Acinetobacter sp. ACNIH2	CP026419	1758189	2637378
Francisella tularensis	CP009683	263	2637378
Lactobacillus sakei	AP017934	1599	2637378
Labrenzia sp. PHM005	CP041190	2590016	2648686
Klebsiella aerogenes	LR134130	548	2648686
Legionella pneumophila	LC215275	446	2648686
Chondrocystis sp. NIES-4102	AP018286	2005460	2648686
Candidatus Protochlamydia naegleriophila	LN879503	389348	282132
Lactobacillus plantarum	CP025992	1590	282132
Alteromonas mediterranea	CP018030	314275	282132
Candidatus Azobacteroides pseudotrichonymphae	AP017919	511435	282132
Planococcus sp. PAMC 21323	CP009130	1526927	2662419
Escherichia coli	KX094567	562	2662419
Oscillibacter valericigenes	AP012045	351091	459786
Rhodoferax antarcticus	CP019241	81479	459786
Turouoiciax airaiculcus	O1 019241	01419	409100

scientificName	nuccoreAcc	taxid	parent
Staphylococcus sciuri	CP041886	1296	459786
Enterococcus faecium	CP019991	1352	459786
Escherichia coli	CP035332	562	459786
Erwinia tasmaniensis	CU468131	338565	459786
Spirosoma linguale	CP001776	108	459786
Nissabacter sp. SGAir0207	CP028039	2126321	459786
Hymenobacter swuensis	CP007143	1446467	459786
Clavibacter michiganensis	AM849036	28447	459786
Desulfovibrio hydrothermalis	FO203523	191026	872
Enterococcus faecium	CP025686	1352	872
Nocardia terpenica	CP023779	455432	1817
Halioglobus japonicus	CP019453	930805	1817
Tabrizicola sp. K13M18	CP034330	2494374	1817
Pseudomonas aeruginosa	MH547561	287	1817
Pseudomonas sp. TCU-HL1	CP015993	1856685	2583993
Fusobacterium varium	CP028104	856	2583993
Acinetobacter pittii	CP033524	48296	2583993
Nissabacter sp. SGAir0207	CP028036	2126321	2583993
Bacillus pumilus	CP011023	1408	2583993
Microbulbifer sp. THAF38	CP045371	2587856	2583993
Lactobacillus salivarius	CP024070	1624	2583993
Vibrio alfacsensis	CP032095	1074311	662
Pseudomonas sp. MPC6	CP034780	2498848	662
Pseudomonas sp. LM8	KM659088	545908	2583993
Paenibacillus durus	CP009289	44251	44249
Pseudorhodobacter sp. S12M18	CP039966	2500533	2644082
Clostridium beijerinckii	LN908214	1520	2644082
Rhodococcus qingshengii	CP025962	334542	2644082
Pantoea dispersa	CP032705	59814	2644082
Streptococcus respiraculi	CP022681	2021971	1301
Campylobacter sp. RM6137	CP018790	1660073	2593542
Candidatus Pantoea carbekii	CP010909	1235990	2593542
Streptomyces sp. S1D4-14	CP041606	2594461	2593542
Kocuria flava	CP013258	446860	2593542
Acetobacteraceae bacterium	CP039461	1909293	41293
Bacillus siamensis	CP025002	659243	1938374
Calothrix sp. 336/3	CP011385	1337936	1938374
Achromobacter xylosoxidans	CP025775	85698	1938374
Streptomyces rochei	AB905437	1928	1938374
Legionella adelaidensis	LR134411	45056	1938374
Proteus vulgaris	AF305615	585	1938374
Vibrio coralliilyticus	CP009619	190893	1938374
Roseovarius sp. THAF8	CP045414	2587846	1938374
Flammeovirga pectinis	CP034564	2494373	59739
i minimoviiga peemins	C1 004004	2101010	99109

scientificName	nuccoreAcc	taxid	parent
Providencia sp. WCHPHu000369	CP031118	2027290	2633465
Jeotgalibaca dankookensis	CP019729	708126	1470540
Bacillus thuringiensis	CP007608	1428	1470540
Paenibacillus sp. IHB B 3084	CP013206	867076	1470540
Tateyamaria omphalii	CP019318	299262	1470540
Helicobacter bizzozeronii	FR871758	56877	209
Acetobacter pasteurianus	CP013474	438	209
Acetobacter estunensis	FN597255	104097	434
Legionella adelaidensis	LR134421	45056	434
Alcanivorax sp. N3-2A	CP022309	2014542	2638842
Ahniella affigens	CP027861	2021234	2233801
Nissabacter sp. SGAir0207	CP028041	2126321	2233801
[Eubacterium] minutum	CP016203	76124	543314
Sphingorhabdus sp. YGSMI21	CP022549	2077182	2614947
Bacillus licheniformis	CP027791	1402	2614947
Pseudomonas mendocina	CP013125	300	2614947
Acinetobacter cumulans	CP035938	2136182	2614947
Brevibacillus laterosporus	CP033462	1465	2614947
Bordetella trematum	LT546646	123899	517
Acidithiobacillus caldus	CP005989	33059	517
Nissabacter sp. SGAir0207	CP028040	2126321	517
Virgibacillus halodenitrificans	CP017963	1482	517
Nocardia farcinica	LN868940	37329	517
Spiroplasma corruscae	CP022536	216934	2132
Neorhizobium sp. SOG26	CP025514	2060726	2629175
Microvirgula aerodenitrificans	CP028518	57480	57479
Deinococcus grandis	AP021852	57498	57479
Salinibacter ruber	CP030358	146919	57479
Psychrobacter urativorans	CP012711	45610	57479
Oenococcus oeni	NC_003201	1247	57479
Burkholderia glumae	AY641454	337	57479
Aeromonas salmonicida	CP021657	645	57479
Agarilytica rhodophyticola	CP021745	1737490	57479
Moraxella osloensis	CP024189	34062	57479
Selenomonas ruminantium	AP012297	971	57479
Indioceanicola profundi	CP030129	2220096	2478349
Staphylococcus nepalensis	CP017462	214473	2478349
Gordonia rubripertincta	CP022581	36822	2053
Crassaminicella sp. SY095	CP042244	2599308	2633479
Halioglobus pacificus	CP019045	930806	1217416
Halobacteriovorax marinus	HE610506	97084	1652133
Rickettsiales bacterium Ac37b	CP009218	1528098	1699067
Paludisphaera borealis	CP019084	1387353	1699067
Tsukamurella tyrosinosolvens	LR134457	57704	1699067

scientificName	nuccoreAcc	taxid	parent
Meiothermus taiwanensis	CP021131	172827	65551
Acidipropionibacterium acidipropionici	CP014353	1748	1912215
Komagataeibacter saccharivorans	CP036407	265959	1912215
Streptomyces sp. SAT1	CP016082	1849967 92947	1912215
Ketogulonicigenium robustum	CP019941		1912215
Arthrobacter sp. ZXY-2	CP017426	$\frac{1806905}{2079792}$	1912215
Mycetocola sp. 449 Rummeliibacillus stabekisii	CP026950		2685235
	CP014807	241244	648802
Pseudorhodobacter sp. S12M18	CP039967	2500533	648802
Escherichia coli	CP019266	562	648802
Chondrocystis sp. NIES-4102	AP018283	2005460	648802
endosymbiont of Sipalinus gigas	AP018163	1972134	204619
Sinorhizobium fredii	CP003573	380	204619
Capnocytophaga sp. oral taxon 878	CP027230	1316596	2640652
Streptococcus dysgalactiae	AP018729	1334	2640652
Paenisporosarcina antarctica	CP038016	417367	651660
Solibacillus silvestris	AP012158	76853	648800
Acinetobacter pittii	CP017939	48296	648800
Microchaete diplosiphon	AP018246	1197	648800
Pseudomonas sp. 11K1	CP035089	2505979	2583993
Bacillus sp. BS98	CP043833	2608254	2583993
Austwickia chelonae	CP031448	100225	1184606
Vibrio tubiashii	CP009356	29498	1184606
Geobacter anodireducens	CP014964	1340425	28231
Desulfovibrio carbinolicus	CP026542	296842	28231
Rickettsiales bacterium Ac37b	CP009219	1528098	28231
Methylophaga nitratireducenticrescens	CP021975	754476	28231
Clostridium baratii	CP006906	1561	28231
Methylophaga thalassica	AF233873	40223	40222
Klebsiella aerogenes	LR134131	548	40222
Acinetobacter nosocomialis	CP042996	106654	40222
Bacillus mycoides	CP000906	1405	40222
Streptomyces sp. Mg1	CP011666	465541	2593676
Agrobacterium fabrum	CP033038	1176649	2593676
Corynebacterium mustelae	CP011543	571915	2593676
Hymenobacter oligotrophus	CP032320	2319843	2593676
Streptomyces sp. ETH9427	CP029626	2211357	2593676
Microcystis aeruginosa	CP026286	1126	2593676
Fischerella sp. NIES-3754	AP017306	1752063	2593676
Geoalkalibacter subterraneus	CP010312	483547	392332
Streptococcus marmotae	CP015198	1825069	392332
Sulfuricella denitrificans	AP013067	649841	935200
Rhizobium sp. ACO-34A	CP021374	1571470	935200
Polaromonas sp. W5N	MG869626	1840315	2638319

Legionella adelaidensis Acidovorax citrulli Collimonas arenae Bacillus glycinifermentans LR CP CP MF	134423 2029374 2009963 7996511	747 45056 80869 279058 1664069	2638319 2638319 12916
Acidovorax citrulli CP Collimonas arenae CP Bacillus glycinifermentans MF	2029374 2009963 5996511	80869 279058	
Collimonas arenae CP Bacillus glycinifermentans MF	2009963 7996511	279058	12916
Bacillus glycinifermentans MF	F996511		
9 0		1664060	202907
D :11 1 CD	2026096	1004009	202907
Bacillus asahii CP		228899	1386
Methylocystis bryophila CP	019949	655015	133
	0015321	71433	133
	022602	271865	528
Sterolibacteriaceae bacterium J5B AP	P018720	2211108	528
	X376339	306	528
	2006904	1491	528
Chryseobacterium joostei CP	033927	112234	59732
Halomonas sp. 40 AB	3987830	223901	2609666
	045368	2587857	83889
	043618	2590022	2623549
	2030853	2259595	2623549
	039711	2026	2023
Chlorobium limicola U7	7780	1092	1091
Curtobacterium flaccumfaciens CP	045290	2035	1091
Desulfovibrio magneticus AP	P010906	184917	1091
•	016621	1882682	186650
	340279	29447	186650
Halioglobus japonicus CP	P019451	930805	186650
	012478	1704044	235627
Escherichia coli CP	014091	562	235627
Rhodococcus sp. H-CA8f CP	023721	1727214	192944
	019237	1842727	28065
Cetia pacifica CP	2 040940	1424653	1775691
	015699	1844971	2685271
	019313	299262	2685271
	020701	83656	2685271
Prauserella marina CP	016354	530584	142577
Kocuria turfanensis CP	014482	388357	142577
Tsukamurella tyrosinosolvens LR	134463	57704	142577
Agrobacterium tumefaciens AF	065242	358	142577
	022047	1296	142577
		1428	142577
•	032280	2004646	142577
		1406	142577
	2009250	161895	1716
		463014	517
		2527974	517
		1115758	1501226

Bacillus cytotoxicus	scientificName	nuccoreAcc	taxid	parent
Euhalothèce natronophila CP042330 577489 1501226 Leptotrichia wadei AP019839 157687 1501226 Listeria monocytogenes CP025563 1639 1501226 Streptomyces sp. AD195-16 CP033584 1522758 1501226 Erysipelothrix rhusiopathiae AF028735 1648 1501226 Ruminococcus flavefaciens U22411 1265 1263 Ractobacillus plantarum CP019350 1590 1263 Rhodobacter sphaeroides CP015293 1063 1263 Borrelia turcica CP028866 229155 1263 Rhodobacter sphaeroides CP015293 1063 269666 Ballomonas sp. Ant2 KP228014 1630300 2609666 Planococcus sp. MB-3u-03 CP025132 2058136 2609666 Palnococcus sp. MB-3u-03 CP025132 2058136 2609666 Arthorbacter sp. GCBC3-3-1 CP034366 1778263 2609666 Arthorbacter sp. Hiyo8 AP014721 1588023 2609666 Lactobacillus plantaru	Bacillus cytotoxicus	CP024119	580165	
Leptotrichia wadei AP019839 157687 1501226 Listeria monocytogenes CP023563 1639 1501226 Streptomyces sp. AD195-16 CP033584 1522758 1501226 Erysipelothrix rhusiopathiae AF028735 1648 1501226 Ruminococcus flavefaciens U22411 1265 1263 Rhodobacter sphaeroides CP019350 1590 1263 Rhodobacter sphaeroides CP015293 1063 1263 Borrelia turcica CP028886 229155 1263 Halomonas sp. Ant2 KP228014 1630300 2609666 Plancoccus sp. MB-3u-03 CP025132 2058136 2609666 Pantoea sp. CCBC3-3-1 CP034366 2490851 2609666 Arthobacter sp. Hiyos AP014721 1588023 2609666 Arthobacter sp. Hiyos AP014721 1588023 2609666 Helicobacter suis AP019776 104628 2609666 Helicobacter suis AP019776 104628 2609666 Helicobacter suis CP014328	· ·			
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Borrelia turcica CP028886 229155 1263 Halomonas sp. Ant2 KP228014 1630300 2609666 Planococcus sp. MB-3u-03 CP025132 2058136 2609666 Pantoea sp. CCBC3-3-1 CP034366 2490851 2609666 Candidatus Hoaglandella endobia LN999836 1778263 2609666 Arthrobacter sp. Hiyo8 AP014721 1588023 2609666 Lactobacillus plantarum CP012656 1590 2609666 Helicobacter suis AP019776 104628 2609666 Halocynthiibacter arcticus CP014328 1579316 1579315 Arthrobacter sp. Chr15 EF495212 447032 235627 Celeribacter manganoxidans CP021410 1411902 235627 Lactobacillus lindneri CP043614 1581 235627 Lactobacillus guangzhouensis CP0445294 1473112 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Hactobacillus gu	Lactobacillus plantarum	CP019350	1590	1263
Borrelia turcica CP028886 229155 1263 Halomonas sp. Ant2 KP228014 1630300 2609666 Planococcus sp. MB-3u-03 CP025132 2058136 2609666 Pantoea sp. CCBC3-3-1 CP034366 2490851 2609666 Candidatus Hoaglandella endobia LN999836 1778263 2609666 Arthrobacter sp. Hiyo8 AP014721 1588023 2609666 Lactobacillus plantarum CP012656 1590 2609666 Helicobacter suis AP019776 104628 2609666 Halocynthiibacter arcticus CP014328 1579316 1579315 Arthrobacter sp. Chr15 EF495212 447032 235627 Celeribacter manganoxidans CP021410 1411902 235627 Lactobacillus lindneri CP043614 1581 235627 Lactobacillus guangzhouensis CP041409 5344 235627 Lactobacillus buthyricum AP019719 1492 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Clostridium buty	-		1063	1263
Halomonas sp. Ant2 KP228014 1630300 2609666 Planococcus sp. MB-3u-03 CP025132 2058136 2609666 Pantoea sp. CCBC3-3-1 CP034366 2490851 2609666 Candidatus Hoaglandella endobia LN999836 1778263 2609666 Arthrobacter sp. Hiyo8 AP014721 1588023 2609666 Lactobacillus plantarum CP012656 1590 2609666 Halocynthiibacter suis AP019776 104628 2609666 Halocynthiibacter arcticus CP014328 1579316 1579315 Arthrobacter sp. Chr15 EF495212 447032 235627 Celeribacter manganoxidans CP021410 1411902 235627 Lactobacillus lindneri CP043614 1581 235627 Lactobacillus guangzhouensis CP0414909 5344 235627 Lactobacillus butyricum AP019719 1492 44249 Clostridium butyricum AP019719 1492 44249 Clostridium butyricum AP019800 190895 171610 Vibr			229155	1263
Planococcus sp. MB-3u-03 CP025132 2058136 2609666 Pantoea sp. CCBC3-3-1 CP034366 2490851 2609666 Candidatus Hoaglandella endobia LN999836 1778263 2609666 Arthrobacter sp. Hiyo8 AP014721 1588023 2609666 Lactobacillus plantarum CP012656 1590 2609666 Helicobacter suis AP019776 104628 2609666 Halocynthiibacter arcticus CP014328 1579316 1579315 Arthrobacter sp. Chr15 EF495212 447032 235627 Celeribacter manganoxidans CP043614 1581 235627 Lactobacillus buchneri CP043614 1581 235627 Lactobacillus lindneri CP014909 53444 235627 Lactobacillus guangzhouensis CP045294 1473112 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Clostridium butyricum AP019719 1492 44249 Vibrio rotiferianus AP019800 190895 717610 Leptospira bor	Halomonas sp. Ant2		1630300	2609666
Pantoea sp. CCBC3-3-1 CP034366 2490851 2609666 Candidatus Hoaglandella endobia LN999836 1778263 2609666 Arthrobacter sp. Hiyo8 AP014721 158802 2609666 Lactobacillus plantarum CP012656 1590 2609666 Helicobacter suis AP019776 104628 2609666 Halocynthiibacter arcticus CP014328 1579316 1579315 Arthrobacter sp. Chr15 EF495212 447032 235627 Celeribacter manganoxidans CP021410 1411902 235627 Lactobacillus buchneri CP043614 1581 235627 Lactobacillus guangzhouensis CP044909 53444 235627 Lactobacillus buchneri CP045294 1473112 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Clostridium butyricum AP019719 1492 44249 Vibrio rotiferianus AP019800 190895 717610 Leptospira borgpeter	-			2609666
Candidatus Hoaglandella endobia LN999836 1778263 2609666 Arthrobacter sp. Hiyo8 AP014721 1588023 2609666 Lactobacillus plantarum CP012656 1590 2609666 Helicobacter suis AP019776 104628 2609666 Halocynthiibacter arcticus CP014328 1579316 1579315 Arthrobacter sp. Chr15 EF495212 447032 235627 Celeribacter manganoxidans CP021410 1411902 235627 Lactobacillus buchneri CP043614 1581 235627 Lactobacillus guangzhouensis CP044909 5344 235627 Paenibacillus guangzhouensis CP045294 1473112 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Clostridium butyricum AP019719 1492 44249 Bacillus subtilis CP039756 1423 44249 Vibrio rotiferianus AP019800 190895 717610 Leptospira borgpetersenii CP012032 174 717610 Synechococcus sp. </td <td>-</td> <td></td> <td></td> <td></td>	-			
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Lactobacillus plantarum CP012656 1590 2609666 Helicobacter suis AP019776 104628 2609666 Halocynthiibacter arcticus CP014328 1579316 1579315 Arthrobacter sp. Chr15 EF495212 447032 235627 Celeribacter manganoxidans CP021410 1411902 235627 Lactobacillus buchneri CP043614 1581 235627 Lactobacillus lindneri CP014909 53444 235627 Paenibacillus guangzhouensis CP045294 1473112 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Clostridium butyricum AP019719 1492 44249 Bacillus subtilis CP039756 1423 44249 Vibrio rotiferianus AP019800 190895 717610 Leptospira borgpetersenii CP012032 174 717610 Synechococcus sp. AB018669 1131 2626047 Synechococcus sp. NKBG042902 D1403 490193 2626047 Moritella marina CP044			1588023	2609666
Helicobacter suis AP019776 104628 2609666 Halocynthiibacter arcticus CP014328 1579316 1579315 Arthrobacter sp. Chr15 EF495212 447032 235627 Celeribacter manganoxidans CP021410 1411902 235627 Lactobacillus buchneri CP043614 1581 235627 Lactobacillus lindneri CP014909 53444 235627 Paenibacillus guangzhouensis CP045294 1473112 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Clostridium butyricum AP019719 1492 44249 Bacillus subtilis CP039756 1423 44249 Vibrio rotiferianus AP019800 190895 717610 Leptospira borgpetersenii CP012032 174 717610 Synechococcus sp. AB018669 1131 2626047 Synechococcus sp. AB018669 1131 2626047 Synechococcus sp. NKBG042902 D14403 490193 2626047 Moritella marina CP044398 </td <td>- "</td> <td>CP012656</td> <td>1590</td> <td>2609666</td>	- "	CP012656	1590	2609666
Halocynthiibacter arcticus CP014328 1579316 1579315 Arthrobacter sp. Chr15 EF495212 447032 235627 Celeribacter manganoxidans CP021410 1411902 235627 Lactobacillus buchneri CP043614 1581 235627 Lactobacillus lindneri CP014909 53444 235627 Paenibacillus guangzhouensis CP045294 1473112 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Clostridium butyricum AP019719 1492 44249 Bacillus subtilis CP039756 17610 4249 Vibrio rotiferianus AP019800 190895 717610 Leptospira borgpetersenii CP012032 174 717610 Synechococcus sp. AB018669 1131 2626047 Synechococcus sp. AB018669 1131 2626047 Synechococcus sp. NKBG042902 D14403 490193 2626047 Moritella marina CP044398 90736 58050 Pseudomonas ps. LM8 KJ940994 <td>•</td> <td></td> <td>104628</td> <td></td>	•		104628	
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Celeribacter manganoxidans CP021410 1411902 235627 Lactobacillus buchneri CP043614 1581 235627 Lactobacillus lindneri CP014909 53444 235627 Paenibacillus guangzhouensis CP045294 1473112 44249 Halomonas sp. Ant2 KP127625 1630300 44249 Clostridium butyricum AP019719 1492 44249 Bacillus subtilis CP039756 1423 44249 Vibrio rotiferianus AP019800 190895 717610 Leptospira borgpetersenii CP012032 174 717610 Vibrio tubiashii CP009358 29498 717610 Synechococcus sp. AB018669 1131 2626047 Synechococcus sp. NKBG042902 D14403 490193 2626047 Moritella marina CP044398 90736 58050 Planococcus sp. MB-3u-03 CP025130 2058136 58050 Zymobacter palmae AP018934 33074 33073 Pseudomonas psychrotolerans CP016806				
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Leptospira borgpetersenii CP012032 174 717610 Vibrio tubiashii CP009358 29498 717610 Synechococcus sp. AB018669 1131 2626047 Burkholderia vietnamiensis CP000621 60552 2626047 Synechococcus sp. NKBG042902 D14403 490193 2626047 Moritella marina CP044398 90736 58050 Planococcus sp. MB-3u-03 CP025130 2058136 58050 Pseudomonas sp. LM8 KJ940994 545908 58050 Zymobacter palmae AP018934 33074 33073 Pseudomonas psychrotolerans CP018759 237610 286 Leuconostoc mesenteroides NC_016806 1245 286 Thermus scotoductus MH325194 37636 286 Staphylococcus aureus CP030544 1280 286 Plesiomonas shigelloides CP040830 1406 286 Planococcus sp. MB-3u-03 CP025126 2058136 286	· ·	CP039756	1423	44249
Vibrio tubiashii CP009358 29498 717610 Synechococcus sp. AB018669 1131 2626047 Burkholderia vietnamiensis CP000621 60552 2626047 Synechococcus sp. NKBG042902 D14403 490193 2626047 Moritella marina CP044398 90736 58050 Planococcus sp. MB-3u-03 CP025130 2058136 58050 Pseudomonas sp. LM8 KJ940994 545908 58050 Zymobacter palmae AP018934 33074 33073 Pseudomonas psychrotolerans CP018759 237610 286 Leuconostoc mesenteroides NC_016806 1245 286 Thermus scotoductus MH325194 37636 286 Staphylococcus aureus CP030544 1280 286 Paenibacillus polymyxa CP040830 1406 286 Plesiomonas shigelloides CP027854 703 286 Planococcus sp. MB-3u-03 CP025126 2058136 286	Vibrio rotiferianus	AP019800	190895	717610
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Moritella marina CP044398 90736 58050 Planococcus sp. MB-3u-03 CP025130 2058136 58050 Pseudomonas sp. LM8 KJ940994 545908 58050 Zymobacter palmae AP018934 33074 33073 Pseudomonas psychrotolerans CP018759 237610 286 Leuconostoc mesenteroides NC_016806 1245 286 Thermus scotoductus MH325194 37636 286 Staphylococcus aureus CP030544 1280 286 Paenibacillus polymyxa CP040830 1406 286 Plesiomonas shigelloides CP027854 703 286 Planococcus sp. MB-3u-03 CP025126 2058136 286		CP000621	60552	2626047
Moritella marina CP044398 90736 58050 Planococcus sp. MB-3u-03 CP025130 2058136 58050 Pseudomonas sp. LM8 KJ940994 545908 58050 Zymobacter palmae AP018934 33074 33073 Pseudomonas psychrotolerans CP018759 237610 286 Leuconostoc mesenteroides NC_016806 1245 286 Thermus scotoductus MH325194 37636 286 Staphylococcus aureus CP030544 1280 286 Paenibacillus polymyxa CP040830 1406 286 Plesiomonas shigelloides CP027854 703 286 Planococcus sp. MB-3u-03 CP025126 2058136 286	Synechococcus sp. NKBG042902	D14403	490193	2626047
Pseudomonas sp. LM8 KJ940994 545908 58050 Zymobacter palmae AP018934 33074 33073 Pseudomonas psychrotolerans CP018759 237610 286 Leuconostoc mesenteroides NC_016806 1245 286 Thermus scotoductus MH325194 37636 286 Staphylococcus aureus CP030544 1280 286 Paenibacillus polymyxa CP040830 1406 286 Plesiomonas shigelloides CP027854 703 286 Planococcus sp. MB-3u-03 CP025126 2058136 286	· -	CP044398	90736	58050
Pseudomonas sp. LM8 KJ940994 545908 58050 Zymobacter palmae AP018934 33074 33073 Pseudomonas psychrotolerans CP018759 237610 286 Leuconostoc mesenteroides NC_016806 1245 286 Thermus scotoductus MH325194 37636 286 Staphylococcus aureus CP030544 1280 286 Paenibacillus polymyxa CP040830 1406 286 Plesiomonas shigelloides CP027854 703 286 Planococcus sp. MB-3u-03 CP025126 2058136 286	Planococcus sp. MB-3u-03			
Zymobacter palmae AP018934 33074 33073 Pseudomonas psychrotolerans CP018759 237610 286 Leuconostoc mesenteroides NC_016806 1245 286 Thermus scotoductus MH325194 37636 286 Staphylococcus aureus CP030544 1280 286 Paenibacillus polymyxa CP040830 1406 286 Plesiomonas shigelloides CP027854 703 286 Planococcus sp. MB-3u-03 CP025126 2058136 286		KJ940994	545908	
Pseudomonas psychrotolerans CP018759 237610 286 Leuconostoc mesenteroides NC_016806 1245 286 Thermus scotoductus MH325194 37636 286 Staphylococcus aureus CP030544 1280 286 Paenibacillus polymyxa CP040830 1406 286 Plesiomonas shigelloides CP027854 703 286 Planococcus sp. MB-3u-03 CP025126 2058136 286		AP018934	33074	33073
Leuconostoc mesenteroides NC_016806 1245 286 Thermus scotoductus MH325194 37636 286 Staphylococcus aureus CP030544 1280 286 Paenibacillus polymyxa CP040830 1406 286 Plesiomonas shigelloides CP027854 703 286 Planococcus sp. MB-3u-03 CP025126 2058136 286				
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Plesiomonas shigelloides CP027854 703 286 Planococcus sp. MB-3u-03 CP025126 2058136 286				
Planococcus sp. MB-3u-03 CP025126 2058136 286				
1				
	Vibrio alginolyticus			

scientificName	nuccoreAcc	taxid	parent
Staphylococcus aureus	CP042093	1280	286
Bacillus mycoides	CP031076	1405	286
Selenomonas ruminantium	AP012294	971	286
Yersinia frederiksenii	CP009363	29484	286
Arthrobacter sp. U41	CP015735	1849032	286
Legionella adelaidensis	LR134419	45056	286
Planococcus sp. Y42	CP019643	2213202	286
Moraxella bovoculi	CP031768	386891	286
Lactobacillus buchneri	CP043613	1581	286
Morganella morganii	CP028957	582	581
Erysipelothrix larvae	CP013214	1514105	1647