| scientificName | nuccoreAcc | taxid | parent |
|-------------------------------|-----------------------|---------|---------|
| Acholeplasma laidlawii | CP000896 | 2148 | 2147 |
| Acinetobacter baumannii | CU468230 | 509170 | 470 |
| Acinetobacter pittii | NC_016603 | 48296 | 909768 |
| Aeromonas hydrophila | NC_008570 | 644 | 642 |
| Agrobacterium fabrum | NC_003062 | 1176649 | 1183400 |
| Agrobacterium fabrum | NC_003063 | 1176649 | 1183400 |
| Alkaliphilus transvaalensis | CP000724 | 208226 | 114627 |
| Aliivibrio fischeri | NC_006841 | 668 | 511678 |
| Aliivibrio fischeri | NC_006840 | 668 | 511678 |
| Amycolatopsis mediterranei | NC_014318 | 33910 | 1813 |
| Aquifex aeolicus | NC_000918 | 63363 | 2713 |
| Architeuthis dux | NC_011581 | 256136 | 34555 |
| Arcobacter bivalviorum | CP031217 | 663364 | 2321115 |
| Arcobacter cibarius | CP043857 | 255507 | 28196 |
| Arcobacter ellisii | CP032097 | 913109 | 28196 |
| Arcobacter halophilus | CP031218 | 197482 | 28196 |
| Arcobacter molluscorum | CP032098 | 1032072 | 28196 |
| Arcobacter mytili | CP031219 | 603050 | 28196 |
| Arcobacter skirrowii | CP032099 | 28200 | 28196 |
| Arcobacter suis | CP032100 | 1278212 | 28196 |
| Arcobacter thereius | CP035926 | 544718 | 28196 |
| Arcobacter trophiarum | CP031367 | 708186 | 28196 |
| Arripis trutta | AP006810 | 270544 | 163128 |
| Atlantibacter hermannii | CP042941 | 565 | 1903434 |
| Bacillus cereus | AP007209 | 1396 | 86661 |
| Bacillus subtilis | NC_000964 | 1423 | 653685 |
| Bacillus thuringiensis | NC_005957 | 1428 | 86661 |
| Bacteroides fragilis | NC_006347 | 817 | 816 |
| Bacteroides thetaiotaomicron | NC_004663 | 818 | 816 |
| Bartonella bacilliformis | CP000524 | 774 | 773 |
| Betacoronavirus coronavirus | MT233526 | 2697049 | 694009 |
| Bifidobacterium adolenscentis | CP028341 | 1680 | 1678 |
| Bifidobacterium bifidum | NC_014638 | 1681 | 1678 |
| Bifidobacterium longum | NC_004307 | 216816 | 1678 |
| Bordetella bronchiseptica | NC_019382 | 518 | 517 |
| Borreliella burgdorferi | NC_001318 | 139 | 64895 |
| Bos taurus | KC153975 | 9913 | 9903 |
| Brachybacterium faecium | CP001643 | 43669 | 43668 |
| Bradyrhizobium diazoefficiens | NC_004463 | 1355477 | 374 |
| Brassica oleracea | NC_016118 | 3712 | 3705 |
| Buchnera aphidicola | NC_002528 | 9 | 32199 |
| Burkholderia pseudomallei | NC_006350 | 28450 | 111527 |
| Burkholderia pseudomallei | NC_006351 | 28450 | 111527 |
| Campylobacter avium | CP022347 | 522484 | 522485 |
| | | | |

| scientificName | nuccoreAcc | taxid | parent |
|---|--------------|---------|---------|
| Campylobacter coli | CP028187 | 195 | 194 |
| Campylobacter concisus | CP012541 | 199 | 194 |
| Campylobacter cuniculorum | CP020867 | 374106 | 194 |
| Campylobacter fetus | CP006833 | 196 | 194 |
| Campylobacter gracilis | CP012196 | 824 | 194 |
| Campylobacter helveticus | NZ_CP020478 | 28898 | 194 |
| Campylobacter hyointestinalis hyointestinalis | CP015575 | 91352 | 198 |
| Campylobacter hyointestinalis lawsonii | CP015575 | 91353 | 198 |
| Campylobacter insulaenigrae | CP007770 | 260714 | 194 |
| Campylobacter jejuni jejuni | NC_002163 | 32022 | 197 |
| Campylobacter lanienae | CP015578 | 75658 | 194 |
| Campylobacter lari | CP000932 | 201 | 194 |
| Campylobacter peloridis | CP007766 | 488546 | 194 |
| Campylobacter sputorum | CP019683 | 202 | 194 |
| Campylobacter subantarcticus | CP007772 | 497724 | 194 |
| Campylobacter ureolyticus | CP012195 | 827 | 194 |
| Campylobacter volucris | CP007774 | 1031542 | 194 |
| Candidatus Desulforudis audaxviator | CP000860 | 471827 | 471826 |
| Candidatus Korarchaeum cryptofilum | CP000968 | 374847 | 498846 |
| Caulobacter vibrioides | NC_011916 | 155892 | 75 |
| Chlamydia pneumoniae | NC_000922 | 83558 | 810 |
| Chlamydia trachomatis | NC_000117 | 813 | 810 |
| Chlamydomonas reinhardtii | AF008237 | 3055 | 3052 |
| Chlorobaculum tepidum | NC_002932 | 1097 | 256319 |
| Chloroflexus aurantiacus | NC_010175 | 1108 | 1107 |
| Citrobacter freundii | CP007557 | 546 | 544 |
| Citrobacter amalonaticus | CP014070 | 35703 | 544 |
| Clavibacter michiganensis_sepedonicus | AM849034 | 31964 | 28447 |
| Clostridioides difficile | NC_009089 | 1496 | 1870884 |
| Clostridium acetobutylicum | NC_003030 | 1488 | 1485 |
| Clostridium argentinense | CP014176 | 29341 | 1485 |
| Clostridium baratii | CP014204 | 1561 | 1485 |
| Clostridium botulinum groupI | NC_010723 | 9000005 | 1491 |
| Clostridium botulinum groupII | NC_010516 | 9000004 | 1491 |
| Clostridium butyricum | CP013239 | 1492 | 1485 |
| Clostridium perfringens | NC_008262 | 1502 | 1485 |
| Corynebacterium diphtheriae | CP091095 | 1717 | 1716 |
| Corynebacterium glutamicum | NC_003450 | 1718 | 1716 |
| Corynebacterium urealyticum | AM942444 | 43771 | 1716 |
| Coxiella burnetii | NC_002971 | 777 | 776 |
| Cronobacter condimenti | CP012264 | 1163710 | 413496 |
| Cronobacter dublinensis dublinensis | CP012266 | 413498 | 413497 |
| Cronobacter malonaticus | CP006731 | 413503 | 413496 |
| Cronobacter muytjensii | CP012268 | 413501 | 413496 |
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| scientificName | nuccoreAcc | taxid | parent |
|------------------------------|-----------------------|--------|---------|
| Cronobacter sakazakii | CP011047 | 28141 | 413496 |
| Cronobacter turicensis | FN543093 | 413502 | 413496 |
| Cronobacter universalis | CP012257 | 535744 | 413496 |
| Cryptosporidium parvum | CM000429 | 353152 | 5806 |
| Cryptosporidium parvum | CM000430 | 353152 | 5806 |
| Cryptosporidium parvum | CM000431 | 353152 | 5806 |
| Cryptosporidium parvum | CM000432 | 353152 | 5806 |
| Cryptosporidium parvum | CM000433 | 353152 | 5806 |
| Cryptosporidium parvum | CM000434 | 353152 | 5806 |
| Cryptosporidium parvum | CM000435 | 353152 | 5806 |
| Cryptosporidium parvum | CM000436 | 353152 | 5806 |
| Cryptosporidium hominis | LN877947 | 237895 | 5806 |
| Cryptosporidium hominis | LN877948 | 237895 | 5806 |
| Cryptosporidium hominis | LN877949 | 237895 | 5806 |
| Cryptosporidium hominis | LN877950 | 237895 | 5806 |
| Cryptosporidium hominis | LN877951 | 237895 | 5806 |
| Cryptosporidium hominis | LN877952 | 237895 | 5806 |
| Cryptosporidium hominis | LN877953 | 237895 | 5806 |
| Cryptosporidium hominis | LN877954 | 237895 | 5806 |
| Cupriavidus taiwanensis | CU633750 | 164546 | 106589 |
| Cupriavidus taiwanensis | CU633749 | 164546 | 106589 |
| Cyanothece | CP000806 | 43989 | 2546360 |
| Cyanothece | CP000807 | 43989 | 2546360 |
| Deinococcus radiodurans | NC_001263 | 1299 | 1298 |
| Deinococcus radiodurans | NC_001264 | 1299 | 1298 |
| Delftia acidovorans | CP000884 | 80866 | 80865 |
| Desulfovibrio vulgaris | NC_002937 | 881 | 872 |
| Dictyoglomus turgidum | NC_011661 | 513050 | 13 |
| Enterobacter cloacae | NC_014121 | 550 | 354276 |
| Enterococcus faecalis | NC_004668 | 1351 | 1350 |
| Enterococcus faecium | NC_017960 | 1352 | 1350 |
| Escherichia albertii | CP024282 | 208962 | 561 |
| Escherichia coli | CP027582 | 562 | 561 |
| Escherichia fergusonii | CP042945 | 564 | 561 |
| Exiguobacterium antarcticum | CP003063 | 132920 | 33986 |
| Finegoldia magna | AP008971 | 1260 | 150022 |
| Flavobacterium psychrophilum | NC_009613 | 96345 | 237 |
| Francisella philomiragia | CP063138 | 28110 | 262 |
| Francisella tularensis | NC_006570 | 263 | 262 |
| Fusobacterium nucleatum | CP028101 | 851 | 848 |
| Gallus gallus | HQ857211 | 9031 | 9030 |
| Gardnerella vaginalis | NC_014644 | 2702 | 2701 |
| Geobacter sulfurreducens | NC_002939 | 35554 | 28231 |
| Gloeobacter violaceus | NC_005125 | 33072 | 33071 |
| | | | |

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|---|-------------------------|---------|---------|
| scientificName | nuccoreAcc | taxid | parent |
| Grimontia hollisae | CP035690 | 673 | 246861 |
| Grimontia hollisae | CP035691 | 673 | 246861 |
| Haemophilus influenzae | L42023 | 727 | 724 |
| Haemophilus somnus | CP000947 | 228400 | 731 |
| Halobacterium salinarum | AM774415 | 478009 | 2242 |
| Helianthus annuus | MG770607 | 4232 | 4231 |
| Helicobacter pylori | AE000511 | 210 | 209 |
| Heliobacterium modesticaldum | CP000930 | 35701 | 2697 |
| Homo sapiens | NC 012920 | 9606 | 9605 |
| Humulus lupulus | NC 086845 | 3486 | 3484 |
| Ketogulonicigenium vulgare | ${ m NC}^{-}017384$ | 92945 | 92944 |
| Klebsiella aerogenes | ${ m NC}^{-}015663$ | 548 | 570 |
| Klebsiella pneumoniae | ${ m NC}^{-}016845$ | 573 | 570 |
| Lactobacillus acidophilus | $^{-}$ 006814 | 1579 | 1578 |
| Lactobacillus paracasei | $^{-}$ NC $^{-}$ 008526 | 1597 | 655183 |
| Lactobacillus plantarum | NC 004567 | 1590 | 1578 |
| Lactobacillus salivarius | NC 007929 | 1624 | 1578 |
| Lactococcus lactis | NC 002662 | 1358 | 1357 |
| Lactuca sativa | MK820672 | 75943 | 4235 |
| Legionella pneumophila | NC 002942 | 446 | 445 |
| Leptospira biflexa | CP000777 | 355278 | 145259 |
| Leptospira interrogans | NC 004342 | 173 | 171 |
| Leptothrix cholodnii | CP001013 | 34029 | 88 |
| Leuconostoc citreum | DQ489736 | 349519 | 33964 |
| Listeria grayi | LR134483 | 1641 | 1637 |
| Listeria innocua | CP045743 | 1642 | 1637 |
| Listeria ivanovii | FR687253 | 1638 | 1637 |
| Listeria marthii | CM001047 | 529731 | 1637 |
| Listeria monocytogenes I | CP054040 | 9000000 | 1639 |
| Listeria monocytogenes II | CP054042 | 9000001 | 1639 |
| Listeria monocytogenes III | CP054039 | 9000002 | 1639 |
| Listeria monocytogenes IV | CP054041 | 9000003 | 1639 |
| Listeria seeligeri | FN557490 | 1640 | 1637 |
| Listeria welshimeri | LT906444 | 1643 | 1637 |
| Lysinibacillus sphaericus | CP000817 | 444177 | 1421 |
| Mesoplasma florum | NC_006055 | 2151 | 46239 |
| Mesorhizobium ciceri | NC 014923 | 39645 | 68287 |
| Methylobacterium | CP000943 | 426117 | 2615210 |
| Methylobacterium radiotolerans | CP001001 | 31998 | 407 |
| Micrococcus luteus | CP001628 | 1270 | 1269 |
| Moorella thermoacetica | CP012370 | 1525 | 44260 |
| Morganella morganii morganii | CP004345 | 180434 | 582 |
| Mycobacterium abscessus | NC 010397 | 36809 | 670516 |
| Mycobacterium abscessus Mycobacterium leprae | NC 002677 | 1769 | 1763 |
| my condition replac | 110_002011 | 1100 | 1100 |

| scientificName | nuccoreAcc | taxid | parent |
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| Mycobacterium smegmatis | NC_008596 | 1772 | 1866885 |
| Mycobacterium tuberculosis | NC_000962 | 1773 | 77643 |
| Mycoplasma mycoides | NC_005364 | 2102 | 656088 |
| Mycoplasma pneumoniae | NC_000912 | 2104 | 2093 |
| Neisseria gonorrhoeae | NC_002946 | 485 | 482 |
| Neisseria meningitidis | NC_003112 | 487 | 482 |
| Neomysis japonica | KR006340 | 1676841 | 223649 |
| Ochrobactrum anthropi | CP000758 | 529 | 528 |
| Ochrobactrum anthropi | CP000759 | 529 | 528 |
| Pantoea ananatis | CP001875 | 553 | 53335 |
| Parabacteroides distasonis | CP000140 | 823 | 375288 |
| Photobacterium damselae | CP046752 | 38293 | 657 |
| Photobacterium damselae | CP046751 | 38293 | 657 |
| Pollachius virens | FR751399 | 8060 | 8059 |
| Polynucleobacter necessarius | LT615228 | 576610 | 44013 |
| Prochlorococcus marinus | NC_005042 | 1219 | 1218 |
| Proteus mirabilis | NC_022000 | 584 | 583 |
| Pseudomonas aeruginosa | NC_002516 | 287 | 136841 |
| Pseudomonas putida | AP013070 | 390235 | 303 |
| Pseudomonas syringae group genomosp. 3 | NC_004578 | 251701 | 136849 |
| Pyrobaculum neutrophilum | CP001014 | 70771 | 2276 |
| Rhodobacter sphaeroides | NC_007494 | 1063 | 1060 |
| Rhodobacter sphaeroides | NC_007493 | 1063 | 1060 |
| Rhodopirellula baltica | NC_005027 | 265606 | 265488 |
| Rhodospirillum rubrum | NC_007643 | 1085 | 1081 |
| Ruminococcus sp. | CP039381 | 1263 | 541000 |
| Rickettsia prowazekii | NC_000963 | 782 | 114292 |
| Salinibacter ruber | NC_007677 | 146919 | 146918 |
| Salmonella bongori | FR877557 | 54736 | 590 |
| Salmonella enterica IIa | CP053411 | 9000010 | 28901 |
| Salmonella enterica IIb | LR134141 | 9000011 | 28901 |
| Salmonella enterica IIIa | CP000880 | 9000014 | 28901 |
| Salmonella enterica IIIb | CP053583 | 9000015 | 28901 |
| Salmonella enterica I | AE006468 | 59201 | 28901 |
| Salmonella enterica IV | CP053579 | 59205 | 28901 |
| Salmonella enterica IX | CP054715 | 9000016 | 28901 |
| Salmonella enterica VII | CP053582 | 59208 | 28901 |
| Salmonella enterica VIII | CP053318 | 9000009 | 28901 |
| Salmonella enterica VI | CP053406 | 59207 | 28901 |
| Salmonella enterica X | CP053581 | 9000017 | 28901 |
| Serratia liquefaciens | CP006252 | 614 | 613 |
| Shewanella halifaxensis | CP000931 | 271098 | 22 |
| Shewanella oneidensis | NC_004347 | 70863 | 22 |
| | _ | | |

| scientificName | nuccoreAcc | taxid | parent |
|-------------------------------------|-----------------------|------------------------|---------|
| Shimwellia blattae | CP001560 | 563 | 1335483 |
| Sinorhizobium fredii | NC_012587 | 380 | 663276 |
| Sinorhizobium medicae | NC_009636 | 110321 | 28105 |
| Sinorhizobium meliloti | NC_003047 | 382 | 28105 |
| Solanum lycopersicum | NC_035963 | 4081 | 49274 |
| Staphylococcus aureus | $NZ_CP009554$ | 46170 | 1280 |
| Staphylococcus epidermidis | NC_004461 | 1282 | 1279 |
| Streptococcus agalactiae | NC_004116 | 1311 | 1301 |
| Streptococcus mitis | NC_013853 | 28037 | 1301 |
| Streptococcus mutans | NC_004350 | 1309 | 1301 |
| Streptococcus pneumoniae | CP000936 | 487214 | 1313 |
| Streptococcus pyogenes | NC_002737 | 1314 | 1301 |
| Streptococcus sanguinis | NC_009009 | 1305 | 1301 |
| Streptococcus suis | NC_012926 | 1307 | 1301 |
| Sus scrofa | FJ236999 | 9823 | 9822 |
| Synechococcus | CP000951 | 32049 | 2626047 |
| Thermanaerovibrio acidaminovorans | NC_013522 | 81462 | 81461 |
| Thermoanaerobacter pseudethanolicus | CP000924 | 496866 | 1754 |
| Thermodesulfovibrio yellowstonii | NC_011296 | 28262 | 28261 |
| Thermosynechococcus elongatus | NC_004113 | 146786 | 146785 |
| Thermotoga maritima | NC_000853 | 2336 | 2335 |
| Thermus thermophilus | NC_006461 | 274 | 270 |
| Thunnus alalunga | AB101291 | 8235 | 8234 |
| Treponema denticola | NC_002967 | 158 | 157 |
| Ureaplasma parvum | CP000942 | 134821 | 2129 |
| Vibrio alginolyticus | CP035699 | 663 | 717610 |
| Vibrio alginolyticus | CP035700 | 663 | 717610 |
| Vibrio cholerae_O1 | CP038178 | 127906 | 666 |
| Vibrio cholerae_O1 | CP038179 | 127906 | 666 |
| Vibrio cidicii | CP046804 | 1763883 | 662 |
| Vibrio cidicii | CP046803 | 1763883 | 662 |
| Vibrio cincinnatiensis | CP035697 | 675 | 662 |
| Vibrio cincinnatiensis | CP035698 | 675 | 662 |
| Vibrio fluvialis | CP051126 | 676 | 662 |
| Vibrio fluvialis | CP051127 | 676 | 662 |
| Vibrio furnissii | CP046797 | 29494 | 662 |
| Vibrio furnissii | CP046798 | 29494 | 662 |
| Vibrio harveyi | CP035692 | 669 | 717610 |
| Vibrio harveyi | CP035693 | 669 | 717610 |
| Vibrio metoecus | CP046817 | 1481663 | 662 |
| Vibrio metoecus | CP046818 | 1481663 | 662 |
| Vibrio metschnikovii | CP035684 | 28172 | 662 |
| T701 | CDOOLCOL | 00170 | cco |
| Vibrio metschnikovii | CP035685 | 28172 | 662 |

| scientificName | nuccoreAcc | taxid | parent |
|-----------------------------|-----------------------|---------|--------|
| Vibrio mimicus | CP035683 | 674 | 662 |
| Vibrio navarrensis | CP046791 | 29495 | 662 |
| Vibrio navarrensis | CP046792 | 29495 | 662 |
| Vibrio parahaemolyticus | CP046828 | 670 | 717610 |
| Vibrio parahaemolyticus | CP046827 | 670 | 717610 |
| Vibrio vulnificus | CP046832 | 672 | 662 |
| Vibrio vulnificus | CP046833 | 672 | 662 |
| Vicia faba | KC189947 | 3906 | 3904 |
| Xanthomonas campestris | NC_003902 | 339 | 338 |
| Xylella fastidiosa | CP000941 | 405440 | 2371 |
| Yersinia aldovae | CP009781 | 29483 | 629 |
| Yersinia bercovieri | CP054044 | 634 | 629 |
| Yersinia canariae | $NZ_CP043727$ | 2607663 | 629 |
| Yersinia enterocolitica | NC_015224 | 630 | 629 |
| Yersinia enterocolitica | NC_008800 | 630 | 629 |
| Yersinia frederiksenii | CP023962 | 29484 | 629 |
| Yersinia hibernica | $NZ_CP032487$ | 2339259 | 629 |
| Yersinia intermedia | CP009801 | 631 | 629 |
| Yersinia kristensenii | CP054049 | 631 | 629 |
| Yersinia massiliensis | CP054048 | 33060 | 629 |
| Yersinia mollaretii | CP054043 | 33060 | 629 |
| Yersinia pseudotuberculosis | CP009712 | 502800 | 633 |
| Yersinia rochesterensis | CP032482 | 1604335 | 629 |
| Yersinia rohdei | CP009787 | 29485 | 629 |
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