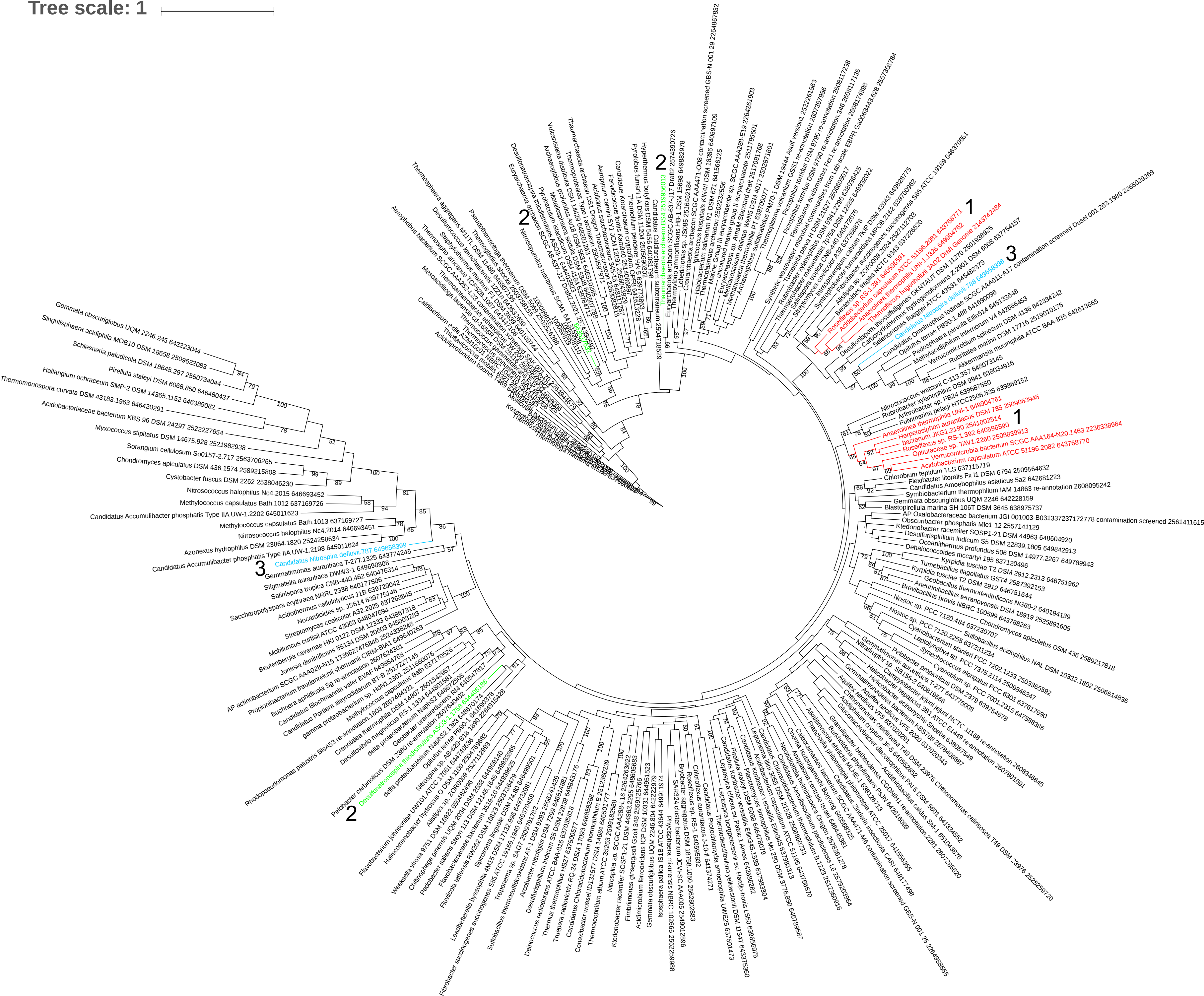

Tree scale: 1
Gemmata obscuriglobus UQM 2246.245 642223044
Singulisphaera acidiphila MOB10 DSM 18658 2509622083
Schlesneria paludicola DSM 18645.297 2550734044
Pirellula staleyi DSM 6068.850 646480437
Haliangium ochraceum SMP-2 DSM 14365.1152 646389082
Thermomonospora curvata DSM 43183.1963 646420291
Acidobacteriaceae bacterium KBS 96 DSM 24297 2522227654
Myxococcus stipitatus DSM 14675.928 2521982938
Sorangium cellulosum So0157-2.717 2563706265
Chondromyces apiculatus DSM 436.1574 2589215808
Cystobacter fuscus DSM 2262 2538046230
Nitrosococcus halophilus Nc4.2015 646693452
Methylococcus capsulatus Bath.1012 637169726
Candidatus Accumulibacter phosphatis Type IIA UW-1.2202 645011623
Methylococcus capsulatus Bath.1013 637169727
Nitrosococcus halophilus Nc4.2014 646693451
Azonexus hydrophilus DSM 23864.1820 2524258634
Candidatus Accumulibacter phosphatis Type IIA UW-1.2198 645011624
Candidatus Nitrospira defluvii.787 649658399
3
Gemmatimonas aurantiaca T-27T.1325 643774245
Stigmatella aurantiaca DW4/3-1 649690808
Salinispora tropica CNB-440.462 640476314
Saccharopolyspora erythraea NRRL 2338 640177506
Acidothermus cellulolyticus 11B 639729042
Nocardioides sp. JS614 639775146
Streptomyces coelicolor A32.2025 637268845
Mobiluncus curtisii ATCC 43063 648047694
Beutenbergia cavernae HKI 0122 DSM 12333 643867318
Jonesia denitrificans 55134 DSM 20603 645003283
AP actinobacterium SCGC AAA028-N15 1336627476846 2524338248
Propionibacterium freudenreichii shermanii CIRM-BIA1 649640263
Buchnera aphidicola Sg re-annotation 2607624301
Candidatus Blochmannia vafer BVAF 649854768
Candidatus Portiera aleyrodidarum BT-B 2517227145
gamma proteobacterium sp. HdN1.2301 2511660076
Methylococcus capsulatus Bath 637170526
Rhodopseudomonas palustris BisA53 re-annotation.1803 2607484321
Crenotalea thermophila DSM 14807 2601542957
Desulfovibrio magneticus RS-1.1334 644801581
delta proteobacterium NaphS2 648672505
Geobacter uraniireducens Rf4 640547817
Pelobacter carbinolicus DSM 2380 re-annotation 2607640402
Desulfonatronospira thiodismutans ASO3-1.1758 644405186
2
delta proteobacterium NaphS2.1383 648670174
Opitutus terrae PB90-1 641690378
Nitrospina sp. AB-629-B18.1890 2264915428
Flavobacterium johnsoniae UW101 ATCC 17061 644740636
Haliscomenobacter hydrossis O DSM 1100 2504769683
Alistipes sp. ZOR0009 2527112993
Weeksella virosa 9751 DSM 16922 650482496
Chitinophaga pinensis UQM 2034 DSM 2588 644969140
Pedobacter saltans Steyn 113 DSM 12145.1646 649983865
Flavobacteriaceae bacterium 3519-10 644939625
Fluviicola taffensis RW262 DSM 16823 2503736479
Spirosoma linguale DSM 74.80 646499501
Leadbetterella byssophila 4M15 DSM 17132.996 649732681
Fibrobacter succinogenes succinogenes S85 ATCC 19169.1940 646370459
Treponema sp. SAG7 2509791782
Sulfobacillus thermosulfidooxidans AT-1 DSM 9293 2506241429
Arcobacter nitrofigilis DSM 7299 646814881
Desulfurispirillum indicum S5 DSM 22839 649843176
Deinococcus radiodurans ATCC BAA-816 637035818
Thermus thermophilus HB27 637500577
Truepera radiovictrix RQ-24 DSM 17093 646858388
Candidatus Chloracidobacterium thermophilum B 2512360239
Conexibacter woesei ID131577 DSM 14684 646501777
Thermoleophilum album ATCC 35263 2599182588
Nitrospina sp. SCGC AAA288-L16 2264263622
Ktedonobacter racemifer SOSP1-21 DSM 44963.2295 648605683
Fimbriimonas ginsengisoli Gsoil 348 2559125766
Acidimicrobium ferrooxidans ICP DSM 10331 644951523
Gemmata obscuriglobus UQM 2246.804 642222979
Isosphaera pallida IS1B ATCC 43644 649911974
Phycisphaera mikurensis NBRC 102666 2562259988
SAR324 cluster bacterium JCVI-SC AAA005 2549012896
Bryobacter aggregatus DSM 18758.1050 2562802883
Roseiflexus sp. RS-1 640595832
Chloroflexus aurantiacus J-10-fl 641374271
Candidatus Protochlamydia amoebophila UWE25 637501473
Thermodesulfovibrio yellowstonii DSM 11347 643375360
Leptospira borgpetersenii sv. Hardjo-bovis L550 639656975
Leptospira biflexa sv. Patoc 1 Ames 642686282
Candidatus Koribacter versatilis Ellin345.1589 637983304
Pirellula staleyi DSM 6068 646478079
Planctomyces limnophilus Mu 290 DSM 3776.890 646789587
Candidatus Koribacter versatilis Ellin345 637983313
Acidobacterium capsulatum ATCC 51196 643766570
Leptonema illini 3055 DSM 21528 2506860733
Candidatus Chloracidobacterium thermophilum B.1223 2512360916
Neorickettsia helminthoeca Oregon 2579203964
Candidatus Xenolissoclinum pacificiensis L6 2578361278
Anaplasma centrale Israel 646445381
Orientia tsutsugamushi Boryong 640568325
Calescamantes bacterium SCGC AAA471-M6 contamination screened GBS-N 001 25 2264958555
Alkalilimnicola ehrlichii MLHE-1 638126713
Francisella philomiragia philomiragia ATCC 25017 641556355
Candidatus Zinderia insecticola CARI 648177498
Burkholderia phytofirmans PsJN 642616099
Granulibacter bethesdensis CGDNIH1 re-annotation.2281 2607285620
Acidithiobacillus caldus SM-1 651043876
Gluconacetobacter diazotrophicus PAl 5 DSM 5601 641334552
Acidiphilium cryptum JF-5 640552852
Chthonomonas calidirosea T49 DSM 23976 Chthonomonas calirisosea T49 DSM 23976 2525259720
Aquifex aeolicus VF5.2020 637020343
Aquifex aeolicus VF5 637020291
Gemmatimonadetes bacterium KBS708 2578408887
Helicobacter acinonychis Sheeba 638057549
Helicobacter hepaticus 3B1 ATCC 51449 re-annotation 2607801691
Campylobacter jejuni jejuni NCTC 11168 re-annotation 2608346645
Nitratiruptor sp. SB155-2 640819568
Gemmatimonas aurantiaca T-27T 643775008
Pelobacter propionicus DSM 2379 639754678
Cyanobium sp. PCC 7001.2315 647588386
Synechococcus elongatus PCC 6301 637617690
Leptolyngbya sp. PCC 7375.2114 2509846247
Cyanobacterium stanieri PCC 7202.1233 2503365592
Nostoc sp. PCC 7120.2255 637231234
Sulfobacillus acidophilus NAL DSM 10332.1802 2506614836
Nostoc sp. PCC 7120.484 637230707
Chondromyces apiculatus DSM 436 2589217818
Brevibacillus brevis NBRC 100599 643788263
Aneurinibacillus terranovensis DSM 18919 2525891605
Geobacillus thermodenitrificans NG80-2 640194139
Kyrpidia tusciae T2 DSM 2912 646751644
Tumebacillus flagellatus GST4 2587392153
Kyrpidia tusciae T2 DSM 2912.2313 646751962
Dehalococcoides mccartyi 195 637120496
Oceanithermus profundus 506 DSM 14977.2267 649789943
Desulfurispirillum indicum S5 DSM 22839.1805 649842913
Ktedonobacter racemifer SOSP1-21 DSM 44963 648604920
Obscuribacter phosphatis Mle1 12 2557141129
AP Oxalobacteraceae bacterium JGI 001003-B031337237172778 contamination screened 2561411615
Blastopirellula marina SH 106T DSM 3645 638975737
Gemmata obscuriglobus UQM 2246 642228159
Symbiobacterium thermophilum IAM 14863 re-annotation 2608095242
Candidatus Amoebophilus asiaticus 5a2 642681223
Flexibacter litoralis Fx l1 DSM 6794 2509564632
Chlorobium tepidum TLS 637115719
Acidobacterium capsulatum ATCC 51196.2082 643768770
Verrucomicrobia bacterium SCGC AAA164-N20.1463 2236338964
Opitutaceae sp. TAV1.2260 2508839913
Roseiflexus sp. RS-1.392 640596590
bacterium JKG1.2190 2541002514
Herpetosiphon aurantiacus DSM 785 2509063945
Anaerolinea thermophila UNI-1 649904761
1
Fulvimarina pelagi HTCC2506.535 639869152
Arthrobacter sp. FB24 639687550
Rubrobacter xylanophilus DSM 9941 638034916
Nitrosococcus watsoni C-113.357 648073145
Akkermansia muciniphila ATCC BAA-835 642613665
Rubritalea marina DSM 17716 2519010175
Verrucomicrobium spinosum DSM 4136 642334242
Methylacidiphilum infernorum V4 642666453
Pedosphaera parvula Ellin514 645133648
Opitutus terrae PB90-1.488 641690096
Candidatus Omnitrophus fodinae SCGC AAA011-A17 contamination screened Dusel 001 263.1980 2265029269
Candidatus Nitrospira defluvii.788 649658398
3
Selenomonas flueggei ATCC 43531 645482379
Carboxydothermus hydrogenoformans Z-2901 DSM 6008 637754157
Desulfonispora thiosulfatigenes GKNTAUT DSM 11270 2501938925
Thermoflexus hugenholtzii JAD2 Draft Genome 2143742484
Anaerolinea thermophila UNI-1.1326 649904762
Acidobacterium capsulatum ATCC 51196.2081 643768771
1
Roseiflexus sp. RS-1.391 640596591
Bacteroides fragilis NCTC 9343 637226520
Alistipes sp. ZOR0009.2024 2527112703
Fibrobacter succinogenes succinogenes S85 ATCC 19169 646370661
Syntrophobacter fumaroxidans MPOB.2162 639700962
Intrasporangium calvum 7KIP DSM 43043 649828775
Streptomyces coelicolor A32 637268878
Salinispora tropica CNB-440 640472676
Thermaerobacter marianensis 7p75a DSM 12885 649832022
Rubrobacter xylanophilus DSM 9941.2296 638036425
Turneriella parva H DSM 21527 2506605017
Synthetic wastewater microbial communities from Lab-scale EBPR Ga0063443.628 2557368784
Ferroplasma acidarmanus Fer1 re-annotation 2608174398
Picrophilus torridus DSM 9790 re-annotation.346 2608117136
Picrophilus torridus DSM 9790 re-annotation 2608117238
Thermoplasma volcanium GSS1 re-annotation 2607367956
Archaeoglobus sulfaticallidus PM70-1 DSM 19444 Asulf version1 2522261563
Methanosaeta thermophila PT 639700077
Methanosalsum zhilinae WeN5 DSM 4017 2502871601
Euryarchaeota sp. AmaM Standard draft 2517091768
uncultured marine group II euryarchaeote 2511795601
Marine Group III euryarchaeote sp. SCGC AAA288-E19 2264261903
Thermoplasmata archaeon 2502232556
Halobacterium salinarum R1 DSM 671 641566125
Ignicoccus hospitalis KIN4/I DSM 18386 640897109
Crenarchaeota archaeon SCGC AAA471-O08 contamination screened GBS-N 001 29 2264867832
Lebetimonas sp. JS085 2516462184
Thermovibrio ammonificans HB-1 DSM 15698 649882978
Euryarchaeota archaeon SCGC AB-637-J17 Draft2 2574390726
Thaumarchaeota archaeon BS4 2519956013
2
Candidatus Caldiarchaeum subterraneum 2504718529
Hyperthermus butylicus DSM 5456 640081798
Pyrolobus fumarii 1A DSM 11204 2505690302
Thermofilum pendens Hrk 5 639773863
Candidatus Korarchaeum cryptofilum OPF8 641613228
Fervidicoccus fontis Kam940 2514086897
Aeropyrum camini SY1 JCM 12091 2556043929
Acidilobus saccharovorans 345-15 648117287
Thaumarchaeota archaeon DS1 Dragon Thaumarchaeon 2263082818
Thermoproteales Type I archaeon 2504597971
Vulcanisaeta distributa DSM 14429 648201263
Archaeoglobus profundus Av18 DSM 5631 646510285
Metallosphaera sedula DSM 5348 640507789
Pyrobaculum islandicum DSM 4184 639784712
Desulfonatronospira thiodismutans ASO3-1 644403923
Euryarchaeota archaeon SCGC AB-637-J17 Draft2.2021 2574390592
2
Nitrosopumilus maritimus SCM1 641315908
Pseudothermotoga thermarum DSM 5069 2503526288
Thermogladius shockii 2503758155
Thermosphaera aggregans M11TL DSM 11486 646807195
Desulfurococcus kamchatkensis 1221n 643532689
Staphylothermus marinus F1 DSM 3639 640109744
Thermosipho africanus TCF52B.1067 643447108
Aerophobus bacterium SCGC AAA252-L23 contamination screened SAK 001 70 2264944679
Mesoaciditoga lauensis cd-1655R DSM 25116
Caldisericum exile AZM16c01 NBRC 104410
Thioflavicoccus mobilis 8321
Aciduliprofundum boonei T469