———— Archaea-CandidatusKorarchaeota-NA-NA-NA-Candidatus_Methanodesulfokores_washburnensis_WP_125672990.1 Archaea-Crenarchaeota-Thermoprotei-Thermoproteales-Thermofilaceae-Thermofilum_adornatus_WP_148682125.1 Archaea-Euryarchaeota-Methanomicrobia-Methanomicrobiales-Methanomicrobiaceae-Methanolacinia_paynteri_WP_0 Eukaryota-Stramenopiles-Labyrinthista-NA-NA-Aplanochytrium_stocchinoi_MMETSP1347_c8916_g1_i1.p1 Bacteria-Acidobacteria-Acidobacteriia-Acidobacteriales-Acidobacteriaceae-Bryocella_elongata_WP_103933163.1 Bacteria-Acidobacteria-Acidobacteriia-Acidobacteriales-Acidobacteriaceae-Granulicella_mallensis_WP_014263787.1 Bacteria-Fusobacteria-Fusobacteriia-Fusobacteriales-Fusobacteriaceae-Fusobacterium_varium_WP_096402270.1 Bacteria-Fusobacteria-Fusobacteriia-Fusobacteriales-Fusobacteriaceae-NA_WP_005947969.1 Paulinella Archaea Bacteria-Tenericutes-Mollicutes-Mycoplasmatales-Mycoplasmataceae-Mycoplasma_iowae_WP_036451909.1 Bacteria Eukaryota-Stramenopiles-Coscinodiscophyceae-Chaetocerotales-Chaetocerotaceae-Chaetoceros_neogracile_MMETSP0754_c21163_g1_i1.p1 Archaea-Crenarchaeota-Thermoprotei-Thermoproteales-Thermoproteaceae-Vulcanisaeta_sp._EB80_WP_081227283.1 Eukaryota ———— Archaea-Thaumarchaeota-NA-NA-NA-Candidatus_Nitrosotenuis_aquarius_WP_100183293.1 Viruses —— Archaea-Thaumarchaeota-NA-Nitrosopumilales-Nitrosopumilaceae-Candidatus_Nitrosomarinus_catalina_WP_086908055.1 Other/Misc Bacteria-Nitrospirae-NA-NA-Nitrospirae_bacterium_HCH1_WP_085050898.1 Eukaryota-Basidiomycota-Agaricomycetes-Boletales-Serpulaceae-Serpula_lacrymans_XP_007315906.1 - Archaea-Euryarchaeota-Thermoplasmata-NA-NA-methanogenic_archaeon_ISO4H5_WP_066076529.1 Archaea-NA-NA-NA-NA-archaeon_AArcSI_WP_119821507.1 Bacteria-Aquificae-Aquificales-Hydrogenothermaceae-Hydrogenothermus_marinus_WP_121923174.1 Bacteria-Aquificae-Aquificae-Aquificales-Hydrogenothermaceae-Sulfurihydrogenibium_sp._YO3AOP1_WP_012460115.1 Bacteria-Planctomycetes-NA-NA-NA-Planctomycetes_bacterium_Pan153_WP_145453790.1

Bacteria-Planctomycetes-Planctomycetia-Planctomycetales-Planctomycetaceae-Gimesia_maris_WP_002646823.1 — Bacteria-Thermodesulfobacteria-Thermodesulfobacteria-Thermodesulfobacteriales-Thermodesulfobacteriaceae-Caldimicrobium_thiodismutans_WP_068514820.1 — Bacteria-Thermodesulfobacteria-Thermodesulfobacteria-Thermodesulfobacteriales-Thermodesulfobacteriaceae-Thermodesulfobacterium_hydrogeniphilum_WP_051920735.1 — Bacteria-Chlamydiae-Chlamydia-Chlamydiales-NA-Chlamydiales_bacterium_SCGC_AG110M15_WP_088244497.1 —56—— Bacteria-Gemmatimonadetes-Gemmatimonadetes-Gemmatimonadales-Gemmatimonadaceae-Gemmatimonas_aurantiaca_WP_012681497.1 ——— Bacteria-Gemmatimonadetes-Gemmatimonadetes-Gemmatimonadales-Gemmatimonadaceae-Gemmatirosa_kalamazoonesis_WP_104022300.1 - Bacteria-Nitrospirae-Nitrospira-Nitrospirales-Nitrospiraceae-Nitrospira_defluvii_WP_083817232.1 - Bacteria-Bacteroidetes-Flavobacteriia-Flavobacteriales-Flavobacteriaceae-Chryseobacterium sp. F5649 WP 124803219.1 Bacteria-Bacteroidetes-Sphingobacteriia-Sphingobacteriales-NA-NA_WP_088761672.1 ukaryota-Arthropoda-Insecta-Diptera-Drosophilidae-Drosophila busckii XP 017846616.1 Eukaryota-Arthropoda-Insecta-Diptera-Muscidae-Stomoxys_calcitrans_XP_013119500.1 Eukaryota-Chordata-Actinopteri-Cichliformes-Cichlidae-Maylandia_zebra_XP_004566077.2 Eukarvota-Chordata-Actinopteri-NA-Pomacentridae-Acanthochromis polyacanthus XP 022073459.1 Eukaryota-Mollusca-Gastropoda-Aplysiida-Aplysiidae-Aplysia_californica_XP_005096073.1 Eukaryota-Brachiopoda-Lingulata-Lingulidae-Lingulidae-Lingula_anatina_XP_013382581.1 Eukaryota-Cryptophyta-NA-Goniomondales-NA-Goniomonas sp MMETSP0114 c32598 g1 i1.p1 Eukaryota-Mollusca-Gastropoda-Architaenioglossa-Ampullariidae-Pomacea_canaliculata_XP_025085364.1 Eukaryota-Hemichordata-Enteropneusta-NA-Harrimaniidae-Saccoglossus_kowalevskii_XP_002735881.1 Eukaryota-Priapulida-Priapulimorpha-Priapulimorphida-Priapulidae-Priapulus_caudatus_XP_014676373.1 Eukaryota-Annelida-Clitellata-Hirudinida-Glossiphoniidae-Helobdella_robusta_jgi185115 Eukaryota-Echinodermata-Asteroidea-Valvatida-Acanthasteridae-Acanthaster planci XP 022086750.1 Eukaryota-Echinodermata-Echinoidea-Echinoida-Strongylocentrotidae-Strongylocentrotus purpuratus XP 785560.2 Eukaryota-Cnidaria-Anthozoa-Actiniaria-Aiptasiidae-Exaiptasia_pallida_XP_020895571.1 Eukaryota-Cnidaria-Anthozoa-Actiniaria-Edwardsiidae-Nematostella_vectensis_XP_001641238.1 Eukaryota-Acytosteliales-Acytosteliales-Acytosteliales-Acytosteliaceae-Heterostelium_album_XP_020432344.1 — 94—— Eukaryota-Acytosteliales-Acytosteliales-Acytosteliales-Cavenderiaceae-Cavenderia_fasciculata_XP_004355494.1 LÉukaryota-Mucoromycota-Mucoromycetes-Mucorales-Phycomycetaceae-Phycomyces_blakesleeanus_XP_018289133.1 Eukaryota-Retaria-NA-NA-Ammonia_sp_MMETSP1384_c17142_g1_i1.p1 Eukaryota-Retaria-NA-NA-Elphidium_margaritaceum_MMETSP1385_c16007_g1_i1.p1 Eukaryota-Alveolata-Dinophyceae-NA-Unranked-Alexandrium_tamarense_MMETSP0384_c122339_g1_i1.p1 Eukaryota-Chlorophyta-NA-NA-NA-Picochlorum_sp_MMETSP1330_c340_g1_i1.p1 Eukaryota-Mesomycetozoea-Ichthyosporea-Ichthyophonida-NA-Sphaeroforma_arctica_XP_014149196.1 Eukaryota-Amoebozoa-NA-NA-Paramoebidae-Filamoeba_nolandi_MMETSP0413_c7077_g1_i1.p1 51 Eukaryota-Chlorophyta-Trebouxiophyceae-Chlorellales-Unranked-Asterochloris spp jgi35650 Eukaryota-Haptophyta-NA-Phaeocystales-Phaeocystaceae-Phaeocystis_cordata_MMETSP1465_c5172_g1_i1.p1 Eukaryota-Streptophyta-NA-Brassicales-Brassicaceae-Eutrema salsugineum XP 006403572.1 Eukaryota-Streptophyta-Bryopsida-Funariales-Funariaceae-Physcomitrella patens XP 024371592.1 Eukaryota-Cercozoa-Chlorarachniophyceae-NA-NA-Bigelowiella_natans_MMETSP1052_c37011_g1_i1.p1 Eukaryota-Cercozoa-Chlorarachniophyceae-NA-NA-Lotharella_amoebiformis_MMETSP0042_c8510_g1_i1.p1 MSTRG.5317.1.p1
Paulinella_chromatophora_CCAC0185_nuclear___scaffold7431-m59611 Paulinella_chromatophora_CCAC0185_nuclear___scaffold10981-m76923 Paulinella ovalis nuclear SingleCell SAG1 utg7180000020839.g9545.t1 Paulinella_ovalis_nuclear_SingleCell___SAG2_utg7180000014715.g7277.t1 Eukaryota-Choanoflagellata-Choanoflagellata-Choanoflagellata-Salpingoecidae-Monosiga_brevicollis_XP_001746819.1 Eukaryota-Choanoflagellata-Choanoflagellata-Choanoflagellata-Salpingoecidae-Salpingoeca_rosetta_XP_004995919.1 Eukaryota-Rhodophyta-Porphyridiophyceae-NA-NA-Timspurckia_oligopyrenoides_MMETSP1172_c687_g1_i1.p1 Eukaryota-Nematoda-Chromadorea-Rhabditida-Onchocercidae-Loa_loa_XP_003136834.1 ———————— Eukaryota-Nematoda-Chromadorea-Rhabditida-Strongyloididae-Strongyloides_ratti_XP_024502179.1 65 Lukaryota-Rhodophyta-Bangiophyceae-Cyanidiales-Cyanidiaceae-Galdieria phlegrea GphlegSOOS G3961.1 Eukaryota-Glaucophyta-Glaucophyta-Gloeochaetales-Gloeochaetaceae-Gloeochaete_witrockiana_MMETSP0308_c3564_g1_i1.p1 Eukaryota-Glaucophyta-Glaucophyta-NA-Cyanophoraceae-Cyanophora paradoxa tig00000480 g1338.t1 Eukaryota-Amoebozoa-NA-NA-Paramoebidae-Paramoeba atlantica MMETSP0151 c3438 g1 i1.p1 — Eukaryota-Euglenida-NA-Eutreptiales-NA-Eutreptiella_gymnastica-like_MMETSP0809_c60863_g1_i1.p1 Eukaryota-Cryptophyta-NA-Pyrenomonadales-Pyrenomonadaceae-Rhodomonas_salina_MMETSP1047_c33573_g1_i1.p1 Eukaryota-Porifera-Demospongiae-Haplosclerida-Niphatidae-Amphimedon_queenslandica_XP_019853579.1 Eukaryota-Placozoa-NA-NA-Trichoplacidae-Trichoplax_adhaerens_XP_002107734.1 Bacteria-NA-NA-NA-NA_WP_003246780.1 — Eukaryota-Platyhelminthes-Trematoda-Opisthorchiida-Opisthorchiidae-Opisthorchis_viverrini_XP_009172184.1 — Eukaryota-Platyhelminthes-Trematoda-Strigeidida-Schistosomatidae-Schistosoma_mansoni_XP_018652352.1 Eukaryota-Heterolobosea-NA-NA-Vahlkampfiidae-Naegleria_gruberi_jgi82737 — Eukaryota-Longamoebia-Longamoebia-Longamoebia-Acanthamoebidae-Acanthamoeba_castellanii_XP_004341612.1 Bacteria-Chlamydiae-Chlamydiia-Parachlamydiales-Criblamydiaceae-Criblamydia_sequanensis_WP_041016664.1 Bacteria-CandidatusTectomicrobia-NA-NA-NA-Candidatus_Entotheonella_palauensis_WP_089936956.1 Eukaryota-Fonticulida-Fonticulida-Fonticulida-Fonticula_alba_XP_009495758.1 Eukaryota-Ascomycota-NA-NA-NA-Saitoella complicata XP 019024154.1 Eukaryota-Chytridiomycota-Chytridiomycetes-Rhizophydiales-NA-Batrachochytrium_dendrobatidis_igi88516 Εφkaryota-Chytridiomycota-Chytridiomycetes-Spizellomycetales-Spizellomycetaceae-Spizellomyces_punctatus_XP_016609166.1 Eukaryota-Basidiomycota-Mixiomycetes-Mixiales-Mixiaceae-Mixia_osmundae_XP_014568587.1 Bacteria-Chloroflexi-Anaerolineae-Anaerolineales-NA-Anaerolineales_bacterium_WP_116781515.1 Eukaryota-Ciliophora-NA-Unranked-NA-Platyophrya_macrostoma_MMETSP0127_c12899_g1_i1.p1 Eukaryota-Kinetoplastida-Kinetoplastida-Kinetoplastida-Trypanosomatidae-Leptomonas_pyrrhocoris_XP_015656283.1 _______Eukaryota-Euglenida-NA-NA-Unranked-Neobodo_designis_MMETSP1114_c18335_g1_i1.p1 Eukaryota-Kinetoplastida-Kinetoplastida-Kinetoplastida-Trypanosomatidae-Trypanosoma_brucei_XP_011773677.1 Bacteria-Spirochaetes-Spirochaetia-Spirochaetales-Spirochaetaceae-Oceanispirochaeta_sp._M1_WP_114628293.1 Bacteria-Spirochaetes-Spirochaetales-Spirochaetaceae-Spirochaeta_africana_WP_014456579.1 Bacteria-Chloroflexi-Ardenticatenia-Ardenticatenales-Ardenticatenaceae-Ardenticatena_maritima_WP_054492227.1 Bacteria-NA-NA-NA-NA-bacterium JKG1 WP 029214714.1 — Bacteria-Proteobacteria-Gammaproteobacteria-Legionellales-Coxiellaceae-Candidatus_Rickettsiella_isopodorum_WP_071662245.1 Bacteria-Cyanobacteria-NA-NA-filamentous_cyanobacterium_Phorm_6_WP_106331978.1 Bacteria-Cyanobacteria-NA-Nostocales-Hapalosiphonaceae-Fischerella_thermalis_WP_102152243.1 ———— Archaea-CandidatusBathyarchaeota-NA-NA-NA-Candidatus_Bathyarchaeota_archaeon_WP_119815377.1 Bacteria-Actinobacteria-Actinobacteria-Glycomycetales-Glycomycetaceae-Glycomyces_harbinensis_WP_091029527.1 Bacteria-Actinobacteria-Actinobacteria-Glycomycetales-Glycomycetaceae-NA_WP_030158318.1 — Bacteria-DeinococcusThermus-Deinococci-Deinococcales-Deinococcaceae-Deinococcus_sp._FeSDHB519_WP_135229339.1 - Bacteria-Firmicutes-Bacilli-Bacillales-Paenibacillaceae-Paenibacillus_curdlanolyticus_WP_006038561.1