

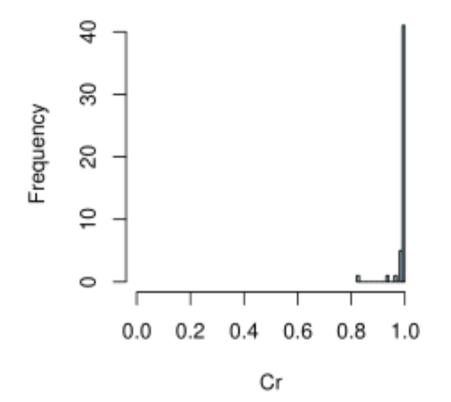


Paulinella

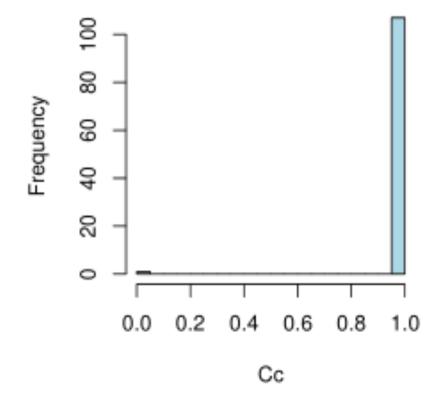
Archaea

Bacteria Eukaryota

Viruses

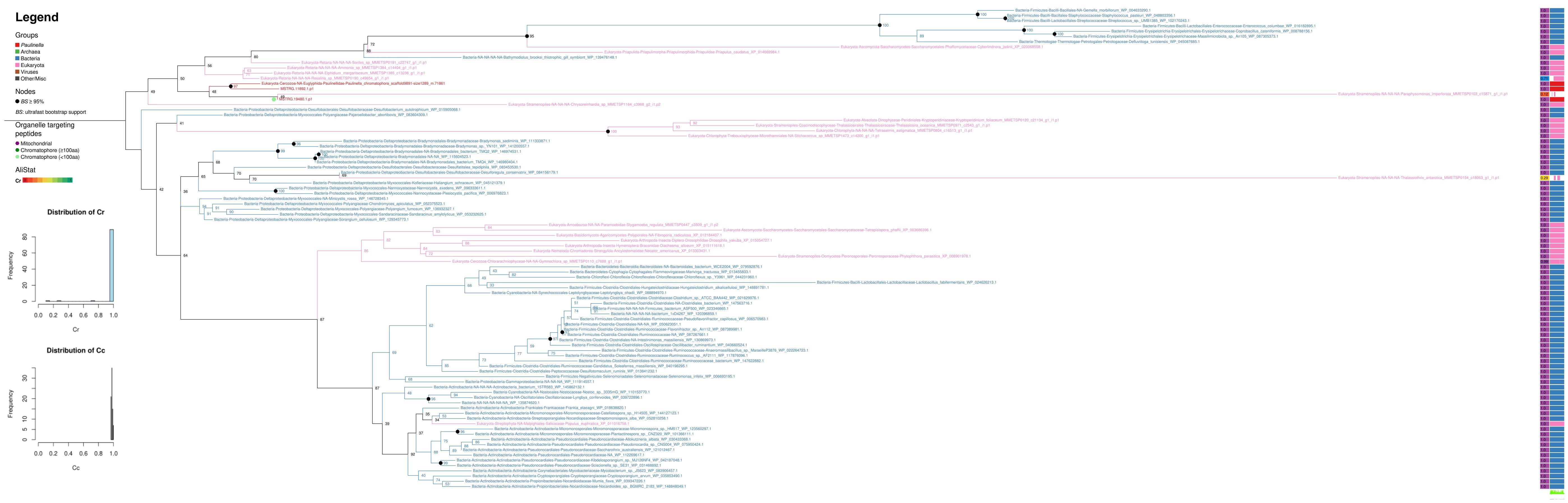


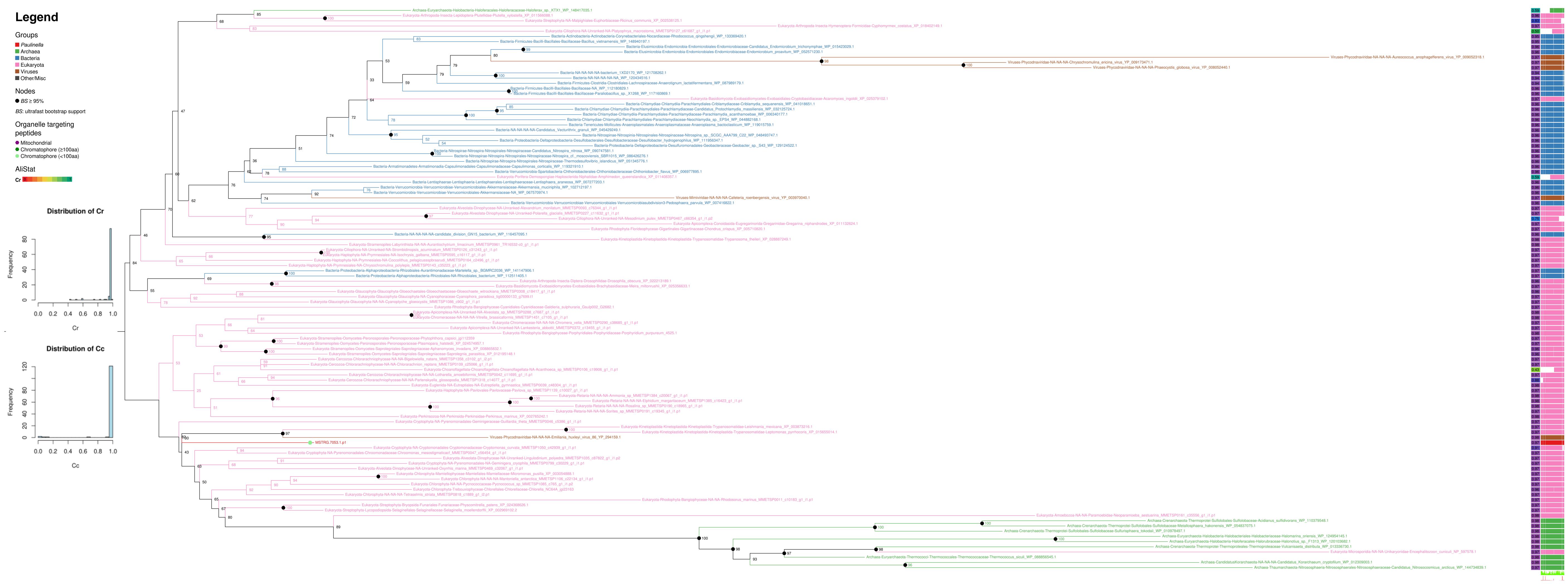
Distribution of Cc

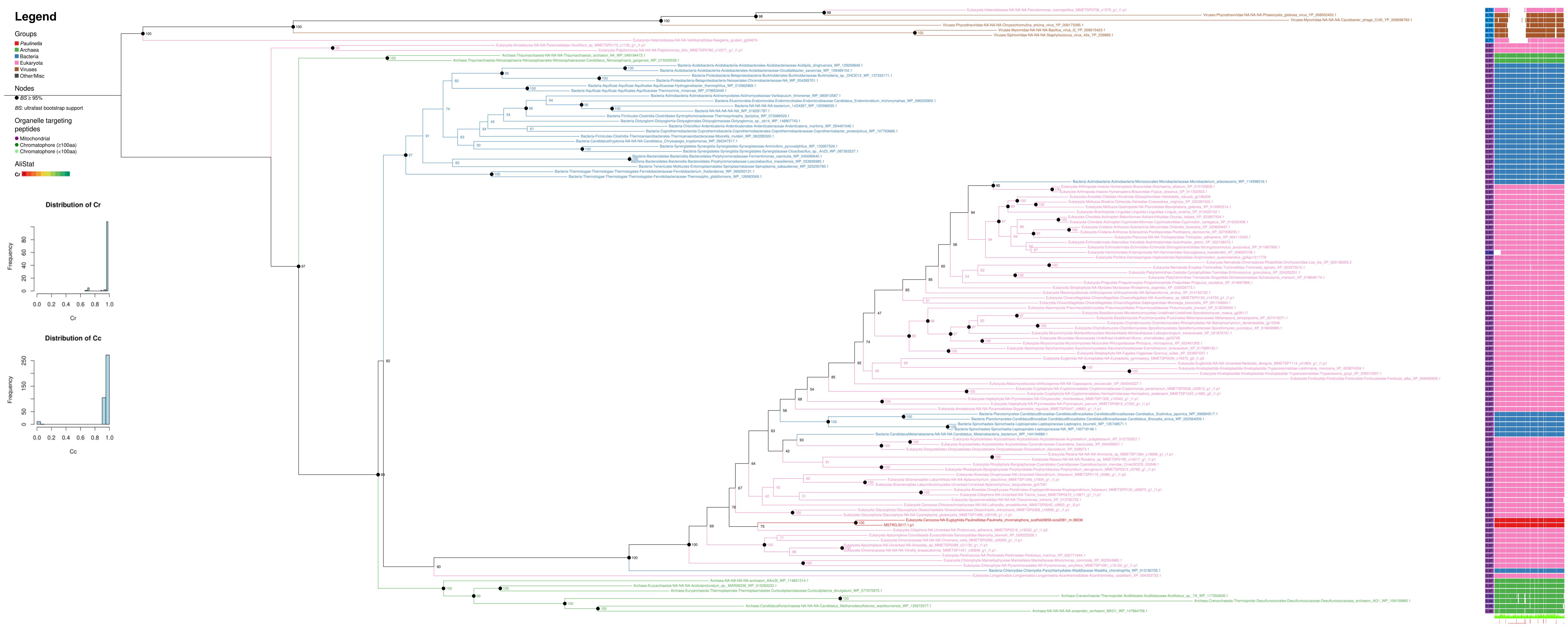


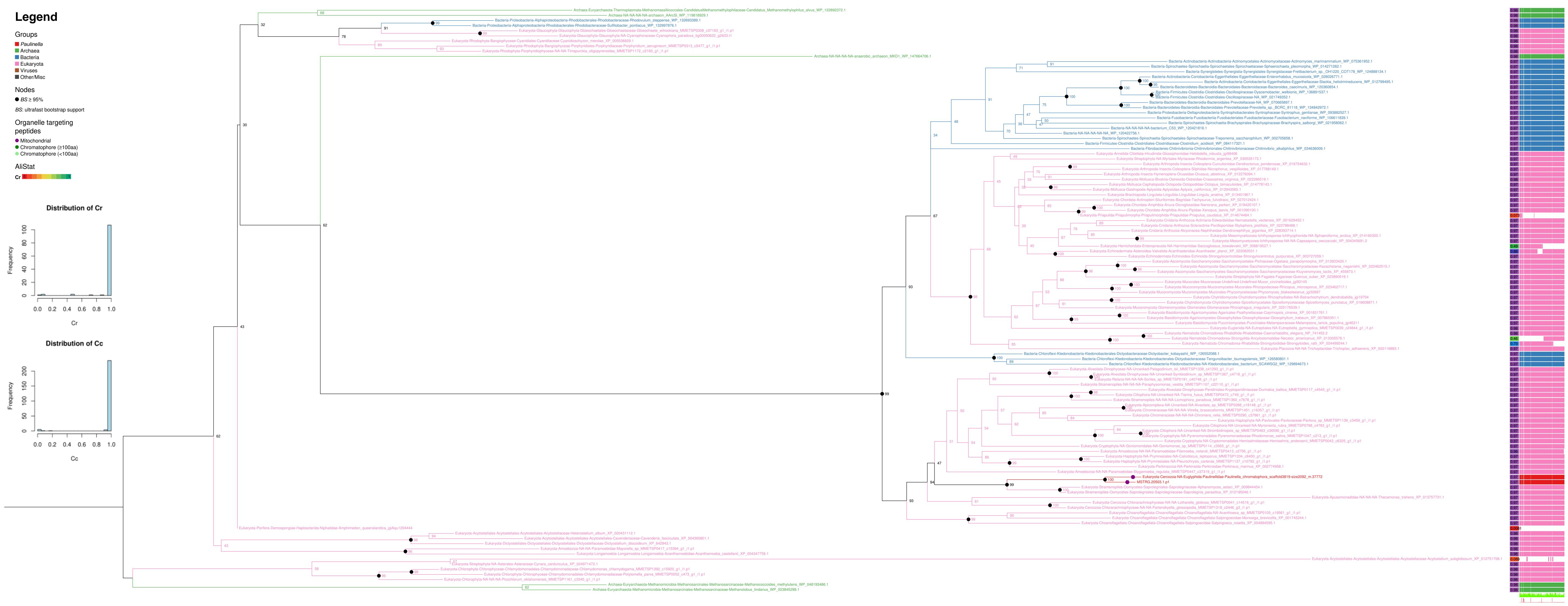


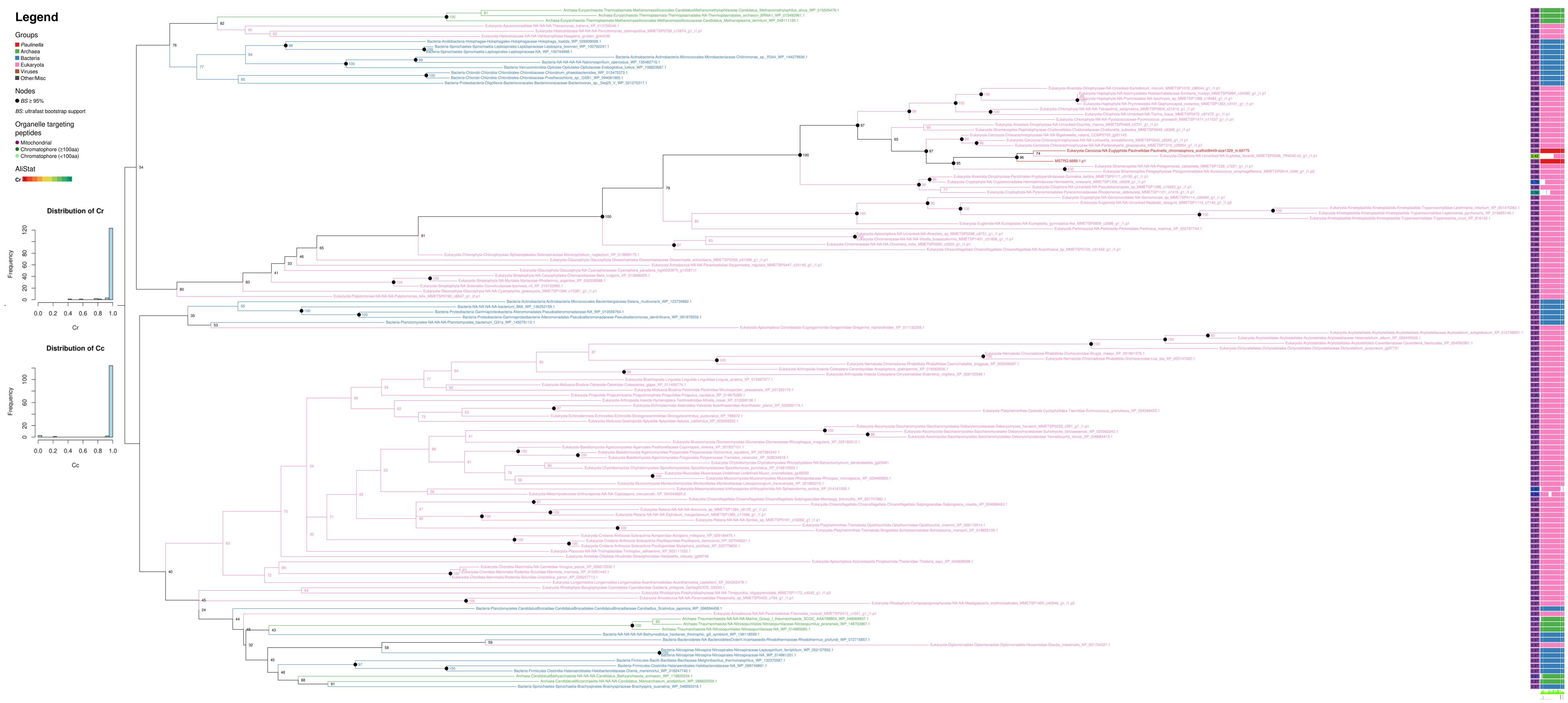


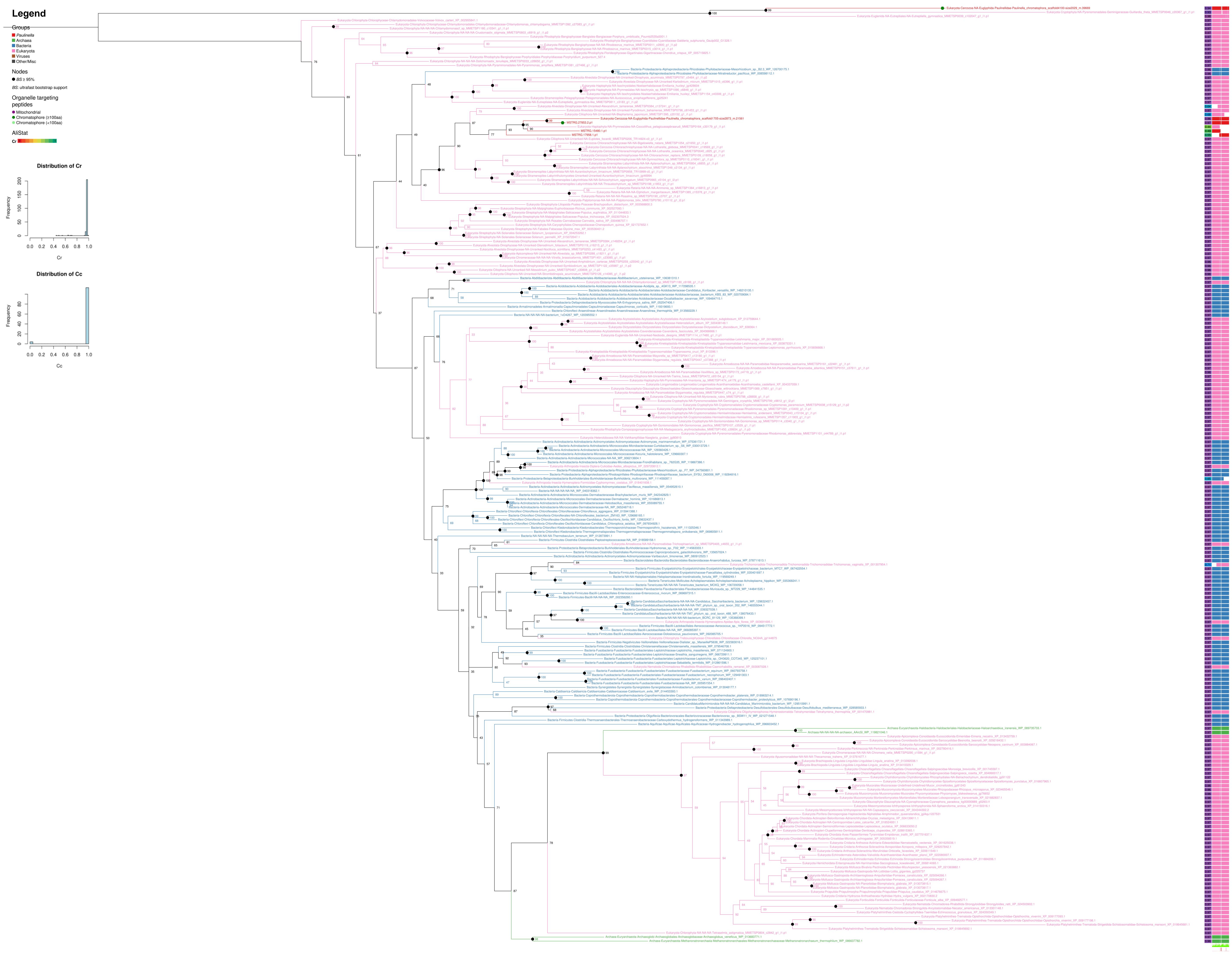






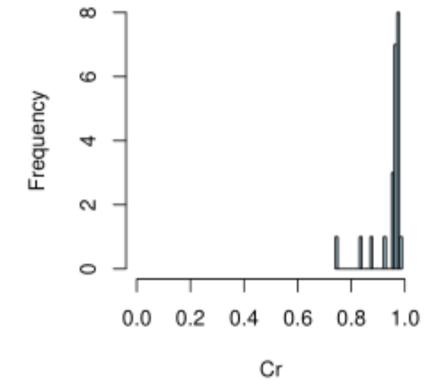




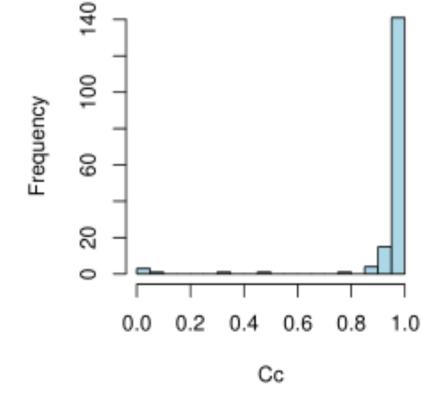


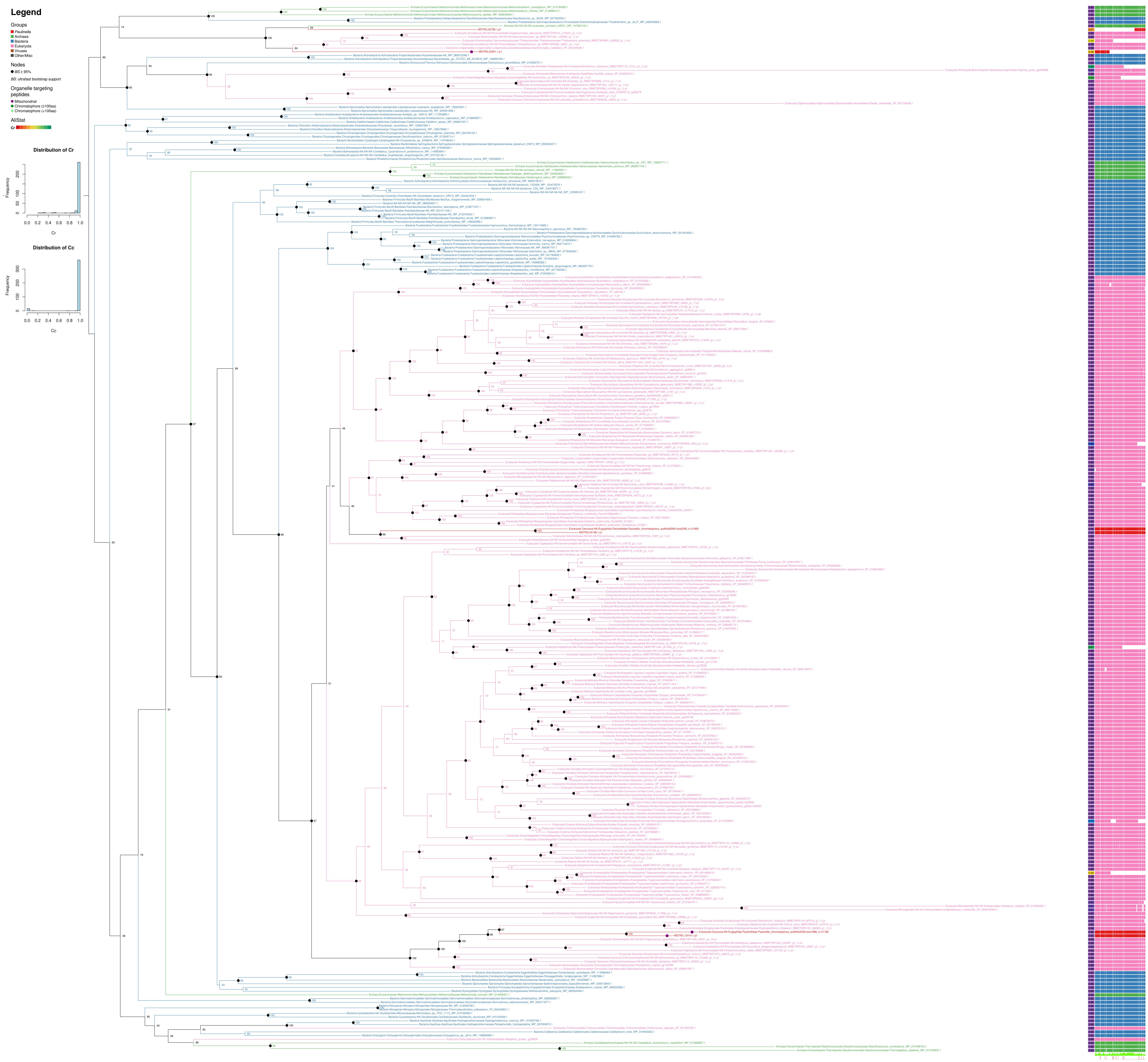


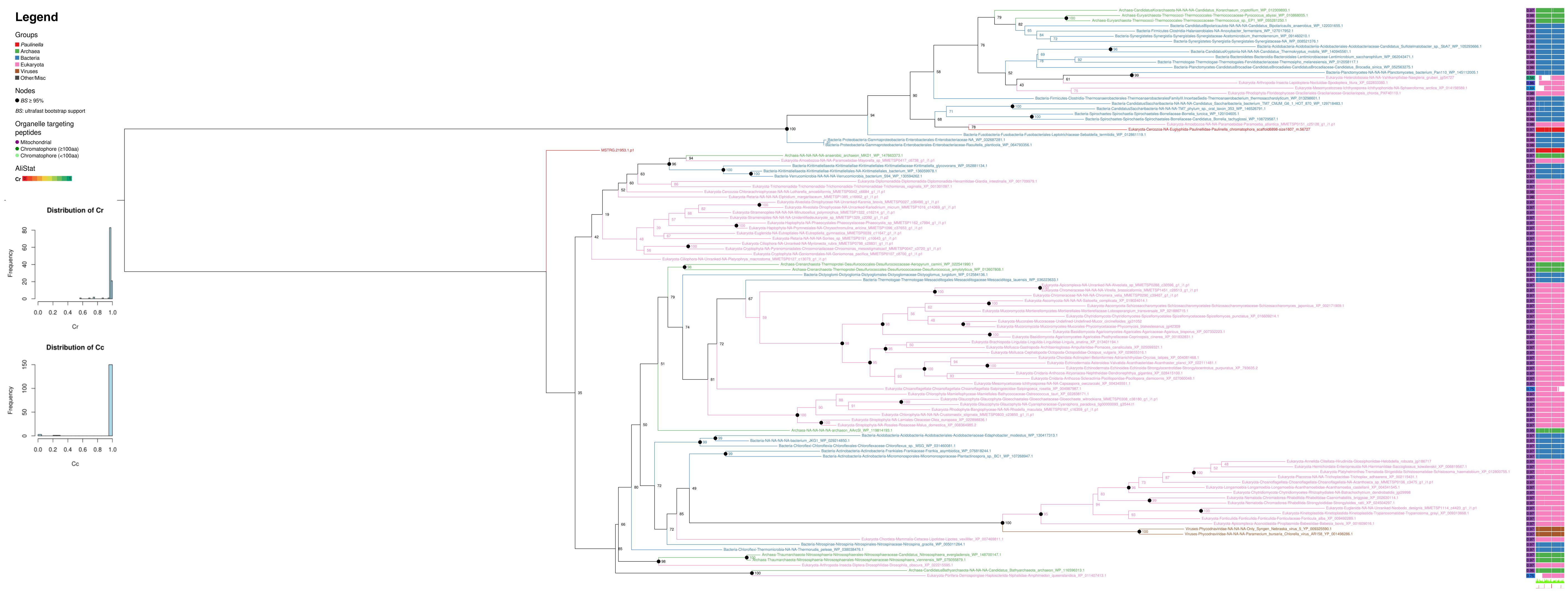





Distribution of Cc









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Grouns

Paulinella

Archaea
Bacteria
Eukaryota
Viruses

Nodes

■ PC > 0E9/

BS: ultrafast bootstrap support

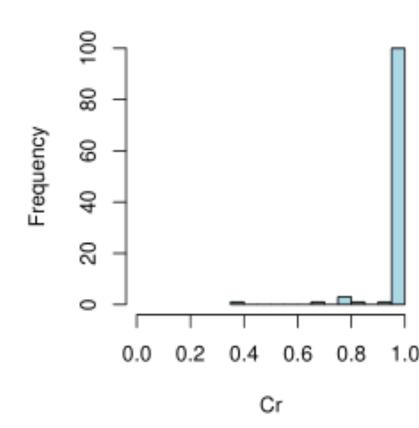
Organelle targeting

peptides

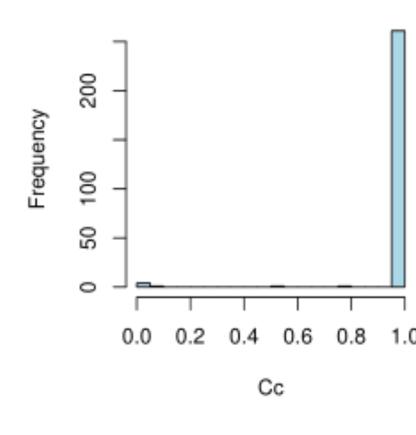
MitochondrialChromatophore (≥100aa)

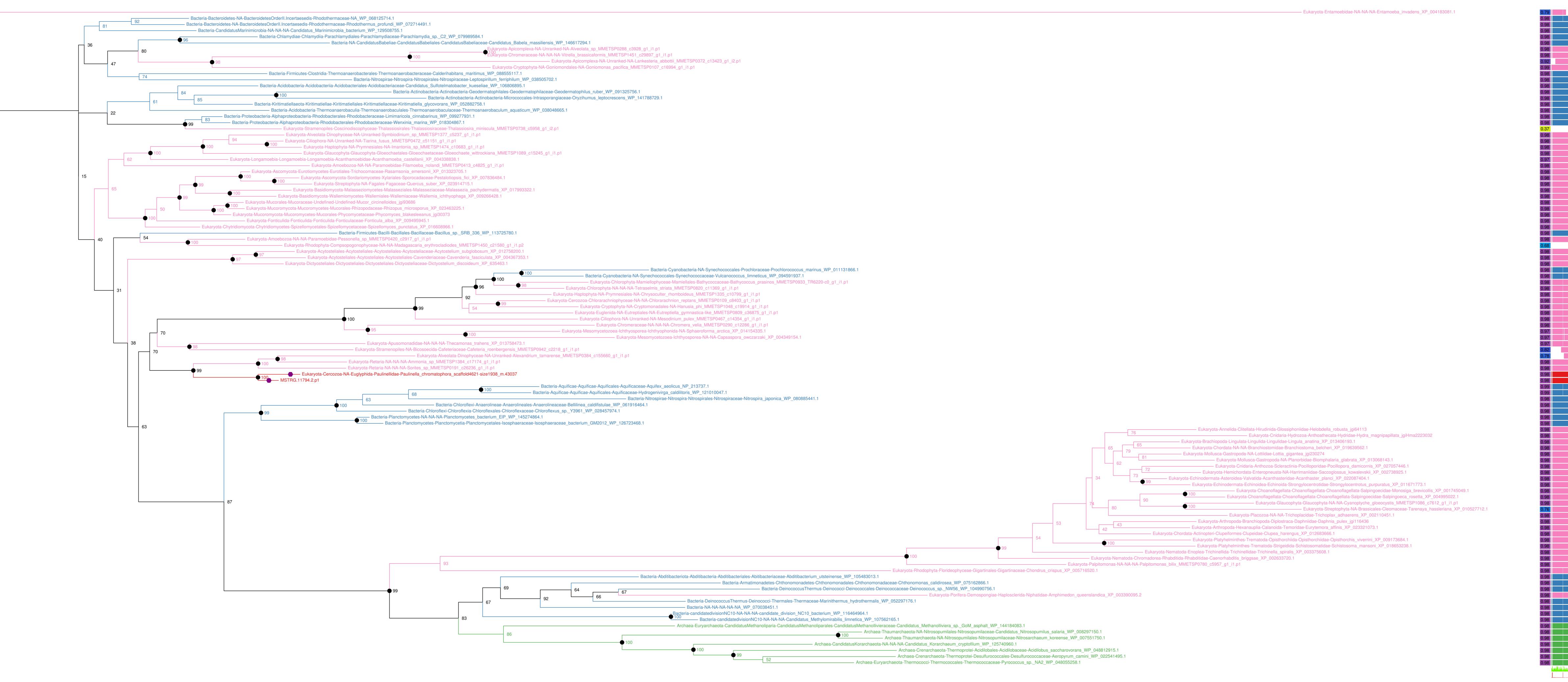
AliStat

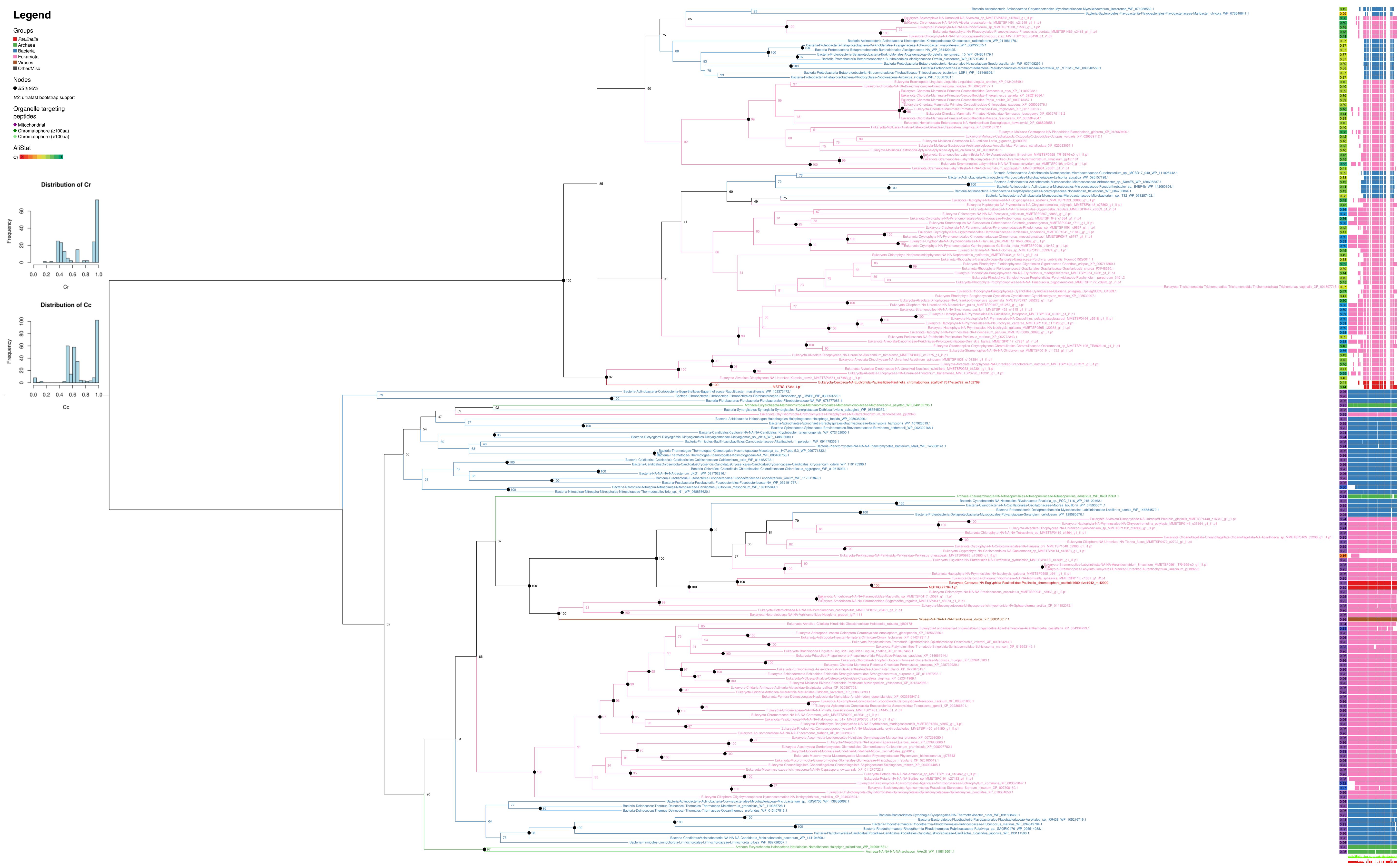





Distribution of Cc

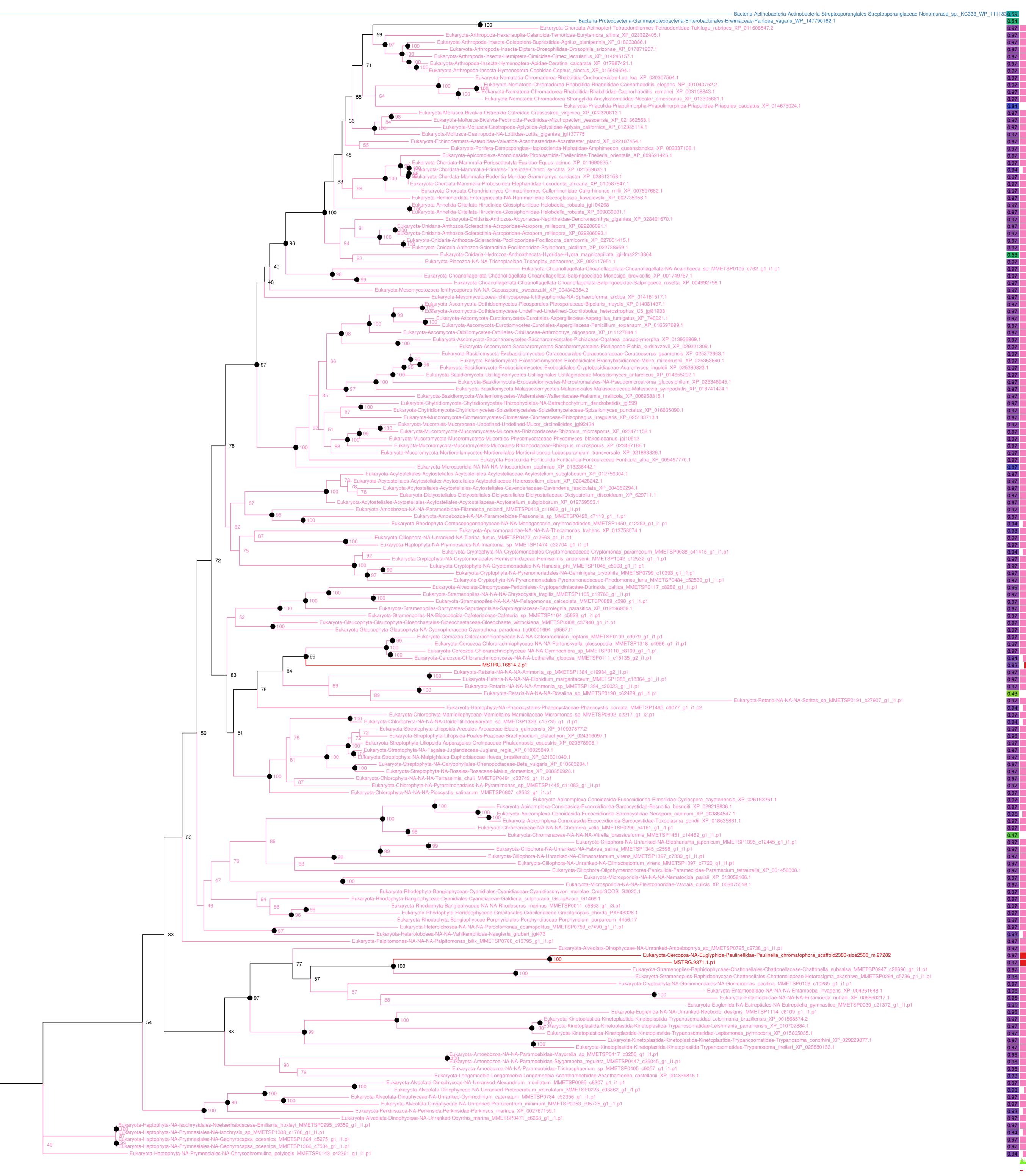


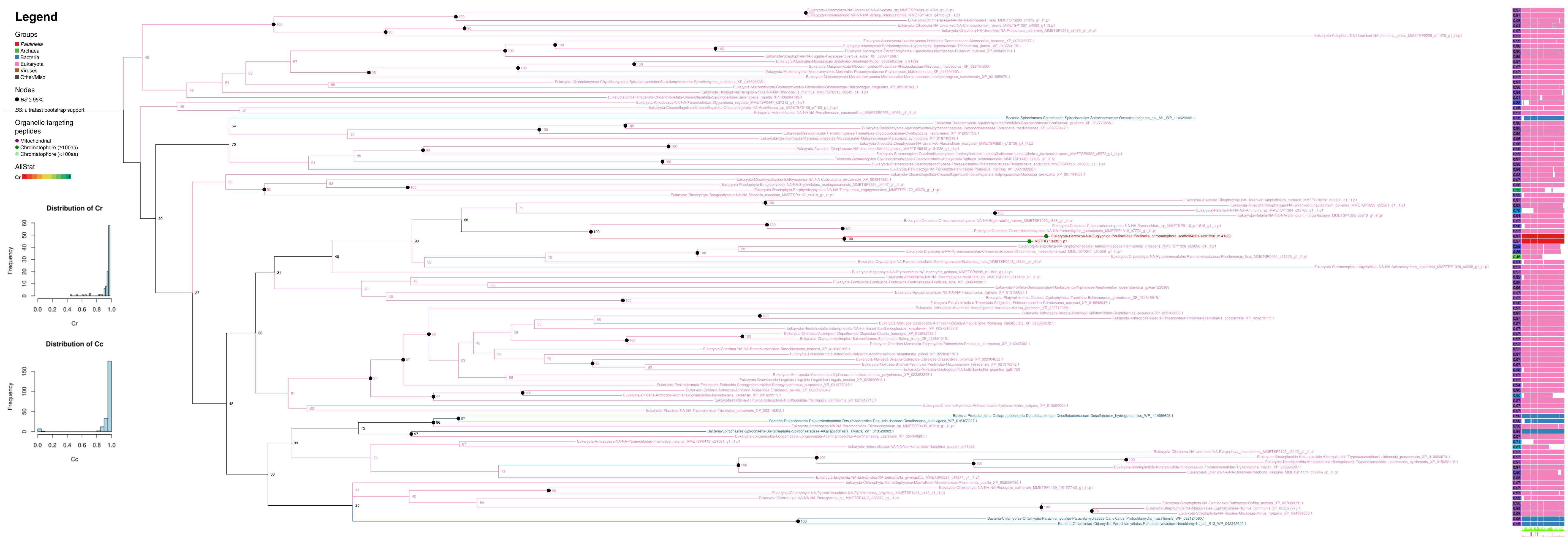


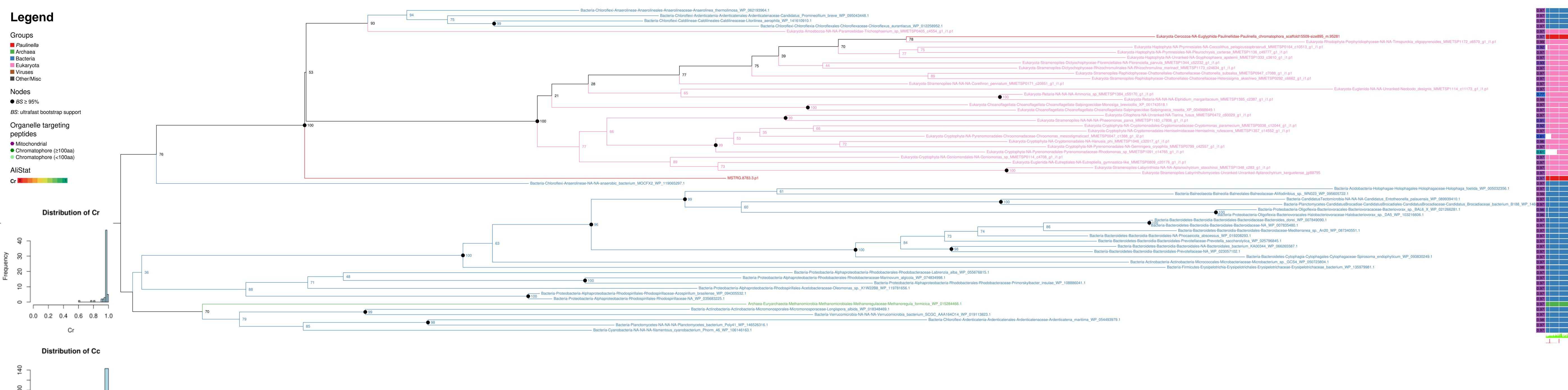




Bacteria BS: ultrafast bootstrap support Distribution of Cr 0.0 0.2 0.4 0.6 0.8 1.0

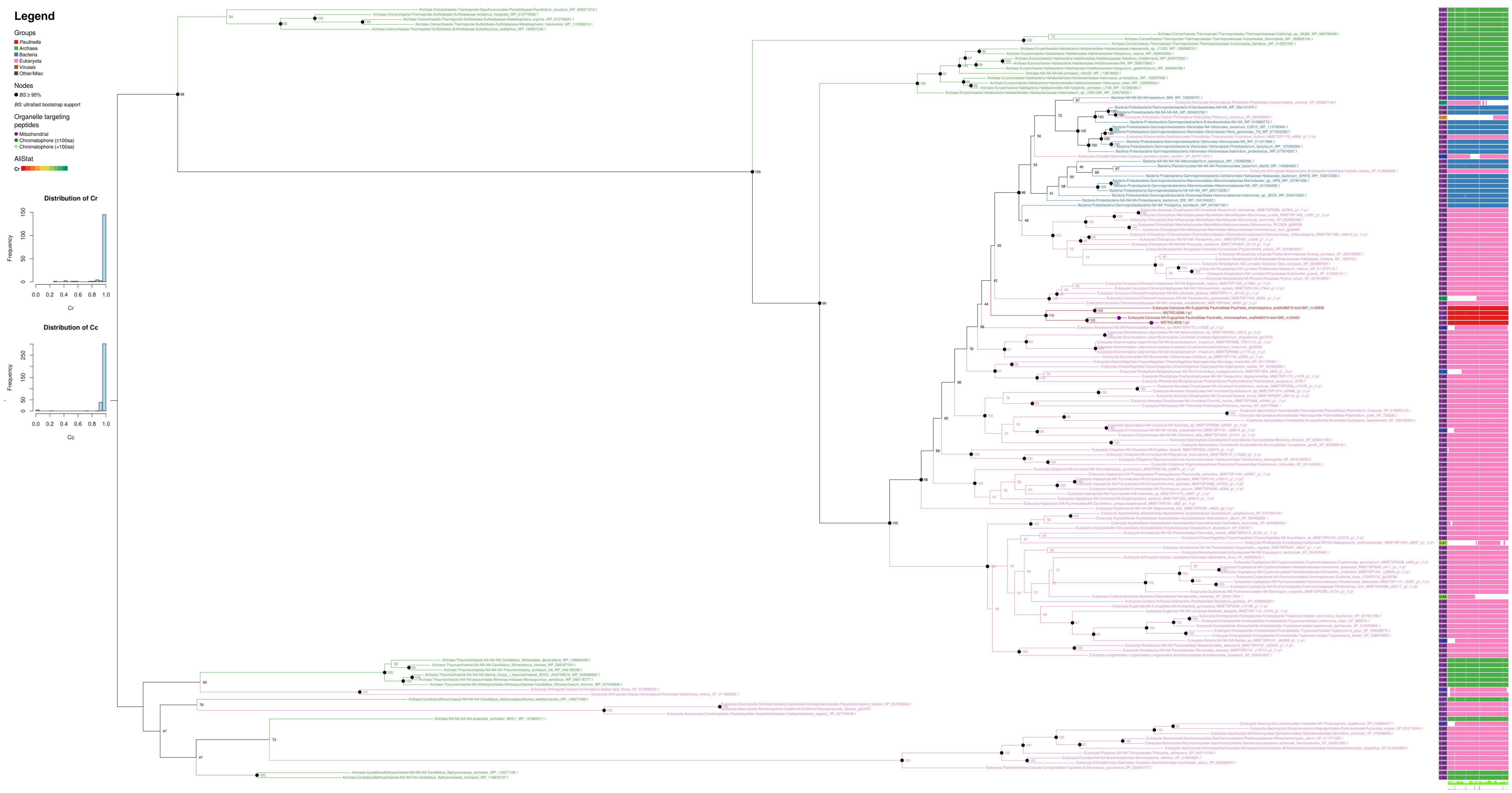


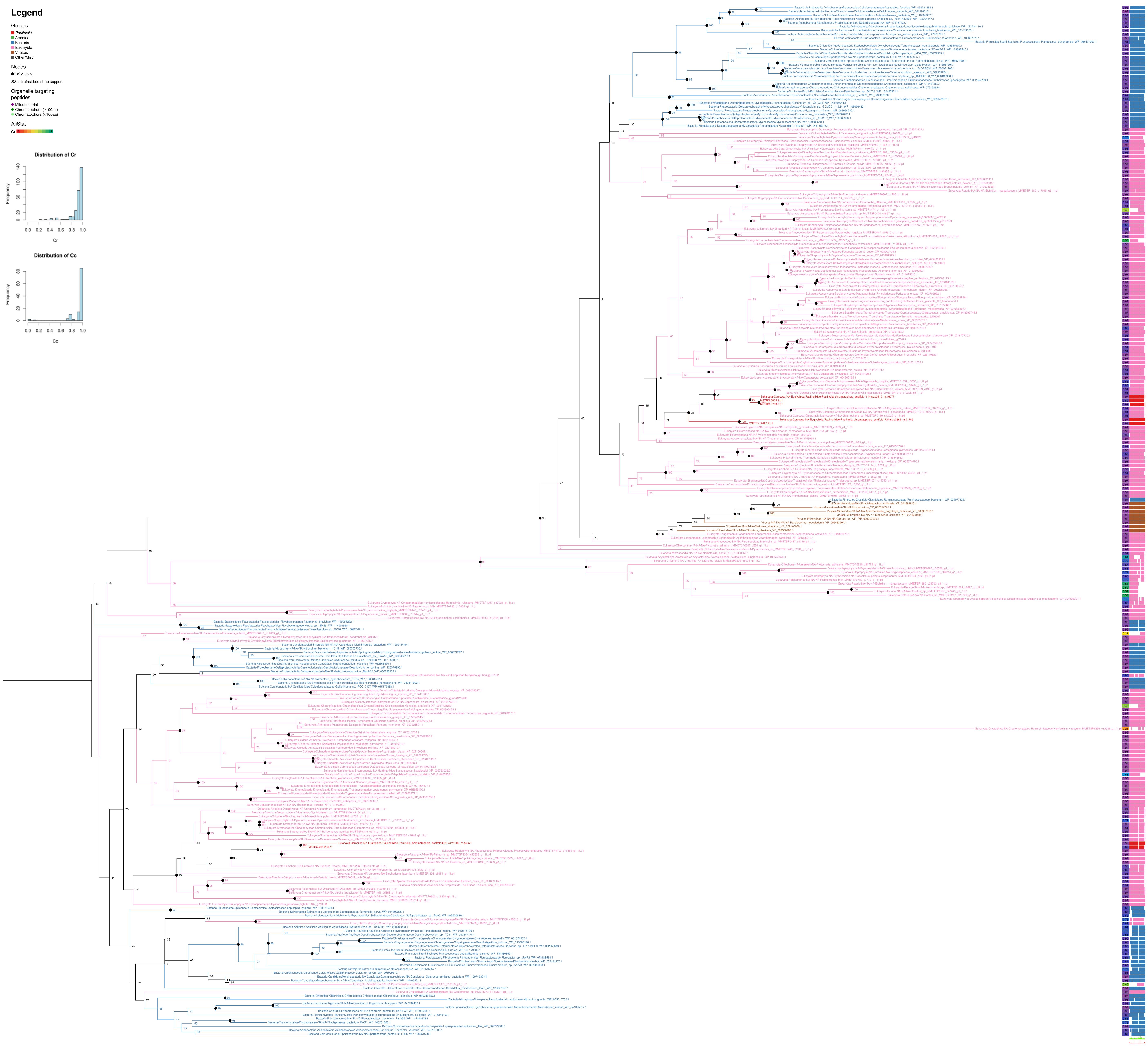




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0.0 0.2 0.4 0.6 0.8 1.0





Legend

Group

Paulinell

ArchaeaBacteria

■ Eukaryot■ Viruses

Node

BC: ultrafact bactatran augnort

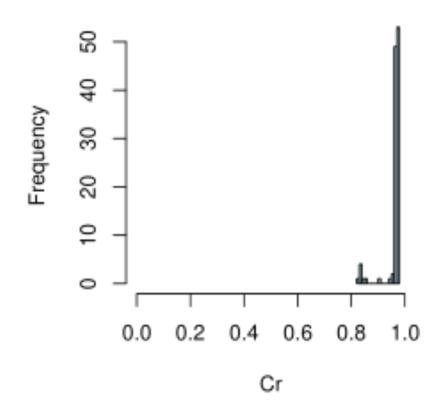
Organelle targeting

Mitochondrial

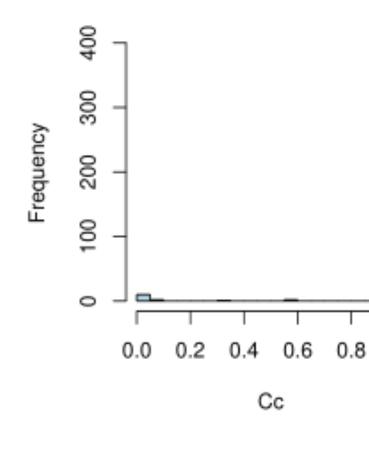
Chromatophore (≥100aa)

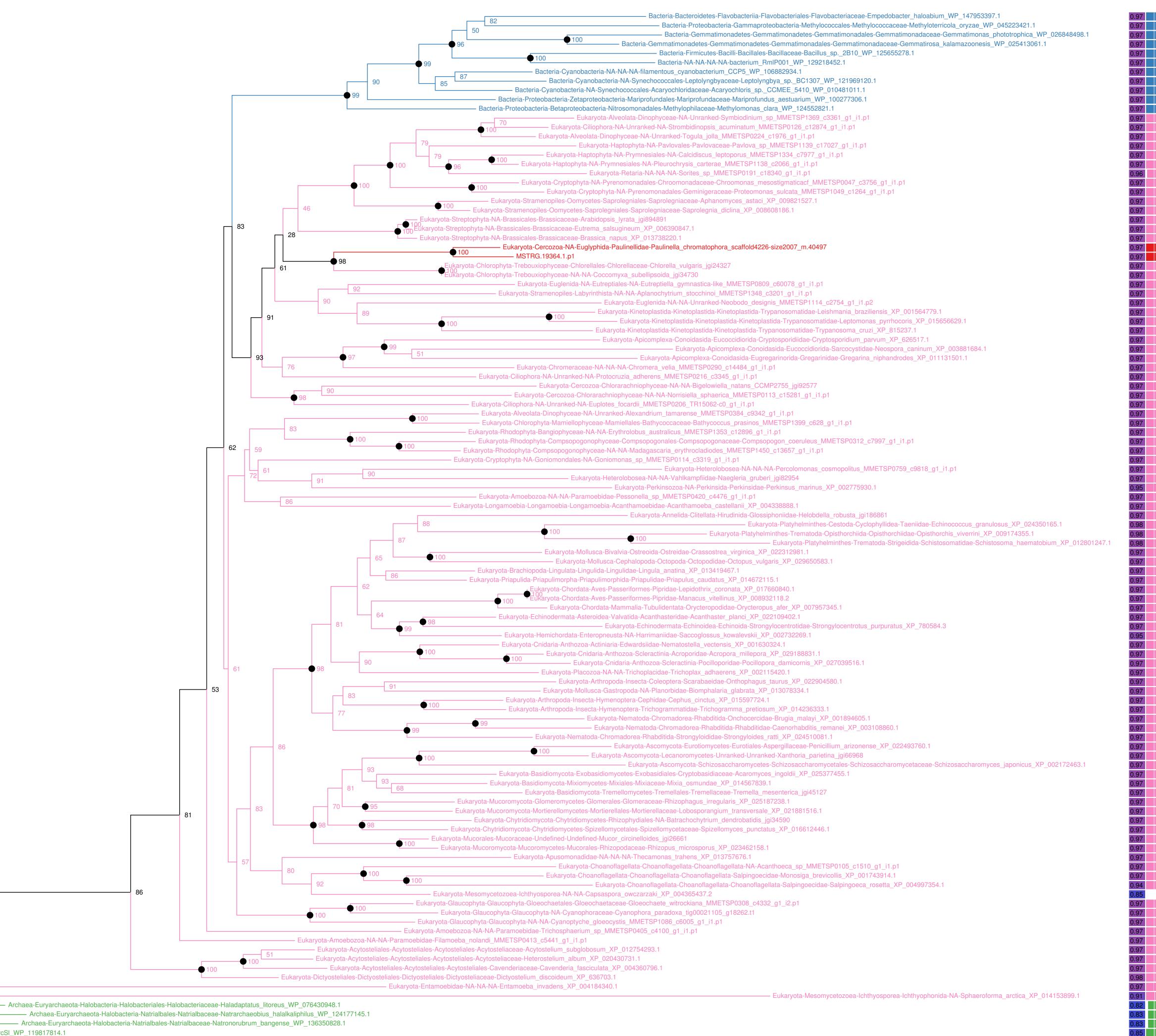
AliStat

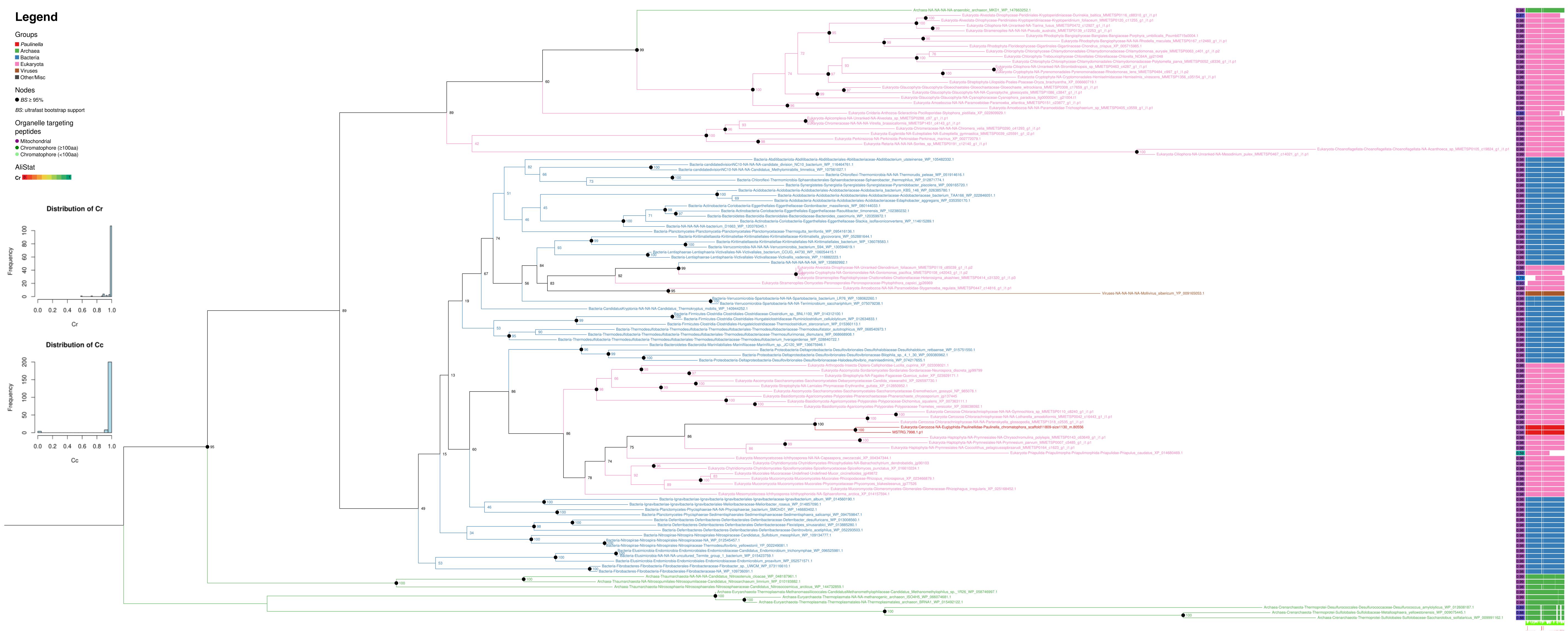
Distribution of Cr

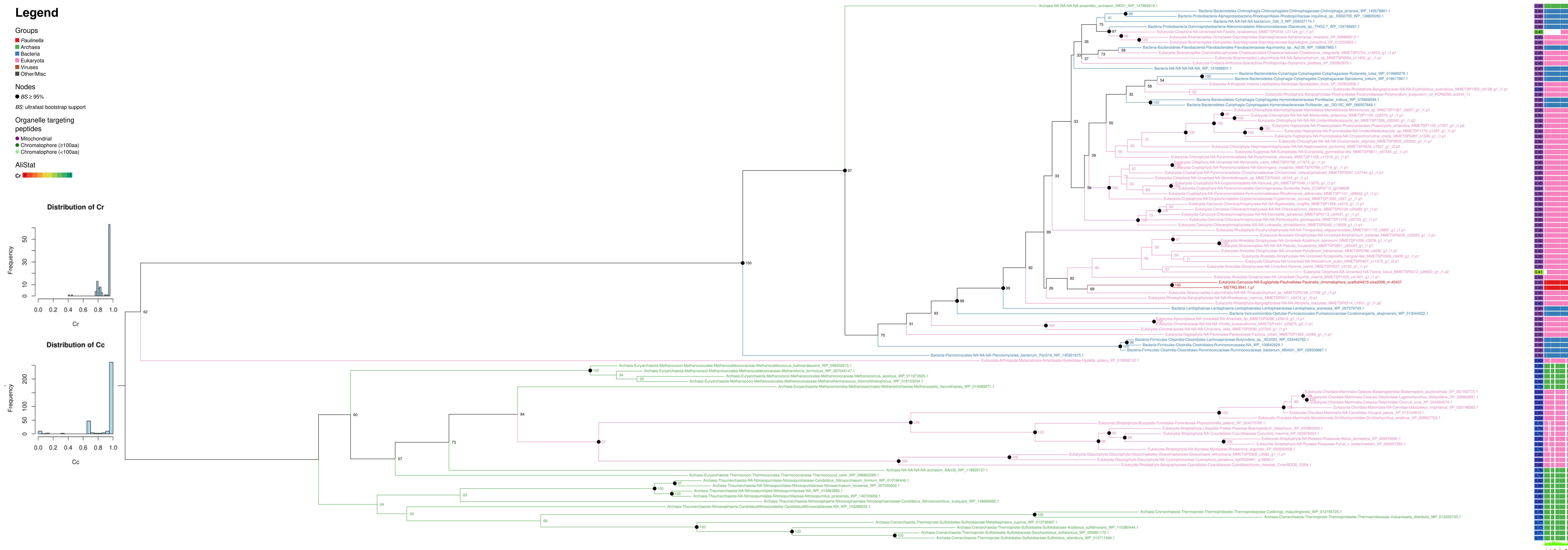


Distribution of (





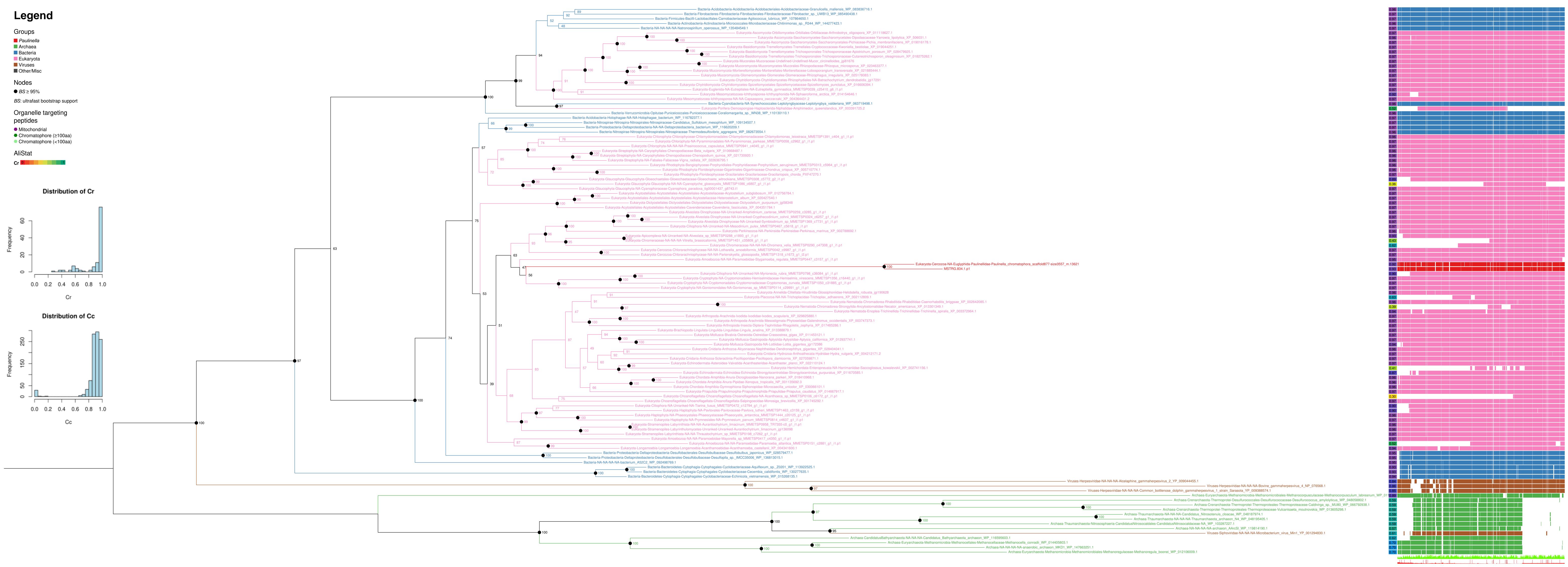


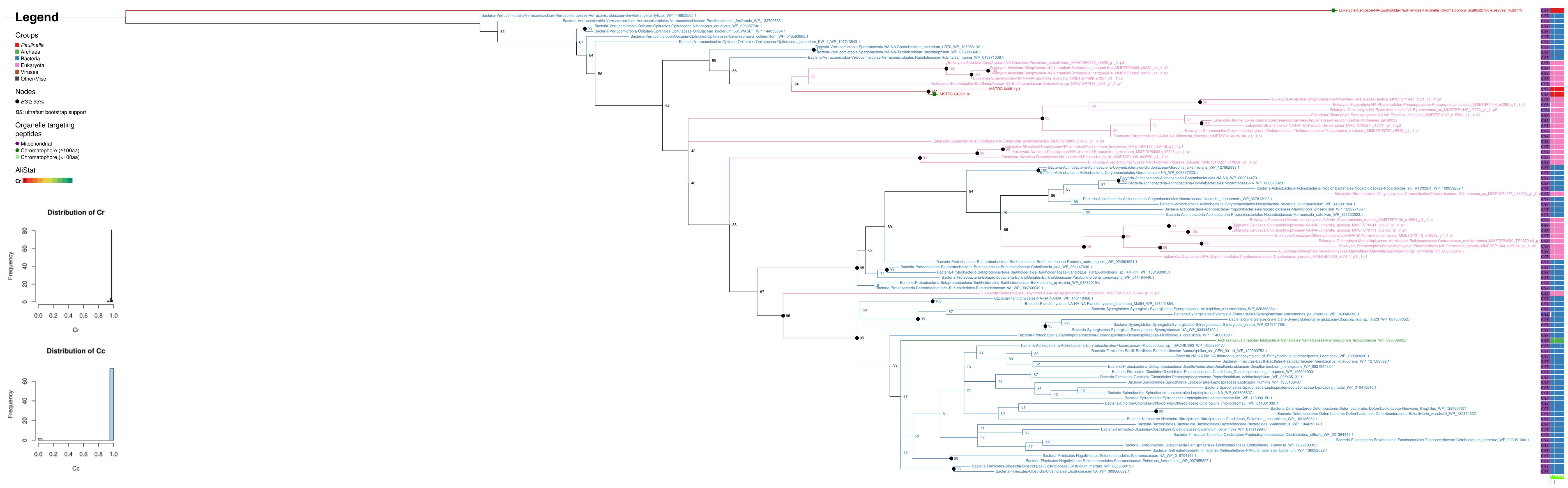


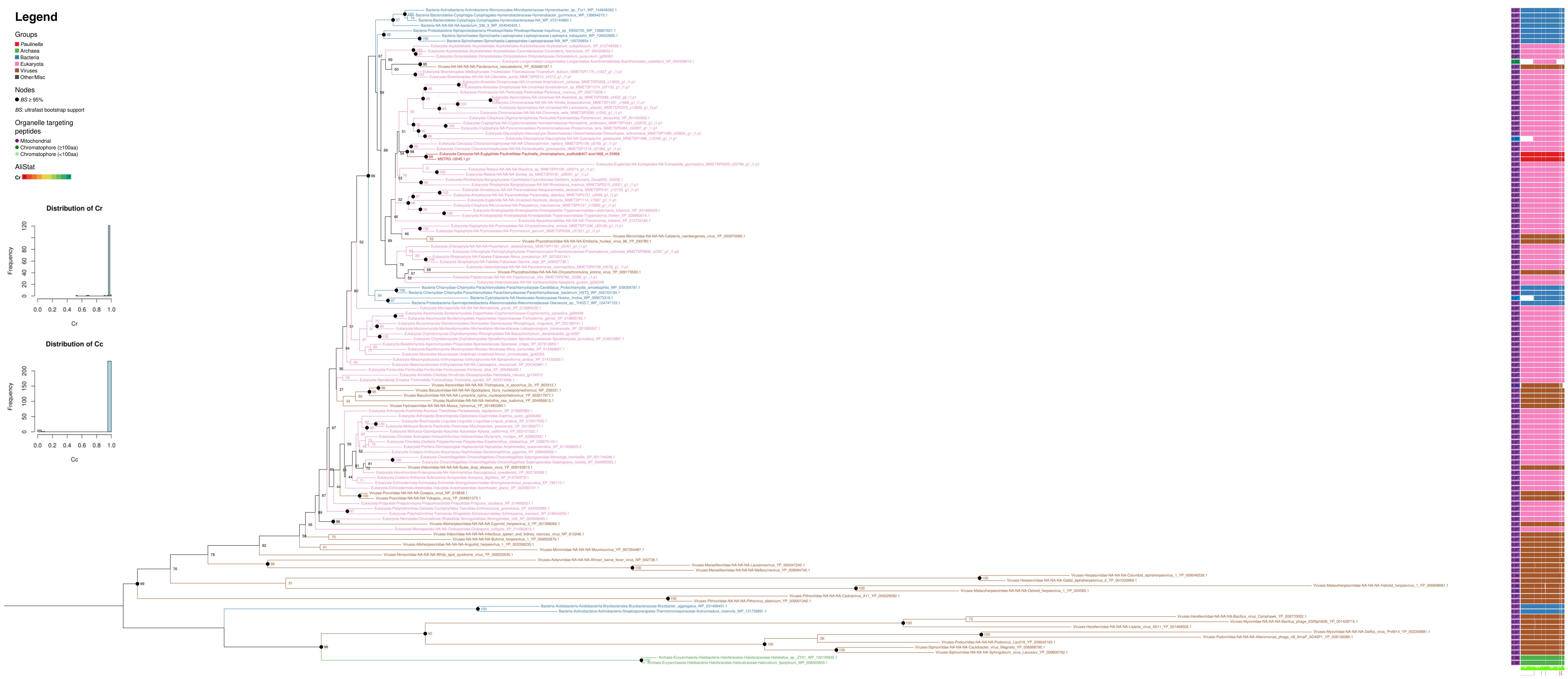
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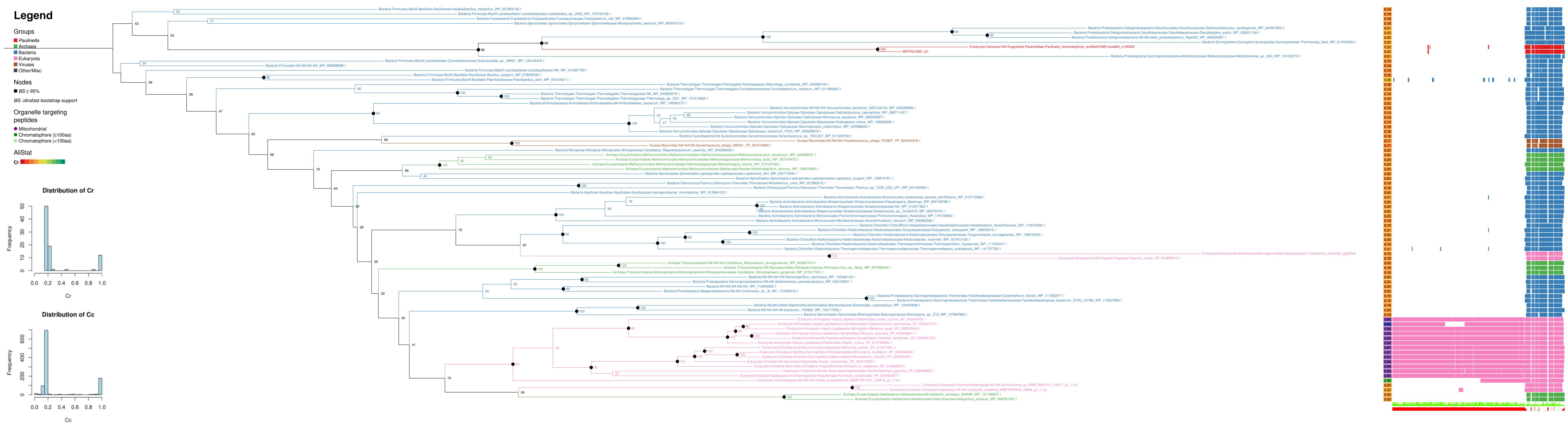
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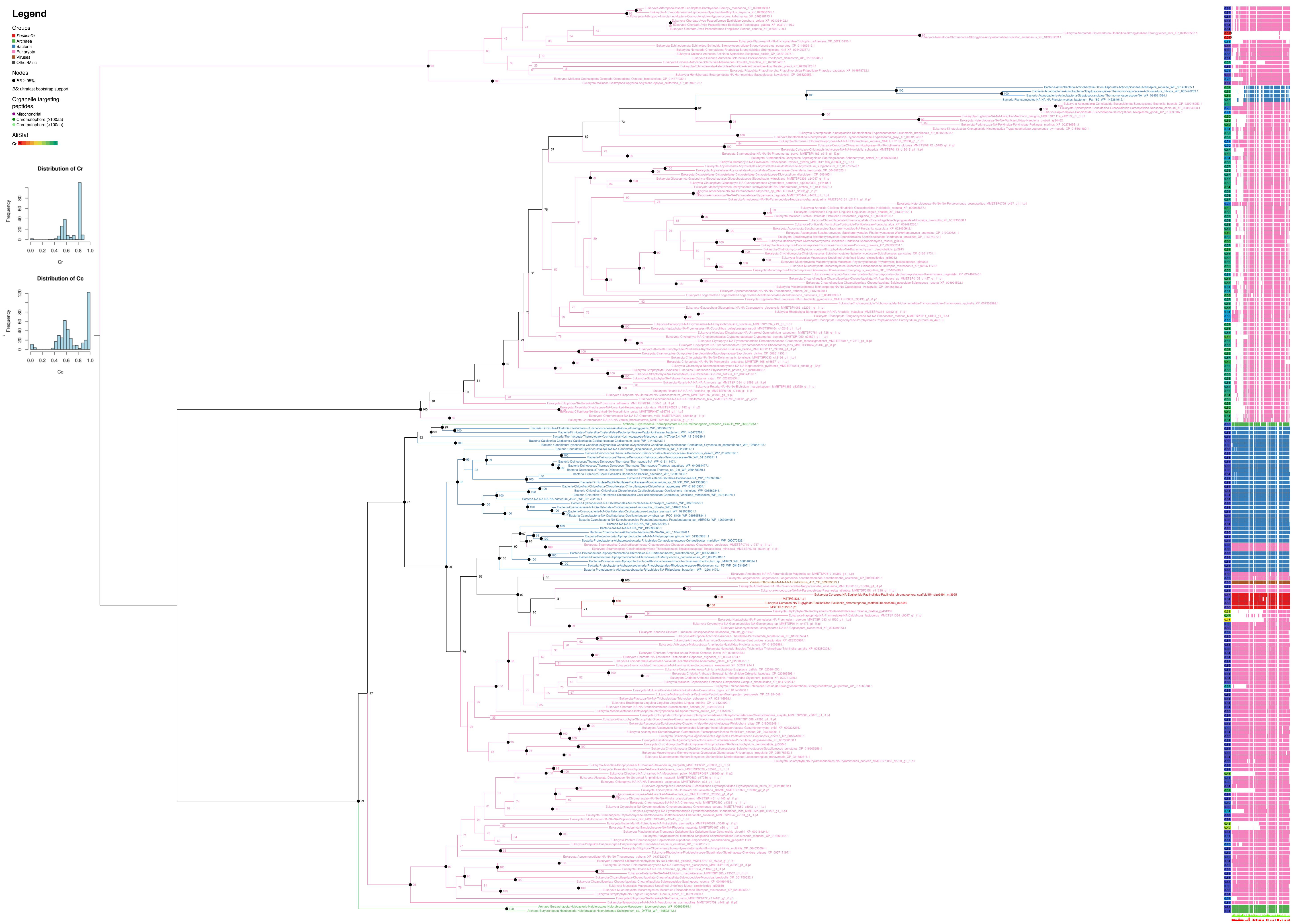
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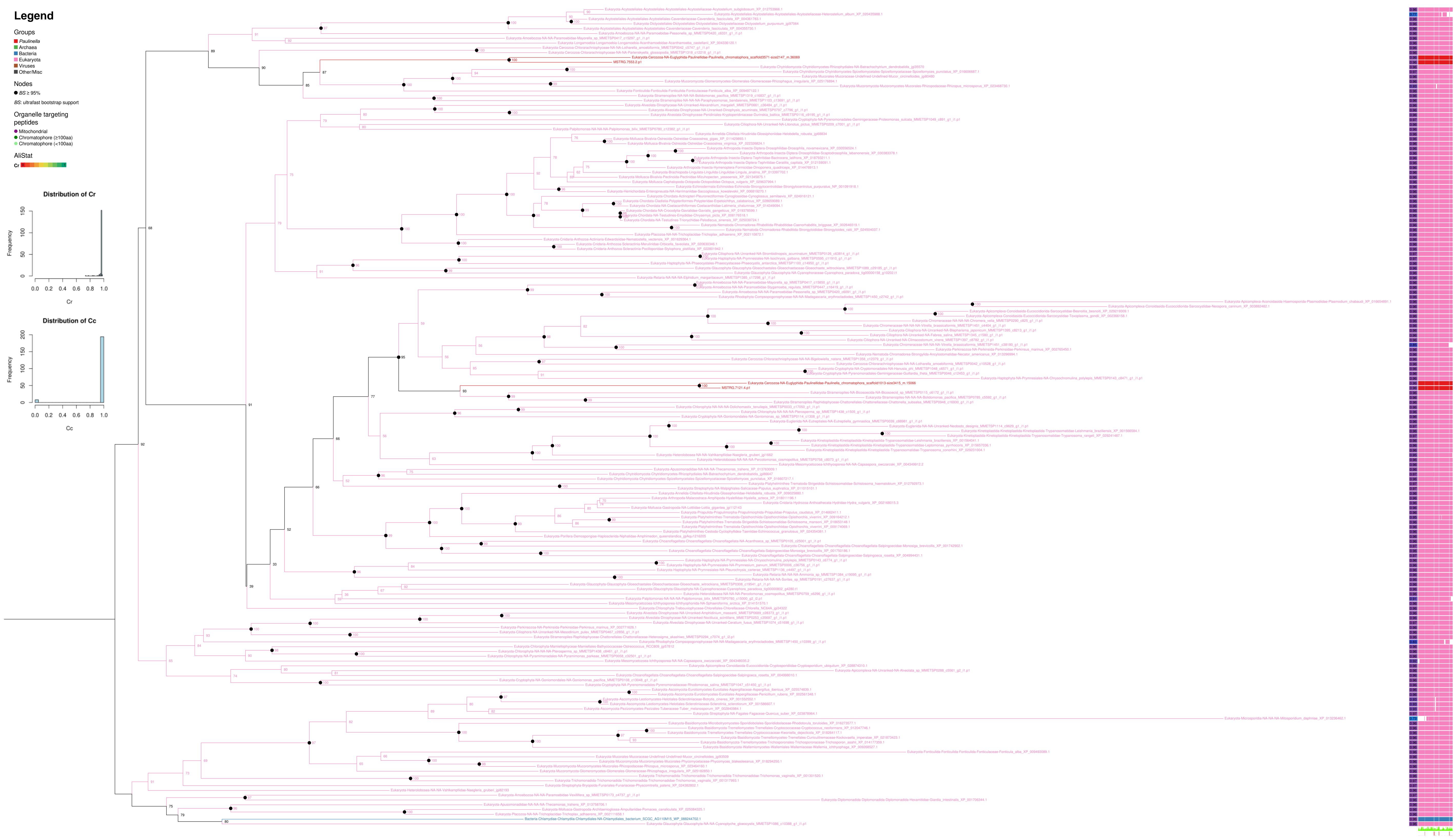






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Eukaryota-Basidiomycota-Tremellomycetes-Tremellales-Cryptococcaceae-Kwoniella_pini_XP_019013308.1 Eukaryota-Basidiomycota-Tremellomycetes-Trichosporonales-Trichosporonaceae-Apiotrichum_porosum_XP_028477184.1 Eukaryota-Basidiomycota-Tremellomycetes-Tremellales-Tremellaceae-Tremella_mesenterica_jgi68552 Eukaryota-Mucoromycota-Mortierellomycetes-Mortierellales-Mortierellaceae-Lobosporangium_transversale_XP_021886304.1 Eukaryota-Mucoromycota-Glomeromycetes-Glomerales-Glomeraceae-Rhizophagus_irregularis_XP_025182850.1 Eukaryota-Mucorales-Mucoraceae-Undefined-Undefined-Mucor_circinelloides_jgi32396 Eukaryota-Mucoromycota-Mucoromycetes-Mucorales-Rhizopodaceae-Rhizopus_microsporus_XP_023464160.1 Eukaryota-Mucoromycota-Mucoromycetes-Mucorales-Phycomycetaceae-Phycomyces_blakesleeanus_XP_018294250.1 Eukaryota-Streptophyta-Bryopsida-Funariales-Funariaceae-Physcomitrella_patens_XP_024382794.1 Eukaryota-Streptophyta-Bryopsida-Funariales-Funariaceae-Physcomitrella_patens_XP_024382802.1 Eukaryota-Trichomonadida-Trichomonadida-Trichomonadidae-Trichomonadidae-Trichomonas_vaginalis_XP_001301520.1 Eukaryota-Trichomonadida-Trichomonadida-Trichomonadida-Trichomonadida-Trichomonadidae-Trichomonas_vaginalis_XP_001302578.1 — Eukaryota-Trichomonadida-Trichomonadida-Trichomonadida-Trichomonadidae-Trichomonas_vaginalis_XP_001581986.1 - Eukaryota-Acytosteliales-Acytosteliales-Acytosteliales-Acytosteliaceae-Acytostelium subglobosum XP 012753966.1 —— Eukaryota-Acytosteliales-Acytosteliales-Acytosteliales-Acytosteliaceae-Heterostelium album XP 020435988.1 Eukaryota-Acytosteliales-Acytosteliales-Acytosteliales-Cavenderiaceae-Cavenderia_fasciculata_XP_004355730.1 Eukaryota-Fonticulida-Fonticulida-Fonticulida-Fonticulaceae-Fonticula_alba_XP_009497122.1 Eukaryota-Mucorales-Mucoraceae-Undefined-Undefined-Mucor_circinelloides_jgi47512 Eukaryota-Mucoromycota-Mucoromycetes-Mucorales-Phycomycetaceae-Phycomyces_blakesleeanus_XP_018285986.1 Eukaryota-Mucorales-Mucoraceae-Undefined-Undefined-Mucor_circinelloides_jgi80480 Eukaryota-Mucoromycota-Glomeromycetes-Glomerales-Glomeraceae-Rhizophagus_irregularis_XP_025176894.1 Eukaryota-Longamoebia-Longamoebia-Longamoebia-Acanthamoebidae-Acanthamoeba_castellanii_XP_004336120.1 — Bacteria-Chlamydiae-Chlamydia-Chlamydiales-NA-Chlamydiales_bacterium_SCGC_AG110M15_WP_088244702.1 Eukaryota-Apusomonadidae-NA-NA-Thecamonas_trahens_XP_013758706.1

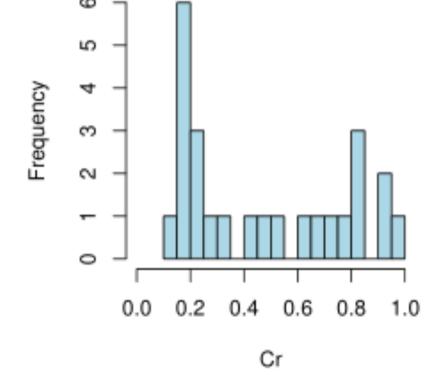


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Eukaryota-Mollusca-Gastropoda-Architaenioglossa-Ampullariidae-Pomacea_canaliculata_XP_025084329.1 Eukaryota-Brachiopoda-Lingulata-Lingulida-Lingulidae-Lingula_anatina_XP_013391998.1 Eukaryota-Mollusca-Bivalvia-Ostreoida-Ostreidae-Crassostrea_gigas_XP_011447434.1 — Eukaryota-Placozoa-NA-NA-Trichoplacidae-Trichoplax adhaerens XP 002111658.1 ucophyta-Glaucophyta-NA-NA-Cyanoptyche_gloeocystis_MMETSP1086_c10388_g1_i1.p1 psopogonophyceae-NA-NA-Madagascaria_erythrocladiodes_MMETSP1450_c9757_g1_i2.p1 ı-NA-NA-Paramoebidae-Pessonella_sp_MMETSP0420_c6091_g1_i1.p1 Eukaryota-Apicomplexa-Conoidasida-Eucoccidiorida-Sarcocystidae-Neospora_caninum_XP_003882217.1 0.0 0.2 0.4 0.6 0.8 1.0 — 100 Eukaryota-Apicomplexa-Conoidasida-Eucoccidiorida-Sarcocystidae-Toxoplasma_gondii_XP_002371435.1 Eukaryota-Chromeraceae-NA-NA-NA-Chromera_velia_MMETSP0290_c825_g1_i1.p1 — Eukaryota-Annelida-Clitellata-Hirudinida-Glossiphoniidae-Helobdella_robusta_jgi114833 ptophyta-NA-Malpighiales-Salicaceae-Populus_euphratica_XP_011015101.1 aryota-Choanoflagellata-Choanoflagellata-Choanoflagellata-NA-Acanthoeca_sp_MMETSP0105_c25001_g1_i1.p1 Eukaryota-Priapulida-Priapulimorpha-Priapulimorphida-Priapulidae-Priapulus_caudatus_XP_014662411.1 Eukaryota-Nematoda-Chromadorea-Rhabditida-Rhabditidae-Caenorhabditis_briggsae_XP_002646519.1 Eukaryota-Nematoda-Chromadorea-Strongylida-Ancylostomatidae-Necator_americanus_XP_013295846.1 ıkaryota-Mesomycetozoea-Ichthyosporea-Ichthyophonida-NA-Sphaeroforma_arctica_XP_014151570.1 Eukaryota-Euglenida-NA-Eutreptiales-NA-Eutreptiella_gymnastica-like_MMETSP0809_c2789_g1_i1.p1 Eukaryota-Euglenida-NA-NA-Unranked-Neobodo_designis_MMETSP1114_c9629_g1_i1.p1 Eukaryota-Heterolobosea-NA-NA-NA-Percolomonas cosmopolitus MMETSP0758 c680 g1 i1.p1 · Bacteria-Chlamydiae-Chlamydiia-Chlamydiales-NA-Chlamydiales_bacterium_SCGC_AG110M15_WP_088244702.1 Palpitomonas-NA-NA-NA-Palpitomonas_bilix_MMETSP0780_c21200_g1_i1.p1 NA-NA-Paramoebidae-Stygamoeba_regulata_MMETSP0447_c8052_g1_i1.p1 Eukaryota-Amoebozoa-NA-NA-Paramoebidae-Vexillifera_sp_MMETSP0173_c4737_g1_i1.p1 karyota-Glaucophyta-Glaucophyta-Gloeochaetales-Gloeochaetaceae-Gloeochaete_wittrockiana_MMETSP1089_c3688_g1_i1.p1 Eukaryota-Haptophyta-NA-Prymnesiales-NA-Imantonia_sp_MMETSP1474_c33928_g1_i1.p1 - Eukaryota-Cercozoa-Chlorarachniophyceae-NA-NA-Gymnochlora_sp_MMETSP0110_c6920_g1_i1.p1 ıkaryota-Apusomonadidae-NA-NA-NA-Thecamonas_trahens_XP_013754541.1 Eukaryota-Fonticulida-Fonticulida-Fonticulida-Fonticulaceae-Fonticula_alba_XP_009497122.1 Eukaryota-Mucoromycota-Mucoromycetes-Mucorales-Rhizopodaceae-Rhizopus_microsporus_XP_023468730.1 Eukaryota-Mesomycetozoea-Ichthyosporea-NA-NA-Capsaspora_owczarzaki_XP_004348035.2 - Bacteria-CandidatusMelainabacteria-NA-CandidatusGastranaerophilales-NA-Candidatus_Gastranaerophilales_bacterium_WP_129697083.1 — Bacteria-Aquificae-Aquificae-Aquificales-Hydrogenothermaceae-Persephonella_marina_WP_012675790.1 — Bacteria-Spirochaetes-Spirochaetia-Spirochaetales-Spirochaetaceae-Sediminispirochaeta_smaragdinae_WP_013252664.1

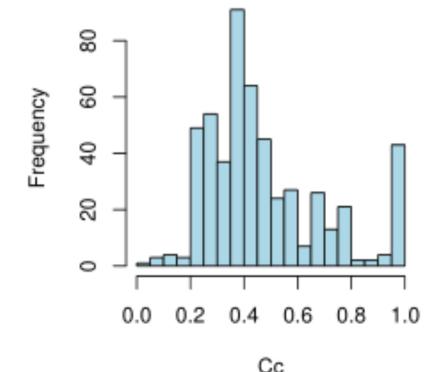
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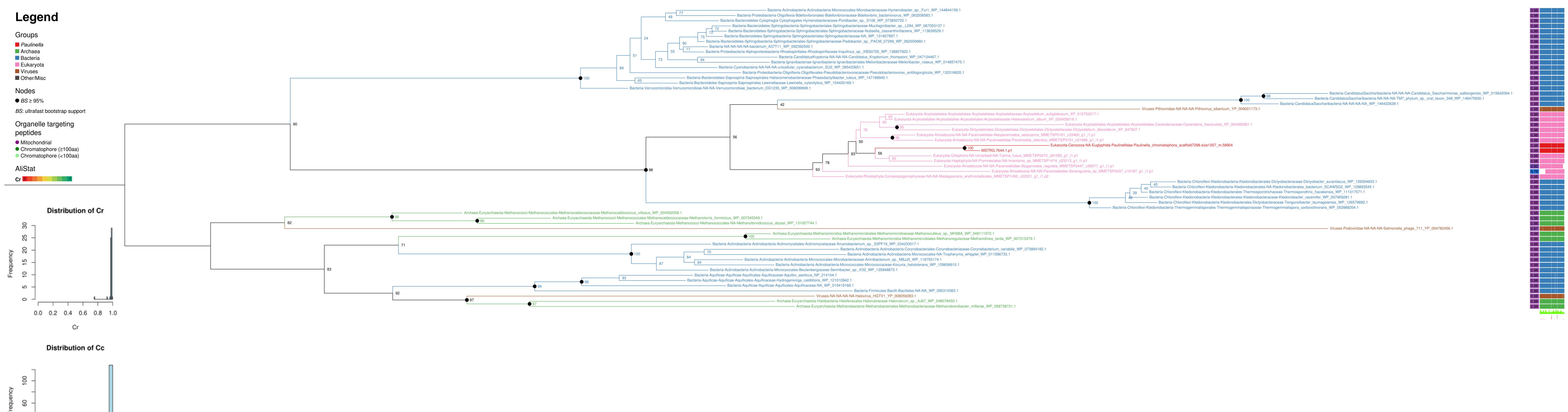
- Bacteria-Actinobacteria-Actinobacteria-Corynebacteriales-Nocardiaceae-Nocardia uniformis WP 067517266.1 Bacteria-Actinobacteria-Actinobacteria-Micrococcales-Intrasporangiaceae-Knoellia_flava_WP_084100086.1 — Bacteria-Actinobacteria-Actinobacteria-NA-NA-Actinobacteria_bacterium_OV450_WP_054223448.1 — Bacteria-Actinobacteria-Actinobacteria-Pseudonocardiales-Pseudonocardiaceae-Sciscionella_sp._SE31_WP_031468571.1 Bacteria-DeinococcusThermus-Deinococci-Deinococcales-Deinococcaceae-Deinococcus_marmoris_WP_081845919.1 —— Bacteria-Actinobacteria-Actinobacteria-Streptomycetales-Streptomycetaceae-Streptomyces_sp._BoleA5_WP_018556775.1 — Bacteria-Planctomycetes-NA-NA-NA-Planctomycetes_bacterium_KS4_WP_145077491.1 — Bacteria-Firmicutes-Negativicutes-Selenomonadales-Sporomusaceae-Pelosinus_propionicus_WP_139214788.1 —— Bacteria-Firmicutes-Negativicutes-Veillonellales-Veillonellaceae-Lucifera butyrica WP 122630553.1 — Bacteria-Firmicutes-Negativicutes-Selenomonadales-Sporomusaceae-Propionispora_sp._2_237_WP_054261390.1 Bacteria-NA-NA-NA-NA-Natronospirillum_operossus_WP_135484594.1 Eukaryota-Acytosteliales-Acytosteliales-Acytosteliales-Acytosteliaceae-Acytostelium subglobosum XP 012750219.1 Eukaryota-Amoebozoa-NA-NA-Paramoebidae-Stygamoeba_regulata_MMETSP0447_c16129_g1_i1.p1 karyota-Kinetoplastida-Kinetoplastida-Kinetoplastida-Trypanosomatidae-Trypanosoma_cruzi_XP_810653.1 - Eukaryota-Amoebozoa-NA-NA-Paramoebidae-Pessonella_sp_MMETSP0420_c6110_g1_i1.p2 Eukaryota-Apicomplexa-Conoidasida-Eugregarinorida-Gregarinidae-Gregarina_niphandrodes_XP_011134576.1 Eukaryota-Ascomycota-Dothideomycetes-Capnodiales-Mycosphaerellaceae-Zymoseptoria tritici XP 003847887.1 Eukaryota-Basidiomycota-Ustilaginomycetes-Ustilaginales-Ustilaginaceae-Anthracocystis_flocculosa_XP_007876107.1 aryota-Apicomplexa-NA-Unranked-NA-Alveolata_sp_MMETSP0288_c14184_g1_i1.p1 ta-Chromeraceae-NA-NA-NA-Vitrella_brassicaformis_MMETSP1451_c37559_g1_i1.p1 Eukaryota-Retaria-NA-NA-Ammonia_sp_MMETSP1384_c27382_g1_i1.p1 —— Eukaryota-Retaria-NA-NA-NA-Elphidium_margaritaceum_MMETSP1385_c25243_g1_i1.p1 — Eukaryota-Cercozoa-Chlorarachniophyceae-NA-NA-Bigelowiella_natans_MMETSP1054_c24727_g1_i1.p1 Eukaryota-Cercozoa-Chlorarachniophyceae-NA-NA-Chlorarachnion_reptans_MMETSP0109_c4043_g1_i1.p1 100 Eukaryota-Cercozoa-Chlorarachniophyceae-NA-NA-Lotharella_amoebiformis_MMETSP0042_c9192_g1_i1.p1 Eukaryota-Cercozoa-Chlorarachniophyceae-NA-NA-Gymnochlora_sp_MMETSP0110_c15206_g1_i1.p1 —— Eukaryota-Cercozoa-NA-Euglyphida-Paulinellidae-Paulinella_chromatophora_scaffold7963-size1483_m.62412 — Eukaryota-Ciliophora-Oligohymenophorea-Hymenostomatida-Tetrahymenidae-Tetrahymena_thermophila_XP_001008010.1 Chlorophyceae-Chlamydomonadales-Chlamydomonadaceae-Chlamydomonas_leiostraca_MMETSP1391_c13900_g1_i1.p1 Eukaryota-Chlorophyta-NA-NA-NA-Tetraselmis_striata_MMETSP0817_c8499_g1_i1.p1 ——— Eukaryota-Rhodophyta-Bangiophyceae-NA-NA-Rhodosorus marinus MMETSP0315 c5765 g1 i1.p1 Eukaryota-Rhodophyta-Porphyridiophyceae-NA-NA-Timspurckia_oligopyrenoides_MMETSP1172_c2851_g1_i1.p1 - Bacteria-Proteobacteria-Gammaproteobacteria-Alteromonadales-Psychromonadaceae-Psychromonas_ingrahamii_WP_011771065.1 — Bacteria-Proteobacteria-Gammaproteobacteria-Oceanospirillales-Oceanospirillaceae-Motiliproteus_sp._MSK221_WP_076718274.1 — Bacteria-Spirochaetes-Spirochaetia-Spirochaetales-Spirochaetaceae-Alkalispirochaeta_odontotermitis_WP_037562239.1 ——— Eukaryota-Stramenopiles-Chrysophyceae-Chromulinales-Chromulinaceae-Ochromonas_sp_MMETSP1105_TR22009-c0_g1_i1.p1 Eukaryota-Stramenopiles-NA-NA-NA-Chromulina nebulosa MMETSP1095 TR11820-c0 g1 i1.p1 karvota-Alveolata-Dinophyceae-NA-Unranked-Ceratium fusus MMETSP1074 c96633 q1 i1.p1 ıkaryota-Haptophyta-NA-Isochrysidales-Noelaerhabdaceae-Emiliania huxleyi MMETSP0997 c22611 g1 i1.p1 aryota-Cryptophyta-NA-Cryptomonadales-Cryptomonadaceae-Cryptomonas_paramecium_MMETSP0038_c46974_g1_i1.p1 - Eukaryota-Cryptophyta-NA-Cryptomonadales-Hemiselmidaceae-Hemiselmis virescens MMETSP1356 c31725 g1 i1.p1 — Eukaryota-Cryptophyta-NA-Pyrenomonadales-Chroomonadaceae-Chroomonas_mesostigmaticacf_MMETSP0047_c44778_g1_i1.p1 Eukaryota-Cryptophyta-NA-Pyrenomonadales-Geminigeraceae-Guillardia_theta_CCMP2712_jgi139875 Eukaryota-Cryptophyta-NA-Pyrenomonadales-NA-Geminigera_cryophila_MMETSP0799_c2705_g1_i1.p1 Eukaryota-Haptophyta-NA-Pavlovales-Pavlovaceae-Pavlova lutheri MMETSP1463 c16053 g1 i1.p1 Eukaryota-Haptophyta-NA-Phaeocystales-Phaeocystaceae-Phaeocystis_cordata_MMETSP1465_c10271_g1_i1.p1 - Bacteria-Proteobacteria-Betaproteobacteria-Burkholderiales-Comamonadaceae-Rhodoferax_koreense_WP_076200559.1 ——— Bacteria-Proteobacteria-Gammaproteobacteria-Oceanospirillales-Saccharospirillaceae-Gynuella_sunshinyii_WP_044619048.1 — Bacteria-Proteobacteria-Gammaproteobacteria-Thiotrichales-Thiotrichaceae-Thiothrix_eikelboomii_WP_078921448.1 Eukaryota-Chlorophyta-NA-NA-NA-Picocystis_salinarum_MMETSP0807_c1002_g1_i1.p1 — Bacteria-Planctomycetes-Planctomycetia-Planctomycetales-Isosphaeraceae-Aquisphaera_giovannonii_WP_148594720.1 Eukaryota-Alveolata-Dinophyceae-NA-Unranked-Alexandrium_tamarense_MMETSP0382_c3075_g1_i1.p1 Eukaryota-Alveolata-Dinophyceae-NA-Unranked-Azadinium_spinosum_MMETSP1038_c24826_g1_i1.p1 ukaryota-Alveolata-Dinophyceae-NA-Unranked-Pyrodinium_bahamense_MMETSP0796_c118769_g1_i1.p1 Eukaryota-Alveolata-Dinophyceae-NA-Unranked-Lingulodinium_polyedra_MMETSP1032_c29049_g1_i1.p1 — Eukaryota-Ciliophora-NA-Unranked-NA-Tiarina_fusus_MMETSP0472_c11618_g1_i1.p1 Eukaryota-Ciliophora-NA-Unranked-NA-Blepharisma_japonicum_MMETSP1395_c17724_g1_i1.p1 Eukaryota-Perkinsozoa-NA-Perkinsida-Perkinsidae-Perkinsus marinus XP 002788413.1 asida-Eucoccidiorida-Sarcocystidae-Besnoitia besnoiti XP 029217601.1 Eukaryota-Euglenida-NA-NA-Unranked-Neobodo_designis_MMETSP1114_c29114_g1_i1.p1 · Viruses-Coronaviridae-NA-NA-NA-Beluga_whale_coronavirus_SW1_YP_001876447.1 Eukaryota-Palpitomonas-NA-NA-NA-Palpitomonas_bilix_MMETSP0780_c14528_g1_i3.p1 — Bacteria-Verrucomicrobia-Opitutae-Opitutales-Opitutaceae-Opitutus_sp._GAS368_WP_091059041.1 ----- MSTRG.25663.1.p1 Bacteria-Proteobacteria-Oligoflexia-Bdellovibrionales-Bdellovibrionaceae-Bdellovibrio bacteriovorus WP 038449871.1 Bacteria-Planctomycetes-Planctomycetia-Planctomycetales-Planctomycetaceae-Mariniblastus_fucicola_WP_084417283.1 —— Bacteria-Chlamydiae-Chlamydiia-Parachlamydiales-Simkaniaceae-Simkania_negevensis_WP_013943346.1 - Bacteria-Chlamydiae-Chlamydiia-Parachlamydiales-Waddliaceae-Waddlia_chondrophila_WP_013181736.1 Bacteria-Fusobacteria-Fusobacteriia-Fusobacteriales-Leptotrichiaceae-NA_WP_021743808.1 —— Bacteria-Fusobacteria-Fusobacteriia-Fusobacteriales-Leptotrichiaceae-Sebaldella_termitidis_WP_012862979.1 Bacteria-Bacteroidetes-Flavobacteriia-Flavobacteriales-Flavobacteriaceae-Chryseobacterium_koreense_WP_048498415.1 Bacteria-Bacteroidetes-Flavobacteriia-Flavobacteriales-Flavobacteriaceae-Elizabethkingia_sp._JS20170427COW_WP_138981240.1 Bacteria-Cyanobacteria-NA-Nostocales-Nostocaceae-Nostoc linckia WP 099077606.1 Viruses-Mimiviridae-NA-NA-NA-Megavirus_chiliensis_YP_004894468.1 - Bacteria-CandidatusCloacimonetes-NA-NA-NA-Candidatus_Syntrophosphaera_thermopropionivorans_WP_133201765.1 Bacteria-Planctomycetes-Phycisphaerae-Sedimentisphaerales-Sedimentisphaeraceae-Sedimentisphaera_salicampi_WP_0.98 Bacteria-Tenericutes-Mollicutes-Mycoplasmatales-Mycoplasmataceae-Mycoplasma_pirum_WP_036448637.1 — Eukarvota-Entamoebidae-NA-NA-NA-Entamoeba dispar XP 001741097.1 Eukaryota-Basidiomycota-Ustilaginomycetes-Ustilaginales-Ustilaginaceae-Anthracocystis_flocculosa_XP_007876109.1 Eukaryota-Basidiomycota-Ustilaginomycetes-Ustilaginales-Ustilaginaceae-Moesziomyces antarcticus XP 014658534.1 Eukaryota-Chromeraceae-NA-NA-NA-Chromera_velia_MMETSP0290_c7403_g1_i1.p1 —— Eukaryota-Porifera-Demospongiae-Haplosclerida-Niphatidae-Amphimedon_queenslandica_XP_011406314.1 Eukaryota-Alveolata-Dinophyceae-NA-Unranked-Glenodinium_foliaceum_MMETSP0118_c69961_g1_i1.p1 Eukaryota-Alveolata-Dinophyceae-NA-Unranked-Scrippsiella_hangoei_MMETSP0359_c96535_g1_i1.p1 Eukaryota-Euglenida-NA-Eutreptiales-NA-Eutreptiella_gymnastica-like_MMETSP0810_c36545_g1_i1.p1 Eukaryota-Chlorophyta-NA-NA-Dolichomastix tenuilepis MMETSP0033 c28131 g1 i1.p1 Eukaryota-Chlorophyta-Palmophyllophyceae-Prasinococcales-Prasinococcaceae-Prasinoderma_singularis_MMETSP1315_c5037_g1_i1.p1 Eukaryota-Streptophyta-NA-Fabales-Fabaceae-Vigna_angularis_XP_017423107.1 Eukaryota-Streptophyta-NA-Myrtales-Myrtaceae-Eucalyptus_grandis_XP_010033400.1 Eukaryota-Amoebozoa-NA-NA-Paramoebidae-Sexangularia_sp_MMETSP0437_c3891_g1_i1.p1 Eukaryota-Retaria-NA-NA-NA-Elphidium_margaritaceum_MMETSP1385_c18117_g1_i1.p1 - Eukaryota-Retaria-NA-NA-NA-Rosalina_sp_MMETSP0190_c29786_g1_i1.p1 moebia-Longamoebia-Longamoebia-Acanthamoebidae-Acanthamoeba_castellanii_XP_004336586.1 Eukaryota-Platyhelminthes-Trematoda-Opisthorchiida-Opisthorchiidae-Opisthorchis viverrini XP 009167853.1 Eukaryota-Platyhelminthes-Trematoda-Strigeidida-Schistosomatidae-Schistosoma mansoni XP 018653103.1 ———— Eukaryota-Brachiopoda-Lingulata-Lingulida-Lingulidae-Lingula anatina XP 013404707.1 — Eukaryota-Mollusca-Gastropoda-Aplysiida-Aplysiidae-Aplysia_californica_XP_005090134.1 Eukaryota-Placozoa-NA-NA-Trichoplacidae-Trichoplax adhaerens XP 002113982.1 Eukaryota-Nematoda-Chromadorea-Rhabditida-Rhabditidae-Caenorhabditis_elegans_NP_001255640.1 Eukaryota-Ascomycota-Saccharomycetes-Saccharomycetales-NA-Kuraishia_capsulata_XP_022458648.1 Eukaryota-Choanoflagellata-Choanoflagellata-Choanoflagellata-NA-Acanthoeca sp MMETSP0106 c24435 g1 i1.p1 tridiomycetes-Spizellomycetales-Spizellomycetaceae-Spizellomyces_punctatus_XP_016610196.1 ——— Eukaryota-Ciliophora-NA-Unranked-NA-Litonotus pictus MMETSP0209 c7224 g1 i1.p1 ——— Eukaryota-Amoebozoa-NA-NA-Paramoebidae-Vexillifera_sp_MMETSP0173_c9870_g1_i1.p1 Eukaryota-Cercozoa-Chlorarachniophyceae-NA-NA-Bigelowiella_natans_MMETSP1052_c18901_g1_i1.p1 arachniophyceae-NA-NA-Chlorarachnion_reptans_MMETSP0109_c6387_g1_i1.p1 Eukaryota-Rhodophyta-Bangiophyceae-Cyanidiales-Cyanidiaceae-Galdieria_sulphuraria_GsulpMS1_G4754.1 — Bacteria-Acidobacteria-Acidobacteriia-Acidobacteriales-Acidobacteriaceae-Granulicella_tundricola_WP_013579445.1 — Bacteria-Acidobacteria-Acidobacteriia-Acidobacteriales-Acidobacteriaceae-Terriglobus_roseus_WP_083345595.1 Eukaryota-Kinetoplastida-Kinetoplastida-Kinetoplastida-Trypanosomatidae-Leptomonas_pyrrhocoris_XP_015652889.1 Eukaryota-Stramenopiles-Bacillariophyceae-Bacillariales-Bacillariaceae-Nitzschia_sp_MMETSP0014_c10221_g1_i1.p1 Eukaryota-Stramenopiles-NA-NA-NA-Pseudo pungens MMETSP1061 c2904 g1 i1.p1 — Bacteria-Balneolaeota-Balneolia-Balneolales-Balneolaceae-Gracilimonas_amylolytica_WP_103665497.1 Eukaryota-Cryptophyta-NA-Cryptomonadales-Hemiselmidaceae-Hemiselmis_tepida_MMETSP1355_c14983_g1_i1.p1 Eukaryota-Cryptophyta-NA-Pyrenomonadales-NA-Geminigera sp MMETSP1102 c69447 g1 i1.p1 - Bacteria-Chloroflexi-Anaerolineae-Anaerolineales-Anaerolineaceae-Bellilinea_caldifistulae_WP_114676094.1 Eukaryota-Haptophyta-NA-Prymnesiales-NA-Chrysochromulina_rotalis_MMETSP0287_c538_g1_i1.p1 — Bacteria-CandidatusKryptonia-NA-NA-NA-Candidatus_Thermokryptus_mobilis_WP_140945705.1 Bacteria-Actinobacteria-Actinobacteria-Micrococcales-Brevibacteriaceae-Brevibacterium_senegalense_WP_019159483.1 — Bacteria-Caldiserica-Caldisericia-Caldisericales-Caldisericaceae-Caldisericum_exile_WP_083836383.1 — Bacteria-Coprothermobacterota-Coprothermobacteria-Coprothermobacterales-Coprothermobacteraceae-Coprothermobacter_proteolyticus_WP_107689853.1 — Bacteria-Firmicutes-Bacilli-Bacillales-Paenibacillaceae-Paenibacillus campinasensis WP 095264336.1 —— Bacteria-Chloroflexi-Thermoflexia-Thermoflexales-Thermoflexaceae-Thermoflexus_hugenholtzii_WP_088572299.1 —— Bacteria-CandidatusAtribacteria-NA-NA-NA-Atribacteria bacterium JGI 0000014F07 WP 090599013.1 Bacteria-Firmicutes-Bacilli-Bacillales-Bacillaceae-Halalkalibacillus halophilus WP 027963514.1 — Bacteria-CandidatusCryosericota-CandidatusCryosericia-CandidatusCryosericales-CandidatusCryosericaceae-Candidatus_Cryosericum_hinesii_WP_119087379.1 — Bacteria-NA-NA-Haloplasmatales-Haloplasmataceae-Haloplasma_contractile_WP_008826175.1 ——— Bacteria-Tenericutes-Mollicutes-Anaeroplasmatales-Anaeroplasmataceae-Anaeroplasma_bactoclasticum_WP_119015812.1 —— Bacteria-Spirochaetes-Spirochaetia-Spirochaetales-Spirochaetaceae-Spirochaeta_cellobiosiphila_WP_028973622.1 Bacteria-Thermotogae-Thermotogae-Petrotogales-Petrotogaceae-Marinitoga_lauensis_WP_129409226.1 Bacteria-Thermotogae-Thermotogae-Petrotogales-Petrotogaceae-NA_WP_014296915.1 Bacteria-DeinococcusThermus-Deinococci-Deinococcales-Deinococcaceae-Deinococcus_koreensis_WP_103312182.1 Bacteria-DeinococcusThermus-Deinococci-Deinococcales-Deinococcaceae-NA_WP_039685329.1 Bacteria-NA-NA-NA-NA WP 112938582.1 —— Bacteria-Proteobacteria-Betaproteobacteria-Burkholderiales-Comamonadaceae-Rhodoferax_fermentans_WP_078366011.1 Archaea-Euryarchaeota-Halobacteria-Haloferacales-Halorubraceae-Halolamina_rubra_WP_049980764.1 Archaea-Euryarchaeota-Halobacteria-Halobacteriales-NA-halophilic archaeon LT46 WP 137287285.1 Archaea-NA-NA-NA-archaeon_AArcSI_WP_119813953.1





Distribution of Cc





0.0 0.2 0.4 0.6 0.8 1.0

Co

