Genus *Calypsonella*

Etymology

[Ca.lyp.so.nel'la] **N.L. dim. fem. n.** *Calypsonella*, little Calypso, referring to a Nereid water spirit in Greek mythology

Nomenclatural type

Species *Calypsonella navitae*[Ts]

Description

Members of this taxon were identified at Mariner on the Valu Fa Ridge in the Lau Basin and Lucky Strike, Mid-Atlantic Ridge. A phylogenomic reconstruction using 53 archaeal marker genes places MAGs of this genus in a well-supported monophyletic clade. Using AAI, MAGs are approximately 56% similar to *Aeropyrum pernix*, and they could not be related to any previously described genus using GTDB-Tk taxonomic analysis. The 16S rRNA gene recovered from the type genome is approximately 96 to 97% similar to the 16S rRNA genes of *Aeropyrum pernix, Aeropyrum camini, Thermodiscus maritimus* and *Stetteria hydrogenophila,* consistent with the level of 16S rRNA gene sequence divergence seen between the genera *Aeropyrum, Stetteria* and *Thermodiscus* (~96–97%). Based on ANI analysis, each of the three MAGs in this genus represents a distinct species (~73–75% similarity). Functional gene analysis suggests that members of this genus are likely non-motile anaerobes, and they may utilize protein-rich carbon sources and at least one member may reduce sulfur, thiosulfate, polysulfides or selenite.

Classification

Archaea » *Thermoproteota* » *Thermoprotei* » *Acidilobales* » *Acidilobaceae* » *Calypsonella*

References

Effective publication: St. John, Reysenbach, 2024 [1]

Registry URL

https://seqco.de/i:33278

References

1. St. John, Reysenbach (2024). Genomic comparison of deep-sea hydrothermal genera related to Aeropyrum, Thermodiscus and Caldisphaera, and proposed emended description of the family Acidilobaceae. *Systematic and Applied Microbiology*. DOI:10.1016/j.syapm.2024.126507