Species *Terraquivivens yellowstonensis*

Etymology

[yel.low.ston.en'sis] **N.L. fem. adj.** *yellowstonensis*, of Yellowstone, referring to Yellowstone National Park, USA, where this organism was identified from

Nomenclatural type

NCBI Assembly: GCA_023539445.1 [Ts]

Description

Seven MAGs for this species were identified from four different springs in Yellowstone National Park, USA. The genomes are between 1,073,374 bp and 1,275,530 bp, in 19 to 35 contigs, and have a G+C content between 45.9 and 46.1 %. Completeness and contamination estimates based on CheckM are between 94.17 and 97.08 %, and 0 to 1.94 %, respectively. Phylogenomics with the ar122 markers robustly place this species in the genus *Terraquivivens*, in the family *Wolframiiraptoraceae*. ANI values among genomes for this species are 98-100 %, with all other pairwise values compared to members of the genus below 85 %. The gene encoding Sqr (sulfide:quinone oxidoreductase) is present in some members of the species, however, most of the genomes lack this gene. All genomes belonging to the species lack an AOR-like encoding gene that is conserved within the rest of the family, and possess an unknown oxidoreductase that is shared with *Terraquivivens tengchongensis*, however, the substrates for these enzymes are still unclear.

Classification

Incertae sedis (Archaea) » “Caldarchaeales” » *Wolframiiraptoraceae* » *Terraquivivens* » *Terraquivivens yellowstonensis*

References

Proposed: Buessecker et al., 2022

Registry URL

https://seqco.de/i:22830

References

1. Buessecker et al. (2022). An essential role for tungsten in the ecology and evolution of a previously uncultivated lineage of anaerobic, thermophilic Archaea. *Nature Communications*. DOI:10.1038/s41467-022-31452-8