Species *Zapsychrus unditaenarius*

Etymology
[un.di.tae.na.ri'us] **L. fem. n.** *unda*, water; **L. masc. adj.** *taenarius*, below ground; **N.L. masc. adj.** *unditaenarius*, water from below ground

Nomenclatural type
NCBI Assembly: GCA_001805965.1 [Ts]

Description
This species conservatively belongs to the genus *Zapsychrus*. Low AAI values, typically associated with family-level relationships are observed between this taxon and the nomenclatural type for the genus, however, relative evolutionary divergence based on a phylogenomic tree inferred from the condensed Bac120 marker set indicate likely genus-level relationships. In addition to characteristics provided for the genus, predicted genome sizes range between 2.2-2.7 Mb with %GC between 37.12 and 37.60%. Some genes associated with acetogenesis and an Rnf complex are encoded by the genome. A reversible acetyl-CoA synthetase coupled with a cytoplasmic Group A3 [FeFe] hydrogenase encoded by this species may facilitate acetogenesis. A respiratory F-type ATPase, and a conductive pilin are encoded by genomes of this species. All genes associated with the tight-adherence complex formation and Type-4a pilus production are present in the genomes. Additionally, a "symbiotic" F-type ATPase and very large ORF are present in the genomes. Assemblies for this species originated from soil and groundwater samples from Rifle, Colorado, USA, where a pH of 7.67 was reported for some samples. The nomenclatural type for the species is the genome GCA_001805965.1.

Classification
Bacteria » *Omnitrophota* » *Velaminicoccia* » *Zapsychrales* » *Zapsychraceae* » *Zapsychrus* » *Zapsychrus unditaenarius*

References
Effective publication: Seymour et al., 2023 [1]

Registry URL
https://seqco.de/i:23775

References

1. Seymour et al. (2023). Hyperactive nanobacteria with host-dependent traits pervade Omnitrophota. *Nature Microbiology*. DOI:10.1038/s41564-022-01319-1