

Register list for 3 new names including Magnetaquicoccaceae fam. nov.

Submitted by Grouzdev, Denis

Family *Magnetaquicoccaceae*

Etymology

[Mag.ne.ta.qui.coc.ca'ce.ae] N.L. masc. n. *Magnetaquicoccus*, referring to the type genus *Magnetaquicoccus*; -*aceae*, ending to denote a family; N.L. fem. pl. n. *Magnetaquicoccaceae*, the *Magnetaquicoccus* family

Nomenclatural type

Genus *Magnetaquicoccus*

Description

Potential ability for chemolithoautotrophic growth with the oxidation of reduced sulfur compounds through a reverse Dsr pathway (most enzymes from the Sox system are absent) and carbon assimilation by rTCA with the type II ATP:citrate lyase. The genes for dissimilatory nitrate/nitrite/nitric and nitrous oxide reduction enzymes were found, but not for the entire pathway, indicating that the pathway might be truncated at different steps, depending on the species. The potential ability for assimilation of nitrate by NasA, which is, in general, absent from other *Magnetococcales*, was predicted for two members of the family: *Ca. Magnetaquicoccus inordinatus* and WMHbinv6.

Classification

Bacteria » *Pseudomonadota* » *Alphaproteobacteria* » *Magnetococcales* » *Magnetaquicoccaceae*

References

Effective publication: Koziyeva et al., 2019 [1]

Registry URL

<https://seqco.de/i:42432>

Genus *Magnetaquicoccus*

Etymology

[Mag.ne.ta.qui.coc'cus] Gr. masc. n. *Magnés*, *etos*, pertaining to a magnet; L. fem. n. *aqua*, water; N.L. masc. n. *coccus*, *coccus*; N.L. masc. n. *Magnetaquicoccus*, magnetic coccus from water

Nomenclatural type

Species *Magnetaquicoccus inordinatus*^{Ts}

Description

magnetic coccus from water

Classification

Bacteria » *Pseudomonadota* » *Alphaproteobacteria* » *Magnetococcales* » *Magnetaquicoccaceae* » *Magnetaquicoccus*

References

Effective publication: Koziyeva et al., 2019 [1]

Registry URL

<https://seqco.de/i:39471>

Species *Magnetaquicoccus inordinatus*^{Ts}

Etymology

[i.nor.di.na'tus] L. masc. adj. *inordinatus*, not arranged

Nomenclatural type

[NCBI Assembly: GCF_004217665.1](#)^{Ts}

Reference Strain

[Strain scl0039539](#): UR-1

Description

Coccoid morphology and represents magnetite magnetosomes not organized in chains and clustered in one side of the cell.

Classification

Bacteria » *Pseudomonadota* » *Alphaproteobacteria* » *Magnetococcales* » *Magnetaquicoccaceae* » *Magnetaquicoccus* » *Magnetaquicoccus inordinatus*^{Ts}

References

Effective publication: Koziaeva et al., 2019 [1]
Assigned taxonomically: Koziaeva et al., 2019 [1]

Registry URL

<https://seqco.de/i:43286>

References

1. Koziaeva et al. (2019). Genome-Based Metabolic Reconstruction of a Novel Uncultivated Freshwater Magnetotactic coccus “Ca. *Magnetaquicoccus inordinatus*” UR-1, and Proposal of a Candidate Family “Ca. *Magnetaquicoccaceae*”. *Frontiers in Microbiology*. [DOI:10.3389/fmicb.2019.02290](https://doi.org/10.3389/fmicb.2019.02290)

Register List Certificate of Validation

On behalf of the *Committee on the Systematics of Prokaryotes Described from Sequence Data* (SeqCode Committee), we hereby certify that the Register List [seqco.de/r:cxvs_ca1](#) submitted by Grouzdev, Denis and including 3 new names has been successfully validated.

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