

Anoxypelagibacter denitrificans gen. nov. sp. nov.

Submitted by Tsementzi, Despina

Genus *Anoxypelagibacter*

Etymology

[An.o.xy.pe.la.gi.bac'ter] **Gr. pref.** *an-*, without; **Gr. masc. adj.** *oxys*, acid or sour and in combined words indicating oxygen; **L. neut. n.** *pelagus*, the open sea; **N.L. masc. n.** *bacter*, a rod; **N.L. masc. n.** *Anoxypelagibacter*, a rod from oxygen-depleted areas in the ocean

Nomenclatural type

Species *Anoxypelagibacter denitrificans*^{Ts}

Description

We propose to name SAR11 subclade IIa.A members as *Anoxypelagibacter*, due to their abundance in ocean oxygen minimum zones where oxygen is below detection levels. The type species is *Anoxypelagibacter denitrificans*.

Classification

Bacteria » *Pseudomonadota* » *Alphaproteobacteria* » *Pelagibacterales* » *Pelagibacteraceae* » *Anoxypelagibacter*

References

Effective publication: Ruiz-Perez et al., 2021 [1]
Corrigendum: Oren, 2022 [2] (from “Anoxipelagibacter”)

Registry URL

<https://seqco.de/i:51492>

Species *Anoxypelagibacter denitrificans*^{Ts}

Etymology

[de.ni.tri.fi'cans] **N.L. masc. part. adj.** *denitrificans*, denitrifying

Nomenclatural type

[NCBI Assembly: GCA_017640265.1](#)^{Ts}

Description

Anoxypelagibacter denitrificans, named because of its capacity to use nitrate as an electron acceptor, which is a trait not present in its closest named surface relative *Pelagibacter ubiqueversans*. In general, *A. denitrificans* exhibits small rod-shaped cells of approximately 1 × 0.2 μm. The genome size is predicted to be approximately 1.2 Mbp with a G + C% content of approximately 30%. The designated type material is MAG_ENTP2013_S02_SV82_300m_MAG_01 and its genome sequence can be found under NCBI BioSample accession number SAMN15305928.

Classification

Bacteria » *Pseudomonadota* » *Alphaproteobacteria* » *Pelagibacterales* » *Pelagibacteraceae* » *Anoxypelagibacter* » *Anoxypelagibacter denitrificans*^{Ts}

References

Effective publication: Ruiz-Perez et al., 2021 [1]
Corrigendum: Oren, 2022 [2] (from “Anoxipelagibacter denitrificans”)

Registry URL

<https://seqco.de/i:592>

References

1. Ruiz-Perez et al. (2021). Description of *Candidatus Mesopelagibacter carboxydoxydans* and *Candidatus Anoxipelagibacter denitrificans*: Nitrate-reducing SAR11 genera that dominate mesopelagic and anoxic marine zones. *Systematic and Applied Microbiology*. DOI:[10.1016/j.syapm.2021.126185](https://doi.org/10.1016/j.syapm.2021.126185)
2. Oren (2022). Candidatus List No. 4: Lists of names of prokaryotic Candidatus taxa. *International Journal of Systematic and Evolutionary Microbiology*. DOI:[10.1099/ijsem.0.005545](https://doi.org/10.1099/ijsem.0.005545)

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:jh3r30a6** submitted by **Tsementzi, Despina** and including 2 new names has been successfully validated.

Date of Priority: 2025-09-03 09:24 UTC

DOI: 10.57973/seqcode.r:jh3r30a6

