Register list for 7 new names including Azoamicales ord. nov.

Submitted by Speth, Daan

Order *Azoamicales*

Etymology

[A.zo.a.mi.ca'les] **N.L. masc. n.** *Azoamicus*, referring to the type genus Azoamicus; *-ales*, ending to denote an order; **N.L. fem. pl. n.** *Azoamicales*, the Azoamicus order

Nomenclatural type

Genus *Azoamicus*

Description

'*Candidatus* Azoamicales' (A.zo.a.mi.ca.les. N.L. masc. n. Azoamicus. type genus of the order; N.L. suff. –ales to denote an order; N.L. masc. pl. n. Azoamicales, the order of the genus Azoamicus). A bacterial order identified by metagenomic analyses and delineated according to Relative Evolutionary Distance by the Genome Taxonomy Database (GTDB). Phylogenetic analyses in this work have shown that the previously published '*Candidatus* Azoamicus ciliaticola' is assigned to an uncharacterized order with provisional designation UBA6186. Consequently, we propose to rename the UBA6186 order to '*Candidatus* Azoamicales'. the type genus of the order is '*Candidatus* Azoamicus'. The order is assigned to the class Gammaproteobacteria.

Classification

Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Azoamicales*

References

Effective publication: Speth et al., 2024 [1]

Registry URL

https://seqco.de/i:49082

Family *Azoamicaceae*

Etymology

[A.zo.a.mi.ca'ce.ae] **N.L. masc. n.** *Azoamicus*, referring to the type genus Azoamicus; *-aceae*, ending to denote a family; **N.L. fem. pl. n.** *Azoamicaceae*, the Azoamicus family

Nomenclatural type

Genus *Azoamicus*

Description

The description of the family '*Candidatus* Azoamicaceae' is the same as that of the genus '*Candidatus* Azoamicus'. The type genus is '*Candidatus* Azoamicus'.

Classification

Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Azoamicales* » *Azoamicaceae*

References

Effective publication: Speth et al., 2024 [1]

Registry URL

https://seqco.de/i:49081

Genus *Azosocius*

Etymology

[A.zo.so.ci'us] **N.L. pref.** *azo-*, pertaining to nitrogen; **L. masc. n.** *socius*, associate; **N.L. masc. n.** *Azosocius*, associate that pertains to nitrogen

Nomenclatural type

Species *Azosocius agrarius*[Ts]

Description

A bacterial genus identified by metagenomic analyses and delineated according to Relative Evolutionary Distance by the Genome Taxonomy Database (GTDB). The type species of the genus is '*Candidatus* Azosocius agrarius'.

Classification

Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Azoamicales* » *Azoamicaceae* » *Azosocius*

References

Effective publication: Speth et al., 2024 [1]

Registry URL

https://seqco.de/i:49077

Species *Azosocius agrarius*[Ts]

Etymology

[a.gra.ri'us] **L. masc. adj.** *agrarius*, of the land or field

Nomenclatural type

NCBI Assembly: GCA_016432505.1 [Ts]

Description

'Azosocius agrarius' (L. masc. adj. agrarius, of the soil). A bacterial species identified by metagenomic analyses. This species includes all bacteria with genomes that show ≥95% average nucleotide identity to the type genome for the species to which is available via NCBI BioSample SAMN15435421 and NCBI GenBank accession GCA_016432505.1.

Classification

Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Azoamicales* » *Azoamicaceae* » *Azosocius* » *Azosocius agrarius*[Ts]

References

Effective publication: Speth et al., 2024 [1]
Original (not valid) publication: He et al., 2021 [2]

Registry URL

https://seqco.de/i:49078

Species *Azoamicus soli*

Etymology

[so'li] **L. gen. n.** *soli*, of soil

Nomenclatural type

NCBI Assembly: GCA_043390205.1 [Ts]

Description

Azoamicus soli (L. masc. n. soli, of the earth). A bacterial species identified by metagenomic analyses. This species includes all bacteria with genomes that show ≥95% average nucleotide identity to the type genome for the species to which is available via NCBI BioSample SAMN39831885 and NCBI GenBank accession GCA_043390205.1

Classification
Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Azoamicales* » *Azoamicaceae* » *Azoamicus* » *Azoamicus soli*

References
Effective publication: Speth et al., 2024 [1]

Registry URL
https://seqco.de/i:49079

Species *Azoamicus viridis*

Etymology
[vi.ri'dis] **L. gen. n.** *viridis*, pertaining to green, in reference to Greene county, where the sample containing the species was taken

Nomenclatural type
NCBI Assembly: GCA_043390165.1 [Ts]

Description
'*Candidatus* Azoamicus soli' (L. masc. n. soli, of the earth). A bacterial species identified by metagenomic analyses. This species includes all bacteria with genomes that show ≥95% average nucleotide identity to the type genome for the species to which is available via NCBI BioSample SAMN39831885 and NCBI GenBank accession GCA_043390165.1

Classification
Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Azoamicales* » *Azoamicaceae* » *Azoamicus* » *Azoamicus viridis*

References
Effective publication: Speth et al., 2024 [1]
Assigned taxonomically: Speth et al., 2024 [1]

Registry URL
https://seqco.de/i:49076

Species *Azosocius aquiferis*

Etymology
[a.qui.fe'ris] **N.L. gen. n.** *aquiferis*, of an aquifer

Nomenclatural type
NCBI Assembly: GCA_043390185.1 [Ts]

Description
Azosocius aquiferis (N.L. gen. masc. n. aquiferis, of an aquifer). A bacterial species identified by metagenomic analyses. This species includes all bacteria with genomes that show ≥95% average nucleotide identity to the type genome for the species to which is available via NCBI BioSample SAMN39831648 and NCBI GenBank accession GCA_043390185.1 .

Classification
Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Azoamicales* » *Azoamicaceae* » *Azosocius* » *Azosocius aquiferis*

References
Effective publication: Speth et al., 2024 [1]

Registry URL
https://seqco.de/i:49080

References

1. Speth et al. (2024). Genetic potential for aerobic respiration and denitrification in globally distributed respiratory endosymbionts. *Nature Communications*. DOI:10.1038/s41467-024-54047-x
2. He et al. (2021). Genome-resolved metagenomics reveals site-specific diversity of episymbiotic CPR bacteria and DPANN archaea in groundwater ecosystems. *Nature Microbiology*. DOI:10.1038/s41564-020-00840-5

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:rlsqwca1** submitted by **Speth, Daan** and including 7 new names has been successfully validated.

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