

Register list for 12 new names including *Muellerivitota* phy. nov.

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Phylum *Muellerivitota*

Etymology

[Mu.e.lle.ri.vi.to'ta] **N.L. fem. n.** *Muellerivita*, the type genus of the phylum; **L. neut. pl. suff. -ota**, ending to denote a phylum; **N.L. neut. pl. n.** *Muellerivitota*, the *Muellerivita* phylum

Nomenclatural type

Genus *Muellerivita*

Description

Phylum formerly known as "FCPU426" in GTDB R226. The description of the phylum is the same as for its type genus *Muellerivita*.

Classification

Bacteria » *Muellerivitota*

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:51279>

Phylum *Oederibacteriota*

Etymology

[Oe.de.ri.bac.te.ri.o'ta] **N.L. neut. n.** *Oederibacterium*, the type genus of the phylum; **L. neut. pl. suff. -ota**, ending to denote a phylum; **N.L. neut. pl. n.** *Oederibacteriota*, the *Oederibacterium* phylum

Nomenclatural type

Genus *Oederibacterium*

Description

The phylum is represented by a single genome and forms a monophyletic lineage based on the phylogeny of 120 concatenated bacterial protein markers, using GTDB R226 as a reference. The description of the phylum is the same as for its type genus *Oederibacterium*.

Classification

Bacteria » *Oederibacteriota*

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:49856>

Class *Muellerivitia*

Etymology

[Mu.e.lle.ri.vi'ti.a] **N.L. fem. n.** *Muellerivita*, the type genus of the class; **L. neut. pl. suff. -ia**, ending to denote a class; **N.L. neut. pl. n.** *Muellerivitia*, the *Muellerivita* class

Nomenclatural type

Genus *Muellerivita*

Description

Class formerly known as "Palsa-1180" in GTDB R226. The description of the class is the same as for its type genus *Muellerivita*.

Classification

Bacteria » *Muellerivitota* » *Muellerivitia*

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:51278>

Class *Oederibacteriia*

Etymology

[Oe.de.ri.bac.te.ri'i.a] **N.L. neut. n.** *Oederibacterium*, the type genus of the order; **L. neut. pl. suff. -ia**, ending to denote a class; **N.L. neut. pl. n.** *Oederibacteriia*, the *Oederibacterium* class

Nomenclatural type

Genus *Oederibacterium*

Description

The class is represented by a single genome and forms a monophyletic lineage based on the phylogeny of 120 concatenated bacterial protein markers, using GTDB R226 as a reference. The description of the class is the same as for its type genus *Oederibacterium*.

Classification

Bacteria » *Oederibacteriota* » *Oederibacteriia*

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:49855>

Order *Muellerivitales*

Etymology

[Mu.e.lle.ri.vi.ta'les] **N.L. fem. n.** *Muellerivita*, the type genus of the order; **L. fem. pl. suff. -ales**, ending to denote an order; **N.L. fem. pl. n.** *Muellerivitales*, the *Muellerivita* order

Nomenclatural type

Genus *Muellerivita*

Description

Order formerly known as "Palsa-1180" in GTDB R226. The description of the order is the same as for its type genus *Muellerivita*.

Classification

Bacteria » *Muellerivitota* » *Muellerivitia* » *Muellerivitales*

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:51277>

Order *Oederibacteriales*

Etymology

[Oe.de.ri.bac.te.ri.a'les] **N.L. neut. n.** *Oederibacterium*, the type genus of the order; **L. fem. pl. suff.** *-ales*, ending to denote an order; **N.L. fem. pl. n.** *Oederibacteriales*, the *Oederibacterium* order

Nomenclatural type

Genus *Oederibacterium*

Description

The order is represented by a single genome and forms a monophyletic lineage based on the phylogeny of 120 concatenated bacterial protein markers, using GTDB R226 as a reference. The description of the order is the same as for its type genus *Oederibacterium*.

Classification

Bacteria » *Oederibacteriota* » *Oederibacteriia* » *Oederibacteriales*

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:49854>

Family *Muellerivitaceae*

Etymology

[Mu.e.lle.ri.vi.ta'ce.ae] **N.L. fem. n.** *Muellerivita*, the type genus of the family; **L. fem. pl. suff.** *-aceae*, ending to denote a family; **N.L. fem. pl. n.** *Muellerivitaceae*, the *Muellerivita* family

Nomenclatural type

Genus *Muellerivita*

Description

Family formerly known as "Palsa-1180" in GTDB R226. The description of the family is the same as for its type genus *Muellerivita*.

Classification

Bacteria » *Muellerivitota* » *Muellerivitia* » *Muellerivitales* » *Muellerivitaceae*

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:51276>

Family *Oederibacteriaceae*

Etymology

[Oe.de.ri.bac.te.ri.a'ce.ae] **N.L. neut. n.** *Oederibacterium*, the type genus of the family; **L. fem. pl. suff.** *-aceae*, ending to denote a family; **N.L. fem. pl. n.** *Oederibacteriaceae*, the *Oederibacterium* family

Nomenclatural type

Genus *Oederibacterium*

Description

The family is represented by a single genome and forms a monophyletic lineage based on the phylogeny of 120 concatenated bacterial protein markers, using GTDB R226 as a reference. The description of the family is the same as for its type genus *Oederibacterium*.

Classification

Bacteria » *Oederibacteriota* » *Oederibacteriia* » *Oederibacteriales* » *Oederibacteriaceae*

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:49853>

Genus *Muellerivita*

Etymology

[Mu.e.lle.ri.vi'ta] **L. fem. n.** *vita*, life; **N.L. fem. n.** *Muellerivita*, a bacterium named in honor of Otto Friedrich Mueller

Nomenclatural type

Species *Muellerivita nordica*^{Ts}

Description

Genus named after Otto Friedrich Mueller (1730–1784) – scientist who contributed significantly to the Flora Danica project (1753–1883). Based on the phylogeny of 120 concatenated bacterial protein markers and ANI-based classification to GTDB R226, the genus is formerly known as "DATKNU01". Based on metabolic reconstruction, *Muellerivita* is inferred to encode the TCA cycle, peptidoglycan biosynthesis genes, and the rod shape-determining protein MreB.

Classification

Bacteria » *Muellerivitota* » *Muellerivitia* » *Muellerivitales* » *Muellerivitaceae* » *Muellerivita*

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:51275>

Genus *Oederibacterium*

Etymology

[Oe.de.ri.bac.te'ri.um] **N.L. neut. n.** *bacterium*, rod; **N.L. neut. n.** *Oederibacterium*, a bacterium named in honor of Georg Christian Oeder

Nomenclatural type

Species *Oederibacterium danicum*^{Ts}

Description

Genus named after Georg Christian Oeder (1728-1791) – scientist who initiated the Flora Danica project (1753-1883). The genus is represented by a single genome and forms a monophyletic lineage based on the phylogeny of 120 concatenated bacterial protein markers and ANI-based classification to GTDB R226. Based on metabolic reconstruction, *Oederibacterium* is estimated to be motile, Gram-negative, and adapted to an anaerobic environment. *Oederibacterium danicum* genome encodes the potential to ferment glucose to acetate, use ethanolamine as a source of nitrogen and energy, and to fix or detoxify formaldehyde using the ribulose monophosphate pathway.

Classification

Bacteria » *Oederibacteriota* » *Oederibacteriia* » *Oederibacteriales* » *Oederibacteriaceae* » *Oederibacterium*

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:49757>

Species *Muellerivita nordica*^{Ts}

Etymology

[nor.di'ca] **L. fem. adj.** *nordica*, Nordic, a species from the Nordic region (Northern Europe).

Nomenclatural type

[NCBI Assembly: GCA_963719085.1](#)^{Ts}

Description

Species represented by a high-quality metagenome-assembled genome (MAG), recovered from Danish bog woodland soil, as part of the Microflora Danica project. The species lineage is based on the phylogeny of 120 concatenated bacterial protein markers and ANI-based classification to GTDB R226. The species is proposed to serve as the nomenclatural type for the *Muellerivita* genus, named after Otto Friedrich Mueller (1730-1784) – scientist who contributed significantly to the Flora Danica project (1753-1883).

Classification

Bacteria » *Muellerivitota* » *Muellerivitia* » *Muellerivitales* » *Muellerivitaceae* » *Muellerivita* » *Muellerivita nordica*^{Ts}

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:51274>

Species *Oederibacterium danicum*^{Ts}

Etymology

[da'ni.cum] **N.L. neut. adj.** *danicum*, Danish, named after Denmark, the country from which the type genome originates.

Nomenclatural type

[NCBI Assembly: GCA_965112635.1](#)^{Ts}

Description

Species represented by a single and circular metagenome-assembled genome (MAG), recovered from a Danish lake sediment, as part of the Microflora Danica project. The species lineage is based on the phylogeny of 120 concatenated bacterial protein markers and ANI-based classification to GTDB R226. The species is proposed to serve as the nomenclatural type for the *Oederibacterium* genus, named after Georg Christian Oeder (1728-1791) – scientist who initiated the Flora Danica project (1753-1883).

Classification

Bacteria » *Oederibacteriota* » *Oederibacteriia* » *Oederibacteriales* » *Oederibacteriaceae* » *Oederibacterium* » *Oederibacterium danicum*^{Ts}

References

Effective publication: Sereika et al., 2025 [1]

Registry URL

<https://seqco.de/i:49756>

References

1. Sereika et al. (2025). Genome-resolved long-read sequencing expands known microbial diversity across terrestrial habitats. *Nature Microbiology*. [DOI:10.1038/s41564-025-02062-z](https://doi.org/10.1038/s41564-025-02062-z)

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:vwa_l78e** submitted by **Sereika, Mantas** and including 12 new names has been successfully validated.

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