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

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Table 1: Complete list of names proposed in the current register list.

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
Phylum *Muellerivitota*	[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	Phylum formerly known as "FCPU426" in GTDB R226. The description of the phylum is the same as for its type genus Muellerivita.	*Bacteria*	*Muellerivita*	seqco.de/i:51279
Phylum *Oederibacteriota*	[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	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.	*Bacteria*	*Oederibacterium*	seqco.de/i:49856
Class *Muellerivitia*	[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	Class formerly known as "Palsa-1180" in GTDB R226. The description of the class is the same as for its type genus Muellerivita.	*Muellerivitota*	*Muellerivita*	seqco.de/i:51278
Class *Oederibacteriia*	[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	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.	*Oederibacteriota*	*Oederibacterium*	seqco.de/i:49855
	[Mu.e.lle.ri.vi.ta'les] **N.L.**				

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Order *Muellerivitales*	**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	Order formerly known as "Palsa-1180" in GTDB R226. The description of the order is the same as for its type genus Muellerivita.	*Muellerivitia*	*Muellerivita*	seqco.de/i:51277
Order *Oederibacteriales*	[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	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.	*Oederibacteriia*	*Oederibacterium*	seqco.de/i:49854
Family *Muellerivitaceae*	[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	Family formerly known as "Palsa-1180" in GTDB R226. The description of the family is the same as for its type genus Muellerivita.	*Muellerivitales*	*Muellerivita*	seqco.de/i:51276
Family *Oederibacteriaceae*	[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	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.	*Oederibacteriales*	*Oederibacterium*	seqco.de/i:49853
Genus *Muellerivita*	[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	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	*Muellerivitaceae*	*Muellerivita nordica*^{Ts}	seqco.de/i:51275

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		biosynthesis genes, and the rod shape-determining protein MreB.			
Genus *Oederibacterium*	[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	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.	*Oederibacteriaceae*	*Oederibacterium danicum*[Ts]	seqco.de/i:49757
Species *Muellerivita nordica*[Ts]	[nor.di'ca] **L. fem. adj.** *nordica*, Nordic, a species from the Nordic region (Northern Europe).	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).	*Muellerivita*	NCBI Assembly: GCA_963719085.1 [Ts]	seqco.de/i:51274
Species *Oederibacterium danicum*[Ts]	[da'ni.cum] **N.L. neut. adj.** *danicum*, Danish, named after Denmark, the country from which the type genome originates.	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-	*Oederibacterium*	NCBI Assembly: GCA_965112635.1 [Ts]	seqco.de/i:49756

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		1791) – scientist who initiated the Flora Danica project (1753-1883).			