Magnimaribacter mokuoloeensis gen. nov. sp. nov.

Submitted by Freel, Kelle

Order *Magnimaribacterales*

Etymology
[Mag.ni.ma.ri.bac.ter.a'les] **N.L. masc. n.** *Magnimaribacter*, referring to the type genus Magnimaribacter; *-ales*, ending to denote an order; **N.L. fem. pl. n.** *Magnimaribacterales*, the Magnimaribacter order

Nomenclatural type
Genus *Magnimaribacter*

Description
This order was named following the isolation of a SAR86 bacterium from surface seawater of the tropical Pacific Ocean collected from Kāneʻohe Bay, Oʻahu, Hawaiʻi. It is the first isolated member of the SAR86 clade of gammaproteobacteria, which we have named the Magnimaribacterales. The Magnimaribacterales are frequently one of the most abundant groups of marine bacteria found across the global ocean.

Classification
Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Magnimaribacterales*

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

Registry URL
https://seqco.de/i:44153

Family *Magnimaribacteraceae*

Etymology
[Mag.ni.ma.ri.bac.ter.a'ce.ae] **N.L. masc. n.** *Magnimaribacter*, referring to the type genus Magnimaribacter; *-aceae*, ending to denote a family; **N.L. fem. pl. n.** *Magnimaribacteraceae*, the Magnimaribacter family

Nomenclatural type
Genus *Magnimaribacter*

Description
This family was established following the isolation of a SAR86 bacterium from surface seawater of the tropical Pacific Ocean collected from Kāneʻohe Bay, Oʻahu, Hawaiʻi. It is the first isolated member of the SAR86 clade of gammaproteobacteria, which we have named the Magnimaribacterales. The Magnimaribacterales are frequently one of the most abundant groups of marine bacteria found across the global ocean.

Classification
Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Magnimaribacterales* » *Magnimaribacteraceae*

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

Registry URL
https://seqco.de/i:44054

Genus *Magnimaribacter*

Etymology
[Mag.ni.ma.ri.bac'ter] **L. masc. adj.** *magnus*, great in importance or number; **L. fem. n.** *mare*, sea; **N.L. masc. n.** *bacter*, a rod; **N.L. masc. n.** *Magnimaribacter*, an abundant microbe in the global oceans

Nomenclatural type
Species *Magnimaribacter mokuoloeensis*[Ts]

Description
This type isolate of this genus was isolated from surface seawater of the tropical Pacific Ocean collected from Kāneʻohe Bay, Oʻahu, Hawaiʻi. It is the first isolated member of the SAR86 clade of gammaproteobacteria, the order of which we have named the Magnimaribacterales. The Magnimaribacterales are frequently one of the most abundant groups of marine bacteria found across the global ocean. This isolate opens an unprecedented window toward understanding the genomic and metabolic traits that contribute to the success of this lineage.

Classification
Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Magnimaribacterales* » *Magnimaribacteraceae* » *Magnimaribacter*

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

Registry URL
https://seqco.de/i:44052

Species *Magnimaribacter mokuoloeensis*[Ts]

Etymology
[mo.ku.o.loe.en'sis] **N.L. masc. adj.** *mokuoloeensis*, Named after Moku o Loʻe, an island in Kāneʻohe Bay, Oʻahu, where the organism was discovered from

Nomenclatural type
NCBI Assembly: GCA_041860225.1 [Ts]

Reference Strain
Strain sc|0038783: Strain HIMB1674

Description
This bacterium was isolated from surface seawater of the tropical Pacific Ocean collected from Kāneʻohe Bay, Oʻahu, Hawaiʻi. It is the first isolated member of the SAR86 clade of gammaproteobacteria, which we have named the Magnimaribacterales. The Magnimaribacterales are frequently one of the most abundant groups of marine bacteria found across the global ocean. This isolate opens an unprecedented window toward understanding the genomic and metabolic traits that contribute to the success of this lineage.

Classification
Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Magnimaribacterales* » *Magnimaribacteraceae* » *Magnimaribacter* » *Magnimaribacter mokuoloeensis*[Ts]

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

Registry URL
https://seqco.de/i:44051

References

1. Ramfelt et al. (2024). Isolate-anchored comparisons reveal evolutionary and functional differentiation across SAR86 marine bacteria. *The ISME Journal*. DOI:10.1093/ismejo/wrae227

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:pj-wgdq1** submitted by **Freel, Kelle** and including 4 new names has been successfully validated.

Date of Priority: 2025-09-22 06:23 UTC
DOI: 10.57973/seqcode.r:pj-wgdq1