Register list for 7 new names including Methanomethylicus gen. nov.

Submitted by Nguyen, Huong

Phylum *Methanomethylicota*

Etymology
[Me.tha.no.me.thy.li.co'ta] **N.L. masc. n.** *Methanomethylicus*, referring to the type genus *Methanomethylicus*; *-ota*, ending to denote a phylum; **N.L. neut. pl. n.** *Methanomethylicota*, the *Methanomethylicus* phylum

Nomenclatural type
Genus *Methanomethylicus*

Classification
Archaea » *Methanomethylicota*

References
Effective publication: Vanwonterghem et al., 2016 [1]
Corrigendum: Oren, Göker, 2023 [2] (from “Verstraetearchaeota”)
Assigned taxonomically: Vanwonterghem et al., 2016 [1]

Registry URL
https://seqco.de/i:23980

Class *Methanomethylicia*

Etymology
[Me.tha.no.me.thy.li'ci.a] **N.L. masc. n.** *Methanomethylicus*, referring to the type genus *Methanomethylicus*; *-ia*, ending to denote a class; **N.L. neut. pl. n.** *Methanomethylicia*, the *Methanomethylicus* class

Nomenclatural type
Genus *Methanomethylicus*

Description
Vanwonterghem et al. (2016): The description is the same as for the genus *Methanomethylicus*. Suff. *-ia*, ending to denote a class. Type order: *Methanomethyliales*, ord. nov.

Classification
Archaea » *Methanomethylicota* » *Methanomethylicia*

References
Effective publication: Vanwonterghem et al., 2016 [1]
Corrigendum: Oren et al., 2020 [3] (from “Methanomethylia”)

Registry URL
https://seqco.de/i:23972

Order *Methanomethylicales*

Etymology
[Me.tha.no.me.thy.li.ca'les] **N.L. masc. n.** *Methanomethylicus*, referring to the type genus *Methanomethylicus*; *-ales*, ending to denote an order; **N.L. fem. pl. n.** *Methanomethylicales*, the *Methanomethylicus* order

Nomenclatural type
Genus *Methanomethylicus*

Description
The description is the same as for the genus *Methanomethylicus*.

Classification
Archaea » *Methanomethylicota* » *Methanomethylicia* » *Methanomethylicales*

References
Effective publication: Vanwonterghem et al., 2016 [1]
Corrigendum: Oren et al., 2020 [3] (from “Methanomethyliales”)

Registry URL
https://seqco.de/i:23979

Family *Methanomethylicaceae*

Etymology
[Me.tha.no.me.thy.li.ca'ce.ae] **N.L. masc. n.** *Methanomethylicus*, referring to the type genus *Methanomethylicus*; *-aceae*, ending to denote a family; **N.L. fem. pl. n.** *Methanomethylicaceae*, the *Methanomethylicus* family

Nomenclatural type
Genus *Methanomethylicus*

Description
The description is the same as for the genus *Methanomethylicus.* Type genus: *Methanomethylicus*, gen. nov.

Classification
Archaea » *Methanomethylicota* » *Methanomethylicia* » *Methanomethylicales* » *Methanomethylicaceae*

References
Effective publication: Vanwonterghem et al., 2016 [1]
Corrigendum: Oren et al., 2020 [3] (from “Methanomethyliaceae”)

Registry URL
https://seqco.de/i:23978

Genus *Methanomethylicus*

Etymology
[Me.tha.no.me.thy'li.cus] **N.L. pref.** *methano-*, pertaining to methane; **N.L. masc. adj.** *methylicus*, pertaining to the methyl group; **N.L. masc. n.** *Methanomethylicus*, methane producing organism growing on methyl groups

Nomenclatural type
Species *Methanomethylicus mesodigestus*^{Ts}

Classification
Archaea » *Methanomethylicota* » *Methanomethylicia* » *Methanomethylicales* » *Methanomethylicaceae* » *Methanomethylicus*

References
Effective publication: Vanwonterghem et al., 2016 [1]

Registry URL
https://seqco.de/i:23973

Species *Methanomethylicus mesodigestus*[Ts]

Etymology
[me.so.di.ges'tus] **Gr. masc. adj.** *mesos*, middle; **L. masc. perf. part.** *digestus*, that has a good digestion; **N.L. masc. adj.** *mesodigestus*, referring to a mesophilic digester

Nomenclatural type
Genome sc|0000269 [Ts]

Description
This organism is inferred to be capable of methylotrophic methanogenesis, is non-motile, and not cultivated, represented by near-complete population genomes V1 (type strain) and V2 obtained from anaerobic digesters.

Classification
Archaea » *Methanomethylicota* » *Methanomethylicia* » *Methanomethylicales* » *Methanomethylicaceae* » *Methanomethylicus* » *Methanomethylicus mesodigestus*[Ts]

References
Effective publication: Vanwonterghem et al., 2016 [1]
Corrigendum: Oren et al., 2020 [3] (from “Methanomethylicus mesodigestum”)

Registry URL
https://seqco.de/i:23974

Species *Methanomethylicus oleisabuli*

Etymology
[o.le.i.sa'bu.li] **L. neut. n.** *oleum*, oil; **L. neut. n.** *sabulum*, sand; **N.L. gen. n.** *oleisabuli*, of oil sand

Nomenclatural type
Genome sc|0000270 [Ts]

Description
This organism is inferred to be capable of methylotrophic methanogenesis, is non-motile, and not cultivated, represented by a near-complete population genome V3 obtained from an iso-alkane degrading enrichment culture from tailings ponds.

Classification
Archaea » *Methanomethylicota* » *Methanomethylicia* » *Methanomethylicales* » *Methanomethylicaceae* » *Methanomethylicus* » *Methanomethylicus oleisabuli*

References
Effective publication: Vanwonterghem et al., 2016 [1]
Corrigendum: Oren et al., 2020 [3] (from “Methanomethylicus oleusabulum”)

Registry URL
https://seqco.de/i:23975

References

1. Vanwonterghem et al. (2016). Methylotrophic methanogenesis discovered in the archaeal phylum Verstraetearchaeota. *Nature Microbiology*. DOI: 10.1038/nmicrobiol.2016.170
2. Oren, Göker (2023). Candidatus List. Lists of names of prokaryotic Candidatus phyla. *International Journal of Systematic and Evolutionary Microbiology*. DOI: 10.1099/ijsem.0.005821
3. Oren et al. (2020). Lists of names of prokaryotic Candidatus taxa. *International Journal of Systematic and Evolutionary Microbiology*. DOI: 10.1099/ijsem.0.003789

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:4owxxlm8** submitted by **Nguyen, Huong** and including 7 new names has been successfully validated.

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