Allocrenothrix methanica sp. nov.

Submitted by Umezawa, Kazuhiro

Genus *Allocrenothrix*

Etymology
[Al.lo.cre.no.thrix.] **Gr. masc. pron.** *allos*, other, another, different; **N.L. fem. n.** *Crenothrix*, a bacterial genus; **N.L. fem. n.** *Allocrenothrix*, the other *Crenothrix*

Nomenclatural type
Species *Allocrenothrix methanica*[Ts]

Description
Cells are rods that grow as linear or branched multicellular filaments. Grows under micro-oxic conditions. Methanotrophic. Inhabits iron-rich snows and sediments along with stratified lakes. The genus corresponds to the "lacustrine Crenothrix" clade or the uncultured genus UBA4132 in GTDB R83 to R226. The nomenclatural type is *Allocrenothrix methanica*.

Classification
Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Methylococcales* » *Methylococcaceae* » *Allocrenothrix*

References
Effective publication: Umezawa et al., 2026 [1]

Registry URL
https://seqco.de/i:55065

Species *Allocrenothrix methanica*[Ts]

Etymology
[Me.tha.ni.ca.] **N.L. neut. n.** *methanum*, methane; **L. fem. adj. suff.** *-ica*, pertaining to; **N.L. fem. adj.** *methanica*, pertaining to methane

Nomenclatural type
Genome sc|0005535 [Ts]

Reference Strain
Strain sc|0040749: AF98

Description
Microaerobic. Cells are rods 1.0-1.5 µm wide and 1.9-5.0 µm long and form multicellular filaments. Filaments are linear, rarely branched. Cells are connected by conjugation-like structures. No production of gonidia has been observed. The reference strain AF98 was isolated from iron-rich microbial mat material from wetlands regions of Oze National Park (Japan).

Classification
Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Methylococcales* » *Methylococcaceae* » *Allocrenothrix* » *Allocrenothrix methanica*[Ts]

References
Effective publication: Umezawa et al., 2026 [1]

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https://seqco.de/i:55064

References

1. Umezawa et al. (2026). Isolation of *Allocrenothrix methanica* reveals distinct ecophysiologies of filamentous methanotrophs and adaptations to O2 limitation. *The ISME Journal*. DOI: 10.1093/ismejo/wrag178

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:gzovp6i4** submitted by **Umezawa, Kazuhiro** and including 2 new names has been successfully validated.

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