Validation of Mesorhizobium maamorense sp. nov., a novel rhizobial species isolated from Ononis repens.

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Abstract

Mesorhizobium maamorense sp. nov. is a novel rhizobial species isolated from *Ononis repens* nodules in Morocco. The type strain, ORM16^{T} (= DSM 116631^{T} = CCMM B1359^{T}), is phylogenetically related to *M. opportunistum* but clearly distinct based on MLSA and whole-genome analysis (ANI 87.63%, dDDH 31.2%). This Gram-negative, aerobic rod-shaped bacterium possesses canonical *nod* genes and shows moderate stress tolerance. The species name refers to the Maâmora forest, its site of origin.

Species *Mesorhizobium maamorense*

Etymology

[ma.a.mo.ren'se] **N.L. neut. adj.** *maamorense*, pertaining to the Maamora forest, the region of isolation

Nomenclatural type

NCBI Assembly: GCA_044998965.1 Ts

Reference Strain

Strain sc|0040742: ORM16 = DSM 120599 = CCMM B1359 (Cat.)

Description

The species is an aerobic, non-spore-forming, Gram-negative rhizobium that appears as an elongated rod, approximately 1 µm wide and 2.5 µm long. On YEM medium, it grows relatively quickly, with a population doubling time of 5 to 6 hours, forming 1 mm colonies within five days. Ideal growth conditions are a temperature of 28°C and a neutral pH of 7, though it remains viable at temperatures as high as 37°C. The bacteria is also resilient to environmental challenges, tolerating saline stress equivalent to 515 mM NaCl and osmotic stress from up to 20% PEG.

Classification

Bacteria » *Pseudomonadota* » *Alphaproteobacteria* » *Hyphomicrobiales* » *Phyllobacteriaceae* » *Mesorhizobium* » *Mesorhizobium maamorense*

References

Effective publication: Alami et al., 2026 [1]
Assigned taxonomically: Laadraoui et al., 2023 [2]

Registry URL

https://seqco.de/i:51228

References

1. Alami et al. (2026). Mesorhizobium maamorense sp. nov., a novel symbiotic nitrogen-fixing bacterium isolated from nodules of Ononis repens in the Moroccan Maâmora forest. *Antonie van Leeuwenhoek*. DOI:10.1007/s10482-026-02251-8
2. Laadraoui et al. (2023). Identification of the symbiovar maamori in Mesorhizobium isolated from nodules of Ononis repens in the Maamora forest (Morocco). *Symbiosis*. DOI:10.1007/s13199-022-00890-9

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:-bmttyad** submitted by **alami, soufiane** and including 1 new name has been successfully validated.

Date of Priority: 2026-01-15 07:09 UTC
DOI: 10.57973/seqcode.r:-bmttyad