

Murinocardiopsis flavida gen. nov., sp. nov., an actinomycete isolated from indoor walls.

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Abstract

Two Gram-stain-positive, mycelium-forming actinobacteria (strains 14-Be-013T and 02-Gi-014) were isolated from walls colonized with moulds and studied taxonomically. The isolates formed yellowish-pigmented substrate mycelium showing no fragmentation. Comparative analysis of 16S rRNA gene sequences showed that these bacteria are most closely related to genera within the family Nocardiopsaceae, but form a separate lineage within this family. Highest sequence similarities were to the type strains of *Marinactinospora thermotolerans* (96.0% to 14-Be-013T), *Nocardiopsis dassonvillei* subsp. *albirubida* and *Nocardiopsis lucentensis* (both 95.3% to 14-Be-013T). Whole-cell hydrolysates contained meso-diaminopimelic acid as the diagnostic diamino acid of the cell wall and no diagnostic sugars. Mycolic acids were absent. The major menaquinones were MK-10(H4), MK-11(H4) and MK-12(H2). The polar lipid profile consisted of phosphatidylcholine, diphosphatidylglycerol, phosphatidylglycerol, phosphatidylinositol and unknown lipids. Major fatty acids iso-C16:0, anteiso-C17:0 and C18:1 ω 9c supported the affiliation of these isolates to the family Nocardiopsaceae. Phenotypic analysis (including chemotaxonomy) further differentiated strains 14-Be-013T and 02-Gi-014 from the most closely

related members of the genera *Marinactinospora* and *Nocardiopsis*. Since the two strains form a distinct lineage in the 16S rRNA gene sequence-based phylogenetic tree, the novel genus *Murinocardiopsis* gen. nov. with the type species *Murinocardiopsis flavida* sp. nov. is proposed. The type strain of *Murinocardiopsis flavida* is 14-Be-013T (=DSM 45312T =CCM 7612T).

Beteiligte Forschungseinheiten

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