Flavobacterium cutihirudinis sp. nov., isolated from the skin of the medical leech Hirudo verbana.

Glaeser SP, Galatis H, Martin K, Kämpfer P (2013) Flavobacterium cutihirudinis sp. nov., isolated from the skin of the medical leech Hirudo verbana. *Int J Syst Evol Microbiol* 63(Pt 8), 2841-2847.

Abstract

A Gram-staining-negative, non-endospore-forming, yellow-pigmented strain (E89(T)) was isolated from the skin of the medical leech Hirudo verbana obtained from a leech farm located in Biebertal, Germany. 16S rRNA gene sequencing analysis showed that the isolate was grouped in the genus Flavobacterium. Strain E89(T) was most closely related to Flavobacterium chilense LM-09-Fp(T) (98.2 %), Flavobacterium chungangense CJ7(T) (98.1 %), and Flavobacterium oncorhynchi 631-08(T) (98.1 %). 16S rRNA gene sequence similarities to all other species of the genus Flavobacterium were ≤ 97.4 %. A menaquinone of the type MK-6 was found to be the predominant respiratory quinone and the polar lipid profile consisted of the major compounds phosphatidylethanolamine, phosphatidylserine, two unidentified aminolipids, one unknown phospholipid and two unknown lipids. The fatty acid profile was composed of iso-C15 : 0, C15 : 0, summed feature 3 (C16 : 1ω7c and/or iso-C15 : 0 2-OH) found in major amounts and several hydroxylated fatty acids in smaller amounts, among them iso-C15 : 0 3-OH and iso-C17 : 0 3-OH. All these data support the allocation of the isolate in the genus Flavobacterium.

Physiological/biochemical characterization and DNA-DNA hybridizations with the type strains of the most closely related species allowed a clear phenotypic and genotypic differentiation of the strain. Based on these data, strain E89(T) represents a novel species of the genus Flavobacterium, for which the name Flavobacterium cutihirudinis sp. nov. is proposed. The type strain is E89(T) (= DSM 25795(T) = LMG 26922(T) = CIP 110374(T)).

Beteiligte Forschungseinheiten

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Details

Identifier

doi: 10.1099/ijs.0.048736-0

PMID: 23315416