

Castellaniella hirudinis sp. nov., isolated from the skin of Hirudo verbana.

Glaeser SP, Galatis H, Martin K, Kämpfer P (2013) Castellaniella hirudinis sp. nov., isolated from the skin of Hirudo verbana. *Int J Syst Evol Microbiol* 63(Pt 2), 521-525.

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Abstract

A Gram-staining-negative, rod-shaped, non-spore-forming bacterium, designated strain E103(T), was isolated from the skin of the medical leech *Hirudo verbana*. 16S rRNA gene sequence analysis showed that the isolate was closely related to species of the genus *Castellaniella*. *Castellaniella ginsengisoli* DCY36(T) was shown to be the most closely related (98.4 % 16S rRNA gene sequence similarity), followed by *Castellaniella denitrificans* NKNTAU(T) and *Castellaniella daejeonensis* MJ06(T) (both 97.8 %), then *Castellaniella caeni* Ho-11(T) (97.5 %). Chemotaxonomic data (major ubiquinone, Q-8; major polar lipids, phosphatidylethanolamine, phosphatidylglycerol and phosphatidylserine; predominant polyamine, putrescine with a moderate amount of 2-hydroxyputrescine; and major fatty acids, C(17 : 0) cyclo, C(16 : 0) and summed feature 4 comprising C(16 : 1) ω 7c and/or iso-C(15 : 0) 2-OH) supported the affiliation of the isolate to the genus *Castellaniella*. DNA-DNA hybridization values with the type strains of all species of the genus *Castellaniella* were 23 % (reciprocal, 18 %) with *C. ginsengisoli* KCTC 22398(T), 20 % (26 %) with *C. daejeonensis* KCTC 22454(T), 11 % (58 %) with *C. denitrificans* DSM 11046(T) and 13 % (12 %) with *C. caeni* KCTC 12197(T)(.) Phenotypic differentiation of strain E103(T) from

its closest neighbours was possible. Strain E103(T) therefore represents a novel species of the genus *Castellaniella*, for which the name *Castellaniella hirudinis* sp. nov. is proposed, with the type strain E103(T) (= CCUG 62394(T) = LMG 26910(T)).

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doi: 10.1099/ijss.0.041392-0

PMID: 22523161