

Duganella phyllosphaerae sp. nov., isolated from the leaf surface of *Trifolium repens* and proposal to reclassify *Duganella violaceinigra* into a novel genus as *Pseudoduganella violceinigra* gen. nov., comb. nov.

Kämpfer P, Wellner S, Lohse K, Martin K, Lodders N (2012) *Duganella phyllosphaerae* sp. nov., isolated from the leaf surface of *Trifolium repens* and proposal to reclassify *Duganella violaceinigra* into a novel genus as *Pseudoduganella violceinigra* gen. nov., comb. nov. *Syst Appl Microbiol* 35(1), 19-23.

[Details](#)



Abstract

A bright yellow pigmented bacterium was isolated from the leaf surface of *Trifolium repens* in Germany. Comparative analysis of 16S rRNA gene sequences showed that this bacterium is most closely related to *Duganella zoogloeoides* IAM 12670(T), with a similarity of 99.3%, but revealed only a moderate similarity (96.8%) to the second *Duganella* species, *Duganella violaceinigra* YIM 31327(T). Strain T54(T) is clearly different from *D. zoogloeoides* IAM 12670(T) in that DNA-DNA hybridization revealed a similarity value of 46% (reciprocal 42%). Ubiquinone (Q-8) was the respiratory quinone and the predominant polar lipids consisted of phosphatidylglycerol, phosphatidylethanolamine, three unknown phospholipids and one aminolipid. Strain T54(T) can be distinguished from *D. zoogloeoides* by the carbon substrate utilization tests of d-trehalose, cis-

aconitate, trans-aconitate, glutarate and dl-3-hydroxybutyrate, and 4-hydroxybenzoate in addition to a different polar lipid profile. The name *Duganella phyllosphaerae* sp. nov. is proposed for this novel species, with the type strain T54(T) (=LMG 25994 = CCM 7824(T)) [corrected]. In addition, it is proposed to reclassify *D. violaceinigra* into a novel genus *Pseudoduganella* gen. nov. as the novel species *Pseudoduganella violaceinigra* comb. nov. because of the low 16S rRNA gene sequence similarities to the other *Duganella* species (

Beteiligte Forschungseinheiten

[Biotechnikum Miriam Agler-Rosenbaum](#) [Mehr erfahren](#)

Leibniz-HKI-Autor*innen



Karin Martin

[Details](#)

Identifier

doi: 10.1016/j.syapm.2011.10.003

PMID: 22169565