Species *Nocardia canadensis*

Etymology

N.L. fem. adj. *canadensis*, Of Canada, from which this microorganim was isolated

Nomenclatural type

NCBI Assembly: GCF_032656385.1 [Ts]

Description

Nocardia canadensis strain WB46 was isolated from the rhizosphere of willow plants (*Salix purpurea* L.) growing in soil contaminated with petroleum hydrocarbons in Varennes, Quebec, Canada. It exhibits a 7.15 Mb (69.55% GC content) draft genome sequence containing 6,387 protein-coding genes, 51 tRNA and 15 rRNA sequences, with many genes responsible for petroleum hydrocarbon degradation such as alkane 1-monooxygenase (*alkB*) and naphthalene dioxygenase (*ndo*). 16S rRNA gene analyses, including *in silico* DNA-DNA hybridization (DDH) and average nucleotide identity (ANI), between *Nocardia* sp. strain WB46 and a closely related strain, *Nocardia asteroids,* showed a distance of 63.4% and sequence identity of 88.63%, respectively. These values are below the threshold levels of 70% and 95%, respectively, suggesting that *Nocardia canadensis* strain WB46 is a new species.

Classification

Bacteria » *Actinomycetota* » *Actinobacteria* » *Mycobacteriales* » *Nocardiaceae* » *Nocardia* » *Nocardia canadensis*

References

Effective publication: Alotaibi et al., 2023 [1]

Registry URL

https://seqco.de/i:32942

References

1. Alotaibi et al. (2023). Draft Genome of Nocardia canadensis sp. nov. Isolated from Petroleum-Hydrocarbon-Contaminated Soil. *Microorganisms*. DOI:10.3390/microorganisms11122972