

عنوان مقاله:

A proposal for the unification of two cyanobacterial strains of Nostoc as the same species

محل انتشار:

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خلاصه مقاله:

The present research aimed to investigate through a polyphasic approach, the differences in morphological and genotypic features of two cyanobacterial strains isolated from paddy fields of northern parts of Iran, belonging to the family Nostocaceae (subject. IV. I). Based on the reliable identification keys, the two strains were identified as *Nostoc ellipsosporum* (Desm.) Rabenh. ex Born. et Flah, and *N. muscorum* Ag. ex Born. et Flah. Sequencing of cloned bacterial 16S rRNA fragment strongly indicated that, two *Nostoc* strains could not be discriminated by 16S rRNA and ITS genes sequencing and the current morphological classification of both is invalid. Moreover, phylogenetic study of two *Nostoc* strains has demonstrated that, genetic relationships are in conflict with the morphological classification. Besides, after doing DNA-DNA reassociation experiments, it was concluded that, two *Nostoc* strains investigated might possibly be united into one species. Finally, two *Nostoc* species were named as *Nostoc* sp. Bahar_E and *Nostoc* sp. Bahar_M, and have been registered under DDBJ, accession numbers: JF795278 and JF792482, respectively.

کلمات کلیدی:

DNA-DNA hybridization, ITS, Morphology, *Nostoc*, 16S rRNA

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