Taxonomic Note

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Proposal of *Nakamurella* gen. nov. as a substitute for the bacterial genus *Microsphaera* Yoshimi *et al.* 1996 and *Nakamurellaceae* fam. nov. as a substitute for the illegitimate bacterial family *Microsphaeraceae* Rainey *et al.* 1997

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The bacterial genus *Microsphaera* Yoshimi *et al.* 1996 is illegitimate because of priority of the fungal genus *Microsphaera* (Wallr.) Lév. [Principle 2, Rule 51b(4) of the *Bacteriological Code*]. Therefore, a new genus name, *Nakamurella*, is proposed for the bacterial genus. The type species *Microsphaera multipartita* Yoshimi *et al.* 1996 becomes *Nakamurella multipartita* gen. nov., comb. nov. Due to the illegitimacy of the only genus in the family *Microsphaeraceae* Rainey *et al.* 1997, this family name is replaced by the new bacterial family name *Nakamurellaceae*.

Léveillé (1851) renamed the fungus *Alphitomorpha divaricata* Wallr. as *Microsphaera divaricata* (Wallr.) Lév. [*Ann Sci Nat Bot Ser 3* 15 (1851), 155 & 381; cf. Saccardo, 1972; Kirk *et al.*, 2001]. *M. divaricata* is a pathogenic fungus which causes powdery mildew on the plant *Frangula alnus*. The genus *Microsphaera* belongs to the family *Erysiphaceae* and contains dozens of species. Until recently new species were described within this genus (Kirk *et al.*, 2001).

Yoshimi *et al.* (1996) described a novel Gram-positive bacterial genus, *Microsphaera*, and species, *Microsphaera multipartita*, of coccoid morphology, isolated from activated sludge and able to accumulate polysaccharides. When Stackebrandt *et al.* (1997) rearranged the bacterial class *Actinobacteria*, they classified the genus *Microsphaera* in the new family *Microsphaeraceae* Rainey *et al.* 1997, suborder *Frankineae*, order *Actinomycetales*, subclass *Actinobacteridae*, class *Actinobacteria*.

Referring to Principle 1(2) of the *International Code of Nomenclature of Bacteria* (1990 revision), the use of names which may cause error or confusion should be avoided (Lapage *et al.*, 1992). Furthermore, according to Principle 2 and Rule 51b(4) of the *Bacteriological Code* the nomenclature of bacteria is not independent of the nomenclature of fungi, algae and protozoa, so the rules of priority are applicable here, too. Therefore, the bacterial genus name *Microsphaera* Yoshimi *et al.* 1996 is illegitimate and must be replaced.

We propose to replace the bacterial genus name

Microsphaera by *Nakamurella*, and to transfer the only species of the bacterial genus *Microsphaera* to *Nakamurella* as *Nakamurella multipartita*. For the same reasons, the illegitimate family name *Microsphaeraceae* is replaced by *Nakamurellaceae*.

Description of *Nakamurellaceae* fam. nov.

Nakamurellaceae (Na.ka.mu.rel.la'ce.ae. N.L. fem. n. *Nakamurella* type genus of the family; -aceae ending to denote a family; N.L. fem. pl. n. *Nakamurellaceae* the *Nakamurella* family).

Family description is as given for *Microsphaeraceae* Rainey *et al.* 1997 in Stackebrandt *et al.* (1997).

Type genus is *Nakamurella*.

Description of *Nakamurella* gen. nov.

Nakamurella (Na.ka.mu.rel'la. M.L. dimin. ending -ella; N.L. fem. n. *Nakamurella* to honour the Japanese microbiologist Professor Kazonuri Nakamura).

Genus description is as given for *Microsphaera* Yoshimi *et al.* 1996.

Type species is *Nakamurella multipartita*.

Description of *Nakamurella multipartita* gen. nov., comb. nov.

Nakamurella multipartita (mul.ti.par.ti'ta. M.L. *multus* many; M.L. v. *partitire* divide; M.L. fem. part. pass. *multipartita* micro-organisms having many divisions inside the cell).

Species description is as given for *Microsphaera multipartita* Yoshimi *et al.* 1996.

Type strain is Y-104^T (=ATCC 700099^T=CIP 104796^T=DSM 44233^T=JCM 9543^T).

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