Escherichiaceae nom. nov., a Name to Replace Enterobacteriaceae

Request for an Opinion

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The family name Escherichiaceae is proposed as a replacement for Enterobacteriaceae, a name which is not formed in accord with the rules of nomenclature.

The family name Enterobacteriaceae is not formed in accord with the rules of bacteriological nomenclature (6). According to Rule 9, the name of the family should be formed from the name of the type genus by adding the suffix -aceae. The name Enterobacteriaceae is a validly published name (4) with the type genus Escherichia Castellani and Chalmers 1919 (1), but under Rule 9 the family name should be Escherichiaceae. The reason for this anomalous situation is that the family name Enterobacteriaceae Rahn 1937 was conserved with the type genus Escherichia in Opinion 15 issued by the Judicial Commission of the International Committee on Bacteriological Nomenclature (3) in 1958 as a specific exception to Rule 9. Lapage requested a reversal of Opinion 15 when he proposed (5) that the Judicial Commission issue an Opinion changing the type genus of the family from Escherichia to Enterobacter Hormaeche and Edwards 1960 (2) and the family name from Enterobacteriaceae to Enterobacteriaceae.

The Judicial Commission has recently concluded (4) that the family name Enterobacteriaceae Rahn 1937 is currently valid and should have been included on the Approved Lists of Bacterial Names (7). However, the problem of retaining a single exception to Rule 9 for merely historical reasons leads to the logical proposal of the correctly formed name Escherichiaceae. This name does not seem to have been previously published, so the name is here formally proposed and the Judicial Commission is requested to issue an Opinion in favor of the name Escherichiaceae.

Escherichiaceae nom. nov. (M.L. fem. n. Escherichia, type genus of the family; -aceae ending to denote a family; M.L. fem. pl. n. Escherichiaceae the Escherichia family). Small gram-negative rods with rounded ends; cells are motile and peritrichous but sometimes nonmotile. Not sporeforming; not acid fast. Aerobic to facultatively anaerobic. Catalase positive, with the exception of one serotype of Shigella dysenteriae; oxidase negative; nitrates almost always reduced to nitrites. Cells grow on meat extract media; chemoorganotrophic; metabolism respiratory and fermentative. Acid and usually gas produced from glucose and other carbohydrates. The guanine-plus-cytosine content of the deoxyribonucleic acid is 39 to 59 mol%.

The type genus is Escherichia Castellani and Chalmers 1919, 941, with the type species Escherichia coli Castellani and Chalmers 1919, 941; both of these names appear on the Approved Lists (7).

REPRINT REQUESTS
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LITERATURE CITED