**Request for an Opinion**

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**The status of the species *Bacillus aerophilus* and *Bacillus stratosphericus*. Request for an Opinion**

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During a study assessing the diversity of the *Bacillus pumilus* group it became apparent that the type strains of both *Bacillus aerophilus* and *Bacillus stratosphericus* were not available from any established culture collection, nor from the authors who originally described them. Therefore, type strains of these species cannot be included in any further scientific studies. It is therefore proposed that the Judicial Commission of the International Committee of Systematics of Prokaryotes place the names *Bacillus aerophilus* and *Bacillus stratosphericus* on the list of rejected names, if suitable replacements for the type strains are not found or if neotype strains are not proposed within two years following the publication of this Request for an Opinion.

*Bacillus aerophilus* and *Bacillus stratosphericus* were proposed as novel species within the genus *Bacillus* by Shivaji et al. (2006), for single strains isolated from cryogenic tubes used for collecting air samples from high altitudes. Both species exhibited characteristics typical of species of the genus *Bacillus*, i.e. stained Gram-positive, were able to produce endospores and contained cell-wall peptidoglycans with DL-diaminobutyric acid as the diamino acid. Moreover, they could be differentiated from the most closely related species, *Bacillus pumilus* group members, on the basis of differences in genotypic and phenotypic features. The type strains of *B. aerophilus* (28KT=MTCC 7304T=JCM 13347T) and *B. stratosphericus* (41KF2aT=MTCC 7305T=JCM 13349T) were both submitted to the MTCC (Microbial Type Culture Collection and Gene Bank, Institute of Microbial Technology, Chandigarh-160036, India) and to the JCM (Japan Collection of Microorganisms, RIKEN BioResource Center, 3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Japan). GenBank/EMBL/DDBJ accession numbers for the 16S rRNA gene sequences were AJ831844 and AJ831841, respectively.

In the course of conducting a comparative study assessing the diversity of the *B. pumilus* group (Branquinho et al., 2014), an attempt was made to obtain the type strains of both *B. aerophilus* and *B. stratosphericus* from the MTCC and JCM culture collections, and from the authors who described these species (Shivaji et al., 2006). The strains, however, were no longer available from either culture collection and could not be obtained from the authors. Thus, the type strains of both *B. aerophilus* and *B. stratosphericus* originally described by Shivaji et al. (2006) no longer exist. According to Rule 18c of the International Code of Nomenclature of Bacteria (Lapage et al., 1992), if suitable replacements for the type strains cannot be found or if neotype strains cannot be proposed, within two years of the publication of this Request for an Opinion, it is proposed that the Judicial Commission of the International Committee of Systematics of Prokaryotes places the names *Bacillus aerophilus* and *Bacillus stratosphericus* on the list of rejected names.

**REFERENCES**

