The status of the species *Bacillus aerius*. Request for an Opinion

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During a recent study assessing the diversity of the species *Bacillus licheniformis*, it became apparent that the type strain of *Bacillus aerius* was not available from any established culture collection or from the authors who originally described it. Other authors have reported similar findings when trying to obtain the strain (Lai et al., 2014), therefore, this species cannot currently be included in any further scientific studies. It is proposed that, if suitable replacements for type strains are not found or neotype strains are not proposed within two years following the publication of this Request for an Opinion, the Judicial Commission of the International Committee of Systematics of Prokaryotes place the name *B. aerius* on the list of rejected names.

*Bacillus aerius* was proposed as a new species within the genus *Bacillus* by Shivaji et al. (2006); it was isolated from a cryogenic tube used for sampling air from high altitudes. The strain stained Gram-positive, was able to produce endospores and contained cell-wall peptidoglycans with DL-diaminobutyric acid as the diamino acid. The strain could be distinguished from strains of the most closely related species, *Bacillus licheniformis*, on the basis of differences in genotypic and phenotypic features.

The type strain of *B. aerius* 24KT (=MTCC 7303T=JCM 13348T) was submitted to the Microbial type Culture Collection and Gene Bank, Institute of Microbial Technology Chandigarh-160036, India (MTCC), and to the Japan Collection of Microorganisms, RIKEN BioResource Center 3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Japan (JCM). The GenBank/EMBL/DDBJ accession number for the 16S rRNA gene sequence was AJ831843. It is noteworthy that two other species, *Bacillus aerophilus* and *Bacillus stratosphericus*, both described in Shivaji et al. (2006), are also not available and a request is pending for an opinion on these (Branquinho et al., 2015).

In the course of conducting a comparative study assessing the diversity of the species *B. licheniformis* an attempt was made to obtain the type strain of *B. aerius* from the MTCC and the JCM and from the authors who described the species (Shivaji et al., 2006). The strain, however, was no longer available from either culture collection and could not be obtained from the authors.

Thus, the type strain of *B. aerius*, originally described by Shivaji et al. (2006) no longer exists. According to Rule 18c of the International Code of Nomenclature of Bacteria (Lapage et al., 1992), if a suitable replacement of the type strains or a neotype strain cannot be found or 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 name *B. aerius* on the list of rejected names.

References


