Minutes

A. Oren, *Secretary*
A. Ventosa, *Chairman*

International Committee on Systematics of Prokaryotes

Subcommittee on the taxonomy of *Halobacteriaceae*

Minutes of the meetings, 5 September 2004, Ljubljana, Slovenia

Session 1. Open meeting

Minute 1. Call to order. The open meeting was held on 5 September 2004 at the University of Ljubljana, Slovenia. The chairman, A. Ventosa, opened the meeting at 18:15.

Minute 2. Record of attendance. The members present were A. Ventosa (Chairman), A. Oren (Secretary), M. Kamekura, C. D. Litchfield, B. J. Tindall and R. H. Vreeland. Apologies were received from R. R. Colwell, W. D. Grant, L. I. Hochstein, Y. Ma, A. Ramos-Cormenzana and F. Rodríguez-Valera. In addition, the meeting was attended by Ç. Bulut, H. S. Çoban, P. DasSarma, S. DasSarma, R. Elevi, M. L. Dyall-Smith, R. L. Mancinelli, M. R. Mormile, T. J. McGenity and H. Stan-Lotter.

Minute 3. New taxa. Reports on the following new taxa and reclassification of existing taxa were presented.

Haloferax alexandrinus [Asker & Ohta, *Int J Syst Evol Microbiol* **52** (2002), 729–738] was included in the list given by Euzéby & Tindall [*Int J Syst Evol Microbiol* **54** (2004), 293–301] of names proposed that are not in accordance with Rules 27(3) and 30 of the Bacteriological Code, as the type strain (JCM 10717^T, IFO 16590^T) was deposited only in two Japanese culture collections. B. J. Tindall will contact T. Itoh at the JCM and request a culture for deposition in the DSMZ.

Halosimplex carlsbadense gen. nov., sp. nov. [Vreeland *et al.*, *Extremophiles* **6** (2002), 445–452], with type strain ATCC BAA-75^T, JCM 11222^T, has been validly published [Validation List no. 92, *Int J Syst Evol Microbiol* **53** (2003), 935–937].

Haloferax lucentense sp. nov. [originally published with the name *Haloferax lucentensis*; Gutierrez *et al.*, *Extremophiles* **6** (2002), 479–483], with type strain JCM 9276^T, DSM 14919^T, NCIMB 13854^T, CIP 107410^T, CECT 5871^T, CCM 7023^T, has been validly published [Validation List no. 95, *Int J Syst Evol Microbiol* **54** (2004), 1–2].

Halorubrum terrestre sp. nov. [Ventosa *et al.*, *Int J Syst Evol Microbiol* **54** (2004), 389–392], with type strain VKM B-1739^T, JCM 10247^T.

Haloferax sulfurifontis sp. nov. [Elshahed *et al.*, *Int J Syst Evol Microbiol* **54** (2004), 2275–2279], with type strain JCM 12327^T, CCM 7217^T, DSM 16227^T.

Halorubrum xinjiangense sp. nov. [Feng *et al.*, *Int J Syst Evol Microbiol* **54** (2004), 1789–1791], with type strain AS 1.3527^T, JCM 12388^T.

Halorubrum alkaliphilum sp. nov. [Feng *et al.*, *Int J Syst Evol Microbiol* **55** (2005), 149–152], with type strain AS 1.3528^T, JCM 12358^T.

Halobacterium noricense sp. nov. will soon be described, with type strain DSM 15987^T, ATCC BAA-852^T, NCIMB 13967^T, together with an emended description of *Halobacterium salinarum* and classification of *Halobacterium* sp. NRC-1 as a strain of *Halobacterium salinarum* [Gruber *et al.*, *Extremophiles*, in press].

The flat, square, gas-vacuolated organism first described by Walsby [*Nature* **283** (2000), 69–71] has been isolated in pure culture independently by the groups of M. Dyall-Smith and H. Bolhuis, and will probably be described as *Haloquadratum walsbyi* gen. nov., sp. nov.

Minute 4. Taxonomic rearrangements within the genera *Haloterrigena* and *Natrinema*. B. J. Tindall clarified the present status of the classification of strains within the genera *Haloterrigena* and *Natrinema* [Tindall, *Int J Syst Evol Microbiol* **53** (2003), 1697–1698]. R. H. Vreeland plans to perform a comparative study of all available strains of these genera.

Minute 5. Identification of genes relevant for multilocus gene comparison studies. S. DasSarma called upon the subcommittee to assist scientists involved in the study of the *Halobacteriaceae* in the identification of a suitable set of genes to be included in multilocus gene comparison studies, enabling a rapid comparison of members of the *Halobacteriaceae* based on a number of genes in addition to the 16S rRNA gene. Availability of such a set of genes would be helpful to resolve questions on halobacterial taxonomy, including establishment of criteria for assignment

of families and genera within the *Halobacteriaceae*. It would also permit the community to guide those conducting genome sequencing projects by providing valid criteria for selection of halobacterial genomes in the future. B. J. Tindall pointed out that multilocus sequence typing studies have been developed for strain typing and population genetics studies, and that care should be taken when applying this approach to the delineation of species and higher taxa. In particular, such data should not be taken out of context of the biology of the organisms as a whole. The subcommittee will appoint an ad hoc committee to identify relevant genes.

Minute 6. Guidance/leadership to authors of papers discussing 16S rRNA sequences in relation to existing taxa of *Halobacteriaceae*. M. L. Dyall-Smith described a problem where an ASM journal reviewer of his submitted manuscript objected to the use of terms like ‘*Haloferox*-related group’ to describe a set of 16S rRNA gene sequences that were closely related to that of *Haloferox volcanii*. The issue was whether one should refer to a validly published name of a genus when describing isolates that are not formally classified or environmental 16S rRNA gene clones from organisms that had not been isolated or formally classified. The subcommittee agreed that using a term like ‘*Haloferox*-related group’ was reasonable, and that having to add a statement that no formal taxonomic proposals was being made should not be necessary.

Minute 7. Culture collections and their policy on distribution of micro-organisms. B. J. Tindall outlined changes in policy on the distribution of micro-organisms that are being implemented by a number of culture collections. This includes the introduction of a formal Material Transfer Agreement, which takes the form of a contract. The consequences may be far-reaching, with the first court case being brought in the USA. The form of Material Transfer Agreements or a discussion of their implementation may be found at <http://www.belspo.be/bccm/mosaic/> and <http://www.atcc.org/Order/mtalcfm>. Comments on the consequences of the wording and nature of Material Transfer Agreements may be found at <http://www.biomedcentral.com/news/20040809/03>, <http://www.biomedcentral.com/news/20040826/02> and <http://www.fems-microbiology.org/fems/publications/images/circular/fems-totaal.pdf>. The issue is of particular concern to the taxonomic community because of the importance of the continued wide availability of type strains. The subcommittee shares B. J. Tindall’s concerns on this issue.

Minute 8. Adjournment. The meeting was adjourned at 19:40 on 5 September 2004.

Session 2. Closed meeting

Minute 9. Call to order. The closed meeting was held on 5 September 2004 at the University of Ljubljana, Slovenia. The chairman, A. Ventosa, opened the meeting at 19:45.

Minute 10. Record of attendance. The subcommittee members present at the open meeting also attended the closed meeting. The meeting was also attended by M. L. Dyall-Smith and H. Stan-Lotter.

Minute 11. Approval of agenda. The agenda of the meeting was approved.

Minute 12. Minutes of previous meetings. The minutes of the meetings held in Paris, France on 30 July 2002 [Oren & Ventosa, *Int J Syst Evol Microbiol* 52 (2002), 2343–2344] were approved.

Minute 13. Confirmation of H. Stan-Lotter and M. L. Dyall-Smith as members of the subcommittee. H. Stan-Lotter and M. L. Dyall-Smith, who were nominated as new members of the subcommittee at its closed meeting in Paris in 2002, were unanimously accepted as members.

Minute 14. Resignation of L. I. Hochstein and A. Ramos-Cormenzana as members of the subcommittee. The secretary read letters from L. I. Hochstein and A. Ramos-Cormenzana in which they expressed the wish to resign from the subcommittee. The subcommittee accepted their resignations, and thanked these two members for their many years of activity in the subcommittee.

Minute 15. Current membership. The current membership of the subcommittee is as follows: A. Ventosa (Seville, Spain) (Chairman); A. Oren (Jerusalem, Israel) (Secretary); R. R. Colwell (Arlington, VA, USA); M. L. Dyall-Smith (Melbourne, Australia); W. D. Grant (Leicester, UK); M. Kamekura (Noda, Japan); C. D. Litchfield (Manassas, VA, USA); Y. Ma (Beijing, China); F. Rodríguez-Valera (Alicante, Spain); H. Stan-Lotter (Salzburg, Austria); B. J. Tindall (Braunschweig, Germany); and R. H. Vreeland (West Chester, PA, USA).

Minute 16. Next meeting of the subcommittee. The next meeting of the subcommittee will be held in association with the International Union of Microbiological Societies meetings to be held in San Francisco, CA, USA from 23 to 28 July 2005.

Minute 17. Adjournment. The meeting was adjourned at 19:50 on 5 September 2004.