Minutes

Stephen L. W. On, *Secretary*

International Committee on Systematics of Prokaryotes

Subcommittee on the taxonomy of *Campylobacter* and related bacteria

Minutes of the meeting, 31 July 2002, Paris, France

Closed meeting

Minute 1. Call to order. The Chairman, P. Vandamme, called the meeting to order at 15:00 on 31 July 2002 in Meeting Room 332M of the Palais des Congrès, Paris, France.

Minute 2. Record of attendance. The members present were P. Vandamme (Chairman), F. E. Dewhirst, M. Kist, F. Mégraud and S. L. W. On (Secretary). Apologies for absence were received from J. G. Fox, A. J. Lastovica, A. Lee, R. J. Owen, T. J. Trust and I. V. Wesley. Professor Kist was welcomed to his first meeting as a subcommittee member.

Minute 3. Agenda. The proposed agenda was approved.

Minute 4. Minutes of the previous meeting. The minutes of the meeting held in Freiburg, Germany on 2 and 4 September 2001 were approved [On, *Int J Syst Evol Microbiol* **52** (2002), 2339–2341]. However, an amendment to Minute 11 was tabled, in that it had also been suggested that a depository of strain DNA from fastidious species (notably *Helicobacter* spp.) would also facilitate taxonomic studies. P. Vandamme agreed to discuss this prospect with representatives of the World Federation of Culture Collections (WFCC).

Minute 5. Matters arising from the previous meeting

ATCC type strain of *Helicobacter cinaedi*. Following correspondence with the ATCC, S. L. W. On had received notification that the results of the in-house investigation had concurred with previous results and, as a result, ATCC 35683 would be designated a *Helicobacter fennelliae* strain. P. Vandamme remarked that this only addressed the problem in part and that the identity and origin of the strain remained unknown. In principle, if the origin of this *H. fennelliae* strain cannot be confirmed, it should be withdrawn from distribution. Furthermore, the correct type strain of *H. cinaedi* should be made available from ATCC and could be acquired from another international culture collection. S. L. W. On agreed to raise the matter with the ATCC.

DNA repository for fastidious *Helicobacter* species. P. Vandamme had contacted colleagues at the WFCC to investigate the possibility of establishing facilities for distribution of DNA from fastidious taxa to facilitate studies of such taxa. Regrettably, the WFCC representative felt that this was impractical.

Minute 6. Recent developments

Novel species. Three putative novel taxa had been described but their names had not yet been validated by publication in the IJSEM. These were '*Candidatus* *Arco-bacter sulfidicus*' [Wirsén *et al.*, *Appl Environ Microbiol* **68** (2002), 316–325], '*Helicobacter muricola*' [Won *et al.*, *FEMS Microbiol Lett* **209** (2002), 45–51] and '*Helicobacter marmotae*' [Fox *et al.*, *J Clin Microbiol* **40** (2002), 2513–2519]. P. Vandamme would check the procedure for validation of *Candidatus* species to determine whether it resembled that for validation of cultured species. The names *Helicobacter canadensis* and *Helicobacter typhlonius*, first proposed in journals outside the IJSEM, had now been validly published (Validation lists 84 and 85, respectively).

Validation of inappropriately described taxa. It was evident that species descriptions continued to be published in journals outside the IJSEM. A number of such descriptions did not meet the minimal standards for proposal of novel species of *Campylobacteraceae* [Ursing *et al.*, *Int J Syst Bacteriol* **44** (1994), 842–845] or *Helicobacter* [Dewhirst *et al.*, *Int J Syst Evol Microbiol* **50** (2000), 2231–2237], although names of some inappropriately described taxa had subsequently been validated by publication in the IJSEM Validation lists. The members of the subcommittee were concerned about this trend, and two possible measures were proposed to prevent names of poorly described species from being validated in this way. Firstly, that copies of the minimal standards papers could be sent to editors of journals other than IJSEM in which taxonomic descriptions had been, or were likely to be, made. A letter that explained the reasons for our actions would accompany the articles. The second approach involved contacting Norbert Weiss (List Editor, now succeeded by J. P. Euzéby) at the IJSEM to check the procedure for validation and suggest that members of the appropriate taxonomic subcommittees be responsible for checking

the quality of the description on which the proposal was based. P. Vandamme agreed to undertake the latter.

Taxonomic position of *Helicobacter nemestrinae*. A study based on multilocus sequence typing (MLST) of the type (and only) strain of *H. nemestrinae* [Suerbaum *et al.*, *Int J Syst Evol Microbiol* **52** (2002), 437–439] had indicated strongly that this isolate represented *Helicobacter pylori*. Additional results from PCR-RFLP analysis of the 23S rRNA gene (R. J. Owen) and re-examination of the G+C content of genomic DNA (P. Vandamme) concurred with the results of Suerbaum *et al.* (2002). Although DNA–DNA hybridization data are required to determine the taxonomic status of *H. nemestrinae* unequivocally, the subcommittee members felt that the current evidence strongly indicated that the *H. nemestrinae* type strain was, in fact, an *H. pylori* strain. Thus, *H. nemestrinae* should be considered a later synonym of *H. pylori*.

Environmental species belonging to the ϵ -subclass of the *Proteobacteria*. It was noted that an increasing number of 16S rRNA sequences derived from a wide range of environmental bacteria, and deposited in public databases such as GenBank, showed a clear affiliation to the ϵ -subclass of the *Proteobacteria*, and the genus *Arcobacter* in particular. As discussed previously [On, *Int J Syst Evol Microbiol* **52** (2002), 2339–2341], the remit of the subcommittee clearly extends to the study of such free-living species, but the current membership roster is heavily biased towards a medical/veterinary perspective. It was therefore agreed that the subcommittee would benefit from the recruitment of a specialist in environmental microbiology and/or ecology with a strong interest in the ϵ -subclass of the *Proteobacteria*. The subcommittee members agreed to identify possible candidates, evaluate their background, circulate details of potential candidates to the other members and ask such candidates if they would, in principle, be interested in membership of the subcommittee. This matter would be discussed again at the next meeting of the subcommittee in 2003.

Minute 7. Taxonomic and nomenclatural implications arising from the revised megaclassification of bacteria (Cavalier-Smith, 2002). The extensive and detailed treatise on bacterial evolution [Cavalier-Smith, *Int J Syst Evol*

Microbiol **52** (2002), 7–76] proposes extensive changes to existing bacterial classification and nomenclature. Of the changes that concern this subcommittee, the class *Epsilonbacteria* is used to refer to the ϵ -subclass of the *Proteobacteria* (also known as rRNA superfamily VI). More controversially, hyperthermophilic oxygen-reducing bacteria belonging to the order *Aquificales* are considered close phylogenetic relatives and proposed as the type order for the *Epsilonbacteria*. Most subcommittee members felt that the proposals of Cavalier-Smith required further study and consideration before they should be adopted for wider use.

Minute 8. Agenda for the open meeting of the subcommittee. P. Vandamme and S. L. W. On agreed to prepare an agenda for the open meeting of the subcommittee, scheduled for 16:30, directly after the closed meeting. It should be noted that no delegates of the International Union of Microbiological Societies (IUMS) Congress were received by 16:45, and the open meeting was cancelled as a result.

Minute 9. Matters concerning membership. The Secretary for Subcommittees (M. Goodfellow) had been contacted to confirm the duration of service of members elected to the positions of Chairman and Secretary. The term of service was confirmed as equivalent to two meetings of the IUMS Congresses and, thus, the current positions were due for re-election in 2005. As a consequence of his retirement from active research, Professor Jean-Paul Butzler had resigned from the subcommittee. The subcommittee thanks Professor Butzler for his contributions to its work and wished him a happy and healthy retirement. The current members of the subcommittee are: F. E. Dewhirst (USA), J. G. Fox (USA), M. Kist (Germany), A. J. Lastovica (South Africa), A. Lee (Australia), F. Mégraud (France), S. L. W. On (Secretary; Denmark), R. J. Owen (UK), T. J. Trust (USA), P. Vandamme (Chairman; Belgium) and I. V. Wesley (USA).

Minute 10. Next meeting. It was agreed that the next meetings of the subcommittee would be held at the 12th International Workshop on *Campylobacter*, *Helicobacter* and related organisms in Aarhus, Denmark, in 2003.

Minute 11. Adjournment. The meeting was adjourned at 16:18 on 31 July 2002.