

International Committee on Systematic Bacteriology Subcommittee on the Taxonomy of the Lactobacilli, Bifidobacteria, and Related Organisms

Minutes of the Meetings, 13 May 1991, Piacenza, Italy, and 14 May 1991, Bologna, Italy

Session 1. Closed meeting.

Minute 1. Call to order. The closed meeting was called to order at 10:15 a.m. on 13 May 1991 by Chairperson T. Mitsuoka.

Minute 2. Record of attendance. The members present were F. Dellaglio, W. Holzappel, A. Kagermeier-Callaway, K. W. Knox, E. Lauer, T. Mitsuoka, G. Reuter, B. Sgorbati, and N. Weiss. Apologies for absence were received from F. Gasser, J. London, and W. E. C. Moore.

Minute 3. Changes in membership. The members of the subcommittee were very sad to hear that two of their fellow members, Germain Mocquot and Morrison Rogosa, had passed away. Letters of resignation were received from O. Kandler, M. E. Sharpe, B. G. Shaw, and P. H. A. Sneath; all were thanked for their valuable contributions in a formal letter. T. Mitsuoka expressed his desire to resign as Chairperson. He nominated E. Lauer as Chairperson, the nomination was seconded by K. Knox, and the vote was unanimous. A. Kagermeier-Callaway was asked to remain as Recording Secretary until 1993.

Minute 4. New members. M. Collins (Reading, United Kingdom) was nominated by W. Holzappel to serve as a member of the subcommittee, the nomination was seconded by N. Weiss, and the vote was unanimous. The following six microbiologists were considered as candidates for membership: A. Bezkorovainy (Chicago, Ill.), B. Biavati (Bologna, Italy), L. Dicks (Stellenbosch, South Africa), F. Gavini (Ville-neuve d'Ascq, France), W. Hammes (Stuttgart, Germany), and M.-C. Montel (St.-Genes-Champanelle, France).

Minute 5. Call for old business. E. Lauer reported that a manuscript was in preparation on the issue of *Lactobacillus bavaricus* being synonymous with either *Lactobacillus curvatus* or *Lactobacillus sake*. N. Weiss indicated that *Lactobacillus brevis* subsp. *lindneri* obtained from spoiled beer was different from *Lactobacillus brevis*; a manuscript in which the name *Lactobacillus lindneri* would be revived was in preparation. N. Weiss also mentioned that *Pediococcus urinaequi* is identical to *Aerococcus viridans*. It was reported that the Secretary for Subcommittees had sent out a circular requesting minimal standards; W. Holzappel and N. Weiss agreed to prepare a first draft to be discussed at the next meeting.

Minute 6. Scope of the subcommittee. It was proposed that the new genus *Carnobacterium* should be included in the scope of the subcommittee. The Secretary was charged with contacting the Secretary for Subcommittees to request permission to do this.

Minute 7. New business. It was suggested that the relationship of *Lactobacillus maltaromicus* to the new genus *Carnobacterium* should be investigated.

Minute 8. New species. The following new species and subspecies were acknowledged as good species and subspecies by the subcommittee: *Bifidobacterium merycicum* (B. Biavati and P. Mattarelli, Int. J. Syst. Bacteriol. 41:163–168, 1991); *Bifidobacterium minimum* (B. Biavati, V. Scardovi, and W. E. C. Moore, Int. J. Syst. Bacteriol. 32:358–373, 1982); *Bifidobacterium subtile* (B. Biavati, V. Scardovi, and W. E. C. Moore, Int.

J. Syst. Bacteriol. 32:358–373, 1982); *Lactobacillus acetotolerans* (E. Entani, H. Masai, and K.-I. Suzuki, Int. J. Syst. Bacteriol. 36:544–549, 1986); *Lactobacillus bifementans* (O. Kandler, U. Schillinger, and N. Weiss, Syst. Appl. Microbiol. 4:408–412, 1983); *Lactobacillus graminis* (R. Beck, N. Weiss, and J. Winter, Syst. Appl. Microbiol. 10:279–283, 1988); *Lactobacillus halotolerans* (O. Kandler, U. Schillinger, and N. Weiss, Syst. Appl. Microbiol. 4:280–285, 1983); *Lactobacillus hamsteri* (T. Mitsuoka and T. Fujisawa, Proc. Jpn. Acad. Ser. B Phys. Biol. Sci. 63:269–272, 1987); *Lactobacillus intestinalis* (T. Fujisawa, K. Itoh, Y. Benno, and T. Mitsuoka, Int. J. Syst. Bacteriol. 40:302–304, 1990); *Lactobacillus kandleri* (W. H. Holzappel and E. P. Van Wyk, Zentralbl. Bakteriol. Parasitenkd. Infektionskr. Hyg. Abt. 1 Orig. Reihe C 3:495–502, 1983); *Lactobacillus kefir* (O. Kandler and P. Kunath, Syst. Appl. Microbiol. 4:286–294, 1983); *Lactobacillus kefiranoferiensis* (T. Fujisawa, S. Adachi, T. Toba, K. Arihara, and T. Mitsuoka, Int. J. Syst. Bacteriol. 38:12–14, 1988); *Lactobacillus malefermentans* (J. A. E. Farrow, B. A. Phillips, and M. D. Collins, FEMS Microbiol. Lett. 55:163–168, 1986); *Lactobacillus mali* (validated over *Lactobacillus yamanashiensis* Nonomura 1983; C. Kaneuchi, M. Seki, and K. Komagata, Int. J. Syst. Bacteriol. 38:269–272, 1988); *Lactobacillus minor* (O. Kandler, U. Schillinger, and N. Weiss, Syst. Appl. Microbiol. 4:280–285, 1983); *Lactobacillus oris* (J. A. E. Farrow and M. D. Collins, Int. J. Syst. Bacteriol. 38:116–118, 1988); *Lactobacillus parabuchneri* (J. A. E. Farrow, B. A. Phillips, and M. D. Collins, FEMS Microbiol. Lett. 55:163–168, 1986); *Lactobacillus paracasei* subsp. *paracasei* (M. D. Collins, B. A. Phillips, and P. Zanoni, Int. J. Syst. Bacteriol. 39:105–108, 1989); *Lactobacillus paracasei* subsp. *tolerans* (M. D. Collins, B. A. Phillips, and P. Zanoni, Int. J. Syst. Bacteriol. 39:105–108, 1989); *Lactobacillus pentosus* (P. Zanoni, J. A. E. Farrow, B. A. Phillips, and M. D. Collins, Int. J. Syst. Bacteriol. 37:339–341, 1987); *Lactobacillus rhamnosus* (M. D. Collins, B. A. Phillips, and P. Zanoni, Int. J. Syst. Bacteriol. 39:105–108, 1989); *Lactobacillus suebicus* (U. Kleynmans, H. Heinzl, and W. P. Hammes, Syst. Appl. Microbiol. 11:267–271, 1989); *Lactobacillus vaginalis* (T. M. Embley, N. Faquir, W. Bossart, and M. D. Collins, Int. J. Syst. Bacteriol. 39:368–370, 1989); *Leuconostoc carnosum* (B. G. Shaw and C. D. Harding, Int. J. Syst. Bacteriol. 39:217–223, 1989); *Leuconostoc gelidum* (B. G. Shaw and C. D. Harding, Int. J. Syst. Bacteriol. 39:217–223, 1989); *Leuconostoc pseudomesenteroides* (J. A. E. Farrow, R. R. Facklam, and M. D. Collins, Int. J. Syst. Bacteriol. 39:279–283, 1989); and *Pediococcus inopinatus* (W. Back, Brauwissenschaft 31:237–250, 312–320, and 336–343, 1978).

Minute 9. Adjournment. T. Mitsuoka thanked F. Dellaglio for hosting the meeting. The closed meeting was adjourned at 4:00 p.m.

Session 2. Open meeting.

Minute 10. Call to order. The open meeting was called to order at 2:00 p.m. on 14 May 1991 by Chairperson T. Mitsuoka.

Minute 11. Record of attendance. The members present were

F. Dellaglio, W. Holzapfel, A. Kagermeier-Callaway, K. W. Knox, E. Lauer, T. Mitsuoka, G. Reuter, B. Sgorbati, and N. Weiss. Apologies for absence were received from F. Gasser, J. London, and W. E. C. Moore. The guests present were B. Biavati, E. Boettger, C. Bonaparte, L. Dicks, M.-C. Montel, L. Morelli, D. Vaira, and about 20 students attending the University of Bologna, Bologna, Italy.

Minute 12. Call for research reports. The following research reports were presented: C. Bonaparte, "Methods Suitable for Distinguishing between *Bifidobacterium longum* and *B. animalis*"; E. Boettger, "Amplification and Direct Sequencing of 16S rRNA Genes and Its Importance for Taxonomy of Bacteria"; L. Dicks, "Reclassification of *Leuconostoc oenos* as *Garvia oenos* gen. nov., comb. nov." and "Designation of ATCC 334 in Place of ATCC 393 (NCDO 161) as the Neotype Strain of the Name *Lactobacillus paracasei* (Collins et al. 1989)"; W. Holzapfel, "Taxonomic Studies on a Rod-Shaped Thermophilic Lactic Acid Bacterium Used for the Commercial Production of a Fermented Maize Meal Product"; K. W. Knox, "Classification of *Lactobacillus* sp. by API 50CH and Computer Analysis"; M.-C. Montel, "Contribution of DNA-DNA Hybridization to the Practical Identification of Lactic Acid Bacteria from Meat"; L. Morelli, "Preliminary Consideration on the Use of RFLP in Lactic Acid Bacteria"; G. Reuter, "The Heterogene-

ity of the '*L. sake-curvatus*-group'; and D. Vaira, "Clinical Overview on *Helicobacter pylori*." A brief discussion followed each presentation.

Minute 13. Present membership. The following individuals are members of the Subcommittee on the Taxonomy of the Lactobacilli, Bifidobacteria, and Related Organisms: Matthew D. Collins, Reading, United Kingdom; Franco Dellaglio, Campobasso, Italy; Francis Gasser, Paris, France; Wilhelm Holzapfel, Karlsruhe, Germany; Angelika Kagermeier-Callaway (Secretary), Erlangen, Germany; Kenneth W. Knox, Sydney, Australia; Eckhard Lauer (Chairperson), Berlin, Germany; Jack London, Bethesda, Md.; Tomotari Mitsuoka, Tokyo, Japan; W. E. C. Moore, Blacksburg, Va.; Gerhard Reuter, Berlin, Germany; Vittorio Scardovi, Bologna, Italy; Barbara Sgorbati, Bologna, Italy; and Norbert Weiss, Braunschweig, Germany.

Minute 14. Date and place of next meeting. The next meeting of the subcommittee will take place in Bingen, Germany, in September 1993.

Minute 15. Adjournment. T. Mitsuoka thanked B. Sgorbati for hosting the meeting and all speakers for their contributions. The meeting was adjourned at 7:00 p.m. on 14 May 1991.

Angelika S. Kagermeier-Callaway, Secretary