Minutes

Kristina Lindström, *Secretary*
J.P.W. Young, *Acting Chairman*

International Committee on Systematics of Prokaryotes

Subcommittee on the taxonomy of *Agrobacterium* and *Rhizobium*

Minutes of the meeting, 31 August 2008, Gent, Belgium

Minute 1. Call to order. The meeting elected J. P. W. Young to serve as a chairperson in the absence of chairperson E. Martínez-Romero, at 16:00 on 31 August 2008 during the 8th European Nitrogen Fixation Conference in Gent, Belgium.

Minute 2. Record of attendance. The members present were B. Eardly, P. de Lajudie, K. Lindström, P. Vinuesa, A. Willems and J. P. W. Young. All subcommittee members had the opportunity to participate in the online discussions.

Minute 3. Membership issues. The new subcommittee member Gehong Wei, China, was welcomed. It was proposed to invite Dr Kemanthie Nandasena, Australia, to the subcommittee. She has published descriptions of rhizobial species and made discoveries of the role of horizontal gene transfer in rhizobial speciation and diversification. During the online-phase of this meeting, Dr Nandasena was subsequently unanimously elected a new member of the subcommittee.

Minute 4. Scope of the subcommittee. It was decided that root-nodule bacteria other than the Alpha-rhizobia, as well as non-nodulating related species will also be covered, and that interaction with subcommittees covering other nodulating taxa will be sought.

Minute 5. New taxa described since the last meeting. In some of the new taxa described since 2006, only one representative strain was analysed in detail. The opinion of the subcommittee is that when novel species are described, a number of strains (a minimum of three) isolated from different sites should be used and analyses should be carried out on several strains representing the diversity of the species. To avoid the possibility that the strains represent closely related clones, genomic fingerprints of the selected strains should be displayed. It is also recommended that several strains representing the population of the novel species should be deposited in two collections when the species description is published.

The following new species were recorded: *Mesorhizobium albiziae* Wang *et al.* [Int J Syst Evol Microbiol 57 (2007), 1192–1199], isolated from *Albizia kalkora*. *Mesorhizobium caraganae* Guan *et al.* [Int J Syst Evol Microbiol 58 (2008), 2646–2653], a novel rhizobial species nodulated with

Caragana spp. in China. *Mesorhizobium gobiense* and *Mesorhizobium tarimense* Han *et al.* [Int J Syst Evol Microbiol 58 (2008), 2610–2618], isolated from wild legumes growing in desert soils of Xinjiang, China. *Rhizobium cellulosilyticum* García-Fraile *et al.* [Int J Syst Evol Microbiol 57 (2007), 844–848] isolated from sawdust of *Populus alba*. *Rhizobium daejeonense* Quan *et al.* [Int J Syst Evol Microbiol 55 (2005), 2543–2549] isolated from a cyanide treatment bioreactor. *Rhizobium fabae* Tian *et al.* [Int J Syst Evol Microbiol 58 (2008), 2871–2875], a bacterium that nodulates *Vicia faba*. *Rhizobium lusitanum* Valverde *et al.* [Int J Syst Evol Microbiol 56 (2006), 2631–2637], which nodulates *Phaseolus vulgaris*. *Rhizobium miluonense* Gu *et al.* [Int J Syst Evol Microbiol 58 (2008), 1364–1368], a symbiotic bacterium isolated from *Lespedeza* root nodules. *Rhizobium multihospitium* Han *et al.* [Int J Syst Evol Microbiol 58 (2008), 1693–1699], isolated from multiple legume species native of Xinjiang, China. *Ochrobactrum cytisi* Zurdo-Piñeiro *et al.* [Int J Syst Evol Microbiol 57 (2007), 784–788], isolated from nodules of *Cytisus scoparius* in Spain. *Ochrobactrum lupini* Trujillo *et al.* [Appl Environ Microbiol 71 (2005) 1318–1327.] Validation List No. 110. Int J Syst Evol Microbiol 56 (2006), 1459–1460], isolated from root nodules of *Lupinus albus*. *Phyllobacterium trifolii* Valverde *et al.* [Int J Syst Evol Microbiol 55 (2005), 1985–1989], nodulating *Trifolium* and *Lupinus* in Spanish soils. *Shinella kummerowiae* Lin *et al.* [Int J Syst Evol Microbiol 58 (2008), 1409–1413], a symbiotic bacterium isolated from root nodules of the herbal legume *Kummerowia stipulacea*. *Burkholderia mimosarum* Chen *et al.* [Int J Syst Evol Microbiol 56 (2006), 1847–1851], isolated from root nodules of *Mimosa* spp. from Taiwan and South America. *Burkholderia nodosa* Chen *et al.* [Int J Syst Evol Microbiol 57 (2007), 1055–1059], isolated from root nodules of the woody Brazilian legumes *Mimosa bimucronata* and *Mimosa scabrella*. *Burkholderia sabiae* Chen *et al.* [Int J Syst Evol Microbiol 58 (2008), 2174–2179], isolated from root nodules of *Mimosa caesalpinifolia*.

Minute 6. The phylogeny and naming of *Sinorhizobium* versus *Ensifer*. The Judicial Commission of the International Committee on Systematics of Prokaryotes published a reply to the Request for an Opinion by Willems *et al.* (2003) in the *International Journal of Systematic and*

Evolutionary Microbiology **58** (2008), 1973. The Judicial Commission affirms that the genus name *Sinorhizobium* Chen *et al.* 1988 is a later synonym of *Ensifer* Casida 1982, and that the former genus name is not conserved over the latter genus name. The species name '*Sinorhizobium adhaerens*' is not validly published. The subcommittee did not disagree with this interpretation.

The motivation of the Judicial Commission was as follows: 'The genus name *Ensifer* Casida 1982 has priority over the genus name *Sinorhizobium* Chen *et al.* 1988, and the two names have been shown by Willems *et al.* (2003) to be synonyms. It was generally felt that the transfer of the members of the genus *Sinorhizobium* to the genus *Ensifer* would not cause confusion and, therefore, the Judicial Commission denied the request to conserve the genus name *Sinorhizobium* Chen *et al.* 1988 over the genus name *Ensifer* Casida 1982'. The subcommittee disagrees with the justification. The transfer of the members of the genus *Sinorhizobium* to the genus *Ensifer* would cause great confusion in the scientific community. At a session of the 8th European Nitrogen Fixation Conference on 31 August 2008, an overwhelming majority of those present indicated that they were not in favour of changing the name from *Sinorhizobium* to *Ensifer*.

Minute 7. The home page. The new subcommittee website was made public in January 2007 and can be accessed at <http://edzna.ccg.unam.mx/rhizobial-taxonomy>.

Minute 8. Biovar designations. Biovar designations reflect host specificity. Isolates should be tested for host range and if the same biovar name is given to representatives of different species, the phylogeny of symbiotic genes should be in separate clades.

Minute 9. Current membership. The current members of the subcommittee are E. Martínez-Romero (Mexico) (Chairperson), K. Lindström (Finland) (Secretary), P. van Berkum (USA), B. Eardly (USA), W. X. Chen (China), B. D. W. Jarvis (New Zealand), G. Laguerre (France), P. de Lajudie (France), K. Nandasena (Australia), X. Nesme (France), P. Vinuesa (Mexico), G. Wei (China), A. Willems (Belgium) and J. P. W. Young (UK).

Minute 10. Next meeting. The next meeting is scheduled for 2010. The location will be announced later.

Minute 11. Adjournment. The meeting was adjourned at 17:45 on 31 August 2008. The meeting was continued online and closed on 17 November 2008.