International Committee on Systematic Bacteriology Subcommittee on Phage-Typing of Staphylococci

Minutes of the Meeting, 5 August 1982, Boston, Massachusetts

Session 1. Closed meeting

Minute 1. Call to order. The eighth meeting of the Subcommittee was called to order on 5 August 1982 by the Chairman, K. Rosendal.

Minute 2. Record of attendance. Members present were: K. Rosendal (Chairman), M. de Saxe (Secretary), P. Ewan, J. M. Fouace, C. Goddard, A. Torres-Pereira, and A. Vickery. The following two members who were unable to attend the meeting sent representatives: W. Koller (represented by G. Wewalka) and L. O. Kallings (represented by R. Wollin).

Minute 3. Minutes of the previous meeting. The minutes of the seventh meeting of the Subcommittee (Int. J. Syst. Bacteriol. 32:253, 1982) were tabled.

Minute 4. Membership. The Subcommittee learned with regret of the death of V. Matejovska, who had represented Czechoslovakia on the Subcommittee for many years. Other changes in the list of members were noted. It was agreed that the membership of national representatives who had been inactive since the last meeting should lapse. The Subcommittee would now be free to appoint new members for these countries on the recommendation of local authorities. Thus, the present list of representatives of 37 national staphylococcal phage-typing laboratories is as follows: D. S. Agarwal, New Delhi, India; A. K. Akatov, Moscow, Union of Soviet Socialist Republics; F. A. Al-Rawi, Baghdad, Iraq; H. Brandis, Bonn, Federal Republic of Germany; P. Byrd-Smith, Atlanta, Ga., United States; J. Casal, Madrid, Spain; E. T. Cetin, Istanbul, Turkey; V. F. Chan, Manila, Philippines; M. de Saxe (Secretary), London, United Kingdom; Doki Chun, Taegu, Republic of Korea; Dong, Chendu, Republic of China; P. Ewan, Ottawa, Canada; J.-M. Fouace, Paris, France; T. H. Fuh, Taipei, Taiwan; C. Goddard, Brussels, Belgium; E. Gomez de Mujica, Maracaibo, Venezuela; M. Grigorova, Sofia, Bulgaria; S. Krynski, Gdansk, Poland; D. Martin, Wellington, New Zealand; H. Milch, Budapest, Hungary; S. Mitsuhashi, Maebashi, Japan; L. O. Kallings, Stockholm, Sweden; P. Oeding, Bergen, Norway; G. Orefici, Rome, Italy; O. A. N. Pessat, Cordoba, Argentina; M. Popovici, Bucharest, Romania; I. Rantasalo, Helsinki, Finland; H. Reber, Basel, Switzerland; K. Rosendal (Chairman), Copenhagen, Denmark; R. Skalova, Zagreb, Yugoslavia; C. Solé-Vernin, Sao Paulo, Brazil; D. Sompolinsky, Tel-Aviv, Israel; A. Torres-Pereira, Lisbon, Portugal; W. J. Van Leeuwen, Bilthoven, The Netherlands; A. Vickery, Camperdown, Australia; W. Witte, Wernigerode, German Democratic Republic; and Jan Zdravilek, Prague, Czechoslovakia.

The Staphylococcal Reference Unit, Division of Hospital Infection, Central Public Health Laboratory, London, United Kingdom, acts as the International Center for staphylococcal phage typing; E. M. Cooke has been appointed as the new director of the Division.

Minute 5. Organization of international typing services. The unanimous opinion of those present was that the current organization, in which each country has a single representative on the Subcommittee who has the responsibility of providing typing services within his or her own country,

continues to be the only appropriate one for carrying out the duties of the Subcommittee (i.e., the provision of typing phages and the maintenance of international standardization and an effective typing method for *Staphylococcus aureus*). The Secretary stated that, for financial and technical reasons, it was not feasible for the International Center to supply phages "on demand." Members were asked to inform the Secretary if they would be able to help workers in neighboring countries who were without national centers and therefore unable to obtain the phages.

Minute 6. Implications of the new international postal regulations. Although the International Center will continue to supply the typing phages and propagating strains free of charge to Subcommittee members, the Secretary announced that members of countries that have not yet agreed to the new postal regulations will have to meet the additional cost of sending these reagents by air freight. Some members present were concerned that this increased cost might inhibit the exchange of phages and strains and that, as a result, standards of typing could suffer. They recommended that members should make appropriate representations to their national authorities whenever necessary to try to improve the situation.

Minute 7. International standardization: report on the eighth comparative typing test. The Secretary introduced the new form of report, which was designed to help laboratories identify where their difficulties arose. Most of the 30 national centers and 37 British laboratories that took part in this test achieved reasonably satisfactory results. As in previous tests, the use of a phage concentration that was too low and the use of an inadequate typing medium were the chief causes of loss of phage reactions and, therefore, of non-typability. However, several national laboratories obtained discrepant results because the specificity of some of the typing phages which they propagated was wrong.

It was agreed that workers should not be complacent about their methods and that they should be alerted to possible sources of error. Every effort should be made to achieve a high standard of typing; to monitor this, it is essential that the international comparative tests of typing be continued.

Minute 8. Typability of *S. Aureus*. More than one-half of the national centers reported that they could type at least 80% of their routine isolates with the basic set of phages. The results of the comparative typing test suggested that the low level of typability reported by some centers was probably due to inadequate typing methods rather than to a lack of phage sensitivity of the strains tested. Members found that untypable strains only occasionally caused outbreaks and that, if necessary, alternative phage-typing methods, such as heat shock or reverse typing, could be used to investigate these incidents. Although multiply resistant strains were causing problems in several countries, they were still uncommon in the majority and were usually typable. Experienced workers had little difficulty interpreting the rather variable typing patterns shown by some of these strains. A total of 53 experimental phages were in use in various

laboratories, but the available information suggested that these phages only marginally increased the level of typability, and none merited inclusion in the basic set. It was agreed, however, that more information was needed to establish whether any of the more active phages was sufficiently specific for the identification of individual strains and whether such strains caused outbreaks.

Minute 9. *The 94,96 complex of strains.* Strains lysed by phages 94 and 96 were common in many countries and often caused serious problems. There was agreement that subdivision of the group is needed so that strains can be distinguished. Members expressed their willingness to evaluate new phages selected for this purpose.

It was felt that the proposal to create a new lytic group V, to which phages 94 and 96 would be allocated, is premature. The Secretary was instructed to circulate the information on these phages and the strains lysed by them to all members so that they could consider whether the formation of a new lytic group is justified.

Minute 10. *Composition of the basic set of phages for typing human strains of S. aureus.* As none of the experimental phages in current use appears sufficiently useful, the Subcommittee recommended that the international basic set of phages remain unchanged. This set consists of the following 23 phages: group I, phages 29, 52, 52A, 79, and 80; group II, phages 3A, 3C, 55, and 71; group III, phages 6, 42E, 47, 53, 54, 75, 77, 83A, 84, and 85; and unallocated, phages 81, 94, 95, and 96.

Session 2. Open meeting

Minute 11. *Agenda for the open meeting.* Members were reminded that an open meeting would be held on 10 August at which current problems in the typing of staphylococci would be discussed. The agenda would include a report of the closed meeting and papers on the following topics would be presented: (i) the subdivision of the 94, 96 group of strains (M. de Saxe and K. Rosendal); (ii) new phages for the differentiation of methicillin-resistant strains in Australia (A. Vickery); and (iii) problems encountered in phage typing oxacillin-resistant strains from an outbreak of hospital infection in Brussels (C. Goddard).

Minute 12. *Future collaborative investigations.* It was concluded that the priorities for future collaborative studies are (i) the continuation of the comparative typing trials, (ii) the evaluation of phages for subdivision of the 94,96 group of strains, and (iii) the collection of information about strains causing outbreaks, with respect to both typability with the basic set of phages and experimental phages and drug resistance.

Minute 13. *Other business and close of meeting.* A. Vickery expressed the appreciation of the Subcommittee members to the Secretary for the work carried out by the International Center. After thanking those present for their participation, the Chairman called the meeting to a close.

MAUREEN DE SAXE, *Secretary*
KIRSTEN ROSENDAL, *Chairman*