INTRODUCTION TO THE SUBJECT

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SUBCOMMITTEE ON PHAGE TYPING
OF STAPHYLOCOCCI

Minutes of the Third Meeting

1. The third meeting of the Subcommittee was held at
McGill University, Montreal, on August 16, 1962. Members present were:

Chairman
Dr. J. E. Blair, New York, USA

Secretary
Prof. R. E. O. Williams, London

Australia
Dr. Phyllis M. Rountree, Camperdown

Britain
Dr. M. T. Parker, London

Canada
Dr. E. T. Bynoe, Ottawa

Czechoslovakia
Prof. K. Raska, Prague

Denmark
Dr. K. Rosendal, Copenhagen

France
Dr. R. Wahl, Paris

Italy
Prof. V. Ortali, Rome

Japan
Prof. I. Ishihara, Maebashi

Norway
Prof. Th. M. Vogelsang, Bergen

Poland
Prof. R. Pakula, Warsaw

Portugal
Dr. M. Moreira-Jacob, Lisbon

Sweden
Dr. L. O. Kallings, Stockholm

United States
Dr. Elaine L. Updyke, Atlanta, Georgia

2. Membership and officers. The Subcommittee reaffirmed the policy agreed at the previous meetings that the membership of the Subcommittee should comprise one representative from each country in which phage typing is actively pursued for public health, hospital or veterinary investigations, and that the representative should ordinarily be the chief of the national staphylococcus laboratory for the country concerned. Where no such laboratory exists the representative should be chosen by the appropriate workers in the country.

Dr. J. E. Blair was re-elected Chairman of the Subcommittee for the period up to the next meeting.

Professor R. E. O. Williams resigned from the secretaryship, and Dr. M. T. Parker now director of the Staphylococcus Reference Laboratory at Colindale, was elected secretary. Professor Williams was asked to remain a member of the Subcommittee until the next meeting.
3. **Constitution of basic set of typing phages.** After discussion it was agreed to retain all the phages at present included in the basic set and to add one additional phage, 83A (group III), which has been found to be the only phage lysing a number of staphylococci from hospital infections in several countries.

It was agreed that no further changes should be made in the basic set before the next meeting of the Subcommittee, but that more opportunity might be taken to circulate potentially useful new phages to national laboratories in the interval. Such circulation, and the allocation of "official" numbers to new phages, would be arranged by the Secretary. It was agreed that phage 82 should be circulated for investigation.

4. **Classification of the 52/52A/80/81 complex.** The Subcommittee considered the nomenclature of the phage types within the complex of staphylococci lysed by one or more of the phages 52, 52A, 80 and 81. Experimental results were presented from which it appears that the strains lysed only by phages 80 and 81 (at RTD and 1000 x RTD) form a homogeneous subdivision of the 52/52A/80/81 complex. If these results are confirmed by wider experience it may be advisable to restrict the term "type 80/81" to staphylococci lysed only by phages 80 and 81 but not by phages 52 or 52A either at RTD or at 1000 x RTD. Further subdivision of this complex of staphylococci, by the use of more phages or by study of the lysogenic state of the strains, is not to be recommended for routine purposes at present. Further investigation is needed of the relations between strains other than "type 80/81" in the complex.

5. **Comparative typing test.** Dr. Parker presented the results of the comparative test conducted in 1961-62. It was agreed that these tests are very valuable and it was suggested that the next test might be carried out in about 2½ years, and that national laboratories should be invited to distribute the test strains to other phage workers in their countries and collate the results for reporting at the next meeting of the Subcommittee. The results from the national laboratories themselves would, as in the past, be collated by the Staphylococcus Reference Laboratory at Colindale.

It was also agreed that new seed phage should be issued to national laboratories about every 4 years.
6. Technical aspects of phage typing. There was much discussion on the possibility of introducing further standardization of media and methods. While it was felt that agreement on one culture medium was impracticable, it was agreed that each laboratory should adhere to one medium and carry out all titration of phage on the medium to be used for testing. It was agreed that incubation of the typing plates was best carried out at 30° overnight.

It was also agreed that the alternate procedure of incubating the typing plates at 37° for 4-6 hours and then holding at room temperature overnight should no longer be recommended; authorization was given to strike out the sentence permitting this practice from the reprints of the Subcommittee's official statement, as published in the Bulletin of the World Health Organization, volume 24, 1961.

Several members reported investigations of the value of heat treatment of untypable strains of staphylococci to increase phage susceptibility. Though of limited use, the method has not been explored sufficiently yet to warrant its general recommendation.

Dr. Parker introduced a report by Dr. M. Patricia Jevons showing that the propagating strains of staphylococci are best stored on agar at room temperature.

Professor Williams and Dr. Parker reported plans to prepare a large batch of standard preparations for issue of phage to national laboratories. These could be used, reconstituted but without further propagation, for comparison with newly propagated batches of phage, thus reducing the difficulties arising from variation in test strains of staphylococci. The World Health Organization has offered financial support to this project.

7. Changes in phage-type distribution. After noting reports from Denmark and Britain on the rising prevalence of staphylococci lysed only by phage 83A, the Subcommittee discussed methods for obtaining samples of the staphylococci of epidemiological importance in any situation. It was felt important to define precisely the aim of any survey and to ensure that the population sampled was a relevant one and was fully described in any published report.

8. Liaison with World Health Organization. It was reported that the World Health Organization intended to recognize the Staphylococcus Reference Laboratory at Colindale as a W.H.O. International Reference Laboratory. The Subcommittee expressed its strong support for this move.
9. **Typing of staphylococci from animal sources.** After discussion it was agreed that there is a great need for standardization of the phages used for typing staphylococci from animal sources. Dr. Ian Davidson of the Ministry of Agriculture Veterinary Research Laboratories, Weybridge, England has offered to try to organize an exchange of information among veterinary bacteriologists with a view to defining a suitable set of phages. The Subcommittee agreed that Dr. Davidson should be given every encouragement and assistance in this project, and that it might be suitable to arrange a joint discussion on the subject with some of the veterinary bacteriologists concerned at the next meeting of the Subcommittee.

10. In closing the meeting the Chairman expressed the Subcommittee's thanks to Professor Williams for his work in organizing the Subcommittee and acting as its Secretary since 1953.