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EXPERT COMMITTEE ON BIOLOGICAL STANDARDIZATION

Thirteenth Report

WORLD HEALTH ORGANIZATION

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1960

EXPERT COMMITTEE ON BIOLOGICAL STANDARDIZATION

Geneva, 31 August-5 September 1959

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EXPERT COMMITTEE ON BIOLOGICAL STANDARDIZATION

Thirteenth Report *

The Expert Committee on Biological Standardization met in Geneva from 31 August to 5 September 1959.

Dr P. Dorolle, Deputy Director-General, on behalf of the Director-General of the World Health Organization, welcomed the members of the Committee, the temporary advisers, and the representative of the Food and Agriculture Organization of the United Nations.

Recalling the long traditions of this Expert Committee, the Deputy Director-General surveyed the large range of substances of great importance in therapy and prophylaxis, which were included in the present agenda. The decisions of the Committee would affect the potency notation used by biological research workers and clinicians throughout the world, as well as the procedures of those whose task it is to control the biological drugs that are made available to the public. An item that required special consideration in this session was the proposal to make available, on a larger scale than hitherto, diagnostic reference reagents for direct routine use in laboratories engaged in the diagnosis of disease and in the identification of micro-organisms. This project must be based on standardization principles in order to ensure the specificity, potency, and stability of the diagnostic material that was to be provided.

PHARMACOLOGICAL

ANTIBIOTICS

1. Amphotericin B

The Committee noted that the National Institute for Medical Research, London, had obtained a quantity of amphotericin.[1] The Committee established this material as the International Reference Preparation of Amphotericin B.

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* The Executive Board, at its twenty-fifth session, adopted the following resolution:
The Executive Board
1. NOTES the thirteenth report of the Expert Committee on Biological Standardization,
2. THANKS the members of the Committee for their work; and
3. AUTHORIZES publication of the report.
(Resolution EB25.R2, *Off. Rec. Wld Hlth Org.*, 1960, **99**, 5)

[1] Unpublished working document WHO/BS/478

2. Bacitracin

The Committee noted that the stock of the International Standard for Bacitracin would soon be exhausted,[1] and it requested the National Institute for Medical Research, London, to obtain suitable material for its replacement and to arrange a collaborative assay.

3. Gramicidin

The Committee was of the opinion that there is a need for an international reference preparation of gramicidin and it requested the National Institute for Medical Research, London, to obtain a quantity of gramicidin suitable for this purpose.

4. Kanamycin

The Committee noted that the National Institute for Medical Research, London, had obtained a quantity of kanamycin sulfate.[2] The Committee established this material as the International Reference Preparation of Kanamycin.

5. Leucomycin

The Committee noted that the quantity of leucomycin obtained by the National Institute for Medical Research, London,[2] was insufficient for serving as an international reference preparation. It requested the National Institute for Medical Research to reassess the need for an international reference preparation of this antibiotic.

6. Neomycin B

The Committee noted that investigation had indicated that the International Reference Preparation of Neomycin contained an antibiotic component which had not yet been identified.

The Committee also noted that the National Institute for Medical Research, London, had examined several samples of neomycin but had not yet been able to obtain a preparation sufficiently pure to serve as the international standard for neomycin B.[3]

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[1] Unpublished working document WHO/BS/481

[2] Unpublished working document WHO/BS/478

[3] Unpublished working document WHO/BS/491

7. Novobiocin

The Committee noted that the International Reference Preparation of Novobiocin had been found suitable to serve as an international standard and that a collaborative assay of this material was in progress.[1] It authorized the National Institute for Medical Research, London, to establish the International Standard for Novobiocin and to define the international unit with the agreement of the participants in the collaborative assay.

8. Nystatin

The Committee noted that progress was being made towards the replacement of the International Reference Preparation of Nystatin by an international standard.[2]

9. Oleandomycin

The Committee noted that the International Reference Preparation of Oleandomycin had been found suitable to serve as an international standard and that a collaborative assay of this material was in progress.[3] It authorized the National Institute for Medical Research, London, to establish the international Standard for Oleandomycin and to define the international unit with the agreement of the participants in the collaborative assay.

10. Penicillin: Unit Notation

The Committee considered a published proposal of the Commission d'études des antibiotiques, France, that " for the administration of penicillin the doses of the antibiotic should no longer be expressed in units but in terms of weight of penicillin anion ".[4] The National Institute for Medical Research, London, had obtained the opinions of experts in different countries on this proposal and, although there had been no unanimity of opinion among the experts, the majority had expressed the view that a change in the present method of notation would be premature.

The Committee agreed with this view and decided not to change the definition of the International Unit of Penicillin, which is the activity of 0.0005988 mg of the International Standard for Penicillin. The Committee

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[1] Unpublished working document WHO/BS/472

[2] Unpublished working document WHO/BS/476

[3] Unpublished working document WHO/BS/477

[4] France, Commission d'études des antibiotiques (1959) *Thérapie*, **14**, 9

asked the National Institute for Medical Research to propose for the next meeting of the Committee an alternative definition of the International Unit of Penicillin in terms of theoretically pure penicillin acid.

11. Procaine Benzylpenicillin in Oil with Aluminium Monostearate (PAM)

The Committee considered the final report [1] on the collaborative study of various batches of PAM and noted that the National Institute for Medical Research, London, had been unable, because of the inconsistency of the results obtained in man, to establish an international reference preparation.

The Committee noted a report [2] on the results obtained during the last eight years in testing 600 samples of PAM by the blood-level duration test in man, as specified in the requirements [3] adopted by the World Health Organization for the purpose of selecting batches of PAM for use in field projects. The Committee asked the National Institute for Medical Research, London, to obtain further details of these results and to subject them to an analysis on the basis of the responses to the injection of PAM that had been observed in individuals.

The Committee was informed that PAM was in continued and widespread use for the treatment of treponematoses in programmes involving millions of people; it therefore agreed that there was an urgent need for developing a more satisfactory method of evaluating the ability of PAM to provide a persistent concentration of penicillin in the circulating blood. It was recognized that this would involve extensive research by a group of scientists over a period of at least two years, but in view of the magnitude of the need the Committee recommended that the work be done. Considerable experience in the study of PAM has been accumulated by the National Institute for Medical Research, London, and the Committee therefore considered that it would be desirable if this Institute would undertake to arrange the further work.

12. Ristocetin

The Committee noted that the National Institute for Medical Research, London, had not yet been able to obtain a quantity of ristocetin suitable for serving as an international reference preparation.[4]

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[1] Unpublished working document WHO/BS/484

[2] Unpublished working document WHO/INT/VDT/122 and Corr. 1

[3] *Wld Hlth Org. techn. Rep. Ser.*, 1953, **63**, 55