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Sixteenth Report

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WHO EXPERT COMMITTEE ON BIOLOGICAL STANDARDIZATION

Geneva, 30 September - 5 October 1963

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WHO EXPERT COMMITTEE ON BIOLOGICAL STANDARDIZATION

Sixteenth Report

The WHO Expert Committee on Biological Standardization met in Geneva from 30 September to 5 October 1963.

Dr P. Dorolle, Deputy Director-General, on behalf of the Director-General, welcomed the members of the Committee. He also welcomed the representative of the Food and Agriculture Organization of the United Nations, who is also the Director of the Veterinary Laboratory and Investigation Services at Weybridge where the third International Laboratory for Biological Standards was designated a year ago.

Recalling the development of biological standardization, the Deputy Director-General said that the members of the Committee were already aware of the importance of this work in the field of health. He would like, however, to point out as well its importance to WHO's intensified programme of medical research and as a service to research in general. He also asked the Committee to keep in mind the difficulties that developing countries had in the control of biological substances used by them in medical and public health work.

Commenting briefly on the agenda before the present meeting he stated that over the years many international biological standards and reference preparations had been established, but there was need for others. It was the duty of successive expert committees to advise the Organization which standards to establish and then proceed to establish them. These standards were needed to facilitate the designation of potency of biological substances. More recently WHO had realized the importance of minimum requirements which had to be fulfilled to ensure the efficacy and safety of biological substances used in prophylaxis and therapy. The present meeting would also consider certain sets of requirements which had been formulated and circulated to experts in member countries.

GENERAL

The Committee considered certain aspects of its work on biological standardization. The third International Laboratory for Biological Standards which had been designated about a year ago was now operational.[1] Close collaboration had been established with the other interna-

[1] Unpublished working document WHO/BS/628.

tional laboratories at Copenhagen and London, and the third laboratory, at Weybridge, had already assumed responsibility for the custody and distribution of certain international standards and reference preparations that were primarily of veterinary importance. In addition, a programme of work for the establishment of several new standards and reference preparations had been initiated.

Considering the aims and purposes of international biological standardization and the provision of international requirements for biological substances, the Committee reviewed the current measures for the dissemination of information on the availability of international standards and requirements. In spite of the wide and regular distribution already made of WHO publications on these items, the Committee agreed that other means of promoting the use and application of international standards and requirements should be examined.

It had always been intended that international standards should be used to calibrate national standards. The Committee underlined the importance of preparing national standards and research standards, since this not only helped in conserving the international standards but also provided unique information on various aspects of standardization, such as techniques of assay and the stability of both international and national standards. Some laboratories, however, were often hesitant to prepare their own standards and the Committee agreed that these laboratories should receive help and guidance from laboratories with greater experience in this work. The international laboratories for biological standards were well fitted to give such assistance. Nevertheless, there may be major difficulties in preparing national standards for some substances on account of their complexity. In such cases, a supply of calibrated working standards would be of great help; working standards were already available for certain substances, as for example corticotrophin. The Committee would endeavour where possible to arrange for the supply of working standards for other selected substances, as technical considerations and availability of materials may permit.

PHARMACOLOGICAL

ANTIBIOTICS

1. Novobiocin

The Committee noted [1] the progress made in the collaborative study of a sample of novobiocin; reports from all but one of the seven participating laboratories had been received. The Committee authorized the National

[1] Unpublished working document WHO/BS/638.

Institute for Medical Research, London, to establish this material as the International Standard for Novobiocin on the basis of the results of the collaborative assay and to define the international unit with the agreement of the participants.

2. Ristocetins

The Committee noted [1] that the International Reference Preparation of Ristocetin consists predominantly of ristocetin A and is therefore not suitable to serve alone for the assay of ristocetin preparations which are mixtures of ristocetin A and ristocetin B. The Committee was of the opinion that international reference preparations of both ristocetin A and ristocetin B would serve a useful purpose and considered the International Reference Preparation of Ristocetin suitable to serve as an international reference preparation of ristocetin A. The Committee was informed that the National Institute for Medical Research, London, had obtained a sample of ristocetin B and requested the National Institute for Medical Research to determine its suitability for use as an international reference preparation.

3. Nystatin

The Committee noted [2] that in accordance with the authorization in its fourteenth report [3] and with the agreement of the participants in the collaborative assay the International Unit for Nystatin had been defined as the activity contained in 0.000333 mg of the International Standard for Nystatin. There was no evidence of instability of the international standard as such, but in view of the inherent instability of nystatin, the Committee requested the National Institute for Medical Research, London, to carry out stability tests.

4. Dihydrostreptomycin

The Committee noted [1] that the collaborative study of the material referred to in its fifteenth report [4] had been performed and that the results were being analysed statistically. The Committee authorized the National Institute for Medical Research, London, to establish this material as the second International Standard for Dihydrostreptomycin on the basis of the collaborative assay, and to define the international unit with the agreement of the participants.

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[1] Unpublished working document WHO/BS/638.

[2] Unpublished working document WHO/BS/646.

[3] *Wld Hlth Org. techn. Rep. Ser.*, 1961, **222**.

[4] *Wld Hlth Org. techn. Rep. Ser.*, 1963, **259**.

5. Colistin

The Committee noted [1] that, in accordance with the request in its fifteenth report,[2] quantities of different national standard preparations had been obtained. These preparations differed when tested both biologically and chemically. The Committee was informed that two colistin preparations are in clinical use, namely colistin sodium methane sulfonate and colistin sulfate. The Committee decided that there was a need for international reference preparations of both colistin sodium methane sulfonate and colistin sulfate and requested the National Institute for Medical Research, London, to obtain samples of both preparations and, in collaboration with national control laboratories, to make a preliminary evaluation of these materials as regards their identity and their potency relative to the national standards.

6. Vancomycin

The Committee noted [3] that studies of the International Reference Preparation of Vancomycin had been made and that the material was suitable to serve as an international standard.

The Committee therefore established this material as the International Standard for Vancomycin, which replaces the international reference preparation. The Committee decided that the international unit for vancomycin should remain unchanged and defined the International Unit for Vancomycin as the activity contained in 0.000993 mg of the International Standard for Vancomycin.

7. Amphotericin B

The Committee noted [3] that studies of the International Reference Preparation of Amphotericin B had been made and that the material was suitable to serve as an international standard.

The Committee therefore established this material as the International Standard for Amphotericin B, which replaces the international reference preparation. The Committee decided that the International Unit for Amphotericin B should remain unchanged and defined the International Unit for Amphotericin B as the activity contained in 0.001064 mg of the International Standard for Amphotericin B.

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[1] Unpublished working document WHO/BS/647.

[2] *Wld Hlth Org. techn. Rep. Ser.*, 1963, **259**.