

## Book review

**Biology of *Treponema pallidum*.** By S. LONGHIN and A. POPESCU. 1969. Pp. 224. Academy of the Rumanian Republic, Bucarest

This book, written in Rumanian, is published as a manual for teaching purposes. It contains all the chapters to be expected in such a manual and the authors present in each chapter the most important, generally accepted facts and also a certain number of problems which have not yet been completely explained. The treatise is, on the whole, very clear, with an extensive bibliography, but not all the chapters are equally good. It is understandable that the authors develop more extensively the subjects to which they themselves contributed. Other chapters, however, are too short, notwithstanding the bibliographical references which indicate the knowledge which could have been summarized in a few lines.

Two subjects, which have been particularly studied by the authors, deserve to be dealt with here in some detail: the action of cortisone and the influence of low temperatures on the course of experimental syphilis in rabbits.

The action of cortisone has been studied by the authors during all stages of *T. pallidum* infection: the incubation period, primary syphilis, and latency, and during treatment. They observe the changes in duration and severity of the lesions and the number of treponemes found, its influence on the generalization of experimental disease and changes in the development of antibodies compared with controls. Furthermore, they have studied the influence of cortisone on the level of carbohydrate, lipids, cholesterol, proteins (by means of electrophoresis), haematological changes, body weight, and the histopathology of lesions.

Their conclusion is that, under the influence of treatment with cortisone, multiple lesions are induced, very rich in treponemes relatively insensitive to antibodies. Thus better antigens can be obtained for serological testing and, especially, for the possible preparation of specific vaccines.

The second point, the influence of low temperatures on the course of experimental syphilis in the rabbit, is dealt with in several paragraphs according to the method of inoculation of the treponemes:

(a) *Inoculation under the scrotal skin or intratesticularly:*

(i) animals kept at an ambient temperature of 35°C. seldom show clinical lesions at the site of inoculation and usually develop inapparent syphilis;

(ii) with an ambient temperature of 20°C. clinical lesions are found at the inoculation site with metastatic or secondary orchitis in 12 per cent. of cases;

(iii) at a temperature of 15°C., clinical lesions occur at the inoculation sites with secondary orchitis in 30 per cent. and occasionally generalized lesions, but only on the shaven parts of the skin;

(iv) at an ambient temperature between 0° and 6°C., the influence of the low temperature becomes very marked: clinical lesions at the inoculation site are found, together with secondary orchitis in 96 per cent. of cases, generalized lesions of skin and mucous membranes in 42 per cent., and even, in a limited number of cases, visceral lesions (this last point is not very clearly expressed in the text). The influence of low temperatures is also evident in the shortened incubation period, the more florid lesions produced, and the greater number of treponemes contained in the lesions compared with control animals kept at higher temperatures.

(b) *Intravenous inoculation:*

At low temperatures (0°–6°C.) generalization of lesions is observed in 62 per cent. of cases.

(c) *Intracardiac inoculation:*

With the same treponeme suspension and in the same conditions as those described above, the rate of generalization increases to 90 per cent.

All animals which show generalized manifestations have an increased immunity of longer duration.

The authors conclude from these observations, perhaps somewhat prematurely, that rabbits kept at a low temperature develop a syphilitic infection comparable with human syphilis.

To sum up, this monograph is very interesting and useful for those who are studying treponematoses, but unfortunately it is only accessible to a limited number of scientists, as it is written in Rumanian.

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### Correction

In the article by R. Nielsen, which appeared in the April, 1970, issue of the *Brit. J. vener. Dis.*, vol. 46, p. 153, col. 2, line 9 from the bottom:

FOR 0·005 µg. penicillin per ml.

PLEASE READ 0·05 µg.