BACTERIOLOGICAL NOMENCLATURE
AND TAXONOMY

STATUS OF THE SPECIES NAME
LEPTOSPIRA MITIS

Request for an Opinion
by the
Leptospira Subcommittee

5th June, 1952

Sir,

I have been directed by the Chairman of the Leptospira Subcommittee of the Nomenclature Committee to submit to the Judicial Commission certain matters regarding the nomenclature of the Leptospira commonly designated Leptospira mitis Johnson 1942, and to request the Commission to express an opinion as to the conclusions which should be drawn therefrom.

The facts are as follows:-

- I. Johnson (Med. J. Austr., 1942, i, 431) described "The discovery of a fifth Australian type of leptospirosis", and he proposed the name "Leptospira mitis" for the causal organism.

Previously however Mino (Acta Conventus Tertii de Tropicis Morbis, 1938, i, 422) had used L. mitis to designate leptospires isolated in northern Italy. Gispén and Schüffner (Acta brev. neerl. Physiol., 1939, 9, 184) later identified these strains as L. bataviae, of which L. mitis Mino 1938 therefore became a synonym.

It would appear however that the specific epithet mitis was effectively published by Mino, in accordance with Rule 11 of the International Bacteriological Code of Nomenclature. If that is so, then L. mitis Johnson is a homonym, and is an "illegitimate" epithet (Rule 24) and must be rejected (Rule 24 (4)).

At a still earlier date Castellani and Chalmers (Manual of Tropical Medicine, 3rd Ed., 1919, London: Baillière, Tindall and Cox, p. 451) used mitis as a specific epithet to designate a Spiroschaudinnia found "in the centrifuged urine of certain cases of camp jaundice of mild type".

They included the causal organism of Weil's disease (Leptospira icterohaemorrhagiae) in this genus, and of S. mitis they say that it (S. mitis) "is thicker than S. icterohaemorrhagiae, and has larger and better defined waves. Of doubtful pathogenicity".

The information in the last paragraph has been included for the sake of completeness, but it may have no bearing on the question whether the name L. mitis Johnson should be rejected.

2. If the Judicial Commission decides that L. mitis Johnson should be rejected, their opinion is requested on a second matter concerned with the nomenclature of this species.

Savino and Rennella (Día Méd., 1944, 16, 1295) isolated from pigs and man in Argentina strains of leptospirae which they believed to constitute a new species, and which they proposed to name Leptospira hyos. Babudieri (Boll. Soc. ital. Biol. sper., 1951, 27, 104) however found L. hyos to be identical serologically with L. mitis Johnson. This identification has been confirmed by Dr. C. Borg-Petersen, Statens Serum Institut, Copenhagen, who has made his results available to the members of the Leptospira Subcommittee, although they have not yet been published.

It appears from Rule 26 that hyos therefore becomes the "oldest legitimate epithet" for this species, and that L. mitis Johnson 1942 becomes a synonym of L. hyos Savino and Rennella 1944.

The Leptospira Subcommittee would advocate the rejection of L. mitis Johnson for practical reasons also, as a means of preventing the continuance of errors in designating species. One such mistake occurs in Textbook of Bacteriology (Eleventh Edition of Muir and Ritchie's "Manual") by C. H. Browning and T. J. Mackie, 1949. On Page 509 these authors state that L. mitis (bataviae) produces "a 'seven-day fever' type of illness, rarely accompanied by jaundice or fatal, among dairy workers in Queensland".

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The context of course makes it clear that it is in fact the Australian species, L. mitis Johnson, to which reference is being made.

The opinion of the Judicial Commission is thus sought on two questions regarding the nomenclature of the species at present designated L. mitis Johnson and L. hyos Savino and Rennella.

- (1) Should the epithet mitis be rejected on the grounds that it is a homonym?
- (2) If it should be so rejected, is hyos the oldest legitimate epithet, and should the species be designated L. hyos Savino and Rennella 1944, and L. mitis Johnson 1942 be considered a synonym?

I am, Sir,

Yours faithfully,

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