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LETTERS TO THE EDITOR

The following letters were forwarded for publication in this Bulletin by Dr. S.T. Cowan, London, England.

"Animal Health Research Laboratory
Cr. Flemington Rd. and Park St.,
Parkville, N. 2., Victoria

21st April, 1960

AIR MAIL

Dr. S.T. Cowan,
National Collection of Type Cultures,
Central Public Health Laboratories,
Colindale Avenue,
LONDON, N.W. 9, England.

Dear Dr. Cowan,

The FAO/OIE/CCTA* Expert Panel on Contagious Bovine Pleuro-pneumonia met recently in Melbourne to deal mainly with the laboratory aspects of diagnosis and immunization. The nomenclature of the causal organism was discussed, and complete agreement was recorded on the generic name Mycoplasma proposed by Freundt, and now incorporated in the Seventh Edition of "Bergey's Manual".

The Panel closely examined the evidence on antigenic analysis by Villemot, J.M. and Provost, A. (Rev. Elev. Méd. vét. Pays trop., 1959, 12 (4), to appear shortly), an account of which was presented by Dr. Provost. This shows the occurrence of at least 6 antigens among the strains of species of Mycoplasma examined, distributed as follows: -

<u>Species</u>	<u>Antigens</u>
<u>M. mycoides</u> var. <u>mycoides</u>	1, 2, -, 4, -, -, ?7.
<u>M. mycoides</u> var. <u>capri</u>	1, -, 3.

*Food and Agriculture Organization of the United Nations Organization; Office International des Epizooties, Paris; Commission for Technical Cooperation in Africa South of the Sahara.

<u>M. bovigenitalium</u>	-, -, -, -, 6.
<u>M. laidlawi</u>	1, 2, 3, -, 5, -.
<u>M. huminis</u>	1, 2, 3, -, 5, -.
<u>M. gallinarum</u> (non-pathogenic strains)	1, 2, -, 4, -, 6.

The antigenic difference between M. mycoides var. mycoides and M. mycoides var. capri thus appear to be at least as great as that between it and M. laidlawi, M. hominis and M. gallinarum; indeed, var. capri appears to share only one antigen (antigen 1) with var. mycoides. It view of this, the Panel approved of Dr. Provost's suggestion that these two micro-organisms have a claim to be regarded not as varieties of the species M. mycoides, but as distinct species, to be known as M. mycoides and M. caprae, respectively.

A resolution to this effect was passed on 26th March, 1960, and I undertook to communicate this information to you with a request that it be considered by the International Commission on Bacteriological Nomenclature.

Yours sincerely,

(A. S. Turner)

ASSISTANT CHIEF OF DIVISION"

"The Wellcome Research Laboratories
Langley Court, Beckenham, Kent

26th May, 1960

The Secretary,
International Committee on Bacteriological Nomenclature,
International Association of Microbiological Societies,
Central Public Health Laboratory,
Colindale Avenue,
London N. W. 9.

Dear Sir:

The Expert Panel on Contagious Bovine Pleuropneumonia, meeting recently in Melbourne, suggested that the causal

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agent of Caprine Pleuropneumonia should be established as a new and distinct species of the genus *Mycoplasma* and be named *Mycoplasma caprae*. Since I was responsible for the view that this organism should be regarded only as a variety of the type species and named it *M. mycoides* var. *capri* (Edward, D.G. ff., J. gen. Microbiol., 1954, 10, 27; Edward, D.F. ff. and Freundt, E.A., J. gen. Microbiol., 1956 14, 197) I should like to comment on this suggestion.

The Expert Panel based their opinion on the work of J.M. Villemot and A. Provost, whose findings are of great interest. They demonstrated the importance of careful analysis of the antigenic structure of *Mycoplasma* species, using a number of different techniques and with particular reference to the existence of antigens common to more than one species. However, previous investigations, using antisera carefully prepared in rabbits by inoculating them with antigens grown in media enriched with rabbit serum, have demonstrated a marked species-specificity within this genus, as demonstrated by the agglutination reaction. Moreover, when antisera were incorporated in culture media growth of the homologous species was inhibited, but not growth of heterologous species.

In suggesting a classification and nomenclature of the pleuropneumonia group of organisms (J. gen. Microbiol. 1956, 14, 197) Dr. Freundt and I aimed at simplicity. We felt that we were only at the beginning of systematic study of this group. We considered that it was easier in the first place to recognise only one genus and a limited number of species. If future investigations justified it new genera would be set up and species split off later. It would be more convenient to do this than to find later the need to retract and to reduce that status of a genus or species. For these reasons an organism was not assigned to a different species unless it differed from others not only in antigenic structure, but significantly in its other biological properties. Although there are no clear rules as to the differences which should exist between organisms to justify their separation into different species, most bacteriologists would not favour a repetition of the practice amongst the *Salmonella*.

The organisms causing contagious pleuropneumonia in cattle and in goats differ little from each other in their biological properties, apart from antigenicity. In regard to two properties, namely, the ability of filtrates of old

cultures to discolour erythrocytes and the ability to liquefy inspissated serum, they differ from all other known organisms in the genus Mycoplasma. It was for this reason that the caprine organism was regarded as a variety of the species M. mycoides and in my opinion sufficient evidence has not yet accumulated to justify its establishment as a separate species.

Yours faithfully,

D.G. ff. Edward

Copy: Dr. E.A. Freundt."