



# HOKKAIDO UNIVERSITY

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## INFORMATION

Hokkaido University granted the degree of Master of Veterinary Medicine to the following 8 graduates of the Graduate School of Veterinary Medicine on 25 March, 1974.

The authors' summaries of their theses are as follows :

### **STUDIES ON THE DETERMINANT GROUP OF THE TYPE SPECIFIC ANTIGEN OF *LEPTOSPIRA KREMASTOS* STRAIN KYOTO**

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The type specific antigen of *Leptospira kremastos* strain Kyoto hydrolyzed with 2 N HCl showed a considerable complement fixation inhibition. Hydrolysate fractionated with a column of Dowex 50 (H form) indicated that a water eluate containing a large amount of neutral sugars showed no complement fixation inhibition, while a 0.5 N HCl eluate containing proteins alone and one containing proteins and hexosamine showed a slight complement fixation inhibition.

The removal of lipids from the type specific antigen by hydrolyzing with 1 N HCl for 4 minutes, followed by dialysis, revealed a very strong complement fixation inhibition. An attempt to separate sugars and proteins in the lipids-deprived type specific antigen by treatment with pyridine was unsuccessful; and neutral sugars, hexosamine and proteins were still found in the complement fixation inhibitory fraction obtained.

Hydrolysis with 2 N HCl of the lipids-deprived type specific antigen resulted in hexosamine deprivation. However, both the deprived hexosamine and the dialysate showed no complement fixation inhibition. A milder hydrolysis with 1 N HCl indicated that the hydrolysate retained its complement fixation inhibition ability and contained neutral sugars, hexosamine and proteins.

From these results it was found that free neutral sugars and hexosamine showed no complement fixation inhibition while fractions containing neutral sugars, hexosamine and proteins showed a strong complement fixation inhibition; and also that a fraction containing only proteins showed a slight complement fixation inhibition. However, further investigation is necessary before it can be concluded that the antigenic determinant group is proteins.