



Title	STUDY OF HUMORAL ANTITOXOPLASMIC FACTORS IN THE NEUTRALIZATION TEST
Author(s)	IWASAKI, Naoko
Citation	Japanese Journal of Veterinary Research, 13(2), 59-60
Issue Date	1965-06
Doc URL	http://hdl.handle.net/2115/1816
Type	bulletin (article)
File Information	KJ00002369142.pdf



[Instructions for use](#)

4) The motility cycle of the O-wave in sheep with surgical adhesions decreased by 8.5 seconds in the ruminating period and by 3.3 seconds in non-ruminating period.

5) Comparison of records made prior to the adhesions and those made one month after adhesions had formed showed that the mean value for the duration of the O-wave decreased by 1.1 seconds in the ruminating period and by 1.6 seconds in the non-ruminating period.

6) One month after the adhesions were formed, frequencies of the E-wave had decreased from 8.0 to 7.0 times per ten minutes in the ruminating period, and from 8.6 to 5.0 times per ten minutes in the non-ruminating period.

7) Comparison of records made prior to the adhesions and those made one month after adhesions had formed showed that the mean value for the duration of the E-wave had decreased by 1.1 seconds in the ruminating period and increased by 0.4 seconds in the non-ruminating period.

8) One month after adhesions had formed, the amplitude of the upward spike of the r-wave was reduced to 23.8% of its pre-adhesion amplitude and the wave form was changed from a diphasic to a monophasic pattern.

STUDY OF HUMORAL ANTITOXOPLASMIC FACTORS IN THE NEUTRALIZATION TEST

Naoko IWASAKI

*Department of Veterinary Hygiene and Microbiology
Faculty of Veterinary Medicine
Hokkaido University, Sapporo, Japan*

(Summary of Master's thesis written under direction of Dr. S. MIURA)

SABIN et al. proved that the infectivity of toxoplasms is neutralized by a combination of two serum factors, thermostable specific antibodies and thermolabile nonspecific substances. However, because of their complexity, little is known about these factors or the mechanism of neutralization.

The present study was undertaken to determine the humoral antitoxoplasmic factors required to neutralize the mouse killing activity of the parasites. For this purpose, mice were inoculated either intraperitoneally or subcutaneously with the parasites treated with both inactivated toxoplasma immune rabbit serum and unheated serum from one of several animals. The results of this study may be briefly summarized as follows.

1) The mouse killing activity of the toxoplasms was not completely neutralized by the inactivated immune rabbit serum alone.

2) The activity of the parasites was completely neutralized only by a combination of both the specific antibody and unheated human serum which was applicable to the dye test as an accessory factor.

3) The effect of unheated human serum was destroyed by heating at 56°C for 30 minutes.

4) In unheated serum from cows, horses, sheep, rabbits, pigs, guinea pigs, rats, dogs, fowl and humans, there were no substances which were effective in combination with the specific antibody, which were not applicable to the dye test as an accessory factor.

5) Toxoplasms were inactivated by fowl or pig serum with or without immune rabbit serum.

6) The inactivated immune rabbit serum appeared to contain some factors which inhibit the neutralizing action of specific antibody for the parasites.

STUDIES ON THE METHOD FOR BIOASSAY OF ANTIBACTERIAL ACTIVITY OF KANAMYCIN

Akira SATO

*Department of Epizootiology
Faculty of Veterinary Medicine
Hokkaido University, Sapporo, Japan*

(Summary of Master's thesis written under direction of Dr. S. MIURA)

Since we had obtained irregular results from the sensitivity test for bacteria of animal origin against Kanamycin (KM) by the usual tube dilution technique, it was thought necessary to search for factors influencing the antibiotic activity of KM. The results of the present study are summarized as follows:

1) A 24 hours seed culture of *Escherichia coli* gave the most constant result in testing antibacterial activity of KM in a liquid medium. On the contrary, cultures over 40 hours gave irregular results.

2) Bacterial doses for inoculum had an effect on the test. When the dose was increased in concentration by 1:100,000, the antibacterial activity of KM against *Staphylococcus aureus* or *E. coli* seemed to decrease about 1/32.

3) The antibacterial activity against *Sta. aureus* or *E. coli* evidently decreased by the addition of 40% animal sera to the medium, although some differences in serum activity were observed among animal species.

SÖRENSEN's phosphate buffer solution of over 0.02 M showed an inhibitory influence on the antibacterial activity to the test organisms except for *Proteus vulgaris*.