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Title	THE LIFE HISTORY OF ORIENTOSTRONGYLUS EZOENSIS TADA, 1975 (NEMATODA : HELIGMONELLIDAE)
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of 9 large colonies and none of 10 medium and 14 small colonies from the kidneys of puppies. The variants from the inocula were 10 of 28 large colonies, none of 16 medium colonies and 3 of 28 small colonies.

In the experiments using *pomona* and pigs, many small and medium colonies and a few large colonies of *pomona* grew from the blood of 4 pigs and from the inocula. The antigenic variants of *pomona* were isolated from the blood and from the inocula. The antigenic variants were 3 of 31 small colonies but none of 11 large and 21 medium colonies from the blood. The variant from the inocula was 1 of 8 large colonies, but none of 9 medium and 20 small colonies.

Some variants were antigenically stable, while many others reverted to their original state after several passages in the normal serum medium.

The antigenic variants were thus isolated from puppies and pigs inoculated with *canicola* and *pomona*.

## THE LIFE HISTORY OF *ORIENTOSTRONGYLUS EZOENSIS*

TADA, 1975 (NEMATODA : HELIGMONELLIDAE)

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The life history of *Orientostrongylus ezoensis* TADA, 1975 was examined.

The eggs,  $0.052\sim 0.072 \times 0.019\sim 0.031$  mm in size, hatched by 12~24 hour incubation at room temperature. The first and second stage larvae, 0.33~0.54 mm and 0.57~0.68 mm in length, respectively, had a rhabditiform esophagus and a filiform tail. The second stage larvae appeared by the second day. The third stage or infective larvae, 0.48~0.86 mm in length, appeared from the third day. They were ensheathed, and had a filariform esophagus and a short conical tail.

In rats, the parasitic stage worms were recovered only from the alimentary tracts after oral ingestion. However, no worms were recovered after the subcutaneous injection. Therefore, somatic migration did not occur. During the growing processes, the infective larvae once reached to the caecum after oral ingestion and they went up the small intestine. The fourth stage larvae, of which the body length was 0.76~1.83 mm in male and 1.09~2.20 mm in female, were found 48~60 hours after oral ingestion. They possessed a small cephalic vesicle and 7 aretes. The adult worms were found 84~96 hours after ingestion, and the body length was 1.85~2.33 mm in male and 1.96~4.13 mm in female. The prepatent period was 7~8 days and the decrease of

EPG was recognized from 2~3 weeks after ingestion.

A small number of adult worms were recovered from Mongolian gerbils, but not from mice (ICR, BALB/cA nu/nu: nude mouse, BALB/cA nu/+).

## SEROEPIDEMIOLOGICAL SURVEY FOR BOVINE LEUKEMIA VIRUS IN DAIRY AND BEEF CATTLE IN JAPAN

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Bovine leukosis is a contagious disease caused by a bovine leukemia virus (BLV). The purpose of the present study is a seroepidemiological survey and detection of the BLV in Japan. The survey covered 5,707 dairy cattle in Hokkaido, 1,774 beef cattle in the Towada area in Aomori Prefecture and 1,113 beef cattle in the Hida area in Gifu Prefecture.

1) In Hokkaido, the survey was performed in 1974 to 1975 and in 1977, and the reactors were 3.3 % and 8.8 % of cattle, respectively. The survey was performed in 1977 and 1978 in Towada area, where multiple cases of bovine leukosis have been reported, and the positive percentages were 32.2 % and 44.2 %, respectively. These results suggest the gradual increase of BLV infection in both areas. In Hida area, 29.1 % of cattle were positive for BLV antibodies.

2) The comparison of serological results and hematological status showed that the percentage of serologically positive animal was higher in animals with lymphocytosis than in suspect or normal animals. However, 18.6 % of hematologically normal cattle were found to be serologically positive. No significant difference was observed in lymphocyte counts between BLV antibody positive and negative cattle. Therefore, there is a relationship between hematological status and the presence of antibodies, and serological reactions appear earlier than hematological disorder.

3) A syncytium assay was performed using bovine fetal thymus or spleen cells to detect BLV. Peripheral blood lymphocytes from the adult form of lymphosarcoma induced syncytium formation. Specific antibodies to BLV reduced the number of syncytium. These results indicate the specificity of this assay for the detection of BLV. Most of the cattle with BLV antibodies were positive in the syncytium assay. Thus all cattle having BLV antibodies may carry BLV.