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ANALYSIS OF INNATE AND ACQUIRED RESISTANCE TO LARVAL TAENIID
INFECTION IN MICE: THE ROLE OF HUMORAL FACTORS

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Innate and acquired resistance to larval taeniid infection in inbred mice, i.e., strains AKR/J, BALB/cAn and C57BL/KsJ, especially the role of humoral factors to *Taenia taeniaeformis*, were analysed by passive transfer of various sera, by antibody determination with ELISA and immunoblotting methods and by monoclonal antibody for antigen characterization.

AKR/J mice, a strain susceptible to *T. taeniaeformis*, were protected against the infection when they were injected intraperitoneally with normal sera from innate resistant BALB/cAn or C57BL/KsJ mice inactivated at 56°C for 30 min. It is suggested that certain protective factors responsible for innate resistance to the cestode remain in the sera from the resistant mice.

Subcutaneous immunizations by the oncospheres and passive transfer of sera from infected BALB/cAn and C57BL/KsJ mice significantly reduced the number of cysts and pinpoint lesions in the livers of AKR/J mice. The sera from AKR/J at 45 days postinfection reduced the number of cysts, but not that of pinpoint lesions.

Using ELISA and immunoblotting methods along the course of the infection, it was revealed that IgG class antibodies to antigens of ca. 102, 65, 45 and 30 kDa mol. wt. in the metacestode extract, and 60, 45 and 30–31 kDa in the oncosphere extract may induce significant protective immunity to the parasite.

Infectivity to various rodents and SDS-PAGE banding patterns of the 4 isolates of *T. taeniaeformis* varied, but antibody responses to the infection with the respective isolates were identical in ELISA titres and immunoblotting. The cross resistance observed among these isolates indicates the presence of common antigens which may participate in host protection against the parasite.

Three hybridoma clones producing IgG antibody to *T. taeniaeformis* and 2 to *Echinococcus multilocularis* detected by ELISA were established. They were preliminarily evaluated for use for protection by passive transfer and for determination of functional antigens sharing taeniid cestodes.