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HOMOLOGOUS AND HETEROLOGOUS IMMUNIZATION AGAINST  
*TAENIA TAENIAEFORMIS* AND *T. CRASSICEPS*  
IN THE RED-BACKED VOLE, *CLETHRIONOMYS RUFOCANUS BEDFORDIAE*

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*Clethrionomys rufocanus bedfordiae* were immunized against infection with *Taenia taeniaeformis* and *T. crassiceps* by oral and subcutaneous inoculation with eggs and oncospheres of both homologous and heterologous parasites, or by intraperitoneal inoculation with cysticerci of *T. crassiceps*.

When oncosphere of *T. crassiceps* was inoculated subcutaneously as an immunization, resistance to subcutaneous infection with *T. crassiceps* was conferred but not to oral infection with *T. taeniaeformis* or *T. crassiceps*. Immunization by oral inoculation with eggs of *T. crassiceps* conferred resistance to *T. taeniaeformis* infection by the same inoculation route but not to *T. crassiceps* by the subcutaneous inoculation route. Immunization by intraperitoneal inoculation with cysticerci of *T. crassiceps* was not effective against oral infection with eggs of *T. taeniaeformis*.

From these results, it is suggested that immunization with *T. crassiceps* shows resistance only to infection by the same inoculation route. However, in the cases of immunization with *T. taeniaeformis* infection either through the subcutaneous or the oral inoculation route, resistance was induced against both parasite infections inoculated subcutaneously or orally.

Using crude antigens, IHA antibody to *T. crassiceps* antigen was not detected in the sera of the voles infected with *T. taeniaeformis*. In contrast, sera of the voles infected with *T. crassiceps* showed antibody titres to both parasite antigens parallelly. Thus, the presence of common antigens in the two parasites responsible for cross immunity is indicated.