

# **Immunological studies on mice vaccinated with irradiated cercaria and IL-12 against *Schistosoma mansoni* infection**

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Protective immunity against *Schistosoma mansoni* infection correlates with increased levels of IgE and blood eosinophilia which are considered as markers of anti-parasitic cell-mediated immunity. IL-5 participates as well in the induction and regulation of IgE and eosinophilia, consequently in the development of acquired immunity. Swiss Webster female mice were subcutaneously injected with either 50 microg of gamma-irradiated cercarial homogenate (400 Gy) twice weekly for three weeks alone or plus a single dose of IL-12 (0.8 ng/Kg). The efficiency of immunization regimens were assessed 45 days post infection with 100 live cercariae/mouse by the number of worm burden, ova count, production of IL-5, eosinophils, and IgE levels in the vaccinated groups compared with the non-immunized group. The results demonstrated a significant reduction of ova count in the livers of vaccinated groups (57.19 and 40.13%) and worm couples compared with the non-immunized group. Furthermore, a decrease of IL-5 level as well as eosinopenia was recorded in both vaccinated groups. Scanning electron microscope (SEM) of adult worms recovered from the immunized groups revealed marked damage on the tegumental surface in males rather than females as well as constrictions and intensive corrugation of intertubercles.