

Effect of mouse strain on humoral responses to *Schistosoma mansoni* irradiated cercariae vaccine

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In murine schistosomiasis, the highest level of resistance to cercarial challenge is obtained by vaccination with radiation-attenuated (RA) cercariae. To identify candidate vaccine antigens relevant to the vaccine model, we examined by ELISA and Western blot parasite antigens recognized by antibodies from mice vaccinated with *Schistosoma mansoni* RA cercariae. To optimize recognition, several factors that may influence protection level in this model were assessed; specifically, we examined the effect of (i) single versus double vaccinations with RA cercariae, and (ii) the genetic background of mouse strains, high-responder versus moderate responder. We found that the number of vaccinations alters antibody specificity and modifies relative antibody titers against particular tegumental antigens. RA cercariae vaccine appeared to be immunogenic against supernatant 2 (Sup.2) and surface membrane pellet (SMP) tegumental target antigens in different mouse strains. However, the immunogenicity against Sup.2 was higher than that against SMP, moreover, general increase in antibody response with boosts. Also, the present study aims to provide information on the molecules recognized by RA cercariae vaccine sera derived from different inbred mice, several bands in Sup.2 immunoblots were recognized with variations in the number and pattern of bands observed. In conclusion, RA vaccine is effective vaccine against schistosomiasis.