

I-14

MICE HYPERIMMUNIZED WITH SYNGENEIC HEART ANTIGEN PRESENT CELLULAR AND HUMORAL RESPONSES AGAINST *TRYPANOSOMA CRUZI* ANTIGEN. Soares MBP, Lima RS, Silva-Mota KN, Bellintani MC, Pontes de Carvalho LC, Ribeiro dos Santos R. Centro de Pesquisas Gonçalo Moniz, FIOCRUZ-BA.

Challenge with low numbers of Y strain *Trypanosoma cruzi* of BALB/c and A/J mice which had been hyperimmunized with syngeneic heart antigen induces a strong myocardial inflammatory response 30 and 60 days post-infection. To investigate the mechanisms by which heart antigen immunization potentiates myocarditis induced by *T. cruzi* infection, we evaluated the cellular and humoral responses against *T. cruzi* antigens in these mice. Sera from heart antigen hyperimmunized BALB/c or A/J mice reacted with *T. cruzi* antigens by ELISA. Titers of anti-*T. cruzi* antibody from hyperimmunized mice were similar to observed in sera from non-immunized mice 30 and 60 days after infection with 100 Y strain trypomastigotes. Anti-*T. cruzi* antibody titers and reactivity against various *T. cruzi* antigens greatly increased upon challenge of hyperimmunized mice with 100 Y strain trypomastigotes, as demonstrated by ELISA and Western blot analyses. The reactivity against *T. cruzi* was partially blocked by pre-incubation of sera from hyperimmune mice with myocardial antigen. Hyperimmunized mice also had cellular responses against *T. cruzi* antigen, as shown by proliferation, Delayed type hypersensitivity (DTH) reaction and interferon-gamma (IFN-gamma) production. Stimulation of splenocytes from hyperimmunized mice with *T. cruzi* antigen induced a proliferative response 2-4 fold higher compared to the response of normal mice, and similar to that of infected mice. The *T. cruzi*-induced proliferative response, DTH-reaction and IFN-gamma production was conspicuously larger in infected hyperimmunized animals in relation to hyperimmunized or infected animals. In contrast to the observations regarding *T. cruzi* antigen, only antibody responses against heart antigens were observed.