

Effect of preventive and therapeutic vaccination schedules with *Trypanosoma rangeli* against *Trypanosoma cruzi* infection in a mouse model of chagas disease

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Chagas disease affects near 16 million people in Latin America and is important in non endemic countries, through congenital, transfusional and transplantation transmission. In our laboratory we have developed an experimental model of vaccination with non pathogenic *Trypanosoma rangeli*. The aim of this work was to compare the humoral response and the efficacy of preventive and therapeutic vaccination. BALB/c mice were vaccinated with epimastigotes of *T. rangeli*, at different times before (BI) or after (AI) infection with *Trypanosoma cruzi*. The course of infection and the pattern of antibody response (IgM, IgG, IgG1, IgG2 and IgG3) were analyzed. The results showed that both BI and AI groups had a better outcome of infection than only infected mice, with significantly lower parasitemias and less mortality. The immunological response was also similar, showing both schemes with significant increase of total IgG and IgG1. The difference was that BI induces increase of IgG2 whereas AI showed elevation of IgG3 compared to control animals. In conclusion, both vaccination schedules with *T. rangeli* triggers a high production of antibodies reactive with *T. cruzi*, and modulates the course of infection. Although both strategies are protective, the pattern of isotypes was different, suggesting that they induce distinct mechanisms of response, both of them important for the early clearance of parasite. As this vaccine also protects guinea pigs and dogs, domestic reservoirs of *T. cruzi* can be an important tool as veterinary vaccine, by disruption of epidemiological chain of Chagas disease, in areas with active vectorial transmission.

Biography

Basso Beatriz has completed her PhD from National University of Córdoba, Argentina. She was visiting Researcher at Michigan State University and Université Libre de Bruxelles. She is Professor at School of Medical Sciences, Natl. Univ. of Córdoba, Director of Research Projects on Immunology of Chagas disease and Vaccination, subject on which she has published more than 80 papers. She has 10 awards in national and international conferences and is serving as Referee and Editorial Board Member of international journals.

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