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### Experimental Chagas' disease: Modulation of innate immunity response in mice vaccinated with *T. rangeli*

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Chagas' disease, caused by *Trypanosoma cruzi*, is a major health problem in Latin America. Immune response to *T. cruzi* infection is highly complex and involves many components, regulators and effectors. This parasite is able to survive and replicate in its host because it is adapted to resist host defences. A model for vaccinating mice with *Trypanosoma rangeli*, a parasite closely related to *T. cruzi*, but non-pathogenic to humans, has been designed in our laboratory, showing protection against *T. cruzi* infection. The aim of this work was to analyse some mechanisms of the early innate immune response in this vaccination model.

In the first hours of infection, vaccinated mice showed a strong innate immune response. The adherent cells revealed important phagocytic activity, and some soluble mediators showed modifications: Respiratory Burst: significantly increase; NO: adequate levels; Arginase: significantly increase. Furthermore, they showed an increase of macrophages, NK, granulocytes, and regulation of IL6, IFN $\gamma$ , TNF $\alpha$  and IL10, with an increase of IL12, with respect to only infected mice.

**Conclusion:** in this model some cellular populations and mediators soluble, involved in the innate immune response, plays an important role in vaccinated mice for the early elimination of the parasites. These results also suggest that in mice vaccinated with *T. rangeli* innate response could develop some kind of immunological memory, equivalent to adaptive immune response, recognizing shared antigens between *T. rangeli* and *T. cruzi*. These results could contribute to the knowledge of new mechanisms which would have an important role in the immunoprevention of Chagas disease.

#### Biography

Beatriz Basso obtained her PhD at School of Biochemistry, National Cordoba University, Argentina. She is Professor of Medicine School at the same University and Director of the Parasitology Laboratory, National Service of Chagas' disease. She was Visiting Researcher in Universities of USA and Belgium, Director of graduate students and PhD. She has published more than 100 papers in national and international journals, over 200 presentations at congress, with several awards. She is evaluator of national and international research project, editorial board member and reviewer of international research journal, among other academic and research activities.

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