

Evaluation of a *Schistosoma mansoni* biomarker able to distinguish the disease states of schistosomiasis endemic area residents

Fernanda Ludolf¹; Fernanda F Araújo²; Rodrigo Corrêa-Oliveira²; Andréa Gazzinelli³; Guilherme C Oliveira²; Cristina F Toscano²; Andréa T Carvalho²; Rosiane A Silva-Pereira².

1 Programa de Pós-Graduação em Ciências da Saúde: Infectologia e Medicina Tropical, Faculdade de Medicina, Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil. 2 Centro de Pesquisas René Rachou-Fiocruz/MG, Belo Horizonte, Minas Gerais, Brazil. 3 Universidade Federal de Minas Gerais, Nursing School, Belo Horizonte, Minas Gerais, Brazil.

Despite intensive efforts towards schistosomiasis control, the disease is still one of the most prevalent in the world. Improvements in the diagnostic would represent a step forward to the transmission control, being essential for epidemiological surveys. Progress on post-genomic technologies has resulted in a more rational approach for new biomarkers discovery. A previous study conducted by our group has identified a panel of proteins with a potential to distinguish the state of susceptibility or resistance of schistosomiasis endemic area residents, suggesting a possible use of these antigens for diagnostic purposes. One protein among these candidates have shown promising results for the development of a new immunodiagnostic test. Briefly, ELISA and Western-blotting (WB) with this recombinant protein have confirmed the recognition profile exclusively to the infected endemic area individuals (INF) pooled sera. WB with 27 individually serum samples showed that of the 12 INF, 8 (67%) recognized a protein band of expected size. None of the 15 (0%) no infected serum samples, from endemic and no endemic area, were reactive to this protein. The innovation of serological bioassays proposed herein still lies in the use of coupling this recombinant protein to functional polystyrene microspheres (multifunctional beads assay).

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