Sulfotopes from Trypanosoma cruzi major or minor antigenic glycoproteins, are involved in parasite infection, and immunopathogenesis of experimental Chagas disease

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Abstract

Statement of purpose: Chagas disease (ChD) constitutes a major endemic health problem in Latin America. The presence of sulfate-bearing-glycoproteins has been identified in Trypanosoma cruzi, they are targets of specific immune responses and subjects chronically infected with T. cruzi mount specific humoral immune responses to sulfated glycoproteins. Cruzipain (Cz), a major antigen. Containing a C-terminal domain (C-T), is responsible for the immunogenicity of the molecule in natural and experimental infection. Synthetic anionic sugar conjugates containing N-acetyl D glucosamine-6-sulfate (NAcGlc6-SO3) mimics the N-glycan-linked sulfated epitope (sulfotope) displayed in the C-T. IgG2 antibody levels specific for sulfotopes are inversely correlated with Chagas disease severity. Another sulfated glycoprotein with serinecarboxypeptidase (SCP) activity was studied.

Methodology & Theoretical Orientation: Native SCP co-purifies with Cz from T. cruzi. Native SCP co-purifies with Cz from Trypanosoma cruzi, they are targets of specific immune responses and subjects chronically infected with T. cruzi mount specific humoral immune responses to sulfated glycoproteins. Cruzipain (Cz), a major antigen. Containing a C-terminal domain (C-T), is responsible for the immunogenicity of the molecule in natural and experimental infection. Synthetic anionic sugar conjugates containing N-acetyl D glucosamine-6-sulfate (NAcGlc6-SO3) mimics the N-glycan-linked sulfated epitope (sulfotope) displayed in the C-T. IgG2 antibody levels specific for sulfotopes are inversely correlated with Chagas disease severity. Another sulfated glycoprotein with serinecarboxypeptidase (SCP) activity was studied.

Biography:


Speaker Publications:

1. Acosta et al (2008) Sulfates are main targets of immune responses to cruzipain and are involved in heart tissue damage in BALB/c immunized mice. International Immunology 20: 461-470.

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