

Title: IMMUNOREACTIVE PROTEINS OF *Conidiobolus lamprauges* ISOLATED FROM NATURALLY INFECTED SHEEP

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Abstract:

Conidiobolus coronatus, *C. incongruus* and *C. lamprauges* fungi, belonging to Entomophthorales order, has been described as the principal agents of conidiobolomycosis. The disease is characterized by granulomatous rhinitis of importance in human and veterinary medicine and has been reported in areas of tropical and subtropical climates by disabling potential and high lethality in the affected species causing serious socio-economic impacts. The study of sheep conidiobolomycosis has been carried out in its clinical, epidemiological, pathological and molecular aspects. Information, however, about the host immune response in infection *Conidiobolus lamprauges* is absent. This study aimed to identify immunoreactive proteins that may play an important role in the immune response of sheep naturally infected by *C. lamprauges*. For protein and immunological characterization, *C. lamprauges* (strain FIOCRUZ-INCQS 40316) isolated from a sheep with clinical signs of conidiobolomycosis in the MT state and five sera samples of naturally infected sheep were used. The presence of IgG antibody was observed in all patients with reagent titers in dilutions up to 1:1600. In immunoblot technique, the antigenic profile against infected sheep sera showed twelve reactive bands with molecular weights ranging from 35 to 198 kDa. Among them, the 198 kDa protein was reactive against sera from three sheep and the 53 kDa showed increased intensity compared to other bands probably being immunodominant. Healthy animal serum samples showed no reactivity demonstrating the specificity of the technique. The presence of antigenic proteins of *C. lamprauges* and specific IgG in sheep sera observed in this study may assist in the development of early diagnostic methods and the use of protein as candidate vaccines for the control and prevention of infection in animals and human.

Keywords: *Conidiobolus lamprauges*, sheep, immunogenic antigen