IMMUNOBIOLOGY STUDY BETWEEN PARASITES ANTIGENS AND CANCER DEVELOPMENT

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Aberrant glycosylation of cell surface glycoproteins is often associated with malignant transformation. The Tn determinant (GalNAc-*O*-Ser/Thr) is one of the most specific human tumor-associated antigens. We demonstrated that Tn antigen is expressed by the cestodes *Echinococcus granulosus* and *Mesocestoides vogae*. *M. vogae* is considered an appropriate experimental model to study cestode immunobiology and pharmacology. As there is evidence that the prevalence of cancer in patients with hydatid disease is lower than the estimated, and considering the good anti-tumoral effect of Tn vaccines, we are studying the effect of *M. vogae* glycoproteins on breast cancer rat's model. Animal models for carcinogenesis provide an invaluable resource for the identification of tumor markers and the development of therapeutic intervention. The present work includes: 1) the study of the immunological response of animals immunized with *M. vogae* extract, 2) the evaluation of these serums on human breast cancer tumors, 3) the development of tumors induced by *N*-nitrosomethylurea in rats that were immunized with this extract and in control groups. We found that the serum anti- *M. vogae* glycoproteins recognize some proteins expressed in human breast cancer tumors. What is more, we also found that the development of rat breast cancer tumors is influenced by the immunization with the *M. vogae* glycoproteins. The results obtained suggest a protective effect on breast cancer development using an active immunization with *M. vogae* extract where the O- glycosylated antigens seem to play an important rol. We are studying the correlation between these proteins expression and prognostic factors.