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## LETTER TO THE EDITOR

Rosario, March 19, 2002

# P SYSTEM EPITHOPES IN *Ascaris lumbricoides*

Dear Editor,

The blood group P substances of tissue cells mediate the adhesion of a series of pathogenic bacterias (*Escherichia coli, Streptococcus suis, Pseudomona aeruginosa,* and de Shiga toxin of *Shigella dysenteriae*). Further, P (globoside) has been shown to be the cellular receptor for parvovirus $B_{19}$.

The antigens of the P system have also been detected in various animal species, where the characters occur not only on erythrocytes and tissue cells but also on water-soluble glycoproteins of secretions and body fluids[10].

Strong $P_1$ (+ $P^k$) activity has been found in the ovomucoid of turtledove eggs[3]. Another excellent source for $P_1$ (+ $P^k$) active material is the fluid in hydatic cysts taken from sheep liver containing live protoscolices of the tapeworm *Echinococcus granulosus*[1]. Further, $P_1$ specific substances were found in the extracts of earthworm *Lumbricus terrestris*[7] and the roundworm *Ascaris suum*[8].

Mimicry, antigenic modulation and natural selection have been proposed to explain hosts tolerance for a parasite[9].

We worked with 27 *Ascaris lumbricoides* extracts [ AE ].

In order to perform our experiments [ AE ] were prepared. Adult specimens were washed in physiological solution supplemented with 200 mg / ml of streptomycin and 200 mg /ml of penicillin. After that a refrigerated mechanical rupture was performed for 5 days. The supernatants were collected and kept at –20 ºC with a final concentration of timerozal 1:1000[2,5].

Inhibition agglutination tests were made facing the [ AE ] against anti P and anti $P_1$ monoclonal antibodies in optimal concentrations (lot No. 2-87 / lot No. 2-88 Monoclonal Antibodies against Blood Group Antigens. IV Workshop. Paris. July 2001). Suspensions of fresh red cells (P and $P_1$) were used as a revealing system[4].

Results have shown that out of the 27 [ AE ] studied, 15 presented P and $P_1$ epithopes and only one [ AE ] $P_1$ epithope.

Previous studies have shown the presence of A and B antigens in the [ AE ] [6]. Owing to the similarity between ABO system and P system, we conclude that membrane glycolipids would be involved in the escape mechanism of the immune response for *Ascaris lumbricoides*.

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