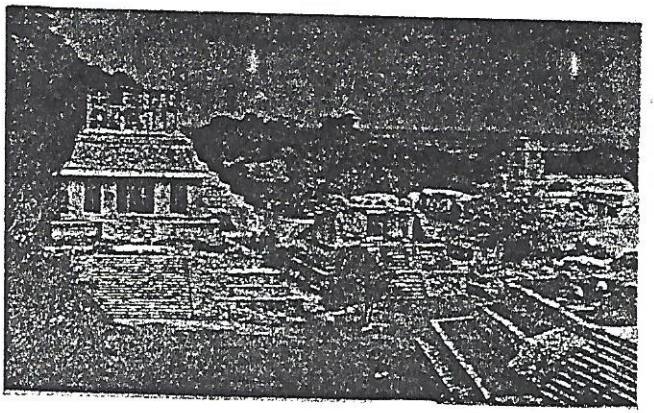
ICT9

NINTH INTERNATIONAL CONFERENCE ON TRICHINELLOSIS

Mexico City
August 19-22, 1996.



Organized by the

Centro de Investigacion y Estudios Avanzados-IPN

In collaboration with

Hospital de Pediatria, Centro Médico, IMSS. Instituto Nacional de Investigaciones Forestales y Agropecuarias, SAGDR. Instituto Nacional de Diagnóstico y Referencia Epidemiológicos, Secretaría de Salud. Facultad de Medicina, Universidad Nacional Autónoma de México

Under the Patronage of

Academia Nacional de Medicina, Sociedad Mexicana de Parasitología and Pan-American Health Organization

ENZYMATIC AND IMMUNOCHEMICAL ANALYSIS OF SPECIFIC DIFFERENCES BETWEEN *TRICHINELLA BRITOVI* AND *TRICHINELLA PSEUDOSPIRALIS*

D.Piergili Fioretti*, P.Pasquali, A.Moretti, M.Coli[1], M.Principato, G.A.Polidori
*Istituto di Parassitologia Veterinaria, Università di Perugia, Italy; [1]Biochimica Clinica e Biochimica Applicata, Università di Perugia,Italy

In this research a comparative analysis on excretory/secretory products of murine muscle stage larvae of the two parasitic species was performed in order to study both quantitative and qualitative differences whether in protein components or in enzymatic components as superoxide dismutase (SOD)and glutatione peroxidase (GSH px), oxidant defence enzymes capable of scavenging helminthotoxic products derived by the respiratory burst of host immune effector cells. SOD activity was determined by measuring the inhibition of the reduction of p-nitro tetrazolium blue (NBT) using the xanthine-xanthine oxidase system. One unit of SOD is defined as that amount which causes 50% inhibition. One unit of GSH px is defined as that amount necessary to oxidize 1μmol of reduced glutathione in 1 min. The results indicate a value of 5.75 ± 0.02 U/mg (mean ± error standard) for SOD activity and a value of 0.079 U/mg for GSH px activity. These data show that the SOD-GSH px sistem is very important in the defence mechanism of *T.britovi*. The comparative analysis with *T.pseudospiralis* showed values of 10.44 U/mg and 0.044 U/mg for SOD and GSH px activities respectively. The relationship between biological features and level of such anti-oxidant enzymes in the two parasitic species is considered. The analysis of protein components on E/S antigens of *T.britovi* and *T.pseudospiralis* was performed by Western blot technique using murine immune homologous and heterologous sera and monoclonal antibody produced against *T.britovi* larvae. The Mab Pg6B1 recognized by Western blot five major antigenic components (Mw : 44,47,53,66,68 KDa) in the E/S antigen of *T.britovi* while four bands (Mw : 43,47,56,66 KDa) were detected in *T.pseudospiralis* E/S antigen. Two of these bands (47,66 KDa) are common for both extracts. These bands were also evidenced by the heterologous immune sera and this implies a considerable cross-reactivity between the two species of Trichinella. Immune sera to *T.britovi* recognized in the homologous E/S antigen the same bands evidenced by Mab Pg6B1 while by immune sera to T.pseudospiralis were detected, in the homologous E/S antigen, two specific bands of 70, 74 KDa.