A31

SURFACE ANTIGENS OF *SETARIA DIGITATA* (FILARIAE) MICROFILARIAE-1

A.K. Chandana[a], M.M. Ismail[b], S. Dissanayake[a]

[a] *Dept. of Biochemistry, Faculty of Medicine, University of Peradeniya*

[b] *Dept. of Parasitology, University of Colombo, Colombo 8*

Uterine microfilariae of *Setaria digitata* express antigens on their surface. Serum antibodies in infected cattle recognise these antigens. *S.digitata* microfilariae formed organised clusters when incubated with immune sera from infected

animals. Heterologous sera such as human, rabbit and foetal calf did not result in cluster formation whereas some buffalo sera did. An inverse correlation between the size of the cluster, the number of microfilariae and the immune serum concentration was observed. Numerous smaller clusters with fewer microfilariae were seen at very high antibody concentrations. Similar clusters were obtained with the immunoglobulin fraction of the immune sera. Heat inactivation of complement resulted in smaller clusters and the formation needed longer incubation times. The microfilariae in the clusters dispersed on prolonged incubation in culture. The dispersed microfilariae formed relatively unstable and smaller clusters on further incubation with fresh sera. Microfilariae released by gravid worms in *in-vitro* culture showed better cluster formation compared to uterine microfilariae.

Such antibody mediated cluster formation by filarial microfilariae has not been reported previously and is probably due to an antigen-antibody reaction involving surface antigens of microfilariae. The dispersal of clustered microfilariae is probably due to shedding of the immune complex. This may be an adaptive mechanism by the parasite to evade the host immune response.

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