German Soc. Parasitol. (1982), Hohenheim, 30 Mar - 2 Apr.
[Z. Bakt., I.Abt. Referate (1982) 277:104-105]

O'DONOGHUE, P.J. and Heidrun WEYRETER (Inst. Parasit., 3000 Hannover 71).

Antigen Characterisation; Antibody Classification and Immune Complex Formation in Sarcocystis Infections.

Parasite antigens and host antibodies were examined in sarcocystis infection in pigs (S. miescheriana, syn. S. suicanis), sheep (S. tenella, S. gigantea) and mice (S. muris). Specific immunofluorescent-labels revealed cystozoites to be strong antigens, merozoites to be moderate and sporozoites to be weak. Intact cystozoites and soluble cystozoite saniate-extracts were therefore used respectively as IFAT and ELISA antigens. SDS-PAGE analysis of soluble S. muris antigen detected 9 peptides in the molecular weight (MW) range from 13-68K (K = 10^3 daltons). Gel fractionation of all soluble antigens produced 2 fractions; one of high MW (>800 K) and one of low MW (5K). SDS-PAGE analysis of the S. muris fractions detected 4 peptides in the high MW fraction (13, 21, 26 and 39 K) and none in the low MW fraction. Specific host-antibody classes were detected with class-specific conjugates and by serum fractionation. IgM-antibodies were detected early in infections but did not persist. They reacted best with soluble antigens, particularly the low MW fractions. IgG-antibodies appeared later, persisted longer and reacted well against both intact and soluble cystozoite antigens, especially the high MW fractions. No antigens were species-specific although heterologous reactions were usually weaker. Immune complexes formed by in vitro immunoprecipitation were of low valency, low affinity, complement-independent and heat-sensitive. Immunofluorescent studies on immune complexes formed in vivo revealed hepatic, renal and lymphatic tissue-bound deposits in sheep shortly following acute disease. Immunodiffusion also detected an exoantigen in the sera of mice during the acute phase of infection. - Immunofluorescence, ELISA, SDS-PAGE, Fractionation