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**ANTIGENIC ANALYSIS OF BOVINE SARCOCYSTIS SPP
IN SRI LANKA**

A PROJECT REPORT PRESENTED BY

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Sarcocystis is an intracellular parasite, known to cause acute and chronic diseases in a variety of hosts, including cattle. This work was designed to characterize *Sarcocystis* antigens by molecular weight and to investigate the possibility of cross-reaction with related Apicomplexan *Toxoplasma gondii*.

Sarcocystis antigen was prepared by chemical lysis (10% Triton) of bradyzoites contained in tissue cysts. Healthy rabbits were inoculated with *Sarcocystis* (antigen and whole parasite) and *Toxoplasma* and antibodies harvested after about a month's lapse.

A higher antibody titer was elicited by the inoculation of *Sarcocystis* cystozoites as opposed to the antigen. The latex agglutination test confirmed presence of anti *Toxoplasma* antibodies in test serum and negated cross-reactivity between *Sarcocystis* and *Toxoplasma* at 1:100 serum dilution. Sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE) and subsequent immunoblot analysis at 1:100 serum dilution revealed twelve antigenic bands, three of which were prominent. Out of these three, two were complex bands of ~ 66 kMW and above. The other was a single band of ~ 45 kMW. Monoclonal antibodies can be developed against these potent antigens for diagnostic purposes in the future. Immunoblot results also dismissed cross-reactivity. A highly sensitive assay should be developed to avoid ambiguity in routine diagnostic tests.