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DETECTION OF AN 81KDA PROTEIN IN THE SERUM OF  
*THEILERIA SERGENTI*-INFECTED CALVES

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Bovine theileriosis, which is caused by the protozoan parasite *Theileria sergenti*, is one of the most important tick-born diseases in Japan. However, there are no available methods to control this disease. In this study, changes in serum protein of calves infected with *T. sergenti* were analyzed in order to clarify the pathogenesis of theileriosis.

An attempt to detect immunocomplex or soluble antigens in infected calf serum was not successful. However, an 81KDa protein could be detected in sera from infected calves. The serum concentration of 81KDa protein increased several days after inoculation of parasites and rapidly decreased within a few days. After this period, the concentration of this protein increased and decreased in parallel with the parasitemia. The 81KDa protein was also found in sera from calves with inflammations.

The biochemical characteristics of this protein were further examined. In non-reduced condition, as estimated by gel filtration, the molecular weight of this protein was approximately 700KDa. This result suggested that this protein consisted of 9–10 subunits of 81KDa polypeptide. Furthermore this protein, which was acidic in nature, was revealed to be glycosylated.

From these results, the 81KDa protein was considered to be an acute phase protein, but there were no apparent similarities in biochemical characteristics between the 81KDa protein and other known acute phase proteins in mammals.