An enzyme-linked immunosorbent assay for the epidemiological survey of *Dermatophilus congoensis* infection in camels (*Camelus dromedarius*)

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**Summary:** The breeding of camels (*Camelus dromedarius*) is especially important in arid and semi-arid areas of Africa, where drought and famine frequently occur. A number of diseases which impair camel production have recently been described, including dermatophilosis (caused by *Dermatophilus congoensis*). However, it is not possible to determine the prevalence of infection from clinical cases alone.

An enzyme-linked immunosorbent assay has therefore been developed to determine the epidemiological prevalence of *D. congoensis* infection in sera of camels. Whole-cell antigen was used on microplates and the test serum was added. Horseradish peroxidase-conjugated sheep antibodies against heavy and light chains of camel immunoglobulin (Ig)G were then added, followed by substrate. The test was used to trace the antibody profile of twelve experimentally-infected camels. Peak antibody levels in serum occurred within twenty-one days following infection.

It is planned to use this test to determine the epidemiological prevalence of *D. congoensis* infection in camels reared in a pastoral area of Kenya.

**KEYWORDS:** Camel – Dermatophilosis – ELISA – Experimental infection.

**INTRODUCTION**

Rearing camels is practised widely by pastoral communities in arid and semi-arid areas of Africa. In Kenya, although camel husbandry is widespread in northern and north-eastern areas, the total camel population of 0.7 million is low (10), despite the potential of the camel to withstand and even thrive during prolonged periods of drought (5). During these periods, camel milk is sometimes the only source of food for pastoralists. Disease is one of the main problems facing camel husbandry and its exact role has yet to be fully determined.

Camel dermatophilosis is a skin disease of camels which is caused by *Dermatophilus congoensis* (8). Although the initial clinical cases were found on one commercial ranch

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