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## Epidemiological studies (parasitological, serological and molecular techniques) of *Trypanosoma evansi* infection in camels (*Camelus dromedarius*) in Egypt

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### Abstract

Trypanosomosis in camel caused by *Trypanosoma evansi* is still a serious problem in camel husbandry causes considerable economic losses in many camel-rearing regions of the world. In the present study 193 camels clinically suspected for surra were examined parasitologically by Giemsa stained blood smear (GSBS) and haematocrit centrifugation technique, serologically for detection of anti-trypanosomal antibodies by card agglutination test for trypanosomes (CATT), and for DNA amplification, by Polymerase chain reaction (PCR), with primers yielding a 177 bp PCR product for the specific detection of Trypanozoon parasites. Out of 193, eight camels were positive by GSBS (4.1%) while 12 were positive with haematocrit centrifugation technique (6.2%). Detection of anti-trypanosomal antibodies with CATT yielded 84 positive samples (43.5%). Using PCR 110 out of 193 were positive (56.9 %). PCR technique is accurate, more sensitive and specific method for diagnosis of trypanosome infected camels than parasitological techniques; it overcomes the problem of specificity and can detect low parasitemic camels in chronic cases. The PCR proved to be the best test used for detection of camel trypanosomosis in Egypt.

Keywords: Camels, Trypanosomosis, Stained Blood smear, Haematocrit centrifugation technique (HCT), Card agglutination test (CATT), Polymerase chain reaction (PCR)