

Zeitschrift: Acta Tropica
Herausgeber: Schweizerisches Tropeninstitut (Basel)
Band: 43 (1986)
Heft: 2

Artikel: "Trypanosoma brucei" infection in domestic pigs in a sleeping sickness epidemic area of Uganda : short communication
Autor: Okuna, N.M. / Mayende, J.S.P. / Guloba, A.
DOI: <https://doi.org/10.5169/seals-313625>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. [Siehe Rechtliche Hinweise.](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. [Voir Informations légales.](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. [See Legal notice.](#)

Download PDF: 14.05.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

Uganda Trypanosomiasis Research Organization, Tororo, Uganda

***Trypanosoma brucei* infection in domestic pigs in a sleeping sickness epidemic area of Uganda**

Short communication

N. M. OKUNA, J. S. P. MAYENDE, A. GULOBA

There appears to be no report of porcine trypanosomiasis in Uganda apart from that of Wilson (1949) who recorded *T. simiae*. In West Africa, the pig has been identified as a possible reservoir of *T. b. gambiense* (Gibson et al., 1978).

The aim of this study was to investigate the possibility that domestic pigs may be reservoirs for *T. b. rhodesiense* in the sleeping sickness epidemic areas of Uganda.

In July 1984, 304 indigenous domestic pigs from the northern shores of Lake Victoria, Uganda, were examined for trypanosomiasis. Sleeping sickness has been epidemic in the area since 1976 (Abaru and Matovu, 1981). The pigs were examined for parasitaemia by the haematocrit concentration technique (HCT) (Woo, 1969). Blood from pigs found to be positive by HCT was sub-inoculated into mice and the mice were examined daily for parasitaemia, by microscopy, until found positive or for 60 days. Thin blood films were made from positive pigs and mice for morphological identification of the trypanosome species.

Thirty-six (11.8%) of the pigs were found positive by HCT and 16 isolates were made from mouse inoculations. Morphologically all trypanosomes diagnosed appeared to belong to the *T. brucei* subgroup. 6 of the isolates were tested by the blood incubation infectivity test (Rickman and Robson, 1970) and two were found resistant to human plasma.

This study shows that *T. brucei* infection is quite prevalent in domestic pigs in the tsetse fly infested northern shores of Lake Victoria where sleeping sickness is epidemic. The disease in pigs was not diagnosed earlier probably because infected animals appear clinically normal.

Pigs are kept in close contact with people in this area, where *G. fuscipes fuscipes* has been shown to be peridomestic (Okoth, 1982). The pigs are almost never treated against trypanosomiasis as they are presumed to be free from the

Correspondence: Dr. N. M. Okuna, Uganda Trypanosomiasis and Malaria Research Organization, P.O. Box 96, Tororo, Uganda

disease. Therefore, it is quite likely that domestic pigs are a reservoir host for *T. b. rhodesiense* in the sleeping sickness epidemic area surveyed; further investigation is necessary in order to clarify their role.

Acknowledgments

We wish to express our gratitude to the Acting Director of UTRO for his interest and encouragement during this work and for permission to publish it.

- Abaru D. E., Matovu F. S.: Sleeping sickness in Southern Eastern Uganda. 17th Meeting, ISCTRC Publ. No. 112, p. 163–167 (1981).
- Gibson W. C., Mehltz D., Lanham S. M., Godfrey D. G.: The identification of *Trypanosoma brucei gambiense* in Liberian pigs and dogs by isoenzymes and by resistance to human plasma. Tropen-med. Parasit. 29, 335–345 (1978).
- Okoth J. O.: Further observations on the composition of *Glossina* population at Lugala, South Busoga, Uganda. E. Afr. med. J. 59, 582–584 (1982).
- Rickman L. R., Robson J.: The blood incubation infectivity test – a simple test which may serve to distinguish *Trypanosoma brucei* from *T. rhodesiense*. Bull. WHO 42, 650–651 (1970).
- Wilson S. G.: Treatment of *T. simiae* infections with “Antrycide”. Vet. Rec. 61, 397–398 (1949).
- Woo P. T. K.: The haematocrit centrifuge for the detection of trypanosomes in blood. Canad. J. Zool. 47, 921–923 (1969).