

Hidden danger from pet dogs in Africa

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Dogs in tropical Africa run the risk of contracting canine trypanosomosis if they are bitten by bloodsucking tsetse flies carrying trypanosomes—microscopic, single-celled organisms found in the bloodstream. In dogs, this disease runs a severe course and is often fatal; "white eyes" or corneal cloudiness is one of the characteristic and obvious signs of the disease.

Sick dogs suspected of trypanosomosis are frequently brought to the University of Nigeria Veterinary Teaching Hospital (UNVTH) in Nsukka, where diagnosis relies on examination of a blood smear under the microscope. While trypanosomes are easily detected by their rapid motion among the blood cells, it is hard to determine the exact species of trypanosome by microscopy alone.

To help with the diagnosis, Dr. Paschal Umeakuana of UNVTH contacted Professor Wendy Gibson from the School of Biological Sciences, as Bristol's Trypanosome Research Group has developed molecular-based methods for trypanosome identification.

The collaboration led to the accurate identification of trypanosomes in 19 recent cases of canine

trypanosomosis referred to UNVTH and these results are published in the journal *Parasites & Vectors*.

Wendy Gibson, Professor of Protozoology, said: "To our surprise, we found that two of the dogs were carrying Tbg1, the trypanosome that causes most of the cases of human trypanosomiasis in Africa."

Human African trypanosomiasis is rarely found in Nigeria nowadays, and indeed elsewhere in tropical Africa, as this deadly disease is now on track for elimination as a public health problem. According to the World Health Organisation, fewer than 1,500 cases were reported in 2017, whereas many countries in tropical Africa suffered devastating epidemics in the last century.

More information: Paschal Ugochukwu Umeakuana et al, Identification of *Trypanosoma brucei gambiense* in naturally infected dogs in Nigeria, *Parasites & Vectors* (2019). [DOI: 10.1186/s13071-019-3680-8](https://doi.org/10.1186/s13071-019-3680-8)

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