*Mem. Inst. Oswaldo Cruz*, Rio de Janeiro, Vol. 81(1) :131-132, jan./mar. 1986

# ANOTHER *TRYPANOSOMA*, DISTINCT FROM *T. CRUZI*, MULTIPLIES IN THE LUMEN OF THE ANAL GLANDS OF THE OPOSSUM *DIDELPHIS MARSUPIALIS*

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*Epimastigotes were found multiplying in the anal glands and in hemocultures of an opossum; rare metacyclics were seen in the cultures. The flagellate is possibly* T. (Megatrypanum) freitasi *Rego, Magalhães & Siqueira, 1957, but its final identification is still pending.*

Key words: *Trypanosoma* – anal glands – opossum

*Trypanosoma cruzi* was found to multiply as extracellular epimastigotes and transform into trypomastigotes of the metacyclic type in the lumen of the anal glands of the opossum *Didelphis marsupialis*. In this situation *T. cruzi* imitates its development in the gut of the invertebrate host. In the tissues of the opossum the parasite goes through its classic vertebrate cycle (Deane, Lenzi & Jansen, 1984; Carreira et al., 1985).

We now report the finding of another trypanosome reproducing as extracellular epimastigotes in the anal glands of the same species of marsupial.

The opossum, an adult female, was captured in Nova Iguaçu, State of Rio de Janeiro, and submitted to the routine established in our laboratory: bi-monthly repeated hemoculture, xenodiagnosis (xeno), immunofluorescent antibody test (IFAT) with *T. cruzi* antigen and microscopic examination of material obtained by manual expression of the anal glands (AG). Results were: 5 negative xenos, with a total of 91 triatomines examined (hemolymph inclusive); 5 negative IFATs; 3 positive hemocultures out of 5 made; 1 positive AG out of 4 examined.

The animal was killed and, in fresh and stained preparations, the presence of epimastigotes, many in division, was confirmed in the AG. No trypomastigotes were found in this material, nor in the many fresh or stained preparations of blood or other tissues, but rare forms in this stage were seen in a culture, very different from *T. cruzi* and with the uncharacteristic morphology of the metacyclic of various species. Blood and AG material have been inoculated in new born mice, young opossums and various culture systems, all of which are still being examined.

The specific identification of the flagellate shall be possible only when we have more data on it, especially on the morphology of the "adult" form. Positive hemocultures with production of a trypomastigote stage, obviously identify the genus. Of the species of *Trypanosoma* that have been reported from opossums *T. cruzi* and *T. rangeli* can be excluded because the parasite does not develop in triatomines and does not infect mice. To our knowledge, the only other trypanosome reported from opossums of the genus *Didelphis* is *T. (Megatrypanum) freitasi* Rego, Magalhães & Siqueira, 1957. The original description and one report by L.M. Deane (1964) indicate that *T. freitasi* is rare among opossums, produces scanty parasitemia, does not infect triatomines or mice and grows poorly in NNN medium, characteristics that seem to correspond to those of our trypanosome. It should be added that we had a great success with cultures grown in media other than NNN or LIT and expect to reach specific identification of the parasite very soon.

The finding here reported stresses the need to look for trypanosomes (and other trypanosomatids?) in such unorthodox situations as the anal glands of the opossum.

RESUMO

Um tripanosoma ainda não identificado foi encontrado multiplicando-se como epimastigotas extracelulares nas glândulas anais de um gambá. Trata-se possivelmente do *T. (M.) freitasi* Rego, Magalhães & Siqueira, 1957. O achado demonstra que tal localização não se restringe ao *T. cruzi* e sugere que os tripanosomatídeos devem ser buscados nesta e em outras situações inortodoxas, no organismo dos hospedeiros vertebrados.

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This investigation received financial support from the UNDP/WORLD BANK/WHO Special Programme for Research and Training in Tropical Diseases and from Brazilian National Research Council (CNPq).

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Received for publication January 8th and accepted January 17th, 1986.

## ACKNOWLEDGEMENTS

We are grateful to Maria de Fátima Bernardo and Valquíria Trajano de Menezes for their excellent technical assistance.

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