

EXPERIMENTAL INFECTION OF THE OPOSSUM *DIDELPHIS ALBIVENTRIS* (MARSUPIALIA, DIDELPHIDAE) WITH *LEISHMANIA DONOVANI*

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Didelphis albiventris was the first non canid wild mammal found naturally infected with *Leishmania donovani* in the New World (Sherlock et al., 1984, *Mem. Inst. Oswaldo Cruz*, 79: 511). The previously recorded experimental infection of this opossum with this parasite (Sherlock et al., Congr. Soc. Brasileira Parasitol., Salvador, BA, 2-6 Aug., 1987) is presently described.

Four female opossums carrying pouch young were caught in Jacobina, Bahia state, and found free from leishmania infection through examination of blood, spleen, liver, lung, and skin smears; blood and spleen cultures in triple N; and spleen inoculation in hamster. Twelve of the young were intraperitoneally inoculated as follows: 4 with amastigotes from hamsters' spleen infected with 2 strains (2/each strain) isolated from naturally infected *D. albiventris*; 4 with culture promastigotes of the above strains; 4 with amastigotes from hamsters' spleen infected with a strain isolated from a naturally infected dog.

No attempts were made to quantify the inocula. The parasites, identified as *L. donovani* (= *chagasi*) by analysis with monoclonal antibodies by means of radioimmune binding assay

(Grimaldi et al., 1987, *Am. J. trop. Med. Hyg.*, 36: 270-287), are registered as MDID/Br/83/CPq/GM/22, MDID/Br/84/CPq/GM/121 and MCAN/Br/84/CPq/GM/076, for the two opossum and the dog strains, respectively. They were all isolated in Jacobina and are maintained by culture and hamster passages.

The young opossums, of various ages but still marsupium-dependent when inoculated, were separated from their mothers at the proper time and from then on kept in individual cages up to one year after inoculation.

Only two animals became infected, both of the group which received amastigotes of strains of opossum origin (1/each strain). Both were apparently well when killed but post-mortem examination showed splenomegaly, abundant amastigotes, and characteristic lesions in spleen and liver. In the skin a dermal mononuclear infiltration was not associated with parasites and no abnormalities or parasites in the intestinal tract (including the anal glands), were detected.

The apparent difference in virulence for the opossum between the opossum strains and a dog strain of *L. donovani*, is stressed.

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