

Reprinted from
 TRANSACTIONS OF THE ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE.
 Vol. 63. No. 1. pp. 8/9, 1969.

A malaria parasite of the brush-tailed porcupine in *Calomys* and white mice

IRÈNE LANDAU, J.-P. ADAM AND Y. BOULARD

Muséum National d'Histoire Naturelle, Paris, and O.R.S.T.O.M., Brazzaville

An *Atherurus africanus* captured in the Congo (Brazzaville) with a natural infection of *Plasmodium atheruri* VAN DEN BERGHE, PEEL, CHARDÔME and LAMBRECHT, 1958 was splenectomized to induce a relapse. At the peak of parasitaemia, a large amount of blood was taken and inoculated to splenectomized and intact laboratory rodents. Splenectomized mice, rats, hamsters and *Calomys callosus* became infected. The *Calomys* and mouse lines were maintained by serial passages to splenectomized animals. Although the strain is not yet fully adapted to rodents without splenectomy, we hope to achieve this soon.

Calomys callosus is at present the best experimental host. This rodent is a South American cricetid which is very easily bred in the laboratory (PETER et al., 1967).

The morphology of the parasite in the blood of white mice and *Calomys* is very different from that of *P. atheruri* in the porcupine.

(i) It invades both mature and immature cells and does not alter the size or the morphology of the erythrocyte.

(ii) Pigment is usually scarce in the asexual forms and, particularly in *Calomys*, it is often reduced to one or two dark grains.

(iii) Schizonts are easily found in the blood smears and produce 12 to 20 merozoites, sometimes even more.

(iv) Gametocytes do not often fill the host cell and contain more pigment than the old trophozoites. They are infective to *A. stephensi*.

Blood from an infected *Calomys* was injected into an uninfected *Atherurus*. The morphology in the porcupine reverted to that of typical *P. atheruri*.

This work was supported by a grant from the World Health Organization.

REFERENCES

- PETER, F., KARIMI, Y. & DE ALMEIDA, C. R. (1967). *C. r. Acad. Sci., Paris*, 265, 1974.
 VAN DEN BERGHE, L., PEEL, E., CHARDÔME, M. & LAMBRECHT, F. L. (1958). *Ann. Soc. belge Méd. trop.*, 38, 971.