

## LETTERS TO THE EDITOR

### *Setaria cervi*, a test organism for screening antifilarial agents

The methods currently available for the screening of antifilarial agents are time-consuming and inconvenient, since an intermediate orthopod vector is required to transmit the infective larvae to the experimental host. Even then there is a long incubation period before microfilaria appear in the blood; 50 days for *Litomosoides carinii* (Hewitt, Wallace & others, 1947) and 8 months for *Dirofilaria immitis* (Webber & Hawking, 1955).

In the present method, two male and two female adult *Setaria cervi*, a common filarial parasite of cattle, were implanted intraperitoneally into rats within 2 h of collection from the slaughter house. Microfilaria appeared in the rat blood in the second week after implantation and continued to be present up to six weeks after which the adult worms were found dead at autopsy.

Rats which showed the presence of microfilaria in peripheral circulation were given diethylcarbamazine orally in doses of 2.5, 5 and 10 mg/100 g. Blood was examined daily by spreading a thick film on the slide, dehaemoglobinizing, and then staining with Leishman stain. Complete disappearance of the microfilaria during 3 consecutive days was accepted as a positive antifilarial response.

Table 1. *The antifilarial activity of diethyl carbamazine against groups of rats infected with Setaria cervi*

Daily oral dose of diethylcarbamazine mg/100 g	Rats surviving	No. of rats cleared of microfilaria	Response %
Control	10/10	0/10	—
10	9/10	9/9	100
5	10/10	7/10	70
2.5	10/10	2/10	20

As shown in Table 1 diethylcarbamazine was found to be completely effective in a dose of 10 mg/100 g and the response diminished with the reduction of the dose. When the drug was discontinued microfilaria reappeared in the blood.

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