

Sensitivity of *Mycobacterium leprae* to Dapsone, Studied in the Rat

TO THE EDITOR:

Levy *et al* (2) from their studies on the disposition of dapsone (DDS) in the mouse, the rat and man, concluded that the situation in man is comparable with that in the rat, whereas the disposition of DDS in the mouse is quite different from that in man.

In the rat and in man a substantial proportion of the dapsone administered is acety-

lated to mono- and diacetyldapsone, whereas the mouse fails to do so. It was therefore important to compare the activity of dapsone in rats and mice. Hilson (1) has shown that *M. leprae* multiplies in the foot pads of rats. We have done this for our strain 17547 previously described [Pattyn *et al* (3)].

Rats were inoculated in one hind foot pad with 10^4 acid-fast bacilli (AFB) and divided

in groups, receiving food containing 0, 0.01%, 0.001%, 0.0001% and 0.00001% DDS.

The multiplication of *M. leprae* in the control animals reached the plateau level five months after inoculation (7 animals out of 7). No AFB were detected in the animals fed DDS at 0.01% (0/6), 0.001% (0/8), 0.0001% (0/10) concentrations. At the 0.00001% concentration four out of six animals showed multiplication of *M. leprae*.

In the past [Pattyn *et al* (3)] the same strain of *M. leprae* had multiplied in one out of eight mice fed DDS at a 0.0001% concentration.

DDS sensitivity of *M. leprae* strains has been shown by Shepard (4) to be a stable character on continued mouse passage.

Our results show that the minimal effective dose, at least for the strain tested, is identical whether it is determined in the mouse or the rat model.

—S. R. Pattyn

G. Verdoolaeghe-Van Loo

Instituut voor Tropische Geneeskunde

Prins Leopold

Nationalesstraat 155

2000 Antwerpen, Belgium

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