

Unclassified Mycobacterial Strains Susceptible to Dapsone Isolated from the Environment in Central Africa

TO THE EDITOR:

We enjoyed the paper of Seydel, Richter, and Wempe (⁴) on the "Mechanism of action of the folate blocker diaminodiphenylsulfone (dapsone, DDS) studied in *E. coli* cell-free enzyme extracts in comparison to sulfonamides."

We note that the authors mention that *M. lufu*, a strain with high sensitivity for DDS, is presently under study in their laboratory. In view of this, we would like to mention that we have isolated, from the environment in Zaïre, a number of mycobacterial strains sensitive to DDS (³). The minimal inhibitory concentration (MIC) of dapsone on Löwenstein-Jensen medium is 0.1 µg/ml for 21 strains and 0.03 µg/ml for five strains. All these strains are slowly growing organisms and do not grow or grow very poorly at 37°C. They are different from the actually recognized mycobacterial species and belong to three new groups. One of these groups was provisionally designated by us as "*M. lufu*," and we gave two of these "*M. lufu*" strains to Prof. Dr. Seydel. Therefore, we want first to draw your attention to the fact that the species description of "*M. lufu*" has not yet been published and is thus not official. Second, among the "in vitro" cultivable mycobacterial species, none was found to be as sensitive to DDS as our unclassified mycobacteria isolated from the environment in Zaïre. The most sensitive species (*M. kansasii*, *M. gastri*, and *M. ulcerans*) have a MIC varying from 0.3 to 0.1 µg/ml, approximately ten times the value known for wild

strains of *M. leprae* (¹). Five of our unclassified mycobacteria, however, have a MIC value (0.03 µg/ml) very close to that of *M. leprae* (0.02 µg/ml), as determined in mice and rats (^{2,3}). Studies of those strains will certainly help to elucidate the mechanism of action of dapsone.

Additional studies on these dapsone sensitive mycobacteria are in progress.

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REFERENCES

1. PATTYN, S. R. and VAN ERMENGEM, J. DDS sensitivity of mycobacteria. Antagonistic effect of PABA for *M. ulcerans* and *M. kansasii*. *Int. J. Lepr.* **36** (1968) 427–431.
2. PETERS, J. H., GORDON, G. R., MURRAY, J. F., FIELDSTEEL, A. H. and LEVY, L. Minimal inhibitory concentration of dapsone for *Mycobacterium leprae* in rats. *Antimicrob. Ag. Chemother.* **8** (1975) 551–557.
3. PORTAELS, F. Etude d'Actinomycetales isolées de l'homme et de son environnement en Afrique Centrale. Doctoral thesis, University of Brussels, Belgium, 1978.
4. SEYDEL, J. K., RICHTER, M. and WEMPE, E. Mechanism of action of the folate blocker diaminodiphenylsulfone (dapsone, DDS) studied in *E. coli* cell-free enzyme extracts in comparison to sulfonamides (SA). *Int. J. Lepr.* **48** (1980) 18–29.
5. SHEPARD, C. C. Studies in mice of the action of DDS against *Mycobacterium leprae*. *Int. J. Lepr.* **35** (1967) 616–622.

Effect of Purification Procedures on the Viability of *Mycobacterium leprae*

TO THE EDITOR:

Suspensions of *Mycobacterium leprae* prepared from infected tissues are usually contaminated with host-tissue elements. When such suspensions are used for met-

abolic studies, spurious results might be obtained. The enzyme activities detected could be of host-tissue origin, or the contaminant substances would inhibit the bacterial enzymes.