ANTIBIOTIC EFFECTS OF LEPTOTAENIA PRODUCTS

TO THE EDITOR:

For some time past I have been interested in the use of an extract of the root of Leptotaenia dissecta Nutt (Peck, 1941), a plant belonging to the Umbelliferae or parsley family. My work with it has been entirely clinical, but in 1948 two workers at Western Reserve University, H. J. Carlson and H. G. Doublas, reported on laboratory investigations made with the same material [J. Bact. 55 (1948) No. 5 (May)]. The thing that struck me as of interest in connection with leprosy work is that they found definite antibiotic effects in vitro with the tubercle bacillus. They wrote that two nonpathogenic strains of mycobacteria, M. phlei and M. smegmatis, and one pathogenic strain, M. tuberculosis H37, had exhibited marked susceptibility to the action of the oil fractions.

As far as I am aware, no work has been done with this substance in leprosy. However, recalling my visit to Culion many years ago, and the opinion held by various workers of an antigenic or immunologic relationship between tuberculosis and leprosy, it has occurred to me that clinicians who are engaged in a search for a better and more specific medicine in leprosy might be interested to try this material. I realize that much progress has been made in leprosy therapy in recent years with the intro-

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duction of sulfones, but I also understand that there is still room for improvement and that any drug which would prove effective as an additive or a synergist, or for use in the rest intervals, would be welcomed.

There are three possible forms in which antibiotic material can be obtained from the root of this plant. One is a volatile oil; the second is sodium leptonate; and the third is a water extractive. All of them exhibit antibiotic effects. Our clinical work here in California during the past few years has been done with sodium leptonate, whereas the workers at Western Reserve used the oil. We now have all three products and are shortly going to begin a study, both on animals and clinically, with a combination of the three. All the necessary toxicity work has been done, and the material has been shown to be nontoxic in many times the dosage which would be used clinically.

In the Department of Bacteriology of the University of Oregon they are undertaking work with this material in virus diseases. No results of that work have been released for publication as yet, but it is understood that there are indications that this may be the most promising of the antibiotics available for clinical use in virus infections.

If anyone in leprosy work would like to undertake an investigation with such material, either clinically or otherwise, I would be glad to arrange to have him sent as much as he might need of any of the forms mentioned. I think that if it has any effect clinically its chief advantage will be the fact that it may be used effectively by oral medication. It might perhaps be interesting to try the use of ethyl esters.

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