

CORRESPONDENCE

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SULFONE-RESISTANT BCG AVAILABLE ATYPICAL MYCOBACTERIUM FROM A LEPROSY PATIENT

TO THE EDITOR:

After reading the editorial which appeared in the fourth issue of THE JOURNAL for 1960, I asked Drs. N. Rist and G. Canetti, of the Institut Pasteur of Paris, and Dr. Gernez-Rieux, director of the Institut Pasteur of Lille, French specialists working on mycobacteria, to study the sulfone-resistance of the BCG strains which they might have. At the same time I sent them three strains of mycobacteria, assumed to be *M. tuberculosis*, that had been isolated from the sputums of leprosy patients showing clinical and roentgenologic symptoms of pulmonary tuberculosis. So far, two interesting findings have been reported:

First, at the Institut Pasteur of Lille there existed a sulfone-resistant strain of BCG. Herewith are the results of tests of the resistance of this strain (No. 159), as compared with that of certain strains of *M. tuberculosis* and one of the strain of BCG—No. 847—the one which I have used here, the sulfone resistance of which is very low.

Gernez-Rieux has forwarded the resistant BCG strain to me. Consequently, there is at the disposal of leprologists, if they so desire, a sulfone-resistant strain of BCG.

From the 3 strains of mycobacteria supposedly *M. tuberculosis*, one (the Delivray strain) was found to be an atypical mycobacterium showing, as is the rule for such strains, very low sensitivity to different antibiotics. A table of the results of the identification and sensitivity tests follows.

TABLE 1.—*In vitro* tests of several strains of mycobacteria for sensitivity to sulfone.^a

Strain	No drug (Control)	Disulone, α /cc.						DDS, α /cc.						
		0.1	0.5	1.0	2.5	5	10	0.1	0.5	1.0	2.5	5	10	
H37Rv	∞	∞	∞	∞	50%	0	0	∞	∞	∞	∞	∞	20	0
Ravenel	∞	∞	∞	∞	∞	0	0	∞	∞	∞	∞	∞	∞	0
Avian 17	∞	∞	∞	∞	∞	10%	0	∞	∞	∞	∞	∞	50%	0
BCG 847 ^b	∞	10%	10%	10%	0	0	0	20%	20%	20%	20%	20%	0	0
BCG 159 ^c	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞

^a Loewenstein-Jensen medium, impregnated on the surface with the drugs as indicated; cultures planted on October 9 and read on October 31, 1961.

^b BCG 847, the strain regularly in use at the Institut Pasteur de Martinique, sensitive to sulfones.

^c BCG 159, the sulfone-resistant strain supplied by the Institut Pasteur de Lille.

The opinion of Karlson regarding the possibility of using sulfones in cases of pulmonary involvement caused by nontuberculosis mycobacteria is well confirmed by the results shown in Table 2. The patient concerned was one with the tuberculoid type of leprosy whose radiographs of the lungs pointed to the diagnosis of tuberculous nature, which however had not responded in the usual manner to the classical antituberculosis treatment. After 4 months of sulfone treatment she was almost recovered, having gained 18 kilograms in weight during that period.

TABLE 2.—*Tests of Souche Delivray, a nonchromogenic, atypical strain of mycobacterium isolated from a patient with tuberculoid leprosy.*

Study done at the Institut Pasteur de Lille

T.C.H.	1+
Niacine	0
Peroxidase	3+

Sensitivity to antibiotics etc.

Drug	Resistant	Sensitive
P.A.S.	100 α	—
Streptomycin	1 α	50 α
I.N.H.	0.5 α	5 α
Kanamycin	—	1 α
Cycloserine	20 α	—
Viomycin	10 α	50 α
1314	1 α	5 α
Disulone	10 α	50 α

I think that you will be interested in this information, and in the fact that I am prepared to supply cultures of the sulfone-resistant strain of BCG on request. I am nevertheless persuaded that the use of a sulfone-resistant strain of BGG as a means of prophylaxis after BBG vaccination of contacts with contagious cases will not give results appreciably better than those already obtainable since, I repeat, the tuberculin and lepromin conversion will operate in essentially the same manner, in intensity and proportion, in the vaccinated persons who receive the chemoprophylaxis as in those who are not given BBG.

E. MONTESTRUC
 Director, Institut Pasteur
 de Martinique

Fort-de-France
 Martinique