CORRESPONDENCE

This department is for the publication of informal communications that are of interest because they are informative and stimulating, and for the discussion of controversial matters. The mandate of this JOURNAL is to disseminate information relating to leprosy in particular and also other mycobacterial diseases. Dissident comment or interpretation on published research is of course valid, but personality attacks on individuals would seem unnecessary. Political comments, valid or not, also are unwelcome. They might result in interference with the distribution of the JOURNAL and thus interfere with its prime purpose.

Leprosy Vaccines from Cultivable Mycobacteria

TO THE EDITOR:

Using a vaccine containing *Mycobacterium w,* Mukherjee, *et al.* [4] have basically obtained, albeit on a larger sample, results similar to those reported earlier by us with ICRC vaccine [1, 2]. Both of the vaccines, which are prepared from cultivable mycobacteria, induce lepromin conversion in a majority of lepromatous leprosy patients, associated with upgrading of tissue reaction and accelerated bacillary clearance. Some patients even show reversal reaction [1, 4]. A comparative account of the two mycobacteria makes interesting reading (The Table).

Cultural characteristics, similarity of protein antigens and, especially, identical RFLP patterns indicate that the two organisms, ICRC and *Mycobacterium w,* may not be very much different, explaining the similarity of the observations. The results from two independent laboratories further show that vaccines containing cultivable mycobacteria, exhibiting crossreactivity with *M. leprae,* could be effective immunotherapeutic agents [2, 4].

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THE TABLE. *Comparative features of ICRC and* Mycobacterium w.

	ICRC	*Mycobacterium w*
Year of isolation	1958	1978
Source	LL patients	Somewhat uncertain
Taxonomical position[8]	*M. avium-intracellulare* complex[a]	*M. avium-intracellulare* complex[a]
Growth characteristics	Easily grows on microbiological media	Easily grows on microbiological media
Temp. optima[a]	35°C	35°C
Antigenic relatedness		
B-cell antigen (using rabbit antibodies)	Similar for the two organisms[b]	
T-cell (LTT as well as skin reaction)	Very similar for the two organisms [5, 6, 7]	
DNA		
Homology with *M. leprae*	Identical for the two organisms [3]	
RFLPs with PstI, and BstEII and probes		
M. leprae 3.6-kb EcoRI fragment	RFLPs with both enzymes and probes identical for ICRC and *Mycobacterium w* [3]	
M. tuberculosis 65-kDa antigen gene		

[a] Personal communication, C. Shepard, 1983.
[b] Personal communication, J. L. Stanford, 1979.

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Dr. Mukherjee, *et al.* Respond to Dr. Deo

To the Editor:

In response to Dr. Deo's letter claiming that ICRC and *Mycobacterium w* "may not be very different," the following points are offered for consideration.

1) ICRC was isolated by Bapat, *et al.* ([1]) from leproma nodules and grown in a "conditioned" medium. This organism belongs to the *M. avium-intracellulare* complex and grows in T/900R mice with evidence of dissemination in the liver and sciatic nerve with production of foot drop ([2]).

2) *Mycobacterium w* has its origin in a collection of atypical mycobacteria grown from sputum specimens and made available in 1974 to Dr. G. P. Talwar by Dr. S. P. Tripathy who was Director of the Tuberculosis Research Center in Madras at that time. This organism, probably a commensal of the upper respiratory tract, is a fast grower and is nonpathogenic to mice, rats and guinea pigs. Its growth and metabolic properties ([4, 6]) are similar to organisms belonging to Runyon's Group 4.

3) The results of DNA hybridization studies on the two organisms reported by Grossinsky, *et al.* ([3]) show that at a low stringency the percentage of binding of *M. leprae* DNA is 10.5 for ICRC and *Mycobacterium w,* 10.8 for *M. avium* and 10.3 for *M. phlei.* More importantly, at a high stringency *Mycobacterium w* has a distinctly higher binding, i.e., 3.9% as compared to 2.9% for ICRC. In the same article the authors have made the statement that *Mycobacterium w* shows the highest degree of homology with *M. leprae* among the three candidate vaccines.

4) With reference to the RFLP patterns studied by the same workers, the restriction enzymes selected and the regions probed are rather conserved. Restriction and probing of other regions are likely to bring out dissimilarities between the two organisms.

The data from the source, growth characteristics, animal pathogenicity and DNA analysis stated above make it clear that the two organisms are quite different. The therapeutic efficacy obtained with *Mycobacterium w* used in conjunction with multidrug therapy (MDT) has been clearly and unequivocally demonstrated in a number of studies ([5, 7, 8]). The only logical way by which the comparative merits of these two different organisms for immunoprophylaxis or immunotherapy can be gauged is with a comparative trial on a standard protocol by an independent party.