THE FIRST THREE YEARS, 1975–1978
THE FOUNDATION FOR MEDICAL RESEARCH, Bombay, 84A, R. G. Thadani Marg, Sea Face Corner, Worli, Bombay, 400 018, INDIA.

A report of 29 pages on the activities of this centre has been issued, giving a most interesting account of the scientific and other achievements during this brief period. One of the projects concerns work on the early detection of leprosy and its chemotherapy, and Mr N. H. Antia, FRCS, Trustee and Research Director, has very kindly supplied the following additional information —

"In regard to Early Detection of Leprosy, we have been studying consanguinous contacts of leprosy patients, since population studies have revealed an increase in the incidence of leprosy among family members. Early studies carried out by us had shown moderate nerve involvement even in patients with less than 6 months clinical history and whose nerves appeared to be normal on clinical testing. On the basis of these observations it was felt that screening of contacts for nerve involvement by using more refined methods would help in the detection of preclinical cases of leprosy.

In the initial study nerve conduction velocity of the index finger branch of the radial cutaneous nerve was carried out, followed by nerve biopsies of selected individuals which was further analysed qualitatively, quantitatively (fibre density and size distribution), ultrastructurally and by tease fibre studies. A total of 70 nerves from 35 contacts were studied for their nerve conduction velocity; 27 nerves showed delayed average nerve conduction velocity of which 10 were biopsied. In four nerves demyelination was observed ranging from 8%–13%. Five nerves with normal nerve conduction velocity were also biopsied and one showed demyelination.

On the basis of these observations, a second study was carried out to assess the alterations in the cell mediated immunity status of the contacts. The tests so far employed have been:

1. Enumeration of T (active) & T (total) lymphocytes by the 'E'–rossette technique.
2. Leucocyte migration inhibition test to lepromin and PHA.
3. Macrophage function as studied by level of protein synthesis.
4. *In vivo* lepromin skin test.

This study is still in progress and therefore definite conclusions cannot be reached. However, a consistent increase in T_1 cells and a normal response to lepromin in leucocyte migration inhibition test indicate that the first two parameters relate to the quality of exposure.

Macrophage function of only 2 lepromatous contacts was similar to LL patients i.e. in the presence of viable *M. leprae* a depression was observed in 3H-leucine uptake. Its implication as a possible measure of susceptibility to lepromatous leprosy will have to await further follow-up studies. This parameter does not seem to assist in the early detection and/or susceptibility to tuberculoid leprosy, for which the nerve studies (nerve conduction velocity) appear more indicative. Those contacts who have similar behaviour like established cases of lepromatous or

tuberculoid leprosy will then have to be followed as individuals who may in the future show clinical symptoms. Thus it is a long-drawn-out project with no quick answers. But continued study for 3 to 4 years may give some directions and hopefully indications towards utility of such an approach.

We have several preliminary observations which are very indicative but we still need clearer supporting data."