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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.

Effect of Interleukin-1 (IL-1) and IL-2 on Lymphocytes from Patients with Leprosy

TO THE EDITOR:

Leprosy is a disease with a wide clinical, histological, and immunological spectrum. The benign form, tuberculoid leprosy, is characterized by a good response measured *in vitro* by T-cell proliferation assay. In the multibacillary malignant form, lepromatous leprosy, T cells do not proliferate in the presence of specific and crossreacting antigens of *Mycobacterium leprae* (3).

In the development of T-cell-mediated immune responses to an antigen, lymphokines are required in a given sequence, and it has been postulated that the amount of interleukin-2 (IL-2) produced might determine the balance between immunity and unresponsiveness (1). To test if the lack of *in vitro* responsiveness to *M. leprae* antigens by T cells from lepromatous leprosy (LL) patients is due to a deficit in IL-1 or IL-2 production, the response of lymphocytes from LL patients to *M. leprae* in the presence of exogenously added IL-1 or IL-2 has been studied, but the data reported are contradictory (4, 8).

The purpose of this study is to evaluate the role of IL-1 and IL-2 in the *in vitro* T-cell proliferation of a group of leprosy patients characterized clinically and histopathologically.

Isolation of mononuclear cells. Mononuclear cells were isolated from heparinized peripheral blood by flotation over Ficoll-Hypaque gradients (2) and cultivated at a density of 2×10^5 viable cells/0.2 ml in microtiter plates. The cells were cultured in RPMI 1640 containing 100 U/ml penicillin, 100 μg/ml streptomycin, and 10% heat-inactivated, pooled normal human AB serum.

Antigen. The antigen used was 20 μl purified *M. leprae* $6 \times 10 \times 5$ bac/ml. The antigen was used with or without IL-2 (Lymphocult T; Biosoft) 100 U/ml diluted 1:50 (100 μl) and IL-1 produced by stimulating human macrophage cultures with silica (10).

For assaying antigen stimulation, the culture plates were incubated for 6 days; 18 hr before harvesting, 1 μCi of ^{3}H-thymidine (specific activity 1 Ci/mmole) was added, and the cells were processed for liquid scintillation.

Patients. The patients were seen in the Instituto de Biomedicina, Caracas, Venezuela. All patients (17 lepromatous, LL) were skin biopsied and classified following the Ridley-Jopling criteria (9). Lymphocytes from three Mitsuda-positive contacts were also studied.

Chemotherapy. All patients were receiving treatment with sulfone, rifampin, and clofazimine.

As can be seen in Table 1, the increase in counts per minute (cpm) obtained when lymphocytes were incubated from *M. leprae* antigen with IL-2 was not significantly different from the cpm obtained by incubating lymphocytes with IL-2 alone.

The nonspecific mitogenic effect on the response of lymphocytes incubated with IL-1 was similar to that observed with IL-2 alone, but of lower intensity (Table 2). However, when the cells were cultured in the

fect of IL-2 in lymphocytes from a group of LL patients, demonstrating the presence of receptors for IL-2 in a portion of blood lymphocytes.

The results obtained in LL pat ts show that IL-1 and IL-2 cannot restor the immune response against *M* tigens. In a group of the patient 2 had a nonspecific mitogenic effect w 1 is now being evaluated.

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Acknowledgment h tc
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To the Editor:

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