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

The results obtained in LL patients show that IL-1 and IL-2 cannot restore, *in vitro,* the immune response against *M. leprae* antigens. In a group of the patients, IL-2 had a nonspecific mitogenic effect which is now being evaluated.

—Elsa M. Rada S., Lic. Biol.
—Walter Mosco, M.D.
—Nacarid Aranzazu, M.D.
—Jacinto Convit, M.D.

Instituto de Biomedicina
Apartado 4043
Caracas 1010A, Venezuela

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An Unusual Case of Untreated Lepromatous Leprosy with Rare Bacilli: An Immunologic Follow-up

To the Editor:

Previously one of us ([1]) reported in the Journal a most unusual case of untreated leprosy with clinical signs and symptoms of nodular lepromatous leprosy which was confirmed by characteristic dermal histopathology following routine hematoxylin and eosin staining. Surprisingly, acid-fast organisms were found only after extraordinary effort. Organisms from these lesions were, however, characteristic of *Mycobacterium leprae* in morphology, growth kinetics in mice, lack of growth on Löwenstein-Jensen medium, antimicrobial susceptibility, and were demonstrated to contain phenolic glycolipid-I. At the time this case was reported, the immunologic mechanisms of this unique host–parasite interaction were under investigation. Herein we wish to report studies whereby we examined the ability of peripheral blood mononuclear leukocytes (PBL) from this patient to respond to mycobacterial antigens. As shown in The Table, fresh PBL, studied repeatedly over an 18-month period, responded vigorously (stimulation index $\geq$ 10) to whole *M. leprae* as well as to purified protein derivative of tuberculin (PPD). Although, as can be seen, a minority (18%) of lepromatous patients' fresh peripheral blood leukocytes respond to *M. leprae* ([2]), this patient is remarkable even as compared to that

THE TABLE. *Proliferative response of PBL from an unusual patient.*[a]

Patients studied	^{3}H-Thymidine incorporation in cultures stimulated with		
	Background (phosphate buffered saline)	*M. leprae* (cpm ± S.E.M.)	PPD
Unusual case (15 Jan. 85)	4,118 ± 609	48,652 ± 7,258	47,234 ± 3,317
Unusual case (14 May 85)	5,610 ± 1,048	61,659 ± 7,159	114,590 ± 7,726
Unusual case (23 July 86)	3,116 ± 567	32,705 ± 4,189	96,834 ± 7,238
Nonresponder lepromatous ([2]) (N = 28)	6,889 ± 1,298	7,383 ± 1,161	79,476 ± 9,344
Responder lepromatous ([2]) (N = 6)	3,291 ± 1,383	25,775 ± 5,737	95,670 ± 19,029
Borderline tuberculoid ([2]) (N = 9)	4,541 ± 1,406	40,881 ± 9,396	89,890 ± 13,942

[a] Proliferative responses of 2×10^5 PBL were measured after stimulation with 10 μg/ml whole *M. leprae* and 100 μg/ml PPD as described previously ([2]). ^{3}H-thymidine incorporation was measured on day 6. Results represent mean cpm of four replicate cultures.

group in the general degree of responsivity to *M. leprae* and more comparable in response to that of borderline tuberculoid patients. Indeed, the profound lymphocyte stimulation demonstrated by this patient indicates that the cell-mediated immune response to *M. leprae* is intact, and such immunity may explain the finding of rare *M. leprae* in the skin of this otherwise typical untreated lepromatous patient. Furthermore, this unusual case serves as a reminder that at the lepromatous pole of the spectrum there appears to be significant immunologic heterogeneity.

—Robert H. Gelber, M.D.

Medical Director
Hansen's Disease Program
Seton Medical Center
1900 Sullivan Avenue
Daly City, California 94015, U.S.A.

—Nahid Mohagheghpour, Ph.D.

Stanford Medical School Blood Center and Department of Pathology
Stanford University School of Medicine
800 Welch Road
Palo Alto, California 94304, U.S.A.

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