

VOLUME 57

1989

INTERNATIONAL JOURNAL OF LEPROSY

And Other Mycobacterial Diseases

Official Organ of the
INTERNATIONAL LEPROSY ASSOCIATION
(Association Internationale contre la Lèpre)
(Asociación Internacional de la Lepra)



Contents

INTERNATIONAL JOURNAL OF LEPROSY and Other Mycobacterial Diseases

Official Organ of the International Leprosy Association

President: Wayne M. Meyers, M.D., Ph.D., Chief,
Microbiology Division, Armed Forces
Institute of Pathology, Washington,
D.C. 20306-6000, U.S.A.

Secretary: Dr. Yo Yuasa, Executive and Medical
Director, Sasakawa Memorial Health
Foundation, The Sasakawa Hall, 6F
3-12-12 Mita, Minato-ku, Tokyo 108, Japan

Treasurer: Dr. W. F. Ross, One Broadway,
Elmwood Park, New Jersey 07407, U.S.A.

EDITORIAL OFFICE

Gillis W. Long Hansen's Disease Center
Carville, Louisiana 70721, U.S.A.

Editor: ROBERT C. HASTINGS, Carville, Louisiana

Assistant Editor: DEE D. GOODMAN, Carville, Louisiana

BUSINESS AND CIRCULATION OFFICE

Executive Officer: W. FELTON ROSS, One Broadway
Elmwood Park, New Jersey 07407, U.S.A.

BOARD OF DIRECTORS

Dr. Wayne M. Meyers (President, ILA), Chairman
Dr. Thomas H. Rea Dr. M. F. R. Waters
Dr. W. Felton Ross Dr. Yo Yuasa

CONTRIBUTING EDITORS

<i>Argentina:</i> Dr. J. E. Cardama (Buenos Aires)	<i>Mexico:</i> Dr. A. Saúl (Mexico, D.F.)
<i>Australia:</i> Dr. J. C. Hargrave (Darwin)	<i>Netherlands:</i> Dr. D. L. Leiker (Amsterdam)
<i>Brazil:</i> Dr. L. M. Bechelli (São Paulo)	<i>People's Republic of China:</i> Dr. Ye Gan-yun (Taizhou)
<i>France & Fr. Terr.:</i> Dr. D. Wallach (Paris)	<i>Philippines:</i> Dr. R. M. Abalos (Cebu City)
<i>India (North):</i> Dr. L. K. Bhutani (New Delhi)	<i>Spain:</i> Dr. J. Terencio de las Aguas (Fontilles)
<i>India (South):</i> Dr. G. Ramu (Kumbakonam)	<i>U.K.:</i> Dr. R. J. W. Rees (London)
<i>Israel:</i> Dr. L. Levy (Jerusalem)	<i>U.K.:</i> Dr. M. F. R. Waters (London)
<i>Japan:</i> Dr. M. Abe (Tokyo)	<i>U.S.A.:</i> Dr. P. W. Brand (Seattle)
<i>Malaysia & SE Asia:</i> Dr. J. H. S. Pettit (Kuala Lumpur)	<i>U.S.A.:</i> Dr. Thomas H. Rea (Los Angeles)
	<i>U.S.S.R.:</i> Dr. A. A. Juscenko (Astrakhan)
	<i>Venezuela:</i> Dr. J. Convit (Caracas)
	<i>West Africa:</i> Dr. M. Nebout (Bamako)

This JOURNAL is indexed in CURRENT CONTENTS/LIFE SCIENCES, BIOLOGICAL ABSTRACTS, CHEMICAL ABSTRACTS, EXCERPTA MEDICA/SECTION 51 LEPROSY, TROPICAL DISEASES BULLETIN, and INDEX MEDICUS-MEDLINE DATA BASE. Microform available from University Microfilms International, Ann Arbor, Michigan 48106, U.S.A. or London WC1R 4EJ, U.K.

The INTERNATIONAL JOURNAL OF LEPROSY (ISSN 0148-916X) is published quarterly for \$70.00 per year for members and \$100.00 per year for subscribers by Allen Press, Inc., 1041 New Hampshire St., Lawrence, Kansas 66044, U.S.A. Second-class postage paid at Elmwood Park, New Jersey and additional mailing office. POSTMASTER: Send address changes to INTERNATIONAL JOURNAL OF LEPROSY, Business and Circulation Office, One Broadway, Elmwood Park, NJ 07407, U.S.A.

**INTERNATIONAL JOURNAL OF LEPROSY
and Other Mycobacterial Diseases**

CONTENTS

Volume 57, Number 1, March 1989

	Page
Original Articles	
Mustafa, Abu Salim and Qvigstad, Erik. HLA-DR-restricted Antigen-induced Proliferation and Cytotoxicity Mediated by CD4+ T-cell Clones from Subjects Vaccinated with Killed <i>M. leprae</i>	1
Job, Charles K., Kahkonen, Martti E., Jacobson, Robert R., and Hastings, Robert C. Single Lesion Subpolar Lepromatous Leprosy and its Possible Mode of Origin	12
Kohli, Majula, Vaishnavi, Chetana, Garg, Uttam Chand, Ganguly, Nirmal Kumar, and Kaur, Surrinder. Urinary Excretion of Renal Brush-border Enzymes in Lepromatous Leprosy—a Preliminary Investigation	20
Sinha, Sudhir, McEntegart, Anne, Girdhar, Bhawmeshwar K., Bhatia, Amarjit S., and Sengupta, Utpal. Appraisal of Two <i>Mycobacterium leprae</i> -specific Serological Assays for Monitoring Chemotherapy in Lepromatous (LL/BL) Leprosy Patients	24
Ganapati, R., Revankar, Chandrakant R., Lockwood, Diana N. J., Wilson, Rowan C., Price, Janet E., Ashton, Penelope, Ashton, Leslie A., Holmes, Rowena M., Bennett, Chad, Stanford, John L., and Rees, Richard J. W. A Pilot Study of Three Potential Vaccines for Leprosy in Bombay	33
Stanford, John L., Stanford, Cynthia A., Ghazi Saidi, Kiumars, Dowlati, Yahya, Weiss, Sister Fabiola, Farshchi, Yusef, Madlener, Frits, and Rees, Richard J. W. Vaccination and Skin Test Studies on the Children of Leprosy Patients ..	38
Ghazi Saidi, Kiumars, Stanford, John L., Stanford, Cynthia A., Dowlati, Yahya, Farshchi, Yusef, Rook, Graham A. W., and Rees, Richard J. W. Vaccination and Skin Test Studies on Children Living in Villages with Differing Endemicity for Leprosy and Tuberculosis	45
Silva, Manuel T., Portaels, Françoise, and Macedo, Paula M. New Data on the Ultrastructure of the Membrane of <i>Mycobacterium leprae</i>	54
Liu Tze-Chun, Ji Zhong-Min, and Skinsnes, Olaf K. Light- and Electron-microscopic Study of <i>M. leprae</i> -infected Armadillo Nerves	65
Editorials	
T-Helper Cell Subpopulations and the Immune Spectrum of Leprosy (Teresa Ramos, Ilana Zalcborg-Quintana, Rui Appelberg, Euzenir N. Sarno, and Manuel T. Silva)	73
The 1988 JOURNAL—a Continuing Perspective (Robert C. Hastings)	82
The Management of Reaction in Leprosy (Roy E. Pfaltzgraff)	103
Correspondence	
A Critique on the Interpretation of the Lepromin Reaction Using Heat-killed <i>M. leprae</i> Vaccine (Nerges F. Mistry and Noshir H. Antia)	110
Reply by Gill, Mustafa and Godal (Havindar Kaur Gill, Abu Salim Mustafa, and Tore Godal)	112
Diagnostic Efficacy of Cutaneous Nerve Biopsy in Primary Neuritic Leprosy (A. Colin McDougall)	114
Drs. Jacob and Mathai Reply (Mary Jacob and Rachel Mathai)	114
Investigations into Cultivation of <i>M. leprae</i> Under Low Oxygen Tension (M. Ishaque)	115
Obituary	
Ma Haide (George Hatem)	117
News and Notes	119
Book Reviews	121

Current Literature	127
Special Grantors and Sustaining Members	152
ILA Membership List	153
Index to Volume 56	167

CONTENTS

Volume 57, Number 1 (Supplement), March 1989

	Page
Congress Organization	
History of the International Leprosy Congress	231
XIII International Leprosy Congress Organizing Committee	232
Sponsoring Organizations	233
International Leprosy Association Officers and Councillors	234
Welcoming Remarks	235
Minutes of ILA Council Meeting	236
XIII International Leprosy Congress Participants	239
Damien-Dutton Award 1988, Hermann Kober	252
Opening Ceremonies	
Welcome, Mrs. E. Veder-Smit	253
Address, Prof. Michel F. Lechat	255
Inaugural Letter, Mr. P. Bukman	256
Keynote Address, Dr. S. K. Noordeen	259
Greetings/Congress Opening, Dr. R. H. Thangaraj	262
Plenary Session	
General Meeting of ILA Members	264
Closing Remarks by Outgoing ILA President, Prof. Michel F. Lechat	268
Address of Incoming ILA President, Dr. Wayne M. Meyers	270
New ILA Officers and Councillors	272
Minutes of New ILA Council Meeting	273
Reports of Pre-Congress Workshop Committees	
Workshop 1. Immunology	275
Workshop 2. Chemotherapy, Clinical and Experimental	278
Workshop 3. Epidemiology	280
Workshop 4. Leprosy Control, Evaluation and Integration	282
Workshop 5. Leprosy Information Systems	284
Workshop 6. Diagnosis and Clinical Aspects	286
Workshop 7. Training	288
Workshop 8. Prevention and Management of Impairment in Leprosy	290
Workshop 9. Leprosy Vaccine Trials	292
Workshop 10. Social Aspects	295
Workshop 11. Health Education	297
Workshop 12. Rehabilitation	299
Workshop 13. Microbiology	301
Abstracts of Congress Papers and Posters	303
Author Index	436
Constitution and Bylaws of the International Leprosy Association	445

CONTENTS
Volume 57, Number 2, June 1989

	Page
Original Articles	
Katoch, Kiran, Ramu, Gopal, Ramanathan, Usha, Sengupta, Utpal, Sreevatsa, Sharma, Vishnu D., Shivannavar, Channappa T., and Katoch, Vishwa M. Results of a Modified WHO Regimen in Highly Bacilliferous BL/LL Patients	451
Katoch, Kiran, Ramanathan, Usha, Natrajan, Mohan, Bagga, Ashok K., Bhatia, A. S., Saxena, R. K., and Ramu, Gopal. Relapses in Paucibacillary Patients After Treatment with Three Short-term Regimens Containing Rifampin	458
Abel, Laurent, Demenais, Florence, Baule, Marie-Sophie, Blanc, Madeleine, Muller, Anne, Raffoux, Colette, Millan, Jacques, Bois, Etienne, Babron, Marie-Claude, and Feingold, Nicole. Genetic Susceptibility to Leprosy on a Caribbean Island: Linkage Analysis with Five Markers	465
Girdhar, Anita, Mishra, Brajendra, Lavania, Ravinder K., Bagga, Ashok K., Malaviya, Govind N., and Girdhar, Bhawneswar K. Leprosy in Infants—Report of Two Cases	472
Max, Emmanuel and Shepard, Donald S. Productivity Loss Due to Deformity from Leprosy in India	476
Marolia, Jolly and Mahadevan, P. R. Reactive Oxygen Intermediates Inactivate <i>Mycobacterium leprae</i> in the Phagocytes from Human Peripheral Blood	483
Rangdaeng, Samreung, Scollard, David M., Suriyanon, Vinai, Smith, Trevor, Thamprasert, Kamthorn, and Theetranont, Choti. Studies of Human Leprosy Lesions <i>in Situ</i> Using Suction-induced Blisters. 1. Cellular Components of New, Uncomplicated Lesions	492
Patnaik, Jaya Krishna, Saha, Prafulla Kumar, Satpathy, Sanjay Kumar, Das, Bhabani Sankar, and Bose, Tarit Kumar. Hepatic Morphology in Reactional States of Leprosy	499
Mukherjee, Ashok, Misra, Radhey S., and Meyers, Wayne M. An Electron Microscopic Study of Lymphatics in the Dermal Lesions of Human Leprosy	506
Editorials	
The Macrophage in Leprosy: A Review on the Current Status (T. J. Birdi and Noshir H. Antia)	511
Clinical Notes	
Relapse or Late Reversal Reaction? (Vijayakumar Pannikar, Kumar Jesudasan, P. Vijayakumaran, and Melville Christian)	526
Controlled Clinical Trial for Evaluation of Antimicrobial Drug Activity Against <i>M. leprae</i> (Jacques H. Grosset and Ji Baohong)	529
State-of-the Art Lectures	
Nerve Damage in Leprosy (Charles K. Job)	532
Operational Aspects of Multidrug Therapy (Marijke Becx-Bleuminck)	540
Obituaries	
Desta, Zerihun	552
Møller-Christensen, Vilhelm	553
Correspondence	
HLA-DQ Molecules May Be Products of an Immune Suppression Gene Responsible for <i>Mycobacterium leprae</i>-specific Nonresponsiveness (Shu-Guang Li and René R. P. de Vries)	554
Interpretation of Published Papers on Controlled Clinical Trials (Michael F. R. Waters)	556
News and Notes	558
Book Reviews	562
Current Literature	564
Special Grantors and Sustaining Members	598

CONTENTS

Volume 57, Number 3, September 1989

Original Articles	Page
Kurz, Xavier, M., Declercq, Etienne E., and Vellut, Claire M. Rate and Time Distribution of Relapses in Multibacillary Leprosy	599
Grosset, Jacques H., Guelpa-Lauras, Claire-Cécile, Bobin, Pierre, Brucker, Gilles, Cartel, Jean-Louis, Constant-Desportes, Monique, Flageul, Beatrice, Frédéric, Micheline, Guillaume, Jean-Claude, and Millan, Jacques. Study of 39 Documented Relapses of Multibacillary Leprosy After Treatment with Rifampin	607
Katoch, Vishwa M., Katoch, Kiran, Ramanathan, Usha, Sharma, Vishnu D., Shivannavar, Chinappa T., Datta, Arun K., and Bharadwaj, Ved P. Effect of Chemotherapy on Viability of <i>Mycobacterium leprae</i> as Determined by ATP Content, Morphological Index and FDA-EB Fluorescent Staining	615
Li Huan-Ying, Yu Xio-Lu, Zhang Mao-Sheng, Duan Chi-Xue, Huang Wen-Biao, Zhang Shi-Bao, Zhu Kang, and Ma Jin-Fu. Short-term Multidrug Therapy in Multibacillary Leprosy—Review of 80 Cases of Two Provinces of China (1983–1988)	622
Tomioka, Haruaki, Yamada, Yoshitaka, Saito, Hajime, and Jidoi, Joji. Susceptibilities of <i>Mycobacterium leprae</i> and <i>M. avium</i> Complex to the H ₂ O ₂ -Fe-mediated Halogenation System Supplemented with Antimicrobial Agents	628
Yandava, Chandri Naidu, Bhutani, Lalit K., Sharma, A. K., and Nath, Indira. Lymphoproliferation and <i>in Vitro</i> Antibody Synthesis in Leprosy Patients	633
Luna Herrera, Julieta and Rojas-Espinosa, Oscar. Serum Lactate Dehydrogenase in Murine Leprosy: Source and Isozymes	641
Sundar Rao, P. S. S., Jesudasan, Kumar, Mani, Kandaswamy, and Christian, Melville. Impact of MDT on Incidence Rates of Leprosy Among Household Contacts. Part 1. Baseline Data	647
Khanolkar, Saroj R., Mackenzie, Charles D., Lucas, Subastein B., Hussen, Amal, Girdhar, Bhawneshwar, K., Katoch, Kiran, and McAdam, Keith P. W. J. Identification of <i>Mycobacterium leprae</i> Antigens in Tissues of Leprosy Patients Using Monoclonal Antibodies	652
Job, Charles K., McCormick, Gregory T., and Hastings, Robert C. Intracellular Parasitism of Parenchymal Cells by <i>Mycobacterium leprae</i>	659
Editorial	
State-of-the-Art Lecture	
Immunological Tools in Leprosy Control. (Paul E. M. Fine)	671
Correspondence	
Demonstration of Antidapsone Antibody in Leprosy Patients. (Javed Naim Agrewala, Sudhir Sinha, Satish K. Ghei, Utpal Sengupta, Kiran Katoch, and Bhawneshwar K. Girdhar)	687
Serum Antibodies of Normals and Leprosy Patients Show Equal Binding to Peripheral Nerve. (Percy S. Ghaswala, Nerges F. Mistry, and Noshir H. Antia)	690
Comments on Leprosy Vaccination. (Laszlo Kato)	693
Multiple Neurofibromatosis with Histoid Leprosy. (Jayakar Thomas, N. C. Wilson, S. Parimalam, S. M. Augustine, and T. C. Muthuswami)	695
Obituaries	
Christian, Melville	697
Gatti, Juan C.	698
News and Notes	700
Book Review	705
Current Literature	707
Special Grantors and Sustaining Members	734

CONTENTS
Volume 57, Number 4, December 1989

Original Articles	Page
Chanteau, Suzanne, Cartel, Jean-Louis, Celerier, Philippe, Plichart, Régis, Desforges, Sylvie and Roux, Jean. PGL-I Antigen and Antibody Detection in Leprosy Patients: Evolution Under Chemotherapy.	735
Gelber, Robert H., Li, Futian, Cho, S.-N., Byrd, Sally, Rajagopalan, K. and Brennan, Patrick J. Serum Antibodies to Defined Carbohydrate Antigens During the Course of Treated Leprosy.	744
Sampatavanich, Surasak, Sampoonachot, Prasert, Kongsuebchart, Kanchana, Ramasoota, Teera, Pinrat, Uarnporn, Mongkolwongroi, Paisal, Ozawa, Toshiharu, Sasaki, Norisuke and Abe, Masahide. Immunoepidemiological Studies on Subclinical Infection Among Leprosy Household Contacts in Thailand.	752
Hasan, Rumina, Dockrell, Hazel M., Chiang, Thomas and Hussain, Rabia. Quantitative Antibody ELISA for Leprosy.	766
Mullins, Raymond J. and Basten, Antony. Effect of Preincubation on the Proliferative Response to Antigen by Cells from Leprosy Patients and Healthy Controls.	777
Mutis, Tuna, van Schooten, Wim C. A. and de Vries, René R. P. A Peptidoglycan Protein Complex Purified from <i>M. leprae</i> Cell Walls Contains Most or All Immunodominant <i>M. leprae</i> T-Cell Antigens.	788
Desforges, Sylvie, Bobin, Pierre, Brethes, Bernard, Huerre, Michel, Moreau, Jean-Paul and Bach, Marie-Anne. Specific Anti- <i>M. leprae</i> PGL-I Antibodies and Mitsuda Reactions in the Management of Household Contacts in New Caledonia.	794
Lord, Rosanne, Naish, Caroline, Taylor, Clare, Stanford, Cynthia A., Stanford, John L., Chacko, Chinoy J. G., Debanbu, Vilvanathan, Samson, Prabhakar D., Berchmans, John, Surendran, Deeradaylu, Ramu, Gopal and Rees, Richard J. W. Skin Test Studies on Close Contacts of Leprosy Patients in India.	801
Cartel, Jean-Louis, Chanteau, Suzanne, Boutin, Jean-Paul, Taylor, Richard, Plichart, Régis, Roux, Jean, Celerier, Philippe and Grosset, Jacques-Henri. Implementation of Chemoprophylaxis of Leprosy in the Southern Marquesas with a Single Dose of 25 mg per kg Rifampin.	810
Nomaguchi, Hiroko, Matsuoka, Masanori, Kohsaka, Kenji, Nakata, Atsuo and Ito, Toneraro. Overproduction, Affinity Purification and Characterization of 65-kDa Protein of <i>Mycobacterium leprae</i> in <i>Escherichia coli</i>	817
Editorials	
Three Times, Three Places, Three Authors, and One Perspective on Leprosy in Medieval and Early Modern Europe. (Stephen R. Ell)	825
Prospects for New Generation Vaccines for Leprosy: Progress, Barriers, and Future Strategies (James D. Watson)	834
Clinical Notes	
Application of a Health Education Model to Obtain Early and Regular Treatment of Leprosy Patients. (C. M. E. Matthews)	844
State-of-the-Art Lecture	
Social Science Research on Social Dimensions of Leprosy: Where Are We Going from Here? (Luzviminda B. Valencia)	847
Correspondence	
Fiftieth Anniversary of the "N-Factor/Hansen-nergic Fringe" Hypothesis for Hanseniasis (Abrahão Rotberg)	864
Failure to Detect Antibodies to HIV-1 in Sera from Patients with Mycobacterial Infections. (Miroslav Malkovský, Paula Dilger and Robin Thorpe)	866
Serum Ferritin in Lepra Reactions. (Kunal Saha, K.N. Rao, Avind Kashyap, V.N. Sehgal and S. K. Agrawal)	867
Interleukin-2 Receptors in the Sera of Leprosy Patients. (Nirmal Kumar Ganguly, Chetana Vaishnavi, Surrinder Kaur, Nalini Agnihotri and Bhushan Kumar)	870
Aggregation Phenomenon of Cultivated Blood Macrophages Isolated from Leprosy Patients. (A. Yamagami, M. Koseki, S. Kim, S. Hazama and K. Sanada)	872
Cultivation of <i>Mycobacterium leprae</i>: A New Approach. (C. V. Bapat)	874
Glomerular Immunoglobulin Deposition in the Absence of Tissue Damage in Murine Leprosy. (Oscar Rojas-Espinosa, Antonina Oltra, Patricia Arce, Patricia Mendez and Amado Gonzalez-Mendoza)	879
Obituary	
Matthews, C. M. E.	883
News and Notes	884
Book Reviews	888
Current Literature	890
Reviewers	922
Statement of Financial Condition	923
Statement of Ownership	926
Special Grantors and Sustaining Members	927