

News and Notes

Research needs, new tools and methodologies reviewed, WHO Working Group

The Chemotherapy of Leprosy (THELEP) and Immunology of Leprosy (IMMLEP) Scientific Working Groups (SWG) held a joint meeting on 4 September 1989 at WHO headquarters in Geneva.

The meeting, whose main objective was to identify research needs for leprosy control, dealt with research activities and the need for new research tools and methodologies. The goals of leprosy control were defined as (1) interruption of transmission; (2) cure of the patient; (3) prevention of debilitation; (4) rehabilitation. Meeting participants agreed that to achieve these goals, it is important to establish links between basic research, development of new monitoring tools, and disease control programmes.

A surge of interest in immunodiagnostic tools has followed the identification of a variety of monoclonal antibodies, native bacterial antigens, T-cell lines and clones, and host-derived (nerve) antigens. Dr Brennan, who reviewed these recent developments, described the powerful antigenic nature of the mycobacterial cell wall. Dr Gupte described the current status of serological and skin tests, and how the development of molecular biological tools can help in understanding the epidemiology and dynamics of disease development.

Dr Pannikar reported the results of two field trials in southern India involving the use of the WHO-recommended multi-drug regimens, and a trial of limited duration therapy. There have been no relapses after more than 3000 person-years follow-up, which would suggest relapse rates considerably lower than those previously observed using dapsone alone.

Demonstration of very rapid bactericidal activity against *M. leprae* in man represents a major development in new antileprosy drug development, reported Dr Grosset. In addition, two other drugs—minocycline and clarithromycin—have been shown to be bactericidal in mouse experiments and are undergoing clinical trials.

Large-scale leprosy vaccine trials are underway in Venezuela (30,000 participants) and Malawi (125,000 participants). In south India a proposed vaccine trial (300,000 participants) would compare the killed *M. leprae* plus BCG vaccine with two other vaccines based on cultivable mycobacteria which have been developed in India.

Recent progress in the molecular biology of mycobacteria

The production of libraries of mycobacterial DNA in cosmid or expression systems has allowed the isolation of major antigenic proteins of *M. leprae*, and the cellular functions of several of these have been identified. More recently, genetic systems for working in mycobacteria have been developed, and should promote understanding of pathogenicity and immunogenicity. The insertion of *M. leprae*-specific genes into potential vaccine vehicles, including BCG and vaccinia virus, was also described.

In reviewing the difficulties of vaccine development, Dr Bloom stressed the importance of understanding the relationship between immunity and protection against infection. Non-human primates, such as the rhesus monkey, develop disease which is more similar to that seen in humans than other animal models, and may be useful for studying immunopathological aspects of leprosy (including nerve damage), immunity and protection against disease, reported Dr Modlin.

The testing of new compounds for antileprosy activity using rapid, *in vitro* systems was described by Dr Hastings. The incorporation of radiolabelled palmitate into *M. leprae* and measurement of CO₂ appears to be particularly valuable, he said, and has already led to the discovery of drugs, with potential antileprosy activity.

Dr Srinivasan drew attention to the inadequacy of research into the involvement of and damage to peripheral nerves. *M. leprae* are found within neural elements, especially Schwann cells, where they can persist and multiply. This induces a tissue response which subsequently leads to nerve thickening and possible damage, whereupon a functional deficit becomes apparent. These multifactorial and complex phenomena require a much greater understanding both at the clinical and the basic levels.

In conclusion, Dr Feenstra emphasized the importance of health systems research in leprosy control. The aim of such research should be to improve the effectiveness of leprosy control programmes. While basic research and new tools are important, research aimed at developing a model for health systems research would also be of great value to control programmes.

(Source: *TDR News*, No. 30, December 1989.)

Leprosy in Ceausescu's Romania

The following is extracted from *The Guardian* (UK), 15 March 1990: A dirt road leading to the Tichilesti Leper Colony is unmarked. The colony is 4 miles from the nearest village and does not appear on any map. It is the legacy of the former Romanian dictator, Nicolae Ceausescu, who wanted its existence kept secret and who told the World Health Organization that the disease had been eradicated. The colony was opened in 1877 with a capacity of 100, but the numbers have shrunk in recent years as standards of hygiene have improved. The 54 patients—27 men and 27 women—are mostly elderly. Only two are in a contagious state, medical treatment having stabilized the rest, though they have to live with their disfigurement. New admissions are down to a trickle—the most recent was 4 years ago. The director of the colony, Dr Gheorghie Popa, expects a few more admissions now that medical information is freely available in Romania, because he thinks new patients will be discovered.

World Congress on AIDS, Bombay, December 1990

Arranged by the Indian Health Organization this World Congress on AIDS is to be held in Bombay, India on 7–9 December 1990. It has a sub-title, 'HIV: the future of an epidemic'. The closing date for abstracts is 1 October 1990. For further information for submission of abstracts, registration etc, contact: Chairman: Organizing Committee, World Congress on AIDS, 1/F, Tulsi Bhuvan, Block 1, 23 Bhulabhai Desai Road, Bombay 400 026, India. Telephone: 851 90 20; Telex: 11-75656 MKAYIN; Fax: 91-22-356957.

Damien Centenary Workshop, Bhubaneswar, Orissa, India, August 1989

A workshop marking the Centenary of the death of Father Damien of Molokai, Hawaii, was held in Bhubaneswar, Orissa, India, 11–15 August 1989. The Meeting was organized by the Damien Institute in collaboration with the Government of Orissa and the Hind Kusht Nivaran Sangh, Orissa. Grants were received from OXFAM (India), UNICEF and the Damien Foundation. Its main objective was the presentation of up-to-date knowledge about leprosy to doctors in the State of Orissa and the delegates included all those working in leprosy eradication units, district leprosy officers and zonal leprosy officers, specialists in skin and venereology departments and medical officers in special leprosy hospitals, together with representatives from non-government agencies such as HKNS, DANIDA and the Damien Foundation.

A team of 23 resource people, all from India with the exception of Niwat Montrewasuwat (Thailand), Tulip Tan (Singapore) and Colin McDougall (UK), gave brief presentations of the

salient features of leprosy, followed by questions and discussions. The Workshop ran for 3 days and was attended by more than 150 people, including senior representatives of the Ministry of Health. Mr Philippe Falisse, Cultural Attaché, Belgian Embassy, New Delhi, joined the Meeting and contributed a stimulating account of the life and work of Father Damien for the leprosy patients of Molokai. Dr P C Roy, Deputy Director, General Health Services, New Delhi, summarized the present state of leprosy control in India and the remarkable extent to which multiple drug therapy has been implemented. Progress is impressive and it is aimed to have all hyper-endemic States under MDT by the year 1992. The State of Orissa already has 9 out of its total of 13 districts under MDT; 2 more (Koraput and Balangir) will soon be included with support from LEPR (British Leprosy Relief Association), leaving only 2 districts, which will be covered within the next 2 to 3 years.

Following the Workshop, some of the delegates, including Dr R Ganapati, President of the Indian Association of Leprologists, took part in a 'shared meal' at the Cuttack Leprosy Home & Hospital, attended by over 2000 patients.

The Workshop certainly achieved its main objective of transmitting up-to-date information about leprosy and its control to a considerable number of doctors in the State of Orissa and discussions are already taking place about a possible meeting in Bhubaneswar or Puri, in January 1990, to establish a 'Chapter' of the Indian Association of Leprologists, with a core membership of dermatologists, giving emphasis to the even wider implementation of multiple drug therapy in Orissa.

Further information: Father William Petrie, Damien Institute, 1 Satyanagar, Bhubaneswar 751 007, Orissa, India.

Maharashtra Lokahita Seva Mandal—Anti-leprosy Week Celebration 1989

We are grateful to Mr Jayadas for supplying the following report on the Maharashtra Lokahita Seva Mandal Anti-leprosy Week Celebration:

"Towards the 21st Century Without Leprosy" is the goal of every leprosy worker/institution. Their day-to-day activities fall nowhere short of their desire to root out leprosy. However, special emphasis is made to reach much closer to the community through the celebration of Anti-Leprosy Week. The week commencing 30 January, International Leprosy Day (also being the anniversary of the death of the late Shri M K alias Mahatma Gandhi), is observed upto 5 February each year.

Maharashtra Lokahita Seva Mandal (MLSM), a non-sectarian organization formed by Mrs Florie Freitas in 1970, with the help of Bishop Longinus Pereira and Dr Noel Lewis, has taken up the challenge and work hard with a zeal towards the goal. A team of dedicated medical and non-medical workers, which had only 3 members to start with and has now grown to over 40, is its main power. In 1976, MLSM adopted the SET (Survey, Education and Treatment) working pattern of National Leprosy Eradication Programme as its working policy under the aegis of the German Leprosy Relief Association. In over a decade of sincere efforts, MLSM has detected and treated over 11,000 leprosy patients of which over 5200 patients have been declared cured. Thirty-nine dispensaries are run in the project area ('H') East and 'P' wards of Bombay Municipal Corporation with a population of 11 lakhs). Besides treatment and medical care, patients of leprosy have also benefited by the availability of multiple community welfare schemes run by MLSM, such as the Tuberculosis Control Project, job placement, community development, housing, loan scheme, creche, children's sponsorship, typing and tailoring classes and last but not the least, the Box Project-cum-Rehabilitation Centre.

MLSM, as a real fighter against leprosy, also had a large share in the Anti-Leprosy Week Celebration of 1989. Although health education on leprosy is a regular working feature, this week was considered as an opportunity to accelerate it. All possible efforts were taken up to reach each and every corner of the community, in and outside of the project area. This was to motivate and ensure the people's participation in its struggle against leprosy.

The preparatory work was started as early as November 1988. The week was marked by

multiple programmes involving different sections of the community. The main attraction was the use of video shows on leprosy. The main function was organized by the Western Railway at their headquarters at Churchgate on 30 January 1989. MLSM was the most active participant. A new set of exhibition material on leprosy was displayed. Over 1000 railway employees were physically examined for leprosy in this camp which was conducted till the end of the week. An eye-catching poster '*Towards 2000 AD Without Leprosy*' designed and produced by MLSM was released at this inaugural function by Shri E Sreedharan, General Manager of Western Railway. These posters were put on Western Railway Suburban trains as a part of leprosy propaganda, and were much appreciated by the masses. This programme would not have been a great success without the initiative and inspiration of Dr M P Garg of Western Railway. The response of this programme was so encouraging that the exhibition had to be extended to the Churchgate main station the following week. Besides the exhibition, video shows together with other routine educative measures were used. For the first time in the city of Bombay MLSM introduced the use of a "*Moving Message Machine*" and "*A Model of the Globe*" with messages and leprosy statistics on it. The Moving Message Machine was filled with many informative messages about leprosy. Its use will be a regular feature in MLSM's Health Activities in the future.

Similarly, a motivating slogan "*Want to do Something Noble? Help Us Eradicate Leprosy*" was printed on the reverse of BEST city bus tickets. Over 16 lakhs of such tickets have been circulated since then. It was a new experience for the Mandal to reach out to more people through these efforts. There is a continuous flow of enquiries following these attempts. People were eager to know how they could contribute in the struggle against leprosy.

There were two big ambitious Seminars, one for doctors and the other for high school teachers, organized at the Hotel Holiday Inn and JDT High School Complex respectively. Over 150 doctors and 200 teachers participated in them. Dr M S Nilakanta Rao, WHO Consultant, was the guest speaker, his lectures on leprosy enriched participant's knowledge about leprosy, there was an active response from the audience during discussion. Dr K C Mohanty, Professor & Head of Dept. of TB & Chest Diseases, Grant Medical College, Bombay gave a talk on tuberculosis in the doctor's seminar. Hon. Shri K A Bastiwala, Municipal Councillor and Member of the BEST Committee was the Chief Guest while the Hon. Shri Subhash Sawant, Chairman Improvements Committee was the Guest of Honour at the Holiday Inn function. At the teachers' seminar Dr P B Shetty, Chief Medical Officer for Schools of Bombay Municipal Corporation, was the chairperson.

A '*Quiz Competition*' for the 10th standard school students was also one of the features during this week. Over 4300 students entered the competition from over 34 schools in the project area. Slide shows on leprosy were conducted in each school before the competition. At a special function 2 students with the highest marks from every school were awarded trophies. A special Rotating Trophy was awarded to Fatimadevi High School, Malad for its outstanding performance, and the outstanding student, who came from St Thomas Academy, was also suitably rewarded.

Special slide shows were held at C.W.C. Homoeopathy College and Cooper Hospital for medical students and nurses respectively. Over 250 medical students and 300 nurses benefited through this. Their active participation in the post-slide-show discussion was indeed encouraging.

Leprosy transparencies were supplied to cinema theatres for regular projection. Slide and film shows for slum residents and the displaying of banners on leprosy at different corners of the project area were among other activities carried out to mark the week-long celebration.

The team spirit and collective efforts of MLSM staff made the Anti-Leprosy Week a great success. MLSM is contributing its mite towards a world without leprosy in the 21st century.'

Subsequently a report of Anti-Leprosy Week Celebration 1990 has been received. Similar activities were carried out to those in 1989. The public response was very encouraging. The organizers now believe that though regular health education in their SET programme is a must, the impact of this intensive and exclusive focus on leprosy during anti-leprosy week is very impressive, positive and hence influential.

Leprosy in India—a statistical compendium. GMLF

The Gandhi Memorial Leprosy Foundation (GMLF) has produced *Leprosy in India—a statistical compendium* in the belief that 'it would fulfil a long-felt need. Health related social and economic statistics included in the volume add to its utility; so does the international comparison. The few charts and maps are of great help in comprehending the global status of leprosy in India.' This publication is comprised of 153 pp of typewritten tables plus 13 figures. The nine chapters are headed: Selected population statistics; Selected socio-economic indicators; Leprosy profile; Leprosy and five-year plans; Leprosy profile and infrastructure under NLEP; Leprosy training; Voluntary efforts in leprosy work; International leprosy scene; Appendices. It is intended as the first of a series and GMLF are wanting to regularly update it. To this end they would be grateful for any critical evaluation, comments and suggestions.

Leprosy in India brings together the available statistical data on leprosy to be used as a reference volume by those interested in issues related to the diseases. e.g. programme managers, administrators, researchers and epidemiologists. Copies are available from: Gandhi Memorial Leprosy Foundation, Hindinagar, Wardha-442103 Maharashtra, India. Price Rs. 50 plus postage.

Handbook of leprosy; 600 copies for India

One hundred copies of the fourth edition of the *Handbook of Leprosy* (International, lower price format) have been safely received by Dr Nilkanta Rao, 'Anupama', Number 4, 11th Main 4th Block East, Jayanagar, Bangalore 560011, India and distribution has already started to selected people working in leprosy and to institutions. Bone fide applicants should write for a copy to Dr Rao. This consignment has been made possible due to a grant from the St Francis Leprosy Guild, London.

In addition, Dass Media Private Ltd, 207 Bhandari House, 91 Nehru Place, New Delhi 110019, India have arranged for 500 copies to be sold to CBS Publishers and Distributors of Delhi for exclusive distribution in India and Bangladesh. CBS are supplying retailers all over India.

Stocks of both the international and hardback editions are now low and the publishers, William Heinemann Medical Books, Jordan Hill, Oxford, UK, will reprint both in the near future.

The prevention of blindness in Africa

The following is extracted from the International Agency for the Prevention of Blindness (IAPB) *Newsletter*, August 1989, No. 12:

The prevalence of blindness in the African Region has been estimated to be 1.2%. Therefore, there are about 5 million blind Africans and another 5 million who have severe visual deprivation. The major causes of blindness in Africa are cataract, onchocerciasis, trachoma, glaucoma and vitamin A deficiency. There are over 2.9 million Africans who are blind from cataract; this represents 58% of all of those who are blind on that continent.

Blindness can be prevented or cured through proper hygiene, adequate food, vector control, adequate safety measures, and early detection and treatment of eye diseases. However, in Africa the paucity of ophthalmologists and auxiliary ophthalmic personnel constitutes a major constraint in these endeavours. The available number of ophthalmologists in Africa is estimated to be one per million population. Only 12 countries have established training institutes for ophthalmic manpower.

The Auxiliary Training Institute at Lilongwe, Malaŵi, continues to train ophthalmic medical assistants from different parts of the region. At present 114 auxiliary eye personnel have undergone training in the Institute, some through the WHO fellowships programme.

These joint efforts of the World Health Organization and non-governmental organization are stimulating programme development in the member states. To date, 16 countries have already established national programmes for the prevention of blindness.

IAPB News is published twice-yearly and can be obtained from:

IAPB, National Eye Institute, National Institutes of Health Building 31, Room 6A03, Bethesda, Maryland 20892, USA.

The Alexander von Humboldt Institute of Tropical Medicine, Lima, Peru

The following is extracted from *Tropical Diseases. Progress in International Research, 1987-1988. Ninth Programme Report*. UNDP/World Bank/WHO, Special Programme for Research and Training (TDR) 1989.

The Instituto de Medicina Tropical 'Alexander von Humboldt' of the Universidad Peruana Cayetano Heredia in Lima was created in 1968 with help from the Alexander von Humboldt Foundation of the Federal Republic of Germany and from the British Council. From the outset its research activities, both clinical and field research, focused on four diseases: leishmaniasis, malaria, Chagas disease and leprosy.

In 1980 a long-term TDR grant was awarded, and a vigorous programme of research and staff development could begin. Teaching was added to the Institute's functions, and in 1983 it became the Peruvian Ministry of Health's Reference Centre for Infectious and Tropical Diseases.

Over the 5 years of the US\$ 454,000 TDR grant, the Institute had conducted locally and internationally significant research on leishmaniasis, of which two forms, uta (cutaneous Andean leishmaniasis) and espundia (jungle mucocutaneous leishmaniasis), are endemic in many areas of Peru. The Institute developed and applied laboratory methods, including isoenzyme analysis, monoclonal-antibody-based assays and DNA probes, for identifying and differentiating these two forms of the disease. Its research staff have recently devised an extremely sensitive test, which, if confirmed by the results of current field trials, could provide a simple, rapid, highly accurate means of diagnosing infection with common strains of *Leishmania* species.

The Institute's work on leishmaniasis has achieved wide recognition in the region and has been the basis of strong links with institutions in other countries, notably the Tropical Medicine Unit of the Federal University of Brasilia. Steps are also being taken to designate the Institute as a PAHO/WHO Collaborating Centre for Research on Leishmaniasis.

Although the Institute's research activities have not been as intensive in other areas, work on leprosy was stimulated by the establishment in 1983 of a small armadillo colony for the local production of *Mycobacterium leprae* and soluble skin-test antigens. Attempts to achieve *in vitro* viability of *M. leprae* and application of the mouse footpad model to the development of drug sensitivity tests have been the main thrusts of the Institute's leprosy work over the past few years.

With a current staff of 24 scientists and 21 technical and support staff, the Alexander von Humboldt Institute now appears to have the basic facilities to develop its potential as a resource centre for tropical disease research in Latin America.

Further enquiries: Professor Humberto Guerra, Universidad Peruana Cayetano Heredia, Instituto de Medicina Tropical, Alexander von Humboldt, AP 5045, Lima 100, Peru.

Blister-calendar packs for MDT: price reduction by Ciba-Geigy

As from 1 January 1990 Ciba-Geigy Ltd, Pharma International, CH 4002, Basle, Switzerland has considerably reduced the price of both paucibacillary and multibacillary packs for MDT in leprosy. Compared with previous prices, monthly treatment will now be 19% cheaper for multibacillary and 17.6% cheaper for paucibacillary leprosy. Particularly with regard to the multibacillary pack carrying three drugs, the company point out that it is difficult to reduce prices any further at this stage in view of the expensive and complicated technical machinery involved.

VII Congrès International des Leprologues de Langue Francaise, Bamako, Mali, February 1991

Details of this Congress, which is to be held 3-6 February 1991 and will be in French, are available from: Association Francaise Raoul Follereau, Commission Médicale, 29 rue de Dantzig, 75015 Paris, France. Telephone 48 28 72 42. The closing date is 1 September 1990.