

Summary of the Workshop

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The Workshop on Experimental Chemotherapy of Leprosy, sponsored jointly by the Chemotherapy of Leprosy (THELEP) Scientific Working Group of the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases and the Sasakawa Memorial Health Foundation, was held 11–20 November 1986 at the Research Institute for Microbial Diseases, Osaka University, Osaka, Japan.

Three groups of participants may be identified. One group, consisting of nine experts, from six countries, acted as members of the "faculty." A second group—11 scientists representing seven leprosy-endemic countries—were the "students," many of whom had already carried out studies in the experimental chemotherapy of leprosy. Five Japanese leprosy and tuberculosis scientists, who were observers, comprised the third group of participants.

The Workshop program was designed around formal lectures, discussions, and work in small groups. A total of 29 lectures, covering the important aspects of the chemotherapy and experimental chemotherapy of leprosy, were delivered by the nine faculty members in the course of eight working days. In addition, four of the students presented aspects of their work. The lectures were followed by prolonged, detailed discussions, in many of which both students and faculty members were challenged to defend assumptions, and to propose experiments by which to examine the question under discussion. Considerable time was also devoted to more deliberate planning of experimental protocols. A high point of the Workshop was the demonstration by Dr Kohsaka and Professor Ito of the nude mouse facility of the Department of Lep-

rology of the Research Institute for Microbial Diseases. Frequently, in addition to these more formal activities, questionnaires dealing with issues of chemotherapy and technical problems of experimental work were distributed to the students at the end of the day; the questionnaires, designed to provoke discussion and clarify points to be considered in the next day's presentations, were completed in the course of the evening. The discussions and questionnaires, which served to ensure full participation of those attending the Workshop, contributed greatly to its success.

The subject matter of the Workshop covered thoroughly the areas of chemotherapy and experimental chemotherapy of leprosy. The present status of chemotherapy designed for the control of leprosy was described in chronological fashion, beginning with the first efforts to evaluate therapy with sulfone drugs, and continuing to the current efforts to promote the wide use of multidrug therapy. The rationale was stressed of the developments that contributed to the progress made in chemotherapy and its evaluation since the first days of modern treatment, and unresolved issues were identified and explored.

Because experimental animals remain the only accepted means of screening new drugs and evaluating the response of patients to treatment, and the only practical source of *Mycobacterium leprae* for research, emphasis was given to experimental infection of laboratory animals by *M. leprae*. Related subjects, for example, pharmacokinetics, and the breeding and husbandry of laboratory mice, were also considered in detail. The greatest emphasis was laid on work with immunosuppressed rodents, and especially with the congenitally athymic, "nude" mouse, which appears to offer the greatest promise as a tool to be employed in the experimental chemotherapy of leprosy.

Finally, experimental protocols for studies dealing with the major problems confronting the chemotherapy of leprosy—screening for new drugs, assessment of drug

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activity, prevention of drug resistance, and eradication of persisting *M. leprae*—were prepared and discussed. In the course of designing the protocols, special attention was paid to the choice of the appropriate experimental animal, inoculum size, drug dosage, timing of harvests, cost, and the requirements for time and manpower.

The Workshop proceeded very smoothly, a credit to the interest of the participants, and to the excellent local arrangements, and was evaluated by all of those involved as successful indeed.