KEYNOTE ADDRESS

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Your Royal Highness, Mr. President, Honorable Ministers, Excellencies, Ladies and Gentlemen, Colleagues and Friends,

On behalf of the Director-General of the World Health Organization (WHO), I have the great pleasure in greeting all of you who have come from different parts of the world to this XIII International Leprosy Congress organized by the International Leprosy Association (ILA). This nongovernmental organization has been in official relationship with the World Health Organization since 1948, that is, since the establishment of WHO. These four decades of collaboration have been extremely productive and mutually beneficial, and WHO takes pride in co-sponsoring this Congress.

For centuries leprosy patients and leprosy work have suffered from a degree of neglect and antipathy that is unparalleled in history. The fight against leprosy, whether on the health or the social front, has not been easy. No doubt the lack of effective means to deal with the disease and its consequences has contributed to the situation. The social stigma against leprosy, prevalent in many societies, did not make life easier either for the patient or for the leprosy worker. However, against this background of despair and hopelessness, a few leprosy workers, whether motivated through the scientific challenge, the social concern or the missionary zeal, kept the fight going in an effort to mitigate the human suffering. We should pay great tribute to their pioneering efforts and exemplary perseverance.

Now, the questions are where are we in relation to leprosy today and where are we going? There is no doubt that leprosy is still a significant problem in most developing countries. The estimated number of leprosy patients throughout the world continues to be between 10 and 12 million. Over 1,600,000,000 people live in countries with significant endemicity for leprosy. Interestingly, leprosy has a very uneven distribution evidenced by the fact that as few as six countries contribute 82% of all the registered cases in the world, and 91% of all registered cases are accounted for by only 19 countries. This does not mean that the other countries with fewer cases have no problems. The cost of leprosy to the community is far beyond what is reflected by numbers alone, if one takes into account the cost of lost self-esteem and lost social and economic productivity.

It should be recognized that this XIII International Leprosy Congress is meeting at an important juncture in the history of leprosy, and that it is a major landmark in relation to the progress being made in the fight against the disease. Even though we have made more progress over the last 10 to 20 years than in all of the preceding centuries, we have still a long way to go. However, the end of leprosy as a public health problem appears to be in sight in at least some of the countries, thanks to a combination of several favorable developments. Of these, I should like to mention three important ones witnessed over the last decade or two. These are the development of effective technology, a new awareness of the leprosy problem, and increased international collaboration. In fact, this new awareness and this increased international collaboration have been in part the result of improved technology.

In the area of technology the most important development has been the introduction of effective treatment for leprosy through multidrug therapy (MDT). It may be that treating patients is merely a method of secondary prevention as far as disease control is concerned. All the same, the fact that leprosy is a disease with no known nonhuman reservoir of infection, that only a minority of patients appear to shed the causative organisms into the environment, and that drugs like rifampin are highly effective as bactericidal agents make it a good target

for disease control through MDT. The other extremely favorable factors in relation to MDT include its efficacy, its capacity to be administered for finite periods of time, and its ability to prevent and cure drug resistance. However, some limitations in relation to the treatment of leprosy still persist, such as the relatively long duration of treatment required for multibacillary leprosy, the inability to accelerate the clearance of dead organisms from the human host, and the minimal impact of MDT on certain complications. Nevertheless, in contrast to dapsone monotherapy, MDT has brought about a tremendous change in relation to leprosy control. For the first time patients can be discharged from treatment and taken off registers within short periods of time, thus resulting in major reductions in the prevalence rates of the disease. In recent years, well-organized leprosy control programs have demonstrated that it is possible to reduce prevalence rates by as much as 70% to 80% within a period of 5 years. Globally, over two million patients have benefited from MDT with very good results in relation to efficacy, acceptability and side effects. While the current euphoria with MDT is not unjustified, it should be realized that, once major reductions in case load are brought about, it is not going to be easy to find the solution to the rest of the disease problem since this is expected to consist mainly of new cases resulting from a breakdown of the subclinical infections acquired in the pre-MDT period. In addition, for a long time to come the problem of patients already deformed will remain, and they will need facilities for medical and social care. With regard to MDT, a problem foreseen for the future is the possible occurrence of *Mycobacterium leprae* with multiple-drug resistance through injudicious use of single drugs or the use of inappropriate combinations of drugs. It is for this reason, among others, that we would like to see as quick and as wide an MDT coverage as possible using the WHO-recommended regimens. Meanwhile, the development of newer and better drugs continues to remain a priority.

The second major development in the area of technology is the tremendous progress being made in leprosy research in several fields such as immunology, chemotherapy, and molecular biology. Our understanding of the subclinical infection, the immune unresponsiveness, and the immunopathological mechanisms in leprosy has greatly improved in recent years. A major consequence of the progress in the immunology of leprosy is the development and field testing of leprosy vaccines, such as the one based on armadillo-derived killed *M. leprae*. It will be some years before we know whether it will be possible to successfully vaccinate individuals against leprosy. However, if and when an effective vaccine becomes available, the elimination of leprosy as a public health problem will no longer be utopic. In recent years, research progress in the chemotherapy of leprosy has provided us with a better understanding of the problems of drug resistance and microbial persistence, better methods for evaluating the efficacy of drugs and drug combinations, and new drugs such as fluoroquinolones which are already under clinical trials. In the field of molecular biology, the recent application of recombinant DNA technologies, together with the availability of *M. leprae*-specific monoclonal antibodies and T-cell clones, has made it possible to identify antigens capable of evoking appropriate immune responses in man, and this should contribute to the development of a newer generation of leprosy vaccines. In other fields of research, such as epidemiology, disability prevention and health services, progress in recent years has been less dramatic. A major factor in research progress in the last decade in the fields of immunology, chemotherapy and molecular biology relating to leprosy has been the contribution made by the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases. By promoting and supporting goal-oriented coordinated research through Scientific Working Group mechanisms, the program had enabled research of high relevance to be carried out much more quickly than would otherwise have been possible.

No matter how good they are, technologies by themselves can accomplish very little for leprosy control unless they are accompanied by the other essential ingredients required for health care delivery, and unless health care delivery itself is part of the overall developmental process. It is here that

community involvement, political commitment, and international cooperation play important roles. In light of its commitment toward Health for All by the Year 2000, WHO places a high priority on leprosy control, through implementation of MDT and building up of relevant national capabilities, and seeks collaboration from all concerned, including the nongovernmental organizations, in a spirit of partnership. Let us all work together to see the end of this most dreadful disease and to let future generations judge us not only by our dedication to the cause but also by the opportunities we seized to make life healthier for them.