KEYNOTE ADDRESS

Dr. Paul W. Brand

Mr. President, Fellow Members of the ILA, Ladies and Gentlemen:

It is my great privilege and real pleasure to bid you all welcome to Orlando today, to the 14th International Leprosy Congress. I am here to tell you that this is going to be a good Congress. I can predict this with some confidence because I have been here for a few days already and have observed in room after room that busy groups of experts have been meeting. These participants in the pre-Congress Workshops have been preparing reports to bring us all up to date on the present situation in each of the broad aspects of the problems that face us today.

Most of you know already that the news about leprosy is good. Multidrug therapy (MDT) is proving to be successful beyond anything we have known before, and as we listen to individual papers we shall all be adapting our thinking and planning to take advantage of the effect of this powerful tool and of new patterns of application which are proving to be more acceptable to our patients. We shall also be learning about better ways to prevent and correct deformity and to help our patients overcome stigma and return to normal life.

I am in no position to speak in detail in reference to any of these new developments. In fact it has occurred to me to wonder why the organizers of this Congress chose me to give the speech inaugurating our meeting. I do not complain about the honor they have given me, but they must have known that I have been retired for several years and am no longer in the front line of research in any aspect of leprosy. Even those areas in which I used to be a leader are no longer at the center of controversy or excitement today, and are not suitable subjects for an inaugural address.

Thus, I can only conclude that I have been chosen because I am old. I have been in this business for a long time. This gives me the ability to see the great changes that have come about in a single lifetime and, perhaps, to draw some conclusions which may escape those whose perspectives cover a shorter period of time.

I first encountered leprosy patients when I was a child growing up in India, 75 years ago. At that time the disease was thought to be highly infectious, with a special predeliction for children. There was no effective treatment for it and I can remember that my missionary parents, who were always happy for me to observe them at work in the medical clinic, made an exception when any leprosy patient was there. It was the only chronic disease for which I was forbidden any contact. There was an atmosphere of fear around those patients. The fear was only for me and for my little sister. It did not hinder my parents from doing what they could to dress the ulcers and give supportive treatment to those whom they knew they could not cure, but could ease the pain of their rejection, and make them feel appreciated as human beings.

This International Congress will be bringing us news of new and effective medications for what is now a curable disease. It will help to define the scientific basis on which we now know that most people are not susceptible to leprosy. It is all too easy, armed with modern scientific knowledge, to look down on those in generations past who had no such knowledge but who overcame their fear in order to help in any way they could.

I think we should pause for a moment to pay tribute to the early pioneers who, with little they could do when compared with what we can do today, nevertheless gave themselves to ease the plight of those whom the rest of the world despised and feared. Some, like Father Damien of Molokai, gained posthumous fame because they did indeed give their lives unto the death. Others, like Armauer Hansen, gained fame because they were able to make important scientific advances which have formed the basis of much of what we know today. Others, the majority, have passed on leaving no mark on history books. Those who continue to serve their fellow men when there are no

prospects of reward or success on any human scale have always needed an inner strength, and have often been humble men and women whose devotion to God and love for their fellow human beings has been the source of their strength.

As we look back to honor such devoted workers, let all of us who are about to embark on an exciting review of scientific advances first pause and pray that as we learn to use new tools and see bacterial counts falling, we may never abandon the love and personal concern that we need as we serve individual sufferers from leprosy. Our forebears cared for those whom they could not cure. We can cure, but must not forget that many cured patients still suffer the effects of the disease and still experience its stigma. They still need care, even after cure.

The next generation we need to remember and to honor are those who pioneered the development of a cure for this disease. I returned to India in the mid1940s with a medical degree and surgical training, and it was there I first heard about the miracle at Carville. It had been Dr. Guy Faget who first had the inspiration to recognize that Promin, a sulfone drug that had been proven effective against tuberculosis, might work in the same way against the very similar germ of leprosy. When the first 22 lepromatous patient volunteers at Carville all became negative, a wave of enthusiasm swept through the world.

When Dr. Robert Cochrane, in India, began using DDS (later called dapsone), he soon began to see similar results. Dr. Lowe, in Nigeria, began to undertake mass campaigns in rural areas. Soon he was reporting that whole villages of patients were becoming negative. Certificates of negativity were handed out at mass meetings with music and dancing and great rejoicing. It was soon being said that the end of leprosy was in sight. The Belgian health authorities in the country now called Zaire adopted similar mass programs and had such spectacular success that they sent two great Belgian physicians, Dr. Hemerijkx and Dr. Vellut, to India to demonstrate to us how to use mass campaigns to eradicate leprosy in India.

I remember those days very well because the enthusiasm for total eradication of leprosy from the world within one generation was at its height at the same time that I was getting excited about my experience with the use of surgery in correction of deformities caused by the disease. I went to America to try to raise interest in a rehabilitation program. I was referred to the professor of epidemiology at Harvard University who was also an advisor to the World Health Organization (WHO). He listened to my story, smiled kindly at me, and said, "Dr. Brand, you are wasting your time. The time and money that you spend on one deformed leprosy patient, if it were spent on dapsone treatment, would result in the cure of fifty patients, who then would not become deformed. For the greatest good, we have got to write off the present generation of deformed leprosy patients. If we put all our effort now into killing bacteria, the next generation will grow up without any leprosy at all." That statement was made about 40 years ago.

I mention this incident, not to criticize a very great and good epidemiologist, but to point out that prophesy is a dangerous game in biology. There are so many unknowns. Back in India, long before the development of sulfone resistance made nonsense of the idea that leprosy could be eradicated by sulfones alone, the mass campaigns were already failing for quite different reasons. Patients found the results too slow. Also, during the 10 years or so that it seemed to take to become bacteriologically negative, they often developed new plantar ulcers or had reactions which resulted in fresh paralysis or had eye complications sometimes leading to blindness. Patients did not have microscopes to see their bacterial counts diminishing. To them leprosy was deformity and stigma, and they found it hard to believe in a drug that did not heal their ulcers or give them back sensation.

The treatment centers that succeeded best in holding their patients for the long term were those which, in addition to giving sulfone treatment, offered measures for the prevention and correction of the deformities and disabilities that were real to the patients.

Now, in this Congress, we shall be discussing much better plans. We have drugs that are bactericidal as well as some that control reactions. We have programs that deal with disabilities and that help patients to accept responsibility for the prevention

of further problems. Although most of the drugs we use are susceptible to the development of resistance by the bacteria, we use them in combinations in which they reinforce each other. We are receiving reports from around the world telling of dramatic reductions in leprosy prevalence, and in much better willingness by patients to stay the new 2-year courses of treatment than used to be with the slower sulfones.

Much of this progress has been due to the work of WHO Expert Committees sifting through the results of research from all over the world, under the able leadership of Dr. Noordeen.

Yet, we old fighters in this battle have a strange sense of *deja vu.* We feel that we have been here before, especially when we hear prophetic words from experts predicting some sort of eradication with dates and numbers attached to their predictions. The experts are new and the programs are different, but the confident predictions sound much the same.

We have an additional reason for caution at this time. We are nearing the end of a century, of a millennium, in fact. We are familiar with what happens at the end of an ordinary year. Many people get a strange compulsion to make predictions about the new year. They make new year resolutions and predict all sorts of improvements in their behavior which in saner moments they know to be unattainable. It is an annual form of madness, full of good intentions and hopes and resolves; but it passes and things revert to normal after the first of January.

I must now report my own observations of a similar condition that occurs with one hundred times the force at the end of a century. In the past few years as we approach the year 2000, I have seen, in almost every walk of life, forecasts made that havè less and less relevance to reality or even to probability. I have heard it said that pollution of the atmosphere will be brought to an end by the year 2000. The ozone layer will be restored. A new world order will be established. Health care will be available to all who need it. All by the magic year 2000. All under the influence of the universal euphoria that takes hold of otherwise sober people near the end of a century.

In the midst of such a frenzy I feel we should congratulate our leading scientists that they have not said leprosy will be eradicated by the year 2000. However, they have not totally escaped the pressure to make forecasts and announce goals, and there is one that will occupy our attention during this Congress. It is that leprosy control will have progressed so far that the prevalence of the disease, world wide, will fall below 1 case per 10,000 population by the year 2000.

Our first reaction to such a prediction must be one of joy and excitement. It is a wonderful thing that one can even speak in such terms, and we are grateful for all the work and planning and advice that has resulted in such a reduction in the prevalence of the disease that serious experts can project it to continue down to that level within the next 7 years. My next reaction is one of puzzlement that the wording of that prediction is not a simple statement of numbers, as I have just spoken it, but that it predicts an end to leprosy as a public health problem in the world by the year 2000. I am sure that during this Congress we will be given an explanation of how the figure of 1 case per 10,000 population came to be identified as the level that poses no problem to public health in the world. I must confess that I personally hope that at this Congress we shall find a different way to express our hopes and goals for the future. This is because I have observed reactions to this statement that are likely to work against its fulfillment. I also have my own doubts about its meaning.

In a world of 5 billion people can it be true that half a million cases of leprosy may be ignored by public health authorities?

My wife and I were in South Africa earlier this year, visiting the headquarters of the leprosy program in Pretoria. We talked with some of the doctors who told us they had recently sought the help of a leprosy epidemiologist in planning the future of their program. He had looked at all their records and told them that they need not be concerned because the total prevalence of leprosy in South Africa was already below the level defined by WHO as posing no public health problem. The doctors in South Africa felt somewhat bewildered, and began to wonder if they were supposed to relax their efforts to reach and treat every case. They took us to see several patients who had just recently been admitted for workup, and my

ophthalmologist wife immediately noted two patients who had active lepromatous nodules in their eyes. The eye lesions had been missed because the patients had not complained about them. The doctors were anxious to be taught how to pick up early signs of eye complications. They recognized that, in the absence of pain sensation, patients often fail to report their problems. It was necessary for trained workers to seek them out. This surely was a function of public health. However, they had just been told that leprosy was no longer a public health problem. Needless to say, we encouraged the medical staff to believe that as physicians their primary duty was, and would always be, to their patients. If in fulfilling this duty, they found the need for public health screening, no mathematical formula should deter them.

There is an additional problem in trying to forecast the future. It is that the mycobacteria have an agenda of their own, and they are very resourceful. I have a fantasy that even while our Congress is discussing the destruction of mycobacteria, world wide, there may be another international congress going on somewhere else. That one may be a congress of bacteria and viruses, planning their strategy. Perhaps their president, who this year may be the virus of AIDS, has just presented their Nobel Prizes. One would have been given to *Mycobacterium tuberculosis* for having emerged in some countries from the category "No Public Health Problem" to that of "Major Public Health Problem" while most doctors were looking the other way. The other prize might be going to the parasite of malaria, which had succeeded in the clever strategy of remaining nearly eradicated for long enough to persuade most malariologists to move into other studies, then only to come roaring back, resistant to most antimalarial drugs and carried by mosquitoes that had become resistant to common insecticides. At the same congress a group of mycobacteria may be reading a paper in which they outline a plan by which *M. leprae* will become widely resistant, perhaps to clofazamine by the year 2000. Such a congress of germs would probably welcome a statement from our Congress here declaring them to be no longer a problem to public health.

Now I must come back from that flight of fancy, and return to our business for this Congress. I do not want to discourage hopeful predictions for the future, especially if they lead to good coordinated plans both for the cure and for the care of patients. My main concern is that we should not get so carried away by the success of new drugs and patterns of treatment that we think the war is over and relax our efforts, or that we give the impression to departments of public health that neither special programs nor research are needed to fill in the huge gaps in our knowledge about leprosy. In one of these gaps may lie the knowledge that would speed up even further our ability to get rid of the disease. In another gap may lie information for lack of which all our hopes of success will be frustrated, as happened in the 1950s and 1960s.

We must press ahead to find out why we have failed so far to grow the mycobacterium; then we have to grow it. We have to find out why, while prevalence has fallen so rapidly under MDT, the incidence of new cases of leprosy refuses to fall in the way we expected it to. We have to explore the persuasive evidence that there may be other reservoirs of bacteria, such as in the soil. We need to know more about transmission. We need to develop a sure system for the early identification of relapsed cases, since it is they who may carry organisms with new types of resistance. We need to let it be known that there is much to be discovered, and we need to encourage our best minds to devote themselves to solving the remaining problems of this disease, rather than encouraging them to think we know it all now. It is good to congratulate ourselves on our successes, but let us not use them to cloak our great areas of ignorance. Let us not be too hasty in dismantling proven methods of control or support for research which we shall need one day.

Finally, I must return to my beginnings. Today, as the older generation of patients passes away, younger leprosy workers may wonder why leprosy ever carried the greatest stigma of any disease. They wonder because most have never cared for patients in the days before effective treatment became available. It used to be a terrible affliction, and could become so again if we declare victory prematurely as some of us did with tuberculosis and malaria. The surest way to

keep up pressure on *M. leprae* is to keep up our concern and our care for every individual patient who suffers from leprosy or from its late results.

Mr. President, in closing I apologize for using this time for a somewhat partisan speech. In spite of appearances to the contrary, I really do appreciate the work and the vision of our leading epidemiologists in Geneva and elsewhere. They know their job much better than I do. However they are young compared to me, and I hope they do not take it badly that an old man has exercised the prerogative of age—that of looking back—before looking forward. If we can find in this Congress a meeting together of the experience and caution of the old and the knowledge and enthusiasm of the young, we do indeed have a prospect of achieving wisdom in our approach to leprosy, at least by the year 2000.