

EDITORIAL

THE INSTITUTE FOR MEDICAL RESEARCH AFTER 100 YEARS

The year 2000 marks the 100th birthday of the oldest research institution in Malaysia, the Institute for Medical Research, Kuala Lumpur (IMR). Established in 1900 by the British as the Pathological Institute, its mission was to undertake research in tropical diseases in order to improve the living standards of the native population. From its beginning, the role and scope of the Institute's work was wide and varied encompassing research, diagnostic, investigative and consultative services and training. Throughout its 100 years, the Institute has contributed significantly in the field of health research and the overall health services of the country and for this, IMR can be justly proud of its achievements. To commemorate its 100 years of existence, the IMR is holding a series of event and activities throughout the year which will include an IMR Open Day, an international seminar on tropical medicine and various seminars, workshops and symposia.

The IMR has a long and illustrious history of conducting innovative biomedical research which has led a better understanding of tropical diseases in the region. Three of the most notable achievements made in its early years of existence include firstly, the research into parasitology and the diagnosis, treatment and control of malaria, secondly, the research into the cause and treatment of beri-beri and thirdly, the research into the vector biology, ecology and treatment of scrub typhus. In the last two decades, research efforts at the IMR have led to several more new findings. A new species of schistosome was found in riverine areas of Pahang between 1980-1983. The IMR achieved a significant breakthrough in filariasis research by establishing an *in vitro* culture system for the infective stage larvae of *Brugia malayi* and *B. pahangi* for the first time and this has enabled the *in vitro* testing of potential filaricides in the fight against filariasis world-wide. Studies on the nutritional status in rural areas have helped shape the nutrition programs and laid the foundation for many of the national nutrition policies today. Studies of diarrhoeal diseases, acute respiratory tract infections and immunization in children have assisted program managers to fine tune disease control programs in children. Improved control methods for common diseases like dengue and malaria were

developed as a result of research carried out on the effectiveness of insecticides and resistance to them in disease vectors. In 1990, IMR researchers discovered the first insecticidal anaerobic killing bacteria in the country, *Clostridium bifermentans malaysia* and this discovery has been duly recognized by way of a fifty-cent stamp commemorating the centennial of the IMR.

Eventhough IMR embarked on its commercialization program just relatively recently, the IMR is proud to note that to-date, three of its research findings have been commercialized. These include MOSBAC[®], an aqueous suspension formulation containing the spore-crystal complex of IMR-BT-1, a Malaysian isolate of *Bacillus thuringiensis* for the biological control of mosquito larvae; R-EST[®], a test kit for the rapid detection of insecticide resistance and Nutri-Cal, a nutrient analysis and food composition data management software.

Since independence, Malaysia has evolved from an essentially agro-based society to an industrializing one. This epidemiologic transition has resulted in changing lifestyles and demographic patterns leading to changing disease patterns, changing paradigms and new challenges in the health sector. In line with these changes, the IMR has in recent years, embarked in new directions in its research, while retaining its traditional strengths in tropical medicine. In 1990, the IMR was reorganized into 5 Departments, namely Tropical Medicine, Clinical Pathology, Community Medicine, Support Services and Administration to meet the challenges of health research more effectively. The IMR undertook increased research in non-communicable diseases such as cardiovascular diseases and cancers, both of which are major causes of morbidity in the country. In addition, the IMR has in recent years emphasized the use of biotechnology as a research tool. Various biotechnological techniques are currently employed in research towards improving or developing better diagnostic methods, characterizing new agents of diseases as well as understanding the molecular mechanisms involved in disease processes which will lead to improved methods of diagnosis, management, treatment and control. Realizing that rapid urbanization and changing population demographics may result in deterioration in the quality of health, the Environmental

Health Research Center was established in 1996 to coordinate and direct research activities in environmental health.

The IMR considers linkages with other research institutes and agencies crucial to its development. Since 1969, it has served as Malaysia's National Center for Tropical Medicine under the Southeast Asian Ministers of Education Organization (SEAMEO). Subsequently in 1993, this Center was redesignated the SEAMEO Regional Center for Microbiology, Parasitology and Entomology to enable it to respond more effectively to the needs of the region and the SEAMEO organization. In 1978, the IMR was designated the WHO Regional Center for Research and Training in Tropical Diseases and Nutrition and since then, the Institute has taken an active international role in providing training to numerous scientists and health personnel both within and outside the region. More recently, the IMR has extended its linkages to other organizations like Japan International Cooperation Agency (JICA) and Inter-Islamic Network for Tropical Medicine. As the IMR progresses into new areas of research, more of such linkages will be undertaken so as to enhance networking among researchers.

In an effort to publicize its research findings, the IMR has produced various publications which include the IMR Annual Report and the IMR Quarterly Bulletin and each year, the IMR publishes about 100 articles in both local and international journals. In 1997, the IMR launched its own journal, the International Medical Research Journal to rapidly disseminate research findings to the international scientific community. This journal has received strong support from both local and overseas scientists.

Besides its research function, the IMR has been very active in providing training and consultancies in various fields of tropical medicine and public health. Specialized diagnostic tests remains a key function of the IMR particularly in the areas of HLA tissue typing and cross-matching, endocrinology, biochemistry, virology and bacteriology.

Today, the IMR which continues to be the research arm of the Ministry of Health, is undergoing yet another phase of change to make it more relevant to meet the challenges of the new millennium. It is currently being reorganized to enable it to focus on important areas such as infectious diseases, cancer research, cardiovascular diseases and nutrition, environmental health research, herbal medicine and allergic disorders. Its mandate will be to collaborate with the other component institutes of the National Institutes of Health *viz* the Public Health Institute, Institute for Health Promotion, Institute for Health Management and the Centers for Clinical Research as well as with other universities and other agencies. The IMR is fully aware that the main strength of any organization is its people who are adequately trained to make use of the latest technologies in the most appropriate manner. Towards this end, continuing professional development will have to be a priority of the IMR in order to meet the country's aspirations of creating a knowledge-based society.

As we look forward to the years ahead, the IMR aspires towards a culture of excellence and the creation of centers of scientific excellence. This we know will not be achieved overnight but will require sustained investment, dedication, discipline and most of all, a hunger for success.

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