

SEAMEO TROPMED MALAYSIA: INSTITUTE FOR MEDICAL RESEARCH KUALA LUMPUR

INTRODUCTION

The Institute for Medical Research Kuala Lumpur (IMR), the research arm of the Ministry of Health Malaysia, celebrated its 100th year of existence in 2000. Founded in 1900, it is one of the oldest research institutions in the region and has a long and illustrious history in the field of biomedical research. Today, the acronym IMR is symbolic of an effective and outstanding research institute in the field of tropical medicine. The Institute for Medical Research is not only known to the academicians, medical professionals and scientists all over the world, but perhaps with greater significance, to the public.

The main functions of the Institute are to: (1) carry out research for the prevention and control of diseases and on pertinent health issues and problems in the country; (2) perform specialized diagnostic services; (3) provide training in various specialized fields; and (4) provide consultative and advisory services. The Institute is organized into 9 Centres, namely Allergy and Immunology Research Centre, Cancer Research Centre, Cardiovascular, Diabetes and Nutrition Research Centre, Environmental Health Research Centre, Herbal Medicine Research Centre, Infectious Diseases Research Centre, Medical Resources Research Centre and Specialised Diagnostics Centre and Management Centre.

RESEARCH

Being the research arm of the Ministry of Health Malaysia, research programs

of the Institute have always been geared towards the various identified priority areas of the Ministry, in line with the health problems in the country. Research findings and results should assist managers and administrators in all ministries in the formulation, implementation and evaluation of programs and activities for the diagnosis, prevention and control of major diseases of the country. Attention is also given to increasing basic knowledge on major disease in which such knowledge is lacking.

The research focus of IMR also extends beyond tropical diseases and penetrates into other areas of biomedical discipline such as cancer, herbal medicine, immunology and autoimmune diseases, diabetes and metabolic syndrome, stem cell research and environmental health, in line with the changing trend of health burden in the country and advancement of medical technologies. Research is also carried out with the purpose of developing and enabling technologies or products and identifying new biomarkers for use in the early detection and diagnosis of disease, monitoring of disease progression and targeted therapy. A total of 22 products or methods were patented or pending patent and five of these have been commercialized.

CONSULTATIVE SERVICES

Another important activity of the Institute is to provide advisory and consultative services to the Ministry of Health, other government departments, agencies and institutions in the country, as well as

international organisations. The pool of expertise available in the Institute for various fields of medical research contributed to the formulation, implementation and evaluation of various health-related programs and activities. Staff members of the Institute also served as faculty members and experts at various workshops, courses and seminars organized by other organisations.

- The IMR has served as the SEAMEO National Centre for Tropical Medicine since 1967 and in 1993, was re-designated the SEAMEO TROPMED Regional Centre for Microbiology, Parasitology and Entomology. The SEAMEO TROPMED Malaysia, conduct two regular training programs. These are the SEAMEO-TROPMED Courses leading to the Diploma in Applied Parasitology and Entomology (DAP&E) and the Diploma in Medical Microbiology (DMM). The DAP&E and DMM course are conducted continuously without break since 1970 and 1978, respectively. The ad hoc programs of the Institute provided training opportunities for scientists, medical doctors, allied personnel from other departments and institutes in the country and abroad and undergraduates from various local institutions of higher learning. The institute also provides practical training in various disciplines. Sponsors for these courses include the Malaysian Technical Cooperation Programme, the World Health Organization, the South-east Asian Ministers of Education Organization, the Asian Development Bank, the World Bank, Wellcome Trust, the South Pacific Commission and national governments. The IMR has trained more than 900 students from 56 countries.

- The IMR developed 'Globinmed' www.globinmed.com which is a global

information hub on integrated medicine. The main function of this website is to provide information on all aspects of traditional medicine *eg*, safety, research, training, policy and trade for the layperson as well as for practitioners.

- The IMR laboratories serve as the National Reference Centres for Transplantation, Allergy Diagnosis, Primary Immunodeficiencies, molecular diagnosis of leukemias, multiple myelomas and confirmatory diagnosis of infectious diseases.

- The IMR established the Malaysian Marrow Donor Registry with National Cancer Council Malaysia (MAKNA), for the purpose of tissue typing potential donors for patients who are in need of bone marrow transplant.

- IMR was elected as a Member of the Governing Board of the WHO-UNDP-World Bank Special Programme on Tropical Disease Research (WHO-TDR), which is the highest policy decision body on tropical diseases research of the WHO.

- The WHO appointed IMR as one of the coordinating body for Western Pacific Region Index Medicus (WPRIM).

- IMR is the Chair of the Public Health Sector of the Second National Communication on Climate Change, and a Member of the Technical Working Group on Climate Change, Ozone Depletion and Eco-system Change of the Regional Ministerial Forum on Environment and Health.

- IMR is the Secretariat for Inter-Islamic Network on Tropical Medicine (INTROM). INTROM is one of the eight COMSTECH Inter-Islamic Networks. COMSTECH is a Ministerial Standing Committee on Scientific and Technological Cooperation established under Organization of Islamic Conference (OIC). INTROM was set up in 1987 and

IMR is the focal point and secretariat for INTROM. INTROM member countries include Algeria, Egypt, Iraq, Malaysia, Nigeria, Pakistan, Senegal, Kingdom of Saudi Arabia and Turkey. The mission of INTROM is in line with the mission of COMSTECH, which is to strengthen the individual and collective capacity of OIC member states and technology through mutual cooperation, collaboration and networking resources.

- IMR has served as the World Health Organization (WHO) Regional Centre for Research and Training in Tropical Diseases since 1978. Three Units of the Institute continue to serve as the collaborating centers for the World Health Organization (WHO):

(a) the Unit of Medical Entomology as a WHO Collaborating Centre for Ecology, Taxonomy and Control of Vectors of Malaria, Filariasis and Dengue.

(b) the Unit of Bacteriology as the national focal point for the WHO Collaborative surveillance program on antibiotic resistance in the Western Pacific Region; and

(c) the Unit of Virology as the WHO National Influenza Centre and the National Reference Laboratory for Polio Eradication.

SPECIALIZED DIAGNOSTIC SERVICES

The IMR supports the pathology service of the country through continuous improvement of test methods or development of new methods through research and development. On the average, IMR carries out about 300,000 specialised diagnostic tests annually. IMR is the only center in the country that is offering biochemical genetic testing for Inborn Error of Metabolism (IEM), molecular

diagnostics for genetic diseases and detection of trace elements and heavy metals in biological fluids. The laboratories in IMR also serve as National Reference Centres for Transplantation, Allergy Diagnosis, Primary Immunodeficiencies, molecular diagnosis of leukemias, multiple myelomas and confirmatory diagnosis of infectious diseases.

A WAY FORWARD

IMR officially came under the ambit of the National Institutes of Health Malaysia in 2003. The National Institutes of Health (NIH) is a network of Ministry of Health (MOH) research institutes. NIH was approved in the 7th Malaysian Plan (7MP). It was officially launched by the Honorable Minister of Health Malaysia on 11 August 2003.

The NIH consists of six institutes:

- Institute for Medical Research (IMR)
- Institute for Public Health (IPH)
- Clinical Research Centre (CRC)
- Institute for Health System Research (IHSR)
- Institute for Health Management (IHM)
- Institute for Health Behavioural Research (IHBR)

The NIH aims to create a seamless continuum from identification of research priorities, conduct of research, to utilization of research findings.

The national health research priorities in Malaysia reflect the unique characteristics of the health sector. The primary goal of the health sector is to improve the health and quality of life of the people of Malaysia. This, in turn, would enhance their productivity and competitiveness, thereby contributing the economic development.

The purpose of identifying health research priorities is to facilitate research that provides information and evidence to support the primary goal of the health sector. Such research outputs would improve the health status and the delivery of health care in Malaysia. Health research primarily aims to bring social benefit. In this respect research in the health sector differs, for example, from research and development (R&D) for industry where the primary focus is on innovative technology that has commercial value. Only some researches in health technology might have a direct commercial value, but other researches are primarily valued for the health benefit they bring to Malaysians.

The selection of priority areas or domains for health research was guided by information/evidence requirements related to two fundamental principles. First, is the role of the health sector in achieving the national Vision 2020, and more immediately the goals of the 10th Malaysia Plan. Second is the continuing need to promote wellness and to reduce the burden of disease among Malaysians.

The 10th Malaysia Plan (10MP) is the five-year road map (2011-2015) of developmental strategies for achieving the national aspirations articulated in Vision 2020. The country strives to achieve an 'advanced nation' status by 2020.

For this to happen, the Country Health Plan 2011-2015 defines the following strategies, namely:

- Establish a comprehensive healthcare system and recreational infrastructure;
- Encourage health awareness and healthy lifestyle activities;
- Empower the community to plan or implement individual wellness

programs (to be responsible for one's own health);

- Transform the health sector to increase the efficiency and effectiveness of the delivery system to ensure universal access.

The thrust of these strategies is to promote wellness rather than merely deal with illness, and to transform health care delivery to meet the needs and growing aspirations of the community and yet be affordable to individuals and society.

While promoting wellness, the health sector has to continue dealing with illness. In order to improve the health status, the burden of disease among Malaysians needs to be tackled. Burden of disease refers to illness, death or disability from illness. The leading contributors to the burden of disease in Malaysia are dengue, obesity, cancer, cardiovascular disease, diabetes, chronic lung diseases, trauma due to accidents, tuberculosis and HIV/AIDS, and emerging health issues among adolescents. For most of these conditions, there is considerable knowledge on effective interventions. However, research is needed to provide evidence to fill gaps in knowledge on how best to apply such interventions in the Malaysian context. Similarly, in relation to health technology, there are critical gaps in knowledge, for example, issues related to safety and the use of traditional and complementary medicine (TCM); need for newer diagnostic tools for conditions such as cancer, dengue, drug resistance, mental health; and need to adapt existing technology to the Malaysian context.

The 10MP also defines strategies for environmental protection and conservation. Since environment hazards have serious impact on health status, this too is a priority area for health research.

The theme for the 50th celebration, “Achievements and Challenges for Sustainable Development in Health”, would

see close and better collaborations between IMR and SEAMEO TROPMED in facing future challenges.