

Medical Research Institute, Colombo

unique partner in making a Healthy Sri Lanka, completes 110

years of service to the nation

The Medical Research Institute [MRI] of Sri Lanka is the premier centre in the country for bio-medical and applied health research. MRI conducts research in diversified areas in the fields of Virology, Bacteriology, Parasitology, Rabies, Nutrition, Biochemistry, Histo-Pathology, Haematology, Immunology, Entomology, Molecular Biology, Pharmacology, Mycology and Animal Studies.

The MRI was built by Mr. J.W.C. de Soysa, in commemoration of Her Majesty Queen Victoria's Diamond Jubilee. The ceremonial opening was conducted by the Governor of Ceylon, Sir Joseph West Ridgeway, on 31st January 1900 and initially named as "The Soysa Bacteriological Institute". Sir Marcus Fernando, a consultant physician of the General Hospital, Colombo was appointed in an acting capacity as the first head of the institute. Later Dr Joseph Silva and Dr S. C. Paul too acted as the director of the institute for a short period.

In 1903, Dr. Aldo Castellani, Professor of Pathology was appointed as the first Director of the MRI. Dr.Castellani had a global reputation as the discoverer of the etiology of Sleeping Sickness in 1902 in Sub- Saharan Africa. In Sri Lanka, he conducted a large number of pioneer research studies in the fields of microbiology and parasitology. As the Director of the MRI he introduced various laboratory tests for the diagnosis of bacterial, fungal and parasitic infestations for the first time in Sri Lanka. Dr.Castellani also introduced vaccination for typhoid infections. In 1909

a vaccine unit to manufacture small pox and anti-typhoid vaccines was established.

This erudite scholar had to leave the colony, Ceylon, prematurely, in 1915, as he refused to change his Italian nationality during the political fiasco created by the World War I. Dr Lucas A Nicholls, a lecturer in Bacteriology at the Ceylon Medical College was then appointed as the Director of the MRI. Under his tenure, a Pasteur Institute was commissioned in 1918. The legend says that the well known philanthropist Mr. Soysa was bitten by a rabid dog and consequently he died in relatively young age. Thereafter, his family donated a large sum of money to establish the institute. In 1936 the Pasteur institute and the Vaccination Establishment were amalgamated with the De Soysa Bacteriological Institute.

A two story building was commissioned in 1937 to accommodate all the departments including newly established Nutrition Division. The name of the institution was changed to its present form “Medical Research Institute” from 1st March 1946 under the directorship of Dr. A.Nimalsuriya the first Sri Lankan to hold this august post. Next, came Dr. LBE Seneviratne as the director and during his time in 1950 the MRI was recognized as the National Reference laboratory for diagnosis of Syphilis in South – East Asia region. In the same year Smallpox was diagnosed for the first time in the island at the MRI.

After a very successful half century the MRI entered into a few relatively dormant years due to lack of technical facilities. But the institute was able to re-juvenate soon through the Technical Co-operation scheme of the Colombo Plan in 1956. As a result the Medical laboratory Technology school was established in 1959 with assistance of the World Health

Organization. Dr. Doyné de A Seneviratne was the 'doyen' of the success during this re-juvenation period. Dr. K Mahadeva, Dr Mrs. Gladys Jayawardene , Dr.Nitiyananda, Dr.BAV Perera, and Dr.C.Palsuntheram held the post of Director/MRI consequently from 1960s to 1980s.

Next major expansion of the institute began under the directorship of Dr. Tissa Vitarana who was confirmed to the post in 1985. Initiated under the theme "Towards new Frontiers in Medical Research" an Ultra-Modern Laboratory Complex of International Standard was constructed and equipped at a cost of Rs. 700 million thanks to the generosity of the Government and the people of Japan. Commissioning of this complex by His Excellency President Ranasinghe Premadasa on the 10th April 1990 opened a new chapter in Bio-medical research in Sri Lanka.

"Together with continued Japanese Technical cooperation it should be possible for the MRI to make the qualitative and quantitative leap to a future upto international standards" Dr. Tissa Vitarana, who conquered into the territory of local politics later and became a respectful cabinet minister, the singular motive force behind the success of the entire MRI venture wrote in the ceremonial publication on the opening of the new MRI Complex.

MRI entered into the new millennium realizing the vision of the great pioneers in the past and played a unique vital role in the health systems in the country. The institution at present consists of 21 sections which have been grouped into seven departments covering all disciplines of laboratory medicine. Besides running the School of Medical Laboratory Technology, it also plays major role in all relevant post graduate training schemes including microbiology, haematology and histopathology.

In certain fields like Virology, Mycology, Pharmacology, Chemical Pathology and Immunology, the MRI alone performs the entire diagnostic function for the whole country. MRI is a major service provider for all hospitals in Sri Lanka with special and specific diagnostic laboratory tests. It also functions as a National Laboratory for Japanese encephalitis, measles, rubella and influenza and as the regional reference laboratory for poliomyelitis.

The Department of Virology is the only centre in the country fully equipped to carry out advanced research in Virology. It carries out specific diagnostic tests for Dengue, Encephalitis, Rabies, Measles, Influenza and many other pathogenic viruses. Surveillance of AFP, JE, Influenza & respiratory viruses, Measles, Congenital Rubella are among the major virological surveillance activities conducted by the department. Dept of Rabies is the National Reference Laboratory for rabies diagnosis and research. The department provides a comprehensive service including, ante mortem & postmortem Human rabies diagnosis , Rabies diagnosis in animals, Quality assurance of decentralized rabies diagnostic laboratories and Specialized rabies post exposure advice clinic.

Dept of Vaccine Quality Control is the National Control Laboratory (NCL) for vaccines in Sri Lanka which provides Technical evaluation and quality testing of all vaccines (EPI & non EPI vaccines) for the drug regulatory authority before licensing.

The Department of Bacteriology has several sub-divisions that provide number of investigation services in clinical bacteriology. Anaerobic bacteriology and Leptospirosis laboratories are the reference laboratories in the country. The department conducts National External Quality

Assessment programme in Bacteriology for state and private sectors. The Food and Water section carry out Microbiological Analysis of Routine Food and Water Samples, Surveillance of Water Samples , Serologic diagnosis of Streptococcal infections, Rickettsia, Brucellosis, *Helicobacter pylori*, Enteric fever, and SAT Antigen preparation for distribution.

Department of Entomology conducts research on mosquito vectors of disease is the main activity of the department. This department also provides mosquito surveillance for dengue haemorrhagic fever and Japanese Encephalitis. Consultancy services are also provided to the Registrar of pesticides and Sri Lanka Standard Institution on the biological efficacy of repellents. larvicides, insecticides.

The Department of Biochemistry of the MRI is the nerve centre for the National External Quality Assurance Scheme for 70 state sector hospital laboratories. Its functions include the provision of technical assistance, performance of routine, special, and highly specialized tests in Biochemistry, evaluation of chemicals, reagents, equipment and devices.

The Department of Nutrition works to improve nutritional status of individuals and populations through basic research and dissemination of nutritional advances in community based programmes, advocacy of national policies, prompting and conducting of bio-medical research.

The Department of Mycology serves as the main service laboratory for processing and identification of patient samples from many parts of the country with regard to fungal infections. Departments of Entomology, Pharmacology, Immunology, Histopathology, Haematology, and Molecular Biology carry out numerous research projects in the respective fields annually and make unique contribution to the scientific

community in addition to providing specific diagnostic services to the public.

Teaching and training programmes of undergraduates and post graduates in medicine, Medical Laboratory Technologists, Nurses, Public Health Inspectors, Entomological Assistants are among the main regular activities in the annual agenda of the MRI.

The school of Medical Laboratory Technologists of the MRI is the main training centre for MLTs for the Ministry of health; Armed Forces, State Universities, local government bodies, and some semi government institutions. e.g. National Transport Medical Institute

In addition following unique services are provided by the MRI:

- Reference laboratory for Immunological investigations
- National reference centre for platelet aggregation studies
- Pre-registration evaluation of pharmaceuticals

The Animal Centre at the MRI is the only place in Sri Lanka which breeds and maintains laboratory animal colonies according to proper breeding methods. Research institutes and universities purchase animal for diagnostic, research and reagent preparation.

All departments disseminate research findings by publishing a large number of scientific papers in reputed peer reviewed journals in respective fields annually.

Presently the MRI is operating with a futuristic **Vision** focusing on Research (basic, operational and advance); surveillance programme for communicable, non communicable and emerging diseases and nutrition status in emergency settings; quality control of laboratories; monitoring

and evaluation of health and nutrition interventions; Partnership, specialized laboratory tests and services; Vaccine quality assurance; Forecasting, control and prevention of outbreaks; Teaching and training (Basic, in-service and postgraduate); Providing specialist services for patient management; Supply of animals and animal blood for laboratory testing and research.

The heart of our **Mission** is to improve the health of Sri Lankans through world-class medical research so as to achieve the national health goals set by the Ministry of Health. To achieve this, we support research across the biomedical spectrum, from fundamental lab-based science to clinical trials in all major disease areas. We work closely with the Ministry of Health, and give high priority to research that is likely to make a real difference to clinical practice and the health of the population.

[Acknowledgement; Sriya Gunasekara]



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