OBITUARY

Dr. Dilip Mahalanabis (1934 – 2022)

Dr Mahalanabis with his spouse.

Dr Dilip Mahalanabis, a famous clinician scientist, passed away in the city of Kolkata on 16th October 2022. He was born in Kishoreganj of the British province of Bengal, India (now in Bangladesh) on 12th November, 1934. His life partner was Prof. Jayanti Mahalanabis who deceased on 9th July, 2021.

In 1958 he received his degree in medicine and surgery (MBBS) from the University of Calcutta, West Bengal, India. Afterwards, he perused his training in Pediatric Medicine at Medical College, Calcutta, Queen Elizabeth Hospital for Children, London and Johns Hopkins University (JHU) School of Medicine, Baltimore, USA from 1959 to 1965. In 1961 he obtained postgraduate diploma in child health (DCH) from the Royal Colleges of Physicians and Surgeons, London, UK. In 1962, he obtained MRCP from the Royal College of Physicians, Edinburgh, UK. Subsequently he was elected as a Fellow of that College (FRCP).

In 1966, on his return to India, he joined Johns Hopkins University International Center for Medical Research and Training (ICMRT) in Calcutta as a research investigator and started his work on early development of Oral Rehydration Therapy (ORT) and its application in children with cholera at Infectious Disease and Beleghata General Hospital, Calcutta (ID & BG hospital) and also in the field situations. Concurrently he held a teaching position as visiting pediatrician at the Institute of Child Health (ICH), Park Circus, Calcutta. In 1973, he joined Kothari Center of Gastroenterology, Calcutta as a Consultant Pediatrician. During that period he conducted research on the composition, safety, and efficacy of Oral Rehydration Solution (ORS) in infants and children which included studies in animal models. His studies on the role of intestinal parasites on malabsorption of vitamin A were carried out during this period (1973-1983).

In 1983-1988, he joined WHO Headquarters in Geneva and was responsible for promoting ORT globally, particularly for its global acceptance by both the profession and the people.

In 1988, he joined International Center for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) in Dhaka as the Director of Clinical Sciences Division and led a research division for seven long years. In this capacity he provided leadership to a team of scientists conducting clinical and nutrition research on topics of public health importance.

His contributions to public health are incomparable. Some of his achievements are enumerated here.

Dr. Mahalanabis conducted one of the world's earliest randomized controlled trials of ORT in children and compared it with conventional intravenous therapy. It was the first definitive field trial of ORT under the most difficult field situation during a massive outbreak of cholera among the millions of Bangladeshi refugees taking shelter in India during the Liberation War of Bangladesh in 1971. He used the ORS in refugee camps in West Bengal, saving thousands of lives during a cholera outbreak. This was the first large-scale use of ORS in a disaster situation. He and his colleagues participated in the oral rehydration trials under John Hopkins University International Research Center in Calcutta (ICMRT), at a border camp near Bangaon, West Bengal, as their intravenous saline supplies were inadequate in proportion to the load of the patients. His decision to use ORS and results of its subsequent use formed an important basis for the Global Programme of Diarrhoeal Diseases Control of WHO and UNICEF based on "Case Management" strategy, not only for children, but also for cholera patients of other age groups as well, which was later extended to each case of diarrhea irrespective of its origin.

He demonstrated the presence of a coagulable protein in the blood of an aquatic animal, Carcinoscorpius (popularly called as Mangrove Horseshoe Crab), a sister species of the well-known horseshoe crab, Limulus, found in the Indian Ocean which may be used for detecting endotoxin, similar to the Limulus test.

He conducted early family studies of hereditary Sucrase-Isomaltase deficiency.

He also reviewed roles of vitamin A supplementation and zinc as micronutrients in the prevention and treatment of childhood illnesses, energy-dense supplementary feed and Helicobacter pylori infection in early infancy, childhood and women of childbearing age.

He had established Society for Applied Studies (SAS), Kolkata. The center was registered in 1990 and started functioning in 1995 initially through its headquarters in Kolkata and later also through the Regional Center at Delhi. Society for Applied Studies has been designated as a WHO Collaborating Centre for Child Health. He created SAS to expand his research and to create new young researchers through imparting training by himself. There he expanded his studies on the role of micronutrients e.g. zinc, vitamin A, Vitamin D in health and disease in children; development and evaluation of enteric vaccines essential in developing countries; evaluated and developed anthropometry and Bio-electrical Impedance Analysis (BIA) based equations of fat free mass and fat mass of infants and children, and also on the problems of STD/STI/RTI and HIV diseases in India. He was recognized as research guide for PhD students from University of Calcutta and Vidyasagar University, India.

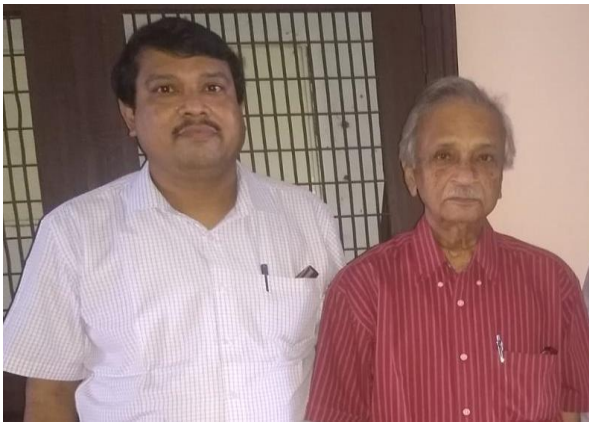
Dr Mahalanabis and his team (SAS) developed “Purulia Model of Sick Newborn Care Unit” with support from UNICEF and the district level self-government body (Zilla Parishad), when there was no sick newborn care facility (neither government nor private) in that locality. During 2003-2005 his research team led by Professor Amitava Sen and others made at least fifty visits to the district spending more than two hundred days and conducted intensive training programs in phases for the nurses and doctors. Utilizing minimum resources, mostly locally available, SAS team was able to curtail about 10 percent of neonatal mortality per year in that district. No other single intervention is known to reduce newborn death rate to that extent. This success story has been published in The Lancet in 2005 and in due process, was accepted by a number of countries, especially the resource-constrained ones.

He was the member of several academic societies such as American Society for Nutrition, Nutrition Society of India and the Indian Academy of Pediatrics. In 1994 he was elected a member of the Royal Swedish Academy of Sciences. This prestigious academy is directly responsible for awarding three of the six categories of the Nobel Prizes. In 2002, he was awarded Pollin Prize in Pediatric Research for contribution to the discovery and implementation of Oral Rehydration and Maintenance Therapy (ORT) by the University of Columbia and Cornell, USA. In 2006, he was awarded Prince Mahidol Award from the King of Thailand in the field of Public Health for his contribution on the development and implementation of Oral Rehydration Therapy. He received D.Sc. Award from Vidyasagar University, West Bengal, India in 2012 and from University of Calcutta, West Bengal, India in 2019. He was honored with the Barclay Memorial Award from Asiatic Society of Kolkata, West Bengal, India in the same year. Next year, amidst the advent of worldwide SARS-CoV-2 pandemic, he personally inaugurated a seminar hall in ID&BG Hospital premises which was dedicated to his name. That hall is situated just by the side of the place where he had performed his initial works on Oral Rehydration Therapy.

He had published more than 200 scientific research studies (which are available in internationally reputed journals) having significant impact on community health, by diminishing mortality and morbidity, directly or indirectly.

He was a good teacher, physician, clinician scientist, and skilled statistician. Above all, he was a very good human being with always smiling face. Both of the authors personally recognized his affectionate and helpful attitude, even to a newly introduced person.

May his soul remain busy in solving the problems of everyone who needs, wherever he is!



Dr Mahalanabis with one of the authors

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