

Dilip Mahalanabis (1934–2022)

Dr Dilip Mahalanabis, a pioneering researcher and medical professional, passed away on 16 October 2022, aged 87. He was born on 12 November 1934, in the Kishoreganj District of Bengal, in undivided British India. He received his MBBS degree from Calcutta Medical College and specialized in paediatrics in 1958. He was later recognized by the United Kingdom's National Health Service (NHS) and invited to study in London and Edinburgh, where he earned his FRCP degree. During his training in the UK, he became the first Indian to be appointed registrar of Queen Elizabeth Hospital for Children. In 1960, Mahalanabis joined the John Hopkins University International Centre for Medical Research and Training (JH-CMRT) in Kolkata, where he began his initial research on Oral Rehydration Therapy (ORT) for cholera. His exemplary service as a medical professional reflects a sincere commitment to the Hippocratic Oath that asks every physician to take a pledge 'to prescribe only beneficial treatments, according to his abilities and judgement; to refrain from causing harm or hurt; and to live an exemplary personal and professional life'.

In the mid-1960s, Mahalanabis did research on cholera and other diarrhoeal diseases at the John Hopkins International Centre for Medical Research and Training in Calcutta, India¹. During the 1971 Bangladesh war for independence, he led efforts by the JH-CMRT to save lives during a cholera outbreak among 350,000 refugees from East Bengal seeking shelter in camps.

Mahalanabis and his team developed ready-to-use ORT sachets, consisting of a mixture of table salt (four teaspoons), baking soda (three teaspoons), and commercial glucose (20 teaspoons) mixed in water. The results of the ORS application were overwhelmingly reassuring. The death rate was 30%, when patients were being treated only with intravenous fluid therapy. The use of ORT drastically reduced the death rate from cholera from 30% to 3.6% in just two weeks. This simple innovation has since helped save millions of lives across the globe, particularly among impoverished populations.

Evidently, this was the first large-scale use of ORS in a disaster situation. Mahalanabis' intervention with ORT for treating cholera was recognized by the WHO and is said to have saved 40 million lives infected with this disease. The 29 July is obser-

ved as World ORS Day in honour of this 'Elixir for life'. His work has been called 'potentially the most important medical advance' of the 20th century by *The Lancet*.



The phenomenal success of this intervention strategy for treating cholera brought more responsibility to Mahalanabis. He worked for the WHO from 1975 to 1979 in Afghanistan, Egypt, and Yemen, and later served as a consultant for the organization. In the mid-1980s and early 1990s, he was a medical officer for the Diarrhoeal Disease Control Programme of the WHO. He then served as the Director of Clinical Research at the International Centre for Diarrhoeal Disease Research (ICDDR, B) in Bangladesh, where he retired in 1995.

Mahalanabis received numerous international awards and honours, including membership in the Royal Swedish Academy of Sciences and the Pollin Prize and Prince Mahidol Prize for his contributions to paediatric research. Despite his global acclaim, it is surprising that he did not receive any government recognition in his own country.

He was the Founder and Director, The Society for Applied Studies (SAS), established in 1990 in Kolkata with a vision of 'Improved Health and Quality of Life' in India and other developing countries, especially for children and women. The SAS has now expanded and become the Centre for Health Research and Development, Society for Applied Studies (CHRD-SAS), New Delhi.

He was married to Jayanti Mahalanabis (now deceased), an eminent physicist. They had no children. In 2012 he was awarded a D.Sc. (h.c.) degree by Vidyasagar University, for his pioneering work on ORS. Subsequently, he received the same degree from Calcutta University.

I was highly privileged and honoured to be associated with Mahalanabis for many

years. I had co-supervised two Ph.D. theses with him at Vidyasagar University; one dealing with risk factors for low birth weight among Bengalese (Samiran Bisai) and the other on estimation of body composition of Indian infants (Bandana Sen). With him, I have co-authored more than 10 research papers in peer-reviewed international indexed journals²⁻⁷.

Mahalanabis' generosity went beyond words. He donated his life savings of rupees one million to Institute of Child Health, Kolkata (ICH), where he started his medical journey. On a personal note, he was a doctor who listened! He was a generous and kind person who helped others whenever possible. An obituary in *The Lancet*⁸ honoured his contributions to the field of medicine. This tribute celebrates the life of a humble and unsung hero who saved millions of lives through his pioneering work.

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