

Polymorphism Journal condoles the loss of Dr. M.K. Bhan



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Dr. Maharaj Krishan Bhan was the man who was the pioneer of India's first indigenously developed rotavirus vaccine. Dr. Bhan was born on the 9th of November 1947. In 1969, he completed his MBBS from Medical College in Pune and went on to get an MD from the Post Graduate Institute of Medical Education and Research (PGIMER) in Chandigarh. Dr Bhan was a pediatrician who played a lead role in promoting primary health care for children in rural India. He promoted the protocols of oral rehydration therapy, micronutrient supplementation and introduced new vaccines and provided greater coverage

with existing ones. He received the prestigious Shanti Swarup Bhatnagar Prize for Science and Technology in 1990 for his scientific contributions. Besides these, his work was also acknowledged by various prestigious academic bodies by bestowing upon him the National Ranbaxy Award 1990 for Medical Sciences, Achar Gold Medal of the Indian Academy of Pediatrics 1984 for the best original research, S.S. Mishra Award of the National Academy of Medical Sciences 1986 for the best unpublished research, Biotech Product and Process Development and Commercialization Award, 2003 and Pollins Foundation Research Award for US 100,000 (Year 2003).

His leadership brought the most vibrant periods in the growth of life science research in India. He took over as the secretary of the Department of Biotechnology, Govt. Of India in 2005 and served in this position till 2013. He was instrumental in setting up transformative BIRAC - the Biotechnology Industry Research Assistance Council - and Centre for Stem Cell Research (CSCR) at Vellore. He introduced the IMNCI integrated program which was developed under his chairmanship and is being introduced in the reproductive child health program of the Government of India. Dr. Bhan has provided leadership to the National Diarrheal Disease Control program, which drastically lowered the cost of vaccination against diarrhoea — a disease that kills 78,000 infants a year in India and 500,000 globally. He has been a cementing force in bringing

stakeholders together for the cause of child health in India.

Dr. Bhan developed rotavirus vaccine based on a neonatal strain (Bhan et al. 2014). Rotavirus is the major cause of diarrheal death in children, particularly in the developing countries. The vaccine is under clinical evaluation in India. He identified G9 as an important serotype in childhood diarrhoea, which led to its incorporation in the candidate rotavirus vaccines (Ramachandran et al. 2000). Bhan developed low osmolarity oral rehydration solution, which has been introduced in the Diarrheal Disease Control Programme by the World Health Organization (WHO) and by the Government of India. He identified zinc deficiency in children as a major public health problem and developed zinc as a new treatment for childhood diarrhoea, which was introduced by the WHO as a global recommendation (Sazawal, et al. 1997). He identified, for the first time, a new pathogen enteroaggregative *E. coli* to be a cause of persistent diarrhoea and developed treatment for this disorder. He demonstrated safety and efficacy of exclusive breastfeeding for 6 months for the first time in a developing country, which led to its global recommendation. Dr Bhan published about 200 papers in national and international journals, written chapters for seven books and prepared guidelines for four national programmes related to public health. Here is what our editors have to say about Dr. Bhan.

Rajender Singh-

I had an opportunity to listen and talk to Dr. Bhan at the Centre for Cellular and Molecular Biology (CCMB), sometime in the year 2006. Dr. Lalji Singh, the then director of CCMB had invited him for a lecture at the institute. I still remember that great talk, which was followed by an open approval of a chunky grant for the central facilities at the institute. He projected

his views about taking the Department of Biotechnology to further heights. With his great vision, Dr. Bhan contributed immensely to the scientific developments in the country, not only by directly contributing to scientific research, but also by planning the scientific course for the decades to come.

Sir, you will be missed and remembered in the scientific community forever. Rest in peace!

Deepak Modi-

Dr Maharaj Kishan Bhan is credited with many innovations that transformed the health sciences in the country. Beyond an innovator, he has been a mentor and a role model for many, including me. While my interactions with him have been brief and often in formal meetings, including my IYBA award in 2008, those few hours of interactions were sufficient to inspire me. His thought process and vision for medical technology were larger than life; these have been a constant source of motivation. His persona would make me listen to his wise words with awe and these words of wisdom and the push to achieve the best has brought me to where I am today.

A visionary in true sense, he leaves behind a legacy unmatched in the domain of health and biotechnology in the country.

I pay my tribute to Dr Bhan. Sir, you will be truly missed.

Acknowledgements

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