

Obituary



Dr Vinod Prakash Sharma (1938-2015)

With the demise of Dr Vinod Prakash Sharma on October 9, 2015 in New Delhi, India, the global scientific community has lost a renowned malariologist. Dr Sharma was born on April 6, 1938 in Bulandsahar, Uttar Pradesh, India. He is survived by his wife Dr Manju Sharma, former Secretary of the Department of Biotechnology, Government of India – a widely acclaimed and decorated biotechnologist herself - and their son, Dr Amit Sharma, a scientist at the International Centre for Genetic Engineering and Biotechnology, New Delhi.

After graduating from Allahabad University with masters, D. Phil. and D. Sc. degrees, Dr Sharma pursued a post-doctoral fellowship to work with the eminent mosquito geneticist Prof. K. S. Rai at the University of Notre Dame, and later at Purdue University, USA, during 1965-1968. Upon returning to India, he joined the Forest Research Institute, Dehradun and then the WHO/ICMR Research Unit from 1970 to 1975 to work on the genetic control of mosquitoes in Delhi.

The success of malaria eradication efforts in India had led to the closure of the famous Malaria Institute of India and the publication of the Indian Journal of Malariology in the late 1960s. However, malaria resurged, cases peaked in 1976 and the Malaria Research Centre (MRC) was established in 1977 under

the aegis of the Indian Council of Medical Research (ICMR). Dr Sharma was among a handful of scientists who joined MRC in 1978 as a Deputy Director, to rise as its Director in 1982. He started with humble beginnings and a few scientists, and then expanded manpower to create the National Institute of Malaria Research with a workforce of over 600 and forge an international reputation. Before superannuating in 1998, he rose to become the Additional Director-General of ICMR.

In the post-malaria resurgence era, India faced multiple challenges. The Malaria Institute of India became the National Institute of Communicable Diseases (now the National Centre for Disease Control) and research on malaria virtually stopped, resistance in vectors and parasites appeared and research was urgently needed to guide efforts to control malaria. Dr Sharma recruited many talented young scientists and technicians and personally nurtured and mentored them on various aspects and dimensions of malaria research. His greatest achievement was the formulation of the Integrated Disease Vector Control Strategy as one of the Technology Missions of the then Prime Minister of India, Mr Rajiv Gandhi. Starting in 1983 with the Kheda Project in Gujarat, with his vision and foresight he gradually established a dozen field research centres

in different ecotypes and diverse epidemiological settings in India, 10 of which are now creating the critical mass of science-based evidence for control of vector-borne diseases. Through these centres, a technology of the bio-environmental control of malaria was tested in different regions of the country.

Dr Sharma firmly believed that control of malaria and other vector-borne infections was not the sole responsibility of the health sector; he promoted participation from diverse non-health sectors, which contribute to the risk of these diseases, to share mitigation efforts. This led to the concept of intersectoral participation involving civil engineers, town planners, architects, non-governmental organizations, defence personnel, public works, fisheries, forestry and irrigation, to name a few, to jointly address the complex issues of controlling mosquito proliferation. His notable contributions were environmental manipulation and modification, and use of larvivorous fish in the control of malaria. Many of the technologies developed, refined and tested in field found place in the policies of the National Vector Borne Disease Control Programme. This work received international acclaim that coincided with WHO's promotion of environmental management measures against malaria. He was rightfully given the Om Prakash Bhasin Award in 1985 in recognition of his contributions.

Dr Sharma became a member of the WHO Panel of Experts on Environmental Management (PEEM). He served on numerous international expert committees and consultation groups on malaria and vector control at WHO headquarters in Geneva, Switzerland. He undertook several missions in countries of the South-East Asia Region, advising on the policy, strategy and plans for control of malaria. In recognition of his contributions to control malaria, the World Health Assembly conferred upon him the 21st Darling Foundation Prize on May 20, 1999 in Geneva.

Recognizing the need to prevent and mitigate health risks associated with infrastructure development in India, he initiated work on health impact assessment of several projects such as the Konkan Railways, the Sardar Sarovar Water Resources Development Project in Gujarat and the Bargi Dam project in Madhya Pradesh. This work is now being sustained by the National Institute of Malaria Research.

For promotion of a healthy environment, the Centre for Science and Environment, a reputed non-governmental organization in New Delhi, honoured Dr Sharma with the Down to Earth Green Scientist Award in 2001. Of the more than two dozen honours conferred upon him, Dr Sharma was decorated with *Padma Shree* (1992) and *Padma Bhushan* (2014), and received the Ranbaxy Award, the Gujar Mal Modi Award for Innovative Science and Technology as also the Meghnad Saha distinguished fellowship.

Dr Sharma was a prolific writer. Until the mid-1980s when computers were rarely available in India, he used to write his scientific articles by hand, revise, re-write and modify them until he was satisfied. When computers arrived he lost no time in embracing the new technology, writing his articles and papers himself and preparing his scientific presentations. Dr Sharma has to his credit over 300 publications and eight books. He was Chief Editor of the Indian Journal of Malariology (now the Journal of Vector Borne Diseases) and the Journal of Parasitic Diseases, and served as editor and reviewer of several national and international journals including the Indian Journal of Medical Research.

Dr Sharma displayed a rare quality of energy and enthusiasm and led from the front. A well-read scientist he was, Dr Sharma continued to inspire his younger colleagues and co-workers much after his superannuation from the ICMR service. He would regularly send copies of important scientific publications and motivate researchers to read, write and keep abreast with contemporary knowledge.

He was Fellow of 10 scientific academies and societies *viz.* Royal Asiatic Society, National Academy of Sciences (India), Indian National Science Academy, *etc.*, and President of the National Academy of Vector Borne Diseases, the National Academy of Sciences and the Indian Society for Parasitology. He was Chairman of the ICMR Vector Science Forum. He used his association with these bodies in doing public good for society at large. For public education and dissemination of basic knowledge on malaria and vector control, many documentary films were made under his guidance, which were widely used and telecast by Indian television channels. At the Centre for Rural Development and Technology, Indian Institute of Technology, Delhi, Dr Sharma continued to work on issues such as safe water, better sanitation

and the health of women and children. Well known for speaking his mind, he raised important national issues related to public health, in particular around malaria.

A keen observer, Dr Sharma travelled to different parts of the country in connection with field trials, visiting difficult areas with his younger colleagues and leading from the front.

Although Dr Sharma has left this physical world, his contributions will continue to guide and inspire

many future generations of scientists in the field of malaria and vector biology and control.

Disclaimer: The opinions expressed in the obituary are that of the author alone and do not represent views or opinion of World Health Organization.

Rajpal Yadav
Department of Control of
Neglected Tropical Diseases
World Health Organization
Geneva, Switzerland
yadavraj@who.int