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DR. KEERTI V. SHAH
MBBS, MPH, DrPH
1929-2019

*A tribute to a great scientist
and a legendary man*

Written by Patti E. Gravitt, PhD, MS on behalf of his
many colleagues, collaborators and friends, including
Nubia Munoz, MD; Silvia de Sanjose, MD, PhD;
Maura Gillison, MD, PhD; Neerja Bhatla, MD;
and Alvaro Munoz, PhD.

On Sunday, July 21, 2019, the papillomavirus research community lost one of our greats to kidney failure at age 90 – Dr. Keerti V. Shah. Dr. Shah, a native of India, received his MBBS degree in 1951 at the B.J. Medical College in Poona, followed by an MPH (1957) and DrPH (1963) at the Johns Hopkins School of Hygiene and Public Health (now the Johns Hopkins Bloomberg School of Public Health) where he was a faculty member until his death.

Keerti was among the original group of international researchers who began to connect the dots associating papillomaviruses with diseases such as recurrent respiratory papillomatosis and cervical, vulvar, and oral cancers. A highly successful scientist by any modern metric, Keerti published over 400 peer-reviewed publications and received continuous grant support over a long career. However, it was the qualities of the man not indexed in PubMed or Google Scholar which will define Keerti's legacy.

Keerti was a leading interdisciplinary scientist long before the term existed. Perhaps less well-known in the papillomavirus community, Keerti was an eminent expert in polyomavirus research, investigating the true public health impact of SV40 exposure to humans as a result of contaminated vaccines. Dr. Silvia de Sanjose reflects on this aspect of Keerti's career "I could not imagine anyone with a more profound understanding of science and public health implications when he was repeatedly confronted with controversy around the simian virus". He was an integral member of the team leading the seminal IARC Spain-Colombia case-control studies and the International Survey of cervical cancer and HPV which ignited the rapid accumulation of epidemiologic evidence that established HPV as central and necessary cause of invasive cervical cancer. Keerti's ability to put science over ego in this collaboration was essential in ensuring that the HPV exposure measures in these studies were validated by state-of-the-art molecular biology. When remembering the early days of these pioneering epidemiologic research studies, Dr. Nubia Munoz wisely remarked on how both old and new generations of researchers had much to learn from the "great Keerti".

In more recent years, Keerti spent much of his time mentoring the next generation, continuing to pursue the answers to the next big questions through selfless encouragement of others. In the early phase of the research that would be the first to establish the causal relationship between HPV and oral cancers, Keerti took a substantial salary cut to allow the research to continue while he and Dr. Maura Gillison awaited funding support for the work. As recalled by Dr. Gillison on news of Keerti's passing, "I can't imagine anyone else in the world doing that".

Keerti was welcoming to anyone wishing to learn from him and his laboratory, and to my knowledge never failed to share what he could to ensure the acceleration of our evidence to the prevention of disease in the population. Many of us have been the beneficiary of this generosity. As Dr. Neerja Bhatla recalls, "he will be remembered not only in India but in Asia" for his mentorship of numerous researchers in his native country in "quality research into HPV epidemiology in India...which laid strong foundations for implementation of HPV testing and cervical screening". He was universally remembered for his kindness, his sense of humor, and fairness. His presence, so often with his loving wife Farida, at the social gatherings to which he brought so much joy will be sorely missed.

These stories can only serve to illustrate the selflessness with which Keerti lived his life as a scientist and a mentor. For more than 15 years, Keerti was my academic mentor. I cannot recall a single conversation between us devoted to strategic career advancement, how to ensure our work was published only in the highest impact papers, quibbles about authorship, or how to write a compelling press release. Instead, I was wisely advised to seek questions that have most impact on disease incidence and mortality and to value collaboration even when that means being overlooked in your contributions. He told me that I could be tight with my findings and not broadly discuss them to protect the academic 'credit' but asked me "what would be the fun in that?". And in the same breath, he advised me that "you talk too much and write too little". Similarly, Dr. Neerja Bhatla commented that in the early years of her work on HPV in India, Keerti responded to a concern she had that she was too late to the game to make meaningful contributions. To which Keerti replied "I sense a despondency in you. But it is my experience that every project teaches you something new" but continued to insist that the work was done using the highest research standards. Keerti was critical and supportive in the same moment and reveled in the success of his colleagues as much as his own.

Since his retirement, Keerti continued to pursue the difficult questions. Dr. Alvaro Munoz, a colleague from Johns Hopkins, was corresponding with Keerti through his retirement on feasible study designs to confirm the vaccine's effectiveness on juvenile onset papillomatosis – an often-neglected consequence of HPV infection. And much of what Keerti focused his attention in recent years was on how we accelerate the translation of our research success to public health practice, particularly in the regions still most affected. As we stand now to meet the calls for the global elimination of cervical cancer, let us hold Keerti's philosophy of selfless collaboration and mentorship as a guiding principle. It is for the causes of public health that we work – as Keerti reminded us all in every interaction. ■