

## In Memoriam: Benjamin L. Van Duuren (1926–2003)

Benjamin L. Van Duuren, a world-class expert in the field of cancer causation and prevention using chemical and analytical techniques, died November 13, 2003. He was 77 years old.

Dr. Van Duuren earned an Sc.D. (Doctor of Natural Sciences) in organic chemistry in 1951 from the University of South Africa, where he was also born. He held a postdoctorate fellowship at the University of Illinois in Urbana, Illinois for 2 years under the famed chemist Roger Adams. He spent 2 more years as a Research Fellow at the University of California Los Angeles with Nobel Laureate Donald Cram. Dr. Van Duuren then became a research chemist at E. I. du Pont de Nemours and Company in Buffalo, New York. In 1955, he joined what became his permanent scientific home, the Institute of Environmental Medicine, New York University Medical Center, as an instructor. He was promoted to Assistant Professor and then to Associate Professor, and he held the title of Professor from 1969 to 1991. He was the Director of the Laboratory of Organic Chemistry and Carcinogenesis from 1965 until his retirement in 1991.

Dr. Van Duuren is well known for the application of analytical organic techniques to identify chemicals in cigarette and cigarette smoke. The polycyclic hydrocarbons were present at low titer, and he suggested that the tobacco-related cancers might be a two-step process. He provided the evidence in animal experiments at the New York University Research Center in Sterling Forest, New York by showing on mouse skin that there were initiators that reacted with DNA and, importantly, promoters. He performed many studies on the structure-activity relationships of chemicals associated with carcinogenesis.

His other area of research was to study the mode of action of chlorinated compounds. His institute was the first to identify bis-dichloromethylether as a powerful carcinogen to the lungs of mice, a pioneering finding with relevance to humans. Indeed, it was found

somewhat later that workmen exposed to this chemical developed lung cancer.

He published 299 manuscripts recording the findings from his laboratory. Of these, 238 were developed specifically under Dr. Van Duuren's leadership as Director of the Laboratory of Organic Chemistry and Carcinogenesis, in the Institute of Medicine of the New York University Medical Center in New York City and in Sterling Forest Laboratories of New York University in Tuxedo, New York. The original research of his group led to them being featured in photographs three times on the cover of *Cancer Research*, with relevant cover legends describing the achievements of those so recognized.

He served on numerous committees such as National Institutes of Health Study Sections, the Lung Cancer Task Force, and the Monograph Committee of the International Agency for Research in Cancer in Lyon, France. He also was recognized for his service on the National Research Council, the National Academy of Sciences, the Science Advisory Board of the Environmental Protection Agency, and the National Science Foundation. He was a member of a Scientific Advisory Panel for the State of Michigan in connection with the role of halogenated biphenyls contaminants in the nearby Great Lakes. He served on the editorial advisory board for a number of journals, such as *Cancer Research* and the *Journal of Environmental Pathology and Toxicology*. He was in demand as a consultant to professional societies and government agencies.

Dr. Van Duuren was an excellent lecturer at professional meetings. Also, his service on the faculty of New York University was praised for the clarity and relevance of his presentation.

He is survived by his wife, Satloo Gurbaxani.

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