

Biographical sketch: Professor Koji Nakanishi



Professor Koji Nakanishi is the Centennial Professor of Chemistry at Columbia University and the director of Suntory Institute of Bioorganic Research in Osaka, Japan. He was born in Hong Kong in 1925 and received his bachelor's degree in chemistry from Nagoya University, Japan, in 1947 from Fujio Egami. Following two years of post-graduate work with Louis Fieser at Harvard University, he returned to Nagoya University, where he completed his Ph.D. in 1954 with Yoshimasa Hirata. He was assistant professor at Nagoya until 1958 when he became professor of chemistry at Tokyo Kyoiku University. In 1963 he moved to Tohoku University in Sendai and remained there until 1969 when he joined the faculty of Columbia University, New York. Since 1980 he has held the title of Centennial Professor of Chemistry. He was a founding member and one of the six directors of research at the International Centre of Insect Physiology and Ecology (ICIPE) in Kenya, 1969–1977. In 1978 he became the first director of the Suntory

Institute for Bioorganic Research (SUNBOR), Osaka, and served until 1991. He served as director of the chemistry unit at Biosphere 2, Arizona, operated by Columbia University from April 2001 until its termination in December 2003.

Professor Nakanishi's research covers isolation, structural and bioorganic studies of bioactive compounds, retinal proteins, interaction between ligands and neuroreceptors, development of various spectroscopic methods, including the first applications of the NMR nuclear Overhauser effect in structure determination during the ginkgolide studies (1967), and in particular development of the exciton coupled circular dichroic method (1969).

In studies on ligand/receptor interactions, he has clarified the structural basis of carcinogenicity of benzo[a]pyrene, the anticancer activity of mitomycin C, and the neurotoxicities of brevetoxin and philanthotoxin. His studies with retinal analogs and retinal proteins have made seminal contributions in understanding the structural and mechanistic basis of animal vision and phototaxis.

Professor Nakanishi has published ca. 750 papers and has authored, co-authored, or edited 9 books on spectroscopy and natural products. He has received awards from the US, Japan, Bulgaria, China, the Czech Republic, Holland, Italy, Saudi Arabia, Sweden, Switzerland, Taiwan, and the UK. A Nakanishi Prize of the American Chemical Society (ACS) and the Chemical Society of Japan (CSJ) started in 1996 and is awarded in alternate years in Japan and the US.