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Biographical sketch: Professor Yoshito Kishi

Yoshito Kishi was born in Nagoya, Japan, in 1937. He received both his B.S. (1961) and Ph.D. (1966) degrees from Nagoya University under the supervision of Professors Yoshimasa Hirata and Toshio Goto. During the period from 1966 through 1969 when he was an instructor in the Department of Chemistry at Nagoya University, he took a leave of absence (1966–1968) to conduct research at Harvard University as a postdoctoral research fellow with Professor Robert Burns Woodward. Upon returning to Nagoya, he was promoted to the position of Associate Professor in the Department of Agricultural Chemistry. He was invited as Visiting Professor of Chemistry at Harvard for the 1972–73 academic year, appointed as Professor of Chemistry in 1974, and then as Morris Loeb Professor of Chemistry in 1982. He served as the Chairman for the Department of Chemistry from 1989 through 1992. Since 1997, he has been Morris Loeb Research Professor of Chemistry. In addition, he has been the Chairman of the Board for Eisai Research Institute, Boston, since 1987.

Kishi's work is centered on the chemistry of complex natural products with high biological activities. He has achieved the total synthesis of various natural products typified by the completed work of neurotoxins (palytoxin, tetrodotoxin, saxitoxin, batrachotoxin, pinnatoxin A, etc.), polyether antibiotics (monensin, lasalocid A, salinomycin/narasin, etc.), ansamycin antibiotics (rifamycin S), antitumor natural products (halichondrins, mitomycins, etc.), tumor promoters (aplysiatoxins), toxic metabolites of micro-organisms (gliotoxins, sporidesmins, etc.), and others (ophiobolins, *Cypridina* luciferin, etc.). In order to carry out these syntheses, he has extensively investigated not only new synthetic strategies/tactics but also new synthetic methods. Notably, through these studies he has advanced the rules to predict the stereochemical course for reactions in acyclic systems. Using primarily organic synthesis, Kishi has elucidated the structure of various natural products including palytoxin, *Latia* luciferin, AAL toxins/fumonisins, and maitotoxin. This program has eventually evolved into the universal NMR database approach in chiral solvents, which allows assignment of the absolute and relative configuration of unknown compounds without degradation and/or derivatization. In connection with the local conformational analysis of palytoxin, he has advanced the rules to predict the preferred solution conformation of *C*- and *O*-saccharides. To define the global conformational analysis of palytoxin, he has developed a chemical ruler to measure the distance in the 15–50 Å range.

Kishi is a recipient of the Shinppo-sho from the Chemical Society of Japan (1967), the Chunichi Press Award (1973), the ACS Award for Creative Work in Synthetic Organic Chemistry (1980), the Harrison Howe Award (1981), the Javits Neuroscience Investigator Award (1988), the Naito Prize (1993), the Nagoya Medal of Organic Chemistry (1995), the Prelog Medal (1995), the Havinga Medal (1996), the Imperial Prize (Japan, 1999), the Japan Academy Prize (1999), the ACS Ernest Guenther Award in the Chemistry of Natural Products (2001), and the Tetrahedron Prize for Creativity in Organic Chemistry (2001). He was elected as a Member of the American Academy of Arts and Sciences (1985), a Fellow of the American Association for the Advancement of Science (1999), an Honorary Member of the Chemical Society of Japan (2000), and a Person of Cultural Merits (Japan, 2001).

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