
Obituary

Professor Emeritus
Dr. TAKANAMI, Mituru (1929–2022)



Dr. Mituru Takanami, Professor Emeritus of Kyoto University, passed away on September 25, 2022, at the age of 93.

Dr. Takanami was born in Toyama on 15th of September, 1929. He graduated from Department of Zoology, Faculty of Science, Kyoto University in 1952, and continued his studies as a graduate student at the same department under the supervision of Professor Kenji Nakamura. In 1953, he was appointed as an instructor of Faculty of Science, Kyoto University, and later reassigned to a chief researcher of the National Institute of Animal Health in the Ministry of Agriculture and Forestry. In 1961, he was granted a doctoral degree from Kyoto University for his biochemical study of ribonucleoproteins. In 1962, he promoted to an Associate Professor of Hiroshima University Research Institute for Radiation Biology and Medicine. On a leave of absence from 1963 to 1966, he worked at Brookhaven National Laboratory and University of California Space Science Laboratory, where he gained further experience on the biosynthesis of ribonucleic acids and proteins in collaboration with Professors Geoferry L. Zubay and Thomas H. Jukes.

In 1967, he moved to the Institute for Chemical Research, Kyoto University as a full Professor to direct the Laboratory of Molecular Biology. In 1981, he established the Research Facility for Nucleic Acids, through which recombinant DNA techniques and DNA sequencing methods were developed and dispersed in Japan and Asian countries. From April 1988 to March 1990, he was appointed as Director of the Institute for Chemical Research. At Graduate School of Science, Kyoto University, he gave lectures on advanced molecular genetics and supervised the dissertation works of graduate students. He retired from Kyoto University in March 1993 and was honored with the title of Professor Emeritus.

Dr. Takanami conducted extensive research in the field of molecular biology. He performed outstanding achievements consistently in elucidating molecular mechanisms

for the transmission and expression of genetic information. In particular, he obtained prominent results in studies on the starting reaction of protein biosynthesis, transcriptional initiation, and the essential structure of bacterial promoters and replicons. In the course of these studies, he discovered novel restriction enzymes, and determined the total genome sequence of the bacteriophage *fd* to pioneer the field of genome sciences. He also elucidated functional structures of fundamentally important genomic regions, including the replication origin of the *Escherichia coli* chromosome, the oncogenic DNA fragment of Adenovirus type 12, the kanamycin resistance transposable element Tn903, and the coding region of the insecticidal fragment in the *Bacillus thuringiensis* crystal protein.

Dr. Takanami devoted himself to organizing the Molecular Biology Society of Japan and officiated as President of the Society for two years from April 1987. After the retirement from Kyoto University, while serving as School Principal of Bio-college Kyoto for four years from April 1993, he involved himself in the establishment of Kazusa DNA Research Institute, where he supervised cutting-edge projects on DNA studies, including the genome project of cyanobacterium *Synechocystis* sp. PCC6803, as the founding Director from October 1994 to August 1997. He was also an editor of the international journal *Molecular and General Genetics*, and the editor-in-chief of *DNA Research*, a pioneering international journal for DNA studies. Through dissemination of recombinant DNA techniques, he contributed intensively to the development of Japanese bioindustry. He assisted a wide variety of companies, including those of chemical, pharmaceutical and food, in their foray into the life science field based on molecular biology.

His sincere and warm personality earned the respect of his friends, colleagues, and students. His contribution to the development of molecular biology during its early days in academic, educational, and industrial societies is gratefully acknowledged.