

Ohtsura NIWA, Ph.D.



Ohtsura Niwa is an Emeritus Professor of Kyoto University. Born in Kobe, Japan, he spent his early life in rural areas which intrigued his interest in living organisms. He received a B.Sc from Kyoto University in 1976 majoring in zoology, and a Ph.D. in 1975 from Stanford University for his research on radiation induced leukemia virus of the mouse. He started his research career at Kyoto University in 1975, and then moved to Hiroshima University Research Institute of Radiation Biology and Medicine in 1984. He moved to Kyoto University Radiation Biology Center in 1997. After retirement from Kyoto University in 2007, he took a position of deputy director of Research Center for Charged Particle Therapy, National Institute of Radiological Sciences, Chiba and then served as a CEO of BioMedics Japan

in Tokyo. He is now working at Fukushima Medical University.

His research has centered on radiation effects on living organisms, and the subjects studied cover a wide range including: host cell reactivation of UV irradiated herpes simplex virus in tissue culture cells; radiation activation of endogenous retrovirus and its silencing in embryonal stem cells; minisatellite instability of the maternal allele in one cell stage mouse embryos by fertilization with radiation exposed sperm; p53 dependent induction of minisatellite instability and pink-eyed unstable allele; long lasting DNA damage memory in *Schizosaccharomyces pombe*; and the mechanism of p53 dependent S checkpoint in preimplantation stage mouse embryos.

In addition to the subjects of basic radiation biology, Ohtsura Niwa took interest in the mechanism of radiation carcinogenesis while working in Hiroshima where he became acquainted with many researchers of the Radiation Effect Research Foundation. Age dependence of radiation carcinogenesis is a fascinating subject of study, and as for the mechanism he is currently focusing on the role of stem cell competition in adult stem cell niche. Stem cell competition is a dynamic process to eliminate rogue stem cells in a niche and is the underlying mechanism for the age dependence and low dose rate effects.

Ohtsura Niwa became a member of ICRP Committee 1 in 2001, and became a member of the ICRP Main Commission in 2009.

Ohtsura Niwa has published more than 120 papers in international peer reviewed journals. These works are original and well received by the radiation research communities. He received the Roentgen Medal in 2005 for these accomplishments.

He has also served as the President of the International Association of Radiation Research. In addition, he is currently a Councillor of the Radiation Effect Research Foundation.