

THE UNIVERSITY OF MICHIGAN

Regents Communication

ACTION REQUEST

Subject: Report of Faculty Retirement

Action Requested: Adoption of Retirement Memoir

John Yoshihisa Kuwada, Ph.D., professor of molecular, cellular, and developmental biology (MCDB) in the College of Literature, Science, and the Arts, retired from the active faculty on December 31, 2020.

Professor Kuwada received his B.S. degree from Case Western Reserve University in 1970, his Ph.D. degree from Stanford University in 1980, and performed postdoctoral research in the biology departments at the University of California, San Diego and Stanford University. He joined the University of Michigan faculty as an assistant professor in 1987, and was promoted to associate professor in 1992, and professor in 1999. He received the March of Dimes' Basil O'Connor Scholar Award (1988-91), the LSA Excellence in Education Award (1997), and the Japan Science and Technology Agency Senior Fellowship (1999). He was on numerous journal editorial boards and grant panels, served in administrative capacities in MCDB, and was the director of Asian/Pacific Islander American Studies at UM.

Professor Kuwada taught large introductory courses and small research-focused interactive courses in biology and helped form the popular neuroscience major. He trained several dozen graduate students and postdoctoral fellows, many of whom went on to successful careers as faculty, and over 60 undergraduate researchers. In 2012, he co-founded Biology Education in Cambodia, which trains faculty and students at the Royal University of Phnom Penh.

Professor Kuwada's research used genetic model animals to study the nervous system. His lab was one of the earliest to adopt zebrafish to study biological processes. His experiments helped establish that neurons form connections using specific molecular cues in vertebrate embryos. His lab developed methods to generate transgenic zebrafish that were widely used to study zebrafish genes. The lab also used a genetic approach to identify genes important for the development and function of the nervous system. One of these genes, *stac3*, encoded a novel protein that regulates skeletal muscles. The lab found that mutations in the human *STAC3* gene was the basis for a congenital myopathy. These studies highlighted how the identification of a gene in a model organism can lead to the discovery of a human disease gene. Professor Kuwada went on to study the *stac* gene in neurons using the fruit fly *Drosophila*, another genetic model. These experiments established that the neuronal *stac* protein regulates the release of neuropeptide neurotransmitters that are required for normal behavior in flies, which may also apply to vertebrates.

The Regents now salute this distinguished scholar by naming **John Yoshihisa Kuwada, professor emeritus of molecular, cellular, and developmental biology**.

Requested by:



Sally J. Churchill, J.D.
Vice President and Secretary of the University

December 2020