



**Professor Daisuke Uemura**

Department of Biosciences and Informatics

Faculty of Science and Technology

Keio University, Japan

**Bioorganic Studies on Marine Natural Products: Diverse Chemical Structures and Bioactivities**

The diversity of novel natural substances provides a new paradigm which can lead not only to a better understanding of ecological phenomena, but also to valuable information in the search for physiologically and biologically intriguing compounds. We have focused on the identification of natural key compounds that control biologically and physiologically intriguing phenomena in the marine organisms. Recently, we successfully isolated a novel macrolide, luminaolide, that induces settlement and metamorphosis in hermatypic coral larvae. Furthermore, we isolated a super-carbon-chain compound (SCC), symbiodinolide, from the dinoflagellate *Symbiodinium* sp. and found that it may serve as a defense substance for symbiotic dinoflagellates to prevent digestion of their host animals. Recently, we isolated a novel spiroketal compound, symbiospirol A, from *Symbiodinium* sp., which inhibited PKC activation induced by phosphatidylserine. These compounds will contribute to the understanding of the marine ecological systems and may become useful tools for physiological studies. In this presentation, I introduce recent findings in our major work.

**Curriculum Vitae**

Daisuke Uemura was born in Gifu in 1945, and received his Ph.D. in 1975 from Nagoya University under the direction of Professor Yoshimasa Hirata. He was an Assistant Professor at Nagoya University (1973–1979), Associate Professor at Shizuoka University (1979–1991), Professor of Chemistry at Shizuoka University

(1991–1997), and Professor of Chemistry at Nagoya University (1997–2008). Since 2008, he has been a Professor of Biosciences and Informatics, Keio University. He is a Professor Emeritus of Nagoya University. His research interest is the diverse chemical structures and bioactivities of marine natural products. He received The Chemical Society of Japan Award for Young Chemist in 1977, The Chemical Society of Japan Award in 2006, The Chunichi Cultural Prize in 2007, and The Naito Foundation Research Prize in 2009.