



Professor Hidetoshi MORITA

I received the Ph.D. degree from the Graduate School of Life Science, Okayama University in 1991. I am a professor at the Graduate School of Environmental, Life, Natural Science and Technology, Okayama University, leading the Unit of Applied Microbiology. I have published more than 120 national and international research papers, focusing on genetic and genomic analysis of lactic acid bacteria and the gut microbiome. Some of these papers have been included in prestigious journals such as Nature, Nature Medicine, Cell, Cell Host & Microbe, and Science.

My research has advanced in the field of genetic and genomic analysis of lactic acid bacteria and has reported findings on the significant impact of the gut microbiome on the host by conducting metagenomic analysis of the gut microbiome. By comparing the gut microbiomes of various patients with those of healthy individuals, I have suggested the involvement of the gut microbiome and have further developed studies to identify specific bacteria directly involved in these processes. We have achieved valuable results using a system that eliminates the influence of conventional mouse indigenous microbiota by using a germ-free mice system.

In my presentation, I will introduce the history of gut microbiome research and the establishment of a germ-free mice system. I also present important research findings, which have contributed to scientific knowledge, obtained from the construction of gnotobiotic mice derived from germ-free mice.