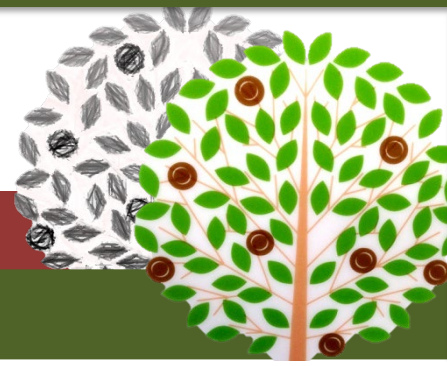


**ON-SITE BIOLOGY COLLOQUIUM**

Friday, 14 Aug 2026 | 4 pm | S3 05-02 Conference Room 1

Hosted by Assoc Prof Christoph Winker

Map to Block S3



Controlling Fish Parasites for Healthy and Sustainable Aquaculture

**Sho Shirakashi***Independent researcher*

Parasitic diseases are among the major constraints to sustainable aquaculture. Current control measures rely largely on chemical treatments; however, preventive strategies that reduce infection pressure are urgently needed to improve sustainability.

My research focuses on developing practical and innovative parasite control strategies through complementary approaches: lifecycle intervention, host-side control, and risk assessment. The lifecycle intervention approach identifies controllable points in parasite life cycles and translates their biological and ecological characteristics into practical preventive measures. For example, the innate phototactic behavior of skin fluke larvae can be exploited to reduce host–parasite encounters by modifying lighting environment of culture cages. Likewise, the use of biological control agents to remove parasite eggs attached to culture cages, primary source of re-infections, reduced infection by more than 40% and increased fish survival by over 70% under field conditions.

In this seminar, I will present examples from several parasite systems and demonstrate how integrating parasite biology, host responses, and farm management can provide effective and sustainable control strategies. The importance of integrated parasite management as a future direction for reducing reliance on chemical treatments in aquaculture will also be discussed.

About the Speaker

Aquaculture parasitologist and fish health specialist with over 20 years of experience in fish parasitology. Received a PhD from the University of Tokyo and conducted research in Japan, Germany, UK, and Canada. Spent 17 years at the Aquaculture Research Institute, Kindai University, Japan, conducting research on the control of parasitic diseases affecting farmed fish. Contributed to the development of integrated parasite management strategies, biological control methods, parasite diagnostics, and aquatic veterinary medicines for commercially important species, including tuna, amberjack, groupers, and salmonids. Published over 100 peer-reviewed papers, co-authored descriptions of more than 25 new parasite species, and holds two patents related to parasite control. Recently completed an appointment at Kindai University and currently pursuing new research opportunities in aquaculture health and sustainable disease management.