Q-AOS 九州大学 アジア・オセアニア研究教育機構 ブラウンバッグセミナー

Brown Bag Seminar No.140

2024 5.15 (wed.) 12:10 ~ 12:50

12:10-12:15 ◆ Introduction
12:15-12:40 ◆ Seminar (Presentation)
12:40-12:50 ◆ Q&A

Online (Zoom)
Scan here for Registration

https://temdec-med-kyushu-u-ac-jp.zoom.us/webinar/register/WN_vqTkD5tKRTWCjfq97ruTaQ

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New paths to sustainable food production: the potential of microbiome agriculture and halophytes

Chair: **Assoc. Prof. Kun QIAN** (Coordinator of Q-AOS)

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Key Words Conservation agriculture, Food production, Halophytes, Microbiome agriculture, Phytoremediation, Stress-tolerant crops

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I received my Ph.D. in Agriculture from Kyushu University in 1994. As a Japan Society for the Promotion of Science (JSPS) Research Fellowship for Young Scientists and a postdoctoral fellow of bio-oriented technology research advancement institution (BRAIN) at the National Institute of Agrobiological Sciences (NIAS), I conducted research on the mechanisms of conversion of photosynthetic mode depending on environmental conditions, and on the creation of genetically modified rice plants expressing maize genes at high levels. In 1998, I started working joined Saga University, and in 2000, I received the Young Researcher's Award from the Japanese Crop Science Society for my research on rice. During my tenure, I conducted postdoctoral research on the salt tolerance mechanisms of salt-tolerant plants at Oklahoma State University and the University of Nevada. In 2010, I moved to Kagawa University, where I conducted research on the agricultural utilization of wild plants and joined my current position in 2019. Very recently, I have started research on microbiome agriculture and plant microbiome fuel cell.

To produce food, we use nearly half of the world's vegetated land and consume 90% of all water used by humans. Yet, around 800 million people still lack sufficient food. The recent dramatic increase in food production has been achieved through the intensive use of agricultural inputs. However, this has also led to environmental problems such as water pollution and soil degradation. We are addressing these issues through environmentally friendly agriculture, the development of stress-tolerant crops, the utilization of stress-tolerant plants, and phytoremediation. In this presentation, we will focus on two of these approaches: microbiome agriculture, a type of environmentally friendly agriculture, and the use of halophytes.

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