

Special Seminar

To invite a researcher from NARO in Japan, we will hold a special seminar on wheat research.

Time & Date: 15:30-16:30 on Tue. Jan. 21st, 2020

Venue: Active Learning Space, ALRC

Dr. Ryozo Imai (Senior Principal Researcher, Institute of Agrobiological Sciences, NARO, Tsukuba, Japan)

The *in planta* Particle Bombardment (iPB) method for cereal transformation and genome editing

Transformation is a key step in modern breeding technology that involves genome editing. The requirement for *in vitro* tissue culture and regeneration hampers application of this technology to commercially important varieties of many crop species. To overcome this problem, we developed a simple and reproducible *in planta* transformation method in wheat (*Triticum aestivum* L.). Our *in planta* particle bombardment (iPB) method utilizes the shoot apical meristem (SAM) as a target tissue. The SAM contains a subepidermal cell layer termed L2, from which germ cells later develop during floral organogenesis. The iPB method can also be used for genome editing through transient CRISPR/Cas9 expression or direct delivery of the CRISPR/Cas9 ribonucleoprotein. In this seminar, I will introduce the iPB technology and provide an overview of its current and future applications in plant transformation and genome editing.

Contact: Ryosuke Mega & Takayoshi Ishii (mega@tottori-u.ac.jp)

