

第 25 回植物生命科学セミナー

25th Open Seminar hosted by the Department of Plant-Biosciences
Faculty of Agriculture, Iwate University

“Developing phloem in plant organ formation - a balancing act”

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日時: 2020 年 2 月 13 日 (木) 16:00~17:30

場所: 総合教育研究棟 (生命系) 1 階遠隔講義室 (生命系スペース C)

Meristems produce plant organs through coordinated cellular proliferation and differentiation from stem cells. The Arabidopsis root meristem is a powerful model to investigate these transitions, because there they can be easily followed along a spatio-temporal gradient. Among the proximal tissues produced by the root stem cells, the protophloem differentiates first and is critical for root meristem maintenance. Differentiation of meristematic cells into mature protophloem sieve elements (PPSEs) involves dramatic rearrangements, such as cell wall build up and nucleus degradation. Over the last years, we have built up a molecular genetic network that governs the commitment of phloem stem cell daughters to the PPSE differentiation program. This network integrates autocrine peptide signaling with local phytohormone activity, suggesting that a coincidence of thresholds is necessary for proper transition to the differentiation program. Recent progress in deciphering molecular details of these interactions will be reported.

スイス・ローザンヌ大学の Christian Hardtke 先生に植物根のメリステムの遺伝学研究の現状についてお話いただきます。植物の根の分裂組織の形成と維持は、植物の成長と発達にとって非常に重要な発達過程です。たくさんの方のご参加をお待ちしています。