

A Receptor-Ligand Signaling Pathway Promotes Formative Cell Divisions in Arabidopsis Root Meristems

The BARELY ANY MERISTEM (BAM) receptor kinases and their small peptide ligands (CLEs) signal to regulate many pathways in Arabidopsis. They are key regulators of vascular and gametophyte development and play a crucial role in maintaining stem cell populations in both the shoot and root. Here, we provide evidence of a new role for BAM-CLE signaling in the patterning of ground tissue in the root apical meristem. Additionally, we demonstrate that BAM-CLE signaling can activate specific cell cycle genes and explore BAM-CLE signaling in the context of the well-studied GRAS transcription factors, SHORT ROOT (SHR) and SCARECROW (SCR), which also mediate cell divisions in the root apical meristem.