

Biology Seminar

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ENOD16 Functions in Symbiotic Root Nodule Formation

Root nodules are specialized plant organs formed during symbiosis between beneficial soil microbes called rhizobia and legume roots. Unique molecular and cellular changes occur within the plant to support the development of root nodules, and ENOD16 protein plays a critical role in nodule formation. *ENOD16* is a member of a small gene family that encodes proteins structurally related to phytoalexins and is predicted to be post-translationally modified by the addition of a GPI-lipid anchor and O-linked carbohydrate side chains. ENOD16 encodes a protein targeted to the symbiosome membrane and the infection threads, and our data suggests that ENOD16 functions in membrane specialization and remodeling of the extracellular matrix during nodule formation.

In this seminar, Dr. Sherrier will introduce the basic principles of symbiotic root nodule formation, explain why it is important to understand nodulation, discuss the specific role of ENOD16 in nodule formation, and show some common features between plant-microbe infection and human diseases.

