

**Friday, September 26, 11:00-11:30 a.m.**

*“Chemical inducers of systemic signaling in plants”*

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Systemic acquired resistance (SAR) is a highly desirable form of resistance that protects against a broad-spectrum of pathogens. SAR involves the generation of a mobile signal at the site of primary infection, which arms distal portions of a plant against subsequent secondary infections. Because of its unique mechanistic properties and its exciting potential applications in developing sustainable crop protection strategies, SAR has been one of the most intensely researched areas of plant biology. The last decade has witnessed considerable progress and a number of diverse chemical signals contributing to SAR have been isolated and characterized. All of these constituents share their requirement for the phytohormone salicylic acid, an essential downstream component of the SAR pathway. However, recent work demonstrating the essential parallel functioning of nitric oxide (NO)- and reactive oxygen species (ROS)-derived signaling together with SA provides important new insights in the overlapping pathways leading to SAR. More recent evidence suggests a role for lipids in accumulation/biosynthesis of a number of SAR associated chemical signals. Relationship among recently identified mobile inducers of SAR will be discussed.