



Tuesday, September 14, 2021

Mechanisms and Applications of Plant Smells in Modulating Innate Plant Immunity

Christopher Frost, Research Assistant Professor, BIO5 Institute

Abstract

Plants sense and react to reliable information cues in their environment. While some plants like the venus fly trap or the sensitive plant are notable examples of how dynamic such responses can be, almost all plants are responsive in ways that are not visibly apparent. For example, plants have evolved sophisticated chemical defense strategies to resist or tolerate environmental stresses including insect herbivory, and these defenses are inducible and therefore change in real time. A prominent chemical response to herbivory is the synthesis and emission of distinct bouquets of volatile organic compounds (VOCs) that provide ecologically relevant information used by a variety of animals including herbivores' natural enemies. Remarkably, plants can also eavesdrop these volatile cues and "prime" themselves against future stress. Priming is therefore an inducible phenomenon requiring changes within a plant to modify its physiological condition to more rapidly mount defense against a future foe. This talk will explore this remarkable feature of plant biology and some ways in which it provides an opportunity to enhance agricultural sustainability.

This seminar is a hybrid event

Dr. Frost will be presenting via Zoom - <https://arizona.zoom.us/j/88431130345>
Password: spls2021

Live broadcast is available in Marley 230 – refreshments will be provided