Current Research Objectives

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**Research topic:** HLB disease management

**Primary Research Objective(s):** Use of plant extracts to manage HLB disease

**Research Goal:** Help to mitigate/reduce HLB disease symptoms in infected citrus plantings through foliage and soil drench applications of oak leaf extracts.

**Outcomes to date:** We have identified antibacterial activity from oak leaf extracts against the *Candidatus Liberibacter asiaticus* (CLas) bacteria in both natural environments and controlled laboratory conditions. Oak leaf extracts are not phytotoxic for the citrus tree when non-infected, but only when infected with CLas.

![Image: Reduction of classic symptoms of HLB disease, yellowing and bleaching of leaves, after 2 months of foliage applications of oak leaf extracts to infected sweet orange trees cv. pineapple. (A) Citrus leaves after oak leaf extract applications. (B) Control citrus leaves after water applications.](image)

Our goal is to benefit Florida growers in the short term by delivering a high throughput method using steam explosion to process large amounts of oak leaves for field applications that can reduce HLB disease in infected groves.

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